BONDING SURVEY REPORT: COAL

Question 1: What adjustments, if any, have you undertaken (or considered undertaking) with regard to the existing reclamation bonding requirements under your state program (i.e. moving to conventional bonding systems and away from alternative bonding systems; use of trust funds; use of corporate guarantees)?

Alabama
None.

Alaska
Increased review frequency of existing bonds and bonding mechanism.

Arkansas
None.

Colorado
The current law and regulations allow surety bonds; collateral bonds, including cash, U.S. government bonds, certificates of deposit, irrevocable letters of credit and real property; and self bonds. Alternative bonding is also generally addressed, but specific alternative bonding provisions are not currently authorized by the Colorado Coal Program. The regulatory requirements associated with these instruments are consistent with the federal regulations and no changes are contemplated at this time.

Illinois
We have not initiated any adjustments except revalidating the CD with the bank at the time of renewals

Indiana
None.

Kentucky
In response to a May 1, 2012 733 letter from OSM, KY has recently increased the amount of individual bonds for surface mining operations and has established a reclamation guaranty to serve as a backup source of funding in the event the individual bond is insufficient for reclamation. KY is in the process of assessing and collecting fees for the new fund.

Louisiana
None.

Maryland
Maryland continues to use an alternative bonding system but is relying more heavily on conventional bonds to cover liability. The current bonding rate is $1000/permit acre plus $6000/disturbed or open acre for a total minimum of at least $7000/acre on disturbed ground. Maryland remains able to increase performance bonds on any permit up to full cost bonding. Deep mine disturbances are bonded at full cost.

New Mexico
No adjustments made.

Ohio
In the last few years Ohio has developed two bonding systems: Bond Pool = $2,500 / acre with greater than 5 years mining experience in Ohio. Full Cost = Provide full cost of reclamation based on engineers estimate. Ohio requires a Trust be established to cover long term water treatment. Changes considered: Make the requirements better defined and more restrictive to enter the bond pool; make it more restrictive to transfer permits to new entities wanting to rely on the bond pool

Oklahoma
No recent changes. We use traditional bonding methods: surety bonds, letters of credit, certificates of deposit, and cash.

Pennsylvania
Pennsylvania converted to a full-cost bonding program beginning in 2001. This program has required continuous adjustments to truly reflect the cost of reclamation. The most recent efforts have been focused on responding to the OSM oversight report which identified a few factors (e.g. underestimating volume) which resulted in less than the needed bond amount.

Texas
No adjustments have been made and none are contemplated at this time.

Utah
We have considered developing rules for doing long term (perpetual) bonds but have not gotten very far.

Virginia
Proposed legislation to eliminate Self Bonding and to collect additional Reclamation Tax for the Alternate Bonding System.

West Virginia
Trust funds authorized as a type of collateral bonding. Increases in tax to the Special Reclamation Fund as part of the approved alternative Bond system. Creation of an SRF water treatment fund.

Wyoming
We have not made any adjustments lately.

Question 2: What are the particular challenges you are facing in your state with regard to bonding requirements for surface coal mining operations?

Alabama
No significant changes.

Alaska
Cost of acquiring collateral bond and surety bonds. Use of self bond regulation and concern that money for reclamation will be available in a timely fashion under the self bond regulations.

Arkansas
Loss of Letters of Credit during multiple bank mergers.

Colorado
Challenges include: 1. Bond amount calculations are often subject to debate; 2. The financial health and viability of financial institutions, surety companies and self bonded companies remains a source of potential vulnerability. Reliable information needed to assess this risk is not readily available; 3. Self bonded companies are not required to itemize all permits nationwide for which self bonding is being used. The total self bonded liability is thus poorly defined, unless research is conducted on a state by state basis, and the regulations do not thoroughly account for this issue; and 4. Letters of Credit, Certificates of Deposit and other deposit instruments can become difficult to track as financial institutions are bought/sold/liquidated.

Illinois
The two primary challenges are; A. Some in the industry to come up with the increases in bonds when requested at mid terms and renewals, B. The complicated nature of bonding increments in the event of bond release and bond forfeiture.

Indiana
None.

Kentucky
Same answer as above. Also, the issues of bonding for long term treatment are still being debated.

Louisiana
Complexity of bonds submitted by the operator. Bonding for low pH water.

Maryland
Most operators claim to have difficulty getting surety bonds without posting 50 to 80% collateral and therefore are moving toward bonding with CD's.

New Mexico
No significant challenges.

Ohio
The biggest challenge in Ohio is that most companies rely on the bond pool and it has not grown to a sufficient size to cover potential forfeitures. The $2,500 per acre bond established by rule doesn't reflect the same percentage of the cost of reclamation as it did 30 years ago. Ohio's current bond pool funded by severance tax has only been in existence for about six years. One of the challenges is to keep forfeitures low while the bond pool increases. Long term water treatment sites need to be identified and a trust established to cover treatment costs earlier in the process.

Oklahoma
No new challenges. We are updating bond amounts based on inflation costs – at least every two years, sometimes once a year if drastic changes in gas costs have occurred.

Pennsylvania
Pennsylvania is faced with a tight coal market which has resulted in more difficulty in getting the permittees to post the required bond. The poor market also contributes a bit more risk taking by the operators, where they may exceed their bond limit.

Texas
No particular challenges.

Utah
The majority of our mines are underground so dealing with surface mining is a challenge. The one surface mine that we have is a challenge because of the moving target aspect of bonding. It is difficult to determine the amount of bond needed when only portions of the site are disturbed and other portions are reclaimed.

Virginia
Self Bonding and being able to ensure the monies will be available in case of a forfeiture.

West Virginia
Accomplishing land reclamation and water treatment at revoked sites with available funding. Imposition of water quality standards on the agency at revoked sites. Determining the amount of full cost bond for any given mining permit. Some of the methods to consider in determining full cost bond amounts are the OSM handbook, a revised matrix from the WV mining rules, and historic costs for the Special Reclamation Program to reclaim revoked sites. Another complication in ascertaining a full cost bond amount is the fact that the costs for water treatment are often difficult to estimate due to the broad ranges of water flow, concentrations of pollutants, duration, and other factors that influence water discharges associated with some mining operations.

Wyoming
Insurance company sureties have become more difficult to obtain and more expensive.

Question 3: Are you experiencing surety companies requiring new or additional collateral in conjunction with surety bonds? If so, what types of collateral (i.e. cash or cash equivalents; investment-grade rated securities; interests in real and personal property)?

Alabama
ASMC is not privy to this information.

Alaska
None that we are aware

Arkansas
No.

Colorado
It is our understanding that some surety issuers are implementing rigorous collateral requirements, but the details of these requirements are known only to the companies involved.

Illinois
The Department is not aware of any issues on this issue

Indiana
Some companies are finding better rates with other carriers and are replacing bond.

Kentucky
Most sureties require increased capital and in some cases full collateralization

Louisiana
No.

Maryland
We do not have direct contact with the sureties regarding their requirements although many operators are expressing the difficulty they are experiencing getting sureties and the high collateral required. My understanding is that most sureties will accept real property and some other investments as collateral.

New Mexico
Surety bonds have been a very small part of NM=s coal financial assurance for a while. The last two bonds were released in 2004 when those mines reached final bond release.

Ohio
Not that we are aware of. Companies are complaining that it is much harder to get bond. Companies are asking to roll over bonds instead of releasing them.

Oklahoma
Unknown

Pennsylvania
While we don't have direct information from surety companies, the coal operators report that it is difficult to get bond coverage and that substantial collateral is required.

Texas
None, to my knowledge.

Utah
Some companies are being required to put up cash (nearly 100%) in order to acquire a surety.

Virginia
Currently Virginia does not receive this type information

West Virginia
The agency is aware of sureties requiring additional collateral for surety bonds, but is uncertain of the details.

Wyoming
This is between the principal and the surety, we do not know the answer to this question.

Question 4: What percentage of your state's outstanding bonding obligations are met using the following instruments or mechanisms:

Traditional Surety Bonds:

Alabama
90.50%

Alaska
7.40%

Arkansas
42%

Colorado
81%. The Coal Program currently holds $207.8 million in financial warranties, of which about $204.5 million are for coal mining permits, and about $3.3 million are for coal exploration notices.

Illinois
77%

Indiana
30%

Kentucky
85.03%

Louisiana
67%

Maryland
40%

New Mexico
no

Ohio
90%

Oklahoma
60%

Pennsylvania
71%

Texas
6.70%

Utah
88%

Virginia
90%

West Virginia
85%

Wyoming
30%, $755,557,950, includes CDs, Cash, Joint Custody Receipt, LOCs, Surety Bonds, Treasury Bonds

Corporate Guarantees: Self Bonds, Parents Guarantees, Third-Party Guarantees:

Alabama
no

Alaska
yes, Self-bonds- 55%

Arkansas
yes, Self-bonds- 16%

Colorado
yes, Self bonds- 16%

Illinois
yes, Parent Guarantees- 1%

Indiana
yes, Self-bonds- 55%

Kentucky
yes

Louisiana
no

Maryland
no

New Mexico
yes, Parent guarantees- 70%

Ohio
no

Oklahoma
no

Pennsylvania
no

Texas
yes, Self-bonds- 4.6% (Self Bonds with Third-Party Guarantee- 86.6%)

Utah
no

Virginia
yes, Self-bonds- 9%

West Virginia
11% (Includes parent guarantors)

Wyoming
yes, Self-bonds- 70%, includes parent guarantors, $1,719,671,200.

Collateral only: Please specify the nature thereof:

Alabama
2.33%, Cash- .44%, CDs- 1.89%

Alaska
37.6%, specify Cash/Property, portion of the total collateral bond held by one of the operators is under appeal.

Arkansas
28.6%, LOC

Colorado
3%, Cash- 1%, CD- 1%, LOC- 1%

Illinois
22%, Cash-7%, LOCs -11%

Indiana
3%, CD, Cash

Kentucky
5.37%, Cash, CD, and Irrevocable LOC

Louisiana
33%, Savings Account

Maryland
50%, CDs, few LOCs

New Mexico
42%, LOC

Ohio
no

Oklahoma
40%, CD, LOC

Pennsylvania
16.7%, primarily LOC, but also CDs and negotiable securities.

Texas
2.4%, LOC

Utah
1%, Real Property

Virginia
<1%, CD, LOC

West Virginia
2%, CDs and Cash

Wyoming
no

Trust funds: Please specify the nature thereof:

Alabama
no

Alaska
no

Arkansas
no

Colorado
no

Illinois
no

Indiana
no

Kentucky
1.23%

Louisiana
no

Maryland
no

New Mexico
no

Ohio
1%, Water Treatment

Oklahoma
no

Pennsylvania
9.4%, Trust funds have been established by operators to provide the money for mine drainage treatment costs. A few trusts have been established as the result of bankruptcy proceedings.

Texas
no

Utah
10%, Government securities

Virginia
no

West Virginia
no

Wyoming
No

Bond pools:

Alabama
no

Alaska
no

Arkansas
no

Colorado
not authorized

Illinois
no

Indiana
6%

Kentucky
8.37%

Louisiana
no

Maryland
10%

New Mexico
no

Ohio
Most companies provide bonds and rely on the bond pool to cover remaining cost of reclamation.

Oklahoma
no

Pennsylvania
no

Texas
no

Utah
no

Virginia
58% of Virginia Bonding Utilized the Pool Bond Method and 42% is Actual Cost Bonding.

West Virginia
no

Wyoming
No

Other: Please specify the nature thereof:

Alabama
no

Alaska
no

Arkansas
28.6%, CD

Colorado
no

Illinois
no

Indiana
6%, LOC

Kentucky
no

Louisiana
no

Maryland
no

New Mexico
30%, LOCs

Ohio
9%, LOC, CD

Oklahoma
no

Pennsylvania
2.7%, Pennsylvania has three state operated bonding programs. The remining financial guarantee program provides bond coverage for operators who reclaim AML in the course of their mining. They pay a fee which provides funds to underwrite the coverage. The conversion assistance program provided partial bonding coverage for sites that made the transition for the ABS to full-cost bonding. Permittees pay a fee to help underwrite the coverage. Finally, the Anthracite Bond Loan program temporarily underwrites bond obligations for anthracite coal operators who then pay a per-ton fee, which becomes a cash collateral bond.

Texas
no

Utah
1%, Cash and LOC

Virginia
<1%, Cash

West Virginia
2%, LOCs

Wyoming
No

Question 5: What, if any, adjustments have you made to your bond calculation methodology? If none, are you facing any particular challenges with regard to this matter?

Alabama
Periodic adjustments to cost factors related to economy.

Alaska
Re-looking at the cost to mob and demob from project sites and making sure that cost is reflected.

Arkansas
We have not made any changes in our methodology since 2008. We don't think we have any problems with the current methodology at the present.

Colorado
Bonds are evaluated at permit renewal, midterms, all permit revisions, phased bond release and anytime unanticipated field issues are observed. Bonds are calculated on a task by task basis with an automated calculation program, using industry cost estimating references such as the CAT Handbook and RS Means. The amounts are calculated assuming a worst case disturbance scenario. The method is well accepted by the Colorado industry, although specific task details and the resulting total bond amount are often debated. Long term water quality treatment is not bonded but long term water quality issues are not a significant problem at Colorado coal mines. This may become more challenging as effluent requirements evolve.

Illinois
The Department has made numerous refinements to its bond calculation methodology in the last 5 years. These included, significant earth moving cost adjustments, Additional charges for Engineering, Mobilization, and Inspection, and many refinements of cost estimates for specific activities.

Indiana
No adjustments, no particular challenges.

Kentucky
KY recently increased the amounts it receives for individual bonds. The result has been an average 60% increase in the amount of bond.

Louisiana
No adjustments. For particular challenges, see question 2.

Maryland
We use a flat rate bond per acre for usual permit bond calculations as described above. However we have also developed a bond calculation sheet that considers open pit void at any time during the life of the mine and in some instances have used that to calculate a full cost bond amount.

New Mexico
None. No.

Ohio
Ohio has developed a Performance Security Spreadsheet that engineers use to estimate the cost of reclamation. This estimate is used to calculate the required bond at the time of permit issuance. The estimate is also re-calculated annually for each permit based on current costs of reclamation.

Oklahoma
No recent adjustments other than increases due to inflation costs and annual meetings with permittees about bond amounts. Changes in bond calculations methods are announced to the permittees in advance so that companies can financially prepare for changes.

Pennsylvania
For simplicity, Pennsylvania had used a method of estimating the volume of a pit as a regular geometric shape. This has proven to underestimate the volume, so we are in the process of eliminating this simplification.

Texas
No adjustments have been made to our bond calculation methodology. However, one of our calculation methods, the worst case pit bonding method, presents the following challenges: requires detailed reclamation cost accounting, not flexible to mine plan changes and when major compliance issues arise may result in inadequate bond amounts, until adjusted. A recent violation was issued because a temporary structure was not shown on the bond map or accounted for in the reclamation cost estimate. After a hearing, the Hearings Examiner ruled in the permittee's favor. This presents a potential problem in the enforceability of our bond maps and a solution is being investigated.

Utah
We recently switched to using a 5 year escalation factor instead of a 3 year escalation factor. Another challenge we have is trying to justify the use of cost estimating manuals such as Means or BlueBook instead of using actual true market value based on regional contractor bids

Virginia
None, due to changing the rate for the Alternate Bonding System requires a regulation change. Full Cost Bonding calculations remain consistent at this time.

West Virginia
The tax used to supplement the Special Reclamation Fund was increased to provide funding for the inventory of post 1977 revoked sites.

Wyoming
We have not made any changes.

Question 6: With regard to bond release, what are the particular challenges you are facing in this area? Have you developed any type of guidance on this topic?

Alabama
None.

Alaska
no response

Arkansas
No problems with bond release at this time. No guidance has been developed.

Colorado
Bond release is not a challenge in Colorado (31 of 69 originally permitted sites are Phase III released). Bond release is encouraged and the agency works closely with the mine operators, land managers and land owners to facilitate and prepare for bond release. The Coal Program issued a Bond Release Guideline in 1995.

Illinois
The retirement of the experienced bond release inspector specialist and staff shortages have created a significant backlog in application processing.

Indiana
None.

Kentucky
KY has really not faced any challenges with bond release

Louisiana
None, No.

Maryland
No difficulties in this area.

New Mexico
Bond releases have been managed smoothly with few problems. The biggest challenge has been meeting vegetation standards during years of little or no precipitation. Several years ago, New Mexico developed flexible criteria for revegetation success that have aided some mines in reaching final bond release despite drought years. NM faces some frustration, however, with persuading companies to come in for bond releases when they are eligible. If they have corporate guarantees or self-bonds, they have little incentive to do so.

Ohio
Bond releases are going very well at this time. We are currently working on a new system of tracking bond and releases; this will go along with our new electronic permitting system.

Oklahoma
Obtaining OSM concurrence on federal bond releases is taking an excessive amount of time and delayed one bond release more than 9 months. We have had for many years a Bond Release Guideline that permittees follow.

Pennsylvania
None.

Texas
Some permittees with self bonds and/or using the worst case pit bonding method have become apathetic towards seeking reclamation bond releases because there is no monetary incentive in doing so. To overcome this situation, we have (since about 13 years ago), required that the submission of bond release applications be made part of the reclamation plan timetable, which is a condition of the approved mining permit. This allows failure to submit bond release applications within specified time frames to become a violation of the permit. We revised our annual permit fee structure to include an annual fee of $10.40 for each acre bonded on December 31st of each year. We have been gradually shifting all of the annual mined acreage fee collections to this bonded acreage fee, thereby creating an incentive for mining companies to more aggressively seek release of reclamation bond. As of this year, 90 percent of our fees are based on the bonded acreage and the remaining 10 percent are based on the mined acreage.

Utah
The biggest challenge is tracking the 10 year liability period for different portions of a mine site. We also deal with operations that want to change the post-mining land use in order to conduct another type of industrial business. It is difficult to determine when to accept the alternative postmining land use and whether to release bond when the site has not been reclaimed to its premining land use. We have developed a bond release directive that helps outline the bond release process.

Virginia
Virginia has developed a Bond Release Guide outlining the requirements for each phase of bond release. There are no current challenges at this time.

West Virginia
One challenge to bond release is the circumstances where land reclamation is completed but ongoing water treatment obligations preclude release. The agency is exploring and in some instances utilizing escrow accounts or other financial assurance mechanisms to address compliance with Clean Water Act requirements in efforts to release the SMCRA reclamation bond. Vegetative cover and capability of meeting post mining land use continue to be issues.

Wyoming
Most of the challenges lie in the procedural and regulatory complexity of obtaining bond release. Over the past year, the LQD has ben working closely with the coal industry to clarify and streamline bond release. The result is a series of modified and new quidelines that we anticipate will facilitate bond release.

Question 7: What types of innovative approaches are you undertaking in the area of reclamation bonding (i.e. segregating obligations (short v. long term); use of multiple instruments; matching the level of risk to the appropriate financial assurance vehicle)?

Alabama
None. Operators are allowed to use multiple instruments on a permit, but must maintain like instruments per increment.

Alaska
no response

Arkansas
We do accept multiple instruments for a single permit.

Colorado
Traditional bonding methods are used. Large surface mines are encouraged to phase the bonding in coordination with phased bond release to reduce total liability.

Illinois
None.

Indiana
None.

Kentucky
KY is implementing a reclamation guaranty fund to serve as backup to individual bonds.

Louisiana
None.

Maryland
None other than described above.

New Mexico
None.

Ohio
Currently most of our effort is aimed at establishing trusts to cover the long term water treatment costs.

Oklahoma
Nothing other than incremental bonding for large permits. We have an escrow account plus certificates of deposit for our one long-term AMD permit.

Pennsylvania
The primary innovation is the state fund backed financial guarantee program. It was originally implemented to assist operators making the transition to full-cost bonds. The process is underway to make it a longer-term program to provide part of the bonding coverage for some sites. The rulemaking process to do this was just initiated.

Texas
None.

Utah
We are doing incremental bonding on certain areas.

Virginia
None

West Virginia
The agency examines the capability of a transferee to assume long-term environmental liabilities. In some instances if the transferee appears to lack the capability, escrow accounts to assure satisfaction of the long term environmental liabilities are established.

Wyoming
We have not modified our approaches.

Question 8: What protections has your state enacted or adopted to avoid bankrupt surety problems?

Alabama
None.

Alaska
Have not addressed issue.

Arkansas
None.

Colorado
Financial news and ratings of issuing companies are monitored to the extent that reliable public information is available. Regulatory and legal action/litigation is used as needed to secure compliance and financial protection.

Illinois
None.

Indiana
We can't stp them from going out of business. Our AML section reclaims these sites using post 1977 funds if available.

Kentucky
N/A

Louisiana
None.

Maryland
None at this time.

New Mexico
None.

Ohio
We monitor the financial status of surety companies and banks utilizing daily RSS feeds from A.M. Best and FDIC Subscriptions where we receive up to date notifications if any surety companies are rated lower than an A rating or any bank is experiencing any financial issues. The rating process involves a comprehensive quantitative and qualitative analysis of a company's balance sheet strength, operating performance and business profile. This includes comparisons to peers and industry standards as well as assessments of operating plans, philosophy and management. It gives us the ability to prepare if an institution is heading toward bankruptcy to take on a proactive stance.

Oklahoma
The status of all sureties involved with bonding in Oklahoma are checked using Best Key Rating Guide. We look for an "A" rating. We also check that no bond is over 10% of Owner's Equity Account amount as listed in that guide. In addition we are required to check the status of the surety in the Oklahoma State Insurance Commissioner's Annual Report.

Pennsylvania
None.

Texas
None.

Utah
None that I am aware of.

Virginia
Staff monitors reports on surety companies to attempt to stay ahead of potential bankruptcies of surety companies and would require a bond replacement if at any time we would feel the bond is threatened.

West Virginia
The Special Reclamation Fund finances the reclamation at revoked permit sites. The SRF is funded by bond forfeitures, civil penalties and tax on tonnage. At a revoked site covered by a bankrupt surety, as with all revoked sites, the SRF funds the reclamation work at these sites. The WVDEP is authorized to seek recovery of reclamation costs in excess of the bond amount collected from the permittee or other responsible party.

Wyoming
Monthly checks on insurance companies and banks to ensure that they are still licensed to operate in Wyoming. This gives us an indication of backruptcies and companies selling or going out of business. FDIC provides updates, LQD checks US Treasury and WY Dept of Insurance to ensure they are still authorized to transact business. We don't have any way to find out about problems before they happen. Bonds are noncancellable- they are still liable if the operator stops paying.

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BONDING SURVEY REPORT: NONCOAL

Question 1: Does your state have a financial assurance requirement for noncoal mining and reclamation?

Alaska
Yes. Placer mines with disturbance can bond on a per acre basis through a bonding pool. Hard rock mines with a potential to generate acid must bond for the actual cost of reclamation.

Arkansas
Yes.

Colorado
Yes.

Illinois
Financial assurance is only required on those aggregate mining operations that are required to obtain a surface mining permit (operations that affect more than 10 acres in a fiscal year (July 1 – June 30) or where the mining operation encounters more than 10 feet of overburden.

Indiana
Yes.

Kentucky
Yes.

Missouri
Yes both with Industrial Minerals – The Land Reclamation Act; and Metallic Minerals – Metallic Minerals Waste Management Act.

Nevada
Yes, per state and federal regulations

New York
Yes.

North Carolina
Yes. North Carolina requires bonding for mining activities. Additionally, the Department of Energy is developing bonding strategies related to oil and gas operations. However, active oil and gas activities are not currently underway.

North Dakota
Yes – Noncoal subsurface minerals mining rules adopted by the North Dakota Geologic Survey (NDGS) include bonding requirements. But it should be noted there are no permitting requirements or state agencies that oversee sand and gravel mining in the State. However, there is a state law that requires reclamation of sand and gravel mines according to a reclamation plan jointly developed by the surface owner and mine operator.

Oklahoma
Yes.

Pennsylvania
Yes.

South Carolina
Yes.

South Dakota
South Dakota requires financial assurance for noncoal mining and reclamation

Tennessee
Yes.

Utah
Yes.

Virginia
Yes.

Wyoming
Yes.

Question 2: If so, what areas are covered by the requirement (i.e. entire permit area; proposed affected area; haul roads; processing or stockpile areas)?

Alaska

All permit areas that require reclamation to a stable environment, all current disturbances, and those proposed for the next year. The bond is reviewed every 5 years on state land. If there is a major disturbance in years 2-5 of the permit cycle, the bond may need to be updated. Sometimes roads can be left in place if they will aid in long-term monitoring/maintenance/treatment.

Arkansas

Everything listed above is covered, however we accept incremental bonding of the proposed pit area.

Colorado

Entire permit area including all affected areas of permit for reclamation.

Illinois

The financial assurance would be required on the entire permit area.

Indiana

Proposed Affected area.

Kentucky

Entire permit area when a bond is required to be filed.

Missouri

For Industrial Minerals, Open Pit Mining - bond is required where overburden is removed to access the mineral commodity and where that overburden is placed. A company can bond land as they affect land; the company is not required to bond all of the acreage identified in the long term mine plan boundary. If topsoil is not salvaged or otherwise made available for reclamation, we can require an additional bond of $4,500.00- regular bonding rates are identified in Question 4. Bond is required for haul roads only if the haul road is constructed from overburden removed to access the mineral commodity, otherwise the roads are not required to have bond. Commodity processing and stockpiles areas are not required to be bonded or kept in a bonded area. For Industrial Minerals, In-Stream Mining – Initially no bond is required, as the stream will reclaim the gravel bar; unless upon inspection the Director determines that the operator has created a reclamation responsibility. For Metallic Minerals bond is required where the following items are stored: mine waste rock, mine water, tailings, chat, blast furnace slag from primary lead smelters and pot liners from primary aluminum smelters, which is disposed of and not put to beneficial use.

Nevada

A reclamation bond is required for all existing and proposed disturbed areas within the entire permit area.

New York

All areas affected by mining operations that require reclamation. This includes stockpiling areas, processing areas, haul roads, etc.

North Carolina

All proposed distubed areas. Additionally, the Energy Program will require bonding for the sealing and abandonment of wells.

North Dakota
The permit area must be covered, but incremental bonding is allowed.

Oklahoma
Entire permit area unless approved for incremental bonding which includes haul roads, processing and stock pile areas

Pennsylvania
All reclamation obligations are covered.

South Carolina
A bond or other security must be provided to cover the land to be affected by mining for a three year period of operation plus all affected areas including sediment or tailings ponds, stock or waste piles, entrance roads and processing plants.

South Dakota
The proposed affected area within a permit boundary is covered under our reclamation bonds. The bonds can be adjusted as additional areas are affected.

Tennessee
The entire permit area including roads, processing areas, stockpiles, etc.

Utah
Affected Area

Virginia
All disturbed areas within the permit.

Wyoming
All mining disturbance inside the permit area.

Question 3: What types of financial assurance, if any, does your state require for mining reclamation obligations and what are the relative percentages?

Traditional Surety Bonds:

Alaska
37% of Large Hardrock Mines

Arkansas
24.10%

Colorado
63%

Illinois
60%

Indiana
yes

Kentucky
80%

Missouri
65% (Industrial Minerals)

Nevada
67%, We currently hold $2,108,320,290 in reclamation bonds. This includes state held bonding and BLM bonding.

New York
68.60%

North Carolina
Yes.

North Dakota
yes

Oklahoma
60%

Pennsylvania
84%

South Carolina
40%

South Dakota
25%

Tennessee
65%

Utah
68%, Bonds, LOC, DC

Virginia
10.7%, Virginia requires a bond of $1,000 per acre for all disturbed areas within the permit prior to disturbance. This initial bond can be a CD, cash, or surety bond. After 5 years of successful experience, operators are required to enter a bond pool. Initial entry costs are $50 per bonded acre, with a yearly charge of $12.50 per bonded acre thereafter.

Wyoming
71%, $439,111,182, Total Bond held is $612,056,538. The difference between the relative percentages of traditional surety bonds and self bonds for the coal and noncoal programs is largely driven by the Federal requirements for bonding. Operations on Federal surface for locatable or material minerals are not allowed to use self-bonds. Coal operations are allowed to self bond.

Collateral: Please Designate Cash or Cash Equivalents (Cash or CE); Investment-Grade Rated Securities (Invest.); Interests in Real or Personal Property (Property); Water Rights (Water):

Alaska
no

Arkansas
Yes. Cash or Cash Equivalents- 21.2%

Colorado
30%, Cash or cash Equivalents, Investment-grade rated securities, Interests in real or personal property (Real Estate Deed or Trust Allowed by the Rule, but we discourage due to cost to initiate and maintain.)

Illinois
35%, Cash or cash equivalents (CDs, T-Bill, Cash), Interest in real or personal property (LOC).

Indiana
yes, Cash or cash equivalents.

Kentucky
20%, Cash or cash equivalents

Missouri
none

Nevada
not allowed by BLM

New York
no

North Carolina
Yes. Cash or Cash Equivalents

North Dakota
yes, Cash or cash equivalents

Oklahoma
40%, Cash or cash equivalents- 68%, Bank LOCs- 32%

Pennsylvania
15%, Cash or cash equivalents- 3%, Investment-grade securities- .07%

South Carolina
yes, Cash or cash equivalents- 59%, Investment-grade rated securities- 1%

South Dakota
yes, Cash or cash equivalents- 50% (CDs)

Tennessee
no

Utah
30.6%, Real Estate and Treasury Notes

Virginia
4.3%, Cash or cash equivalents

Wyoming
no

Bond Pools:

Alaska
100% of placer mines are bnded through a bond pool

Arkansas
no

Colorado
no.

Illinois
5%

Indiana
no

Kentucky
no

Missouri
none

Nevada
0.10%

New York
no

North Carolina
No.

North Dakota
no

Oklahoma
no

Pennsylvania
<1%

South Carolina
no

South Dakota
no

Tennessee
no

Utah
no

Virginia
85%

Wyoming
no

Trust Funds:

Alaska
no

Arkansas
no

Colorado
no.

Illinois
no

Indiana
no

<u>Kentucky</u>
no

<u>Missouri</u>
none

<u>Nevada</u>
These are only allowed for long term post -closure obligations

<u>New York</u>
no

<u>North Carolina</u>
no

<u>North Dakota</u>
no

<u>Oklahoma</u>
no

<u>Pennsylvania</u>
<1%

<u>South Carolina</u>
no

<u>South Dakota</u>
no

<u>Tennessee</u>
no

<u>Utah</u>
no

<u>Virginia</u>
no

<u>Wyoming</u>
no

Corporate Guarantees: Please Designate: Self Bonds, Parent Guarantees, Third Party Guarantees:

<u>Alaska</u>
No

Arkansas
no

Colorado
7%, Self bonds, Parent bonds, and Third Party guarantees.

Illinois
yes, Self Bonds.

Indiana
No

Kentucky
no

Missouri
80% (Metallic Minerals)

Nevada
7%

New York
no

North Carolina
Yes. Third Party Guarantees.

North Dakota
no

Oklahoma
no

Pennsylvania
no

South Carolina
no

South Dakota
no

Tennessee
no

Utah
1%, Board Contract

Virginia
no

Wyoming
29%, $172,945,356, Self-Bonds and Parent or Affiliate Bonds.

Other: Please Specify:

Alaska
63% of Large Hardrock Mines, LOCs issued by banks.

Arkansas
54.7%, LOC

Colorado
no.

Illinois
no

Indiana
yes, LOC, CD

Kentucky
no

Missouri
CD- 14%, assigned to state (Industrial), LOC- 21% (Industrial), LOC- 20% (Metallic)

Nevada
25.9%, Cash- 1%, Letter of Credit- 24%, Time Deposit- .5%, Treasury Security- .2%, Personal bond held by financial statement.

New York
yes, LOCs- 25.5%, CDs- 5.4%, Cash or money orders- .4%

North Carolina
Yes, Assignment of Savings Accounts, Irrevocable Standby Letters of Credit, Bank Guarantees.

North Dakota
yes, The NDGS has the authority to develop rules to allow other forms of bonds, but no others are in place at this time.

Oklahoma
yes, ODM allows for third parties to post reclamation by way of tradtional surety and collateral bonds.

Pennsylvania
no

South Carolina
no

South Dakota
25%, LOC.

Tennessee
yes, CDs- 10%, Irrevocable Standby LOCs- 20%, Cash- 5%.

Utah
no

Virginia
no

Wyoming
no

Question 4: What is the amount per acre required under your financial assurance procedure? (If a rate structure applies, please specify).

Alaska
No set amount or structure for hardrock mines. Maximum of $ 750 per acre for placer mines. The miner pays 15% (+ 5%=$150) with a 5% non-refundable annual fee to the bond pool. The 15% is refunded after successful reclamation is demonstrated. Small operations under 5 acres can submit a letter of intent to reclaim instead of a fee.

Arkansas
We use a series of cost factors based on amounts for contracting reclamation work under the Coal Title IV AML Program. A copy of the cost factors is attached.

Colorado
Amount per acre is determined by site specific reclamation cost estimate. (NOI minimum $2000 per acre, regular mining hardrock or construction permits $2500-$3000 per acre, Special short term construction 111 permits, $2500 per acre.)

Illinois
The assurance can range from $600.00 to $5,000.00/acre based on equipment used in reclamation and how permitted area is to be reclaimed.

Indiana
$1000 to $5000/acre

Kentucky
Minimum $100/acre with a maximum of $500/ acre has been utilized on new non-coal permits for many years.

Missouri
For open pit all minerals and >5,000 tons of sand and gravel mined per year the first eight (8) acres @ $8,000.00 and $500.00 for each additional acre over the initial eight acres. E.g. 10-acres requires $9,000.00 bond. This rate has not changed since 1990. As mentioned earlier if topsoil is not made available for reclamation then an extra $4,500 bond applies for each acre that requires topsoil. No bond initially required for in-stream mining unless the operator created a reclamation liability. For open pit sand and gravel operations mining less than 5,000 tons the bonding rate is set at $500.00 per acre. For metallic minerals $20,000.00 bond minimum for the first 20 acres then $1,000.00 for each additional acre

Nevada
100% financial assurance is required. A reclamation cost estimate is determined for each operation based on actual work proposed.

New York
New York bases the amount on the true cost of performing the reclamation proposed in the mined land use plan for the mine. The average financial security per acre has risen from $4750 per acre in 2006 to around $5700 per acre today.

North Carolina
$500 to $5,000 per acre, based on land disturbance

North Dakota
Current rules require the amount to be $5,000 per acre but the NDGS can require a higher per acre bond amount.

Oklahoma
$1,000/acre during 2013; $1,500/acre during 2014

Pennsylvania
Bond rates include earth moving, revegetation, mobilization and other incidental costs. Rates are based on an evaluation of costs from state reclamation contracts from the coal program

South Carolina
Less than 10 acres- $10,000. More than 10 acres, but less than 15- $15,000. More than 15 acres, but less than 25- $25,000. 25 acres or more- $25,000 or more.

South Dakota
There is no required cost per acre except for mine license operations (sand, gravel, pegmatite minerals, cement or lime production minerals) which is $500/acre, up to a maximum of $20,000. For large scale mine permits (greater than 10 acres and/or 25,000 tons annually, or operations with chemical or biological leaching agents), the bond covers calculated costs for a third party contractor to perform reclamation or postclosure activities. For small scale mine permits (less than 10 acres and 25,000 tons annual), the bond covers third party costs up to a maximum of $2500. A spill bond is also required for large scale mine permit operations that use cyanide or other chemical or biological leaching agents. This bond cannot be more than $1 million.

Tennessee
$600 per acre.

Utah
Exploration--$8900 for the first acre, $4900 each additional acre. Small Mines-- $9400 for the first acre, $5300 for each additional acre. Large Mines-- $42000 for first 6 acres, $5600 for each additional acre.

Virginia
See item #2

Wyoming
The only time LQD uses a per-acre bond is to reseed in the event of failed reclamation. This amount varies, but the range is $500-$800 per acre.

Question 5: What types of calculation methodologies do you employ for determining the required financial assurance amount?

Alaska
Per acre, actual costs to the state, SCRE model. Guidelines such as R.S. Means, Caterpillar Performance Handbook, Davis Bacon Wages, Equipment Watch, OSM handbook, State Department of Labor rates, BLM and USFS handbooks, and vendor quotes.

Arkansas
We use a form based on the cost factors mentioned in the previous question

Colorado
CIRCES Program, by task for direct and indirect costs for reclamation.

Illinois
We evaluate the mining methodology to be employed and consider what costs we would incur reclaiming the site to the approved reclamation plan should the operator forfeit bond. The assumption is made that the forfeiture would occur at a point in time which leaves the greatest reclamation liability. Costs to reclaim the site consider how much grading and revegetation would be required given the current mining practices and reflect current grading values. Routine site inspections are conducted to insure that additional financial obligations are not generated by the mining operation. Should that be observed the bond would be recalculated.

Indiana
We have a bond evaluation factor sheet that is used to determine the bond rate.

Kentucky
The regulatory maximum is applied when determining bond amounts.

Missouri
It is based on acres.

Nevada
Reclamation cost estimation tools were developed by working groups representing state and federal agencies and the mining industry.

New York
A work sheet consisting of various reclamation activities has been developed using RS Means and other information to provide a template for calculating reclamation costs.

North Carolina
Acreage X per Acre Cost, Positive Drainage, Supplemental Costs and Inflation Factor.

North Dakota
Mining companies are required to provide reclamation cost estimates as part of their permit applications.

Oklahoma
Calculated on actual cost to reclaim site

Pennsylvania
Full-cost engineering estimate.

South Carolina
A Bond Calculation worksheet is used or a 3rd party estimate is requested. The worksheet can be found at the end of this report.

South Dakota
We use our BONDCALC Program to calculate earthmoving and revegetation costs. To the base reclamation cost, we apply the following indirect costs: Mobilization- 5%, Performance Bond- 1%, Contractor Overhead- 8%, State Excise Tax- 2%, Contractor Profit- 10%, Contingenc- 10%, Engineering and Consulting- 5%, Inspection/Administration/Maintenance- 5%, Scope and Bid Contingency- 5%.We also calculate any necessary water treatment costs for a five year reclamation period. We include costs such as reagents used in the treatment process, labor, and utilities in our calculation. We also apply indirect costs to the base water treatment costs that are similar to the ones applied to the reclamation costs. The only exception is that we may increase the contingency to 25% depending on the age and the performance of the company's water treatment system. The process is similar for postclosure bonds. The postlcosure bonds we now hold cover mostly long term water treatment costs for periods of 50 to 100 years.

Tennessee
Acreage only.

Utah
Use average cost per acre for reclamation of similar operations based upon approved surety amounts for current large mining operations.

Virginia
The required assurance amount is set by Virginia statute.

Wyoming
We use the same process as for coal. The bond is calculated using estimates of what it would cost the state to recliam the mine if it were forfeited. Bond amounts are calculated using an LQD quideline which is updated annually to account for changes in equipment (e.g. new type of grader) and fuel costs.

Question 6: To what extent has RELEASE of financial assurance obligations been an issue for your state? Do you have procedures or guidelines in place addressing release?

Alaska

Not a significant issue. Reclamation Standards and Guidelines have been established that determine when reclamation is complete. Funds can be incrementally released at the Alaska Department of Natural Resources discretion with input from other agencies.

Arkansas

Since the operator has to initiate a bond release by sending a letter to us asking for release, sometimes we have to remind an operator that they might be ready for a partial release if they want it. The release procedure is outlined in Regulation No. 15.

Colorado

No issues regarding release. Procedures in placing addressing release:a) Request by Operator b) Inspection by Division Specialist, if reclamation completed per plan then approved c) Approved and 30 day comment period before bond released.

Illinois

Release has not been an issue. Yes, permit areas must meet their specific grading and revegetation obligations before release can be performed.

Indiana

Bond releases have not been an issue. Statutes and guidelines are in place to address the bond release process.

Kentucky

No issues related to bond release. Regulations require submission of "Request for Bond Release Form" and require establishment of postmining land use, success of revegetation, and minimum duration of vegatative cover.

Missouri

Missouri has a set procedure that we have been practicing for 20-years, with some small tweaks on forms and one law change concerning release, which involves contacting the landowner if the land is not owned by the company. We really have not run into any problems. We use a check list to make sure all of the steps are followed. This is for Industrial Minerals; we have not yet released land for Metallic Minerals. The operator generally will consult with the program prior to requesting a release. The operator submits a request for approval of reclaimed land form. And also a copy of the release application and map to the landowner if the land is not owned by the company. The program inspects the site within 15-days of receipt. If the inspector does not believe the site is ready for release, then the inspector will either mail back the application or hand the application back to the company and explain the reason for not approving the release and the company can approach the Land Reclamation Commission for a decision, if they choose. If the inspector believes that the site will qualify for a release then a slide show is presented to the Staff Director for approval. Once the Director approves the release, then bond is provided back to the company.

Nevada

No major issues with release. We have SOPs in both the operational and bond handbooks. The state has guidelines for documentation of reclamation activities for release.

New York
It has not been a real issue in New York. Financial security is released at the time the site has been determined to be reclaimed by the Department. Procedures are in place to ensure that financial security is not released prematurely.

North Carolina
Yes. The operator may request partial or full release from responsibilities of the Mining Act.

North Dakota
There have not been any release issues to date. However, new rules were recently adopted by NDGS that contain more stringent bond release requirements.

Oklahoma
No issue with release. Yes ODM has bond release procedures.

Pennsylvania
Not an issue.

South Carolina
Has not been an issue, once reclamation standards have been achieved the bond is released.

South Dakota
The release of financial assurance obligations has not been an issue for our state. We have procedures in place for releasing reclamation liability and bonds. After a site is reclaimed, we conduct a final inspection of the mine site to ensure compliance with state mining laws and regulations and the terms of the mine permit. We can release a portion of or the entire reclamation bond based on the results of the inspection. After bond release, we can place sites covered under a mine permit into postclosure status. A postclosure bond is submitted to cover care and maintenance costs during the postclosure period. These are usually required only for large scale heap leach gold mines in which long term water treatment is necessary.

Tennessee
None noted. Yes, 50% of bond is released upon initial grading and seeding; final bond release upon proven success of vegetation and drainage control (minimum of two growing seasons).

Utah
Operator is required to complete an application for bond release. An inspection is completed to determine if the site can be released.

Virginia
Release of financial assurances has not been a problem. The requirements for bond releases are addressed by regulation.

Wyoming
We have regulations that define successful bond release, and guidelines for sampling and statistical procedures. For noncoal, bond release may occur five years after final seeding. The main issue that arises is slow establishment of vegetation, primarily due to low precipitation, which can delay bond release. For the most part, bond release is a straight-forward process for noncoal.

Question 7: What is your experience with regard to the availability of surety bonds?

Alaska
Not easily available for a period just after 2008 but more available the last few years. Only well established companies have been able to retain sureties. Smaller companies and Canadian juniors have been known to be required to put up cash.

Arkansas
The availability appears better than it was ten years ago

Colorado
Input from Operators: Reclamation bonds have been in limited availability, large bonds are expensive and small companies have trouble being approved by surety for bond.

Illinois
Over time it appears that aggregate operators are finding it more difficult to attain these types of instruments (more so with smaller operators).

Indiana
Surety bonds are available to non-coal operations.

Kentucky
No reported difficulties or issues from non-coal operations.

Missouri
The smaller startup companies have experienced problems in obtaining a surety bond. We even will provide them with a list of the surety companies we have bond with and the person will say I have contacted that surety and they say they do not issue mine related bonds. Within the last few years Missouri mining companies are looking to get away from sureties as the price for surety bond has increased dramatically. The bigger mining companies have no problem in maintaining a surety bond in fact one company said they have a surety that does not charge them for bond.

Nevada
We are not allowed to refer/recommend surety companies to operators. From what I have heard from industry, it is very easy to obtain a surety and is currently the most economical way to bond.

New York
Over the last decade or so the number of entities willing to write bonds has decreased significantly. It is much more difficult to get a reclamation bond now than in 2000.

North Carolina
Operators with sound financial standing generally have no trouble obtaining reclamation bonds. Newer or less financially secure companies may have difficulty.

North Dakota
There have not been any issues with surety bond availability for noncoal mining, but there are only a very few non-coal mineral mines in North Dakota.

Oklahoma
The availability has been adequate to meet industry needs.

<u>Pennsylvania</u>
While we don't have direct information from surety companies, the coal operators report that it is difficult to get bond coverage and that substantial collateral is required.

<u>South Carolina</u>
Not known.

<u>South Dakota</u>
Most mining companies in South Dakota usually do not have many problems obtaining surety bonds.

<u>Tennessee</u>
Still available to established customers, but somewhat expensive. Difficult to obtain to new customers.

<u>Utah</u>
Most small operators have difficulty qualifying for a surety. They generally put up cash

<u>Virginia</u>
The availability of surety bonds has decreased since 2008

<u>Wyoming</u>
Surety bonds are more difficult to obtain, and more expensive.

Question 8: What are the specific challenges you are facing with respect to financial assurance in your state?

Alaska
Long Term Water Treatment (in perpetuity) and Long Term Maintenance. Mainly disagreement in the bond amount, and indirect cost percentage. Alaska is moving toward standardizing the direct amount methodology.

Arkansas
With limited staff, it is difficult to insure that each instrument remains in effect. Some banks are using the terminology of "Time Deposit" rather than "Certificate of Deposit." The "Time Deposit" is not an instrument, so we have not been accepting them as a bond.

Colorado
A) We need to track automatic renewals to ensure that the bond is not 'expired'. B) Company acquisition where the new company does not assume the previous company's liability, as in Letter of Credit. We need to follow up to insure bond is still in place. C) Self Bonding Rule update is needed for threshold requirement; requires Board approval. D) Management or tracking of our large bond pool adequacies. E) Statewide bond tracking. F) Increased workload due to multiple oversight by state agencies.

Illinois
None. Mining permits are not issued unless the assurance is in hand.

Indiana
No specific changes.

Kentucky
The regulatory maximum bond of $500/ acre may prove insufficent on future instancse of forfeiture.

Missouri
Since the bonding rate has not changed since about 1990, there is at times a lack of adequate bond for the reclamation responsibility left by the company. This is not true all of the time though because there may not be much overburden to move around. We have also allowed nature to reclaim some mine sites and nature does a decent job on some of the sites that we have actually released, without spending very much if any reclamation dollars at all. We have spoken with industry to get an increase in bond, which has not been taken well due to the economy taking a recent blow.

Nevada
Time deposits are acceptable to secure a personal bond, but we have had some issues with the security of the Time Deposit. There have been instances in the past where Time Deposits have been redeemed without BLM approval and we have limited options to recoup the instrument. We have also been approached to accept an insurance policy. To date, no one has submitted an acceptable policy though.

New York
Many small operators are having difficulty obtaining FS. In addition, some operators are having a hard time increasing their FS at the time of permit renewal (typically every 5 years) when we recalculate the FS to account for inflation. At some older sites with limited FS on hand we are facing difficulties reclaiming sites with seized FS.

North Carolina
Some recent bond forfeiture sites have had insufficient funds to reclaim the sites. Also, determining the best bonding strategies to apply to future oil and gas operations.

North Dakota
None at this time

Oklahoma
No specific challenges

Pennsylvania
The biggest challenge is the work load (about 2000 permitted noncoal mines) and lack of funding. Pennsylvania recently enacted regulations intended to provide for the full cost of implementing the program from user fees. The fees include application fees for permitting and annual administrative fees to cover the inspection costs. We are in the midst of the first year of this new fee program.

South Carolina
Struggle to keep bond amounts updated with inflation.

South Dakota
Ensuring that the calculated bonds will adequately cover reclamation and postclosure costs in the event of bond forfeiture. Bonding for perpetual water treatment is especially challenging since it is difficult to project inflation and discount factors and construction and water treatment costs many years into the future. A large heap leach gold mine has recently requested to replace a letter of credit with net worth as a bonding instrument. We do have concerns over the increased risk of converting the letter of credit to net worth.

Tennessee
None noted.

Utah
Cost for the operator.

Virginia
Bond requirements are set by statute, which makes it difficult to change the bond amounts to deal with changing reclamation requirements. We have also seen surety bonds become much more difficult to obtain.

Wyoming
Our challenges lie in coordination of concurrence on bond amounts and holding/releasing bond instruments with other agencies that also have an interest in the bond. The two main agencies we work with in this regard are the BLM and the NRC. We have working agreements with both agencies, but it can be a complex process.

Question 9: What types of innovative approaches are you considering with respect to financial assurance (i.e. segregating risk (short v. long term); use of dedicated trust funds; use of multiple instruments; matching the level of risk to the appropriate mechanism; phased bonding)?

Alaska
Trust Fund managed by the State's Department of Revenue . Alaska is moving toward using trust funds to pay for long term aspects such as water treatment and dam maintenance.

Arkansas
We are looking at a new position in the Legal Division to monitor financial assurance in all of the Department's programs not just the Mining Division

Colorado
a) No innovative approaches of financial assurance because of the risk to collateral for the bond.
b) Use of Phased Bonding for leverage of bond amount relative to mining activities and reclamation costs to reduce immediate bond costs for operator.
c) Slope control management during mining to keep bond amount of reclamation costs low.

Illinois
None.

Indiana
None.

Kentucky
None.

Missouri
Phased in bonding where we would increase the acreage amount in subtle increases over a five year or so time period. Since reclamation responsibility is mainly tied to the amount of overburden that is at the site, we have looked at rate increases tied to the amount of overburden, however that option is not taken well as some people think there should be one bonding rate for the entire State of Missouri.

Nevada
Trust funds are often used by the federal agency for long-term closure costs, but are not allowable under federal regulation for reclamation bonding. Phased bonding is permitted under state and federal regulations. For reclamation bonds, cost estimates are updated at least every three years to determine adequate bond amounts. For trust funds, the investment mix (equities vs. fixed income) is based on how soon funds are anticipated to be needed. Funds needed sooner typically have a higher percentage of fixed income investments. Use of multiple instruments is allowable.

New York
Multiple instruments; bonding only areas proposed to be affected during the permit term; encouraging concurrent reclamation.

North Carolina
Probably not too innovative, but we're planning to allow bonding using these mechanisms: Assignment of Savings Account, Surety Bonds, Bank Guaranty, and Cash Deposits. Also considering the need to increase the bond per acre amount.

North Dakota
Not applicable.

Oklahoma
ODM currently allows phased (incremental) bonding

Pennsylvania
None.

South Carolina
We currently use multiple instruments and phased bonding.

South Dakota
The department currently allows operators to use phased bonding and multiple bonding instruments, especially for large scale heap leach gold mines. We are willing to consider innovative approaches used by other states.

Tennessee
None.

Utah
We do phased bonding and are generally able to adjust the bond based on reclamation completed.

Virginia
See Item 10.

Wyoming
No changes in bonding approach are currently being contemplated.

Question 10: What adjustments to your regulatory program have you undertaken (or considered undertaking) in the area of financial assurance?

<u>Alaska</u>
Standardization of direct cost calculation, use of trust funds.

<u>Arkansas</u>
We will be having future discussions on Letters of Credit and Time Deposits.

<u>Colorado</u>
a) Annual audit of instruments to ensure they remain active for reclamation use if needed.
b) Initiated in our Permit data system for a surety, a check box for verification date so we don't need re-audit before year is up.
c) Considering codifying in rules and regulations percentages for self bonding requirements.

<u>Illinois</u>
Increasing the statutory limit above the $5,000.00 threshold.

<u>Indiana</u>
Consideration given to revising bond evaluation factor sheet.

<u>Kentucky</u>
None.

<u>Missouri</u>
Challenging the corporate guarantee that is currently used by The Doe Run Company; however our attorney advises us that we would not win the challenge. We do inspect each mine site at least once every two years, to help keep reclamation responsibility to a minimum.

<u>Nevada</u>
In the past we have attempted it issue a Nevada IM to eliminate insurance as an acceptable financial instrument for bonding. This was not approved by the State Director. In the future, we would like to pursue a Nevada IM to eliminate Time Deposits.

<u>New York</u>
We are considering revisiting the rationale behind some of our FS calculation estimates. We have also discussed a limited bond pool with the bluestone industry, but have not proceeded to actual discussions on how to implement. It would require legislative action.

<u>North Carolina</u>
Currently in the process of writing rules for the execution of oil and gas operations. Possible increase in the amount per acre.

<u>North Dakota</u>
Not applicable.

<u>Oklahoma</u>
ODM has raised the minimum bond amount. In 2013 the minimum bond is $1,000/acre and in 2014 the minimum bond will be $1,500/acre. No further increases beyond $1,500/acre are anticipated at this time.

<u>Pennsylvania</u>
None.

South Carolina
Requesting to update or increase bond amounts in the law.

South Dakota
Considered increasing the mine license bonding requirement of $500/acre; considered increasing the $2500 maximum for small scale mine permit bonds.

Tennessee
Added Letters of Credit and Certificates of Deposit as acceptable instruments about 3-4 years ago. Eliminated US treasury Bonds and corporate or municipal bonds as acceptable instruments at the same time.

Utah
Have considered rulemaking for long term bonding.

Virginia
We have pending regulatory modifications which would allow the use of Irrevocable Letters of Credit for initial bond requirements.

Wyoming
None.

Non-Coal Survey Contacts

Alaska
Name of Person Completing Questionnaire: Brent Martellaro
Phone Number: 907-456-2558
E-mail Address: brent.martellaro@alaska.gov

Colorado
Name of Person Completing Questionnaire: Barbara Coria/ Tony Waldron
Phone Number: (303) 866-3567 ext 8148/ ext 8150
E-mail Address: barbara.coria@state.co.us, tony.waldron@state.co.us

Illinois
Name of Person Completing Questionnaire: Michael D. Falter
Phone Number: (217)782-9976
E-mail Address: Michael.Falter@Illinois.Gov

Indiana
Name of Person Completing Questionnaire: Kevin Geier
Phone Number: 812-665-2207
E-mail Address: kgeier@dnr.in.gov

Kentucky
Name of Person Completing Questionnaire: Jim Mckenzie
Phone Number: (502) 564-2340
E-mail Address: jameso.mckenzie@ky.gov

Missouri
Name of Person Completing Questionnaire: Bill Zeaman
Phone Number: (573) 751-1312
E-mail Address: bill.zeaman@dnr.mo.gov

Nevada
Name of Person Completing Questionnaire: Doug Siple/Lacy Trapp
Phone Number: 775-861-6636/775-861-6599
E-mail Address: dsiple@blm.gov, ltrapp@blm.gov

New York
Name of Person Completing Questionnaire: Matthew Podniesinski
Phone Number: 518 408-0288
E-mail Address: mjpodnie@gw.dec.state.ny.us

North Carolina
Name of Person Completing Questionnaire: Janet Boyer/ Walt Haven
Phone Number: 919-707-9220 (same)
E-mail Address: janet.boyer@ncdenr.gov, Walt.Haven@ncdenr.gov

North Dakota
Name of Person Completing Questionnaire: Jim Deutsch (based on a telephone conversation with State Geologist Ed Murphy)
Phone Number: (701) 328-2251
E-mail Address: jdeutsch@nd.gov

Oklahoma
Name of Person Completing Questionnaire: Rick Bullard, Bond Accountant
Phone Number: 405 427-3859
E-mail Address: rick.bullard@mines.ok.gov

Pennsylvania
Name of Person Completing Questionnaire: Bill Allen
Phone Number: 717-783-9580
E-mail Address: wallen@pa.gov

South Carolina
Name of Person Completing Questionnaire: Joe Koon
Phone Number: 803-898-1371
E-mail Address: koonjm@dhec.sc.gov

South Dakota
Name of Person Completing Questionnaire: Eric Holm
Phone Number: (605) 773-4201
E-mail Address: eric.holm@state.sd.us

Tennessee
Name of Person Completing Questionnaire: Bruce Ragon
Phone Number: (865) 594-5547
E-mail Address: bruce.ragon@tn.gov

Utah
Name of Person Completing Questionnaire: Daron Haddock
Phone Number:801-538-5325
E-mail Address: daronhaddock@utah.gov

Virginia
Name of Person Completing Questionnaire: *Thomas Bibb, Engineering Manager*
Phone Number: *434-951-6313*
E-mail Address: *tom.bibb@dmme.virginia.gov*

West Virginia
Name of Person Completing Questionnaire: Russ Hunter
Phone Number: 304-926-0490 or (direct dial) 304-926-0499, x1537
E-mail Address: Russ.M.Hunter@wv.gov

Wyoming
Name of Person Completing Questionnaire: Carol Bilbrough
Phone Number: 307-777-6772
E-mail Address: carol.bilbrough@wyo.gov

SOUTH CAROLINA

DETERMINATION OF AFFECTED ACREAGE AND BOND

Company__________________________________ Permit #
/Mine__________/____________________________

The following bond calculation worksheet may be used to establish an appropriate bond for each permitted mine site based upon the acreage approved by the Department to be affected during the life of the mining permit.

Please insert the approximate acreage, for each aspect of the mining operation, that you intend to affect during the life of this mining permit(in addition, please insert the appropriate reclamation cost/acre for each category from the Schedule of Reclamation Costs provided with this application form):

CATEGORY	AFFECTED ACREAGE	X	RECLAMATION COST/ACRE	=	RECLAMATION COST
Tailings/Sediment Ponds	_______ Ac.	x	$ __________/ Ac.	=	$______________
Stockpiles	_______ Ac.	x	$ __________/ Ac.	=	$______________
Wastepiles	_______ Ac.	x	$ __________/ Ac.	=	$______________
Processing Area/Haul Roads	_______ Ac.	x	$ __________/ Ac.	=	$______________
Mine Excavation	_______ Ac.	x	$ __________/ Ac.	=	$______________
Other	_______ Ac.	x	$ __________/ Ac.	=	$______________
TOTAL AFFECTED AC.	_______ **Ac.**				

Temporary & Permanent Sedimentation & Erosion Control Measures:
Divide the **TOTAL AFFECTED AC.** above in the following two categories: a) affected acres that drain into proposed/existing excavation and/or b) affected acres that will be graded for positive drainage (measures will be needed to prevent offsite sediment).

a) Internal Drainage	_______ Ac.				
b) Positive Drainage	_______ Ac.	x	$ 1,500/ Ac.	=	$______________

SUBTOTAL COST: **$______**

Inflation Factor:

0.02 X **SUBTOTAL COST:** $___________ x Permit Life (# years) _________

INFLATION COST:

$______
____

TOTAL COST **SUBTOTAL COST + INFLATION COST =**
$__________________

TOTAL RECLAMATION BOND COST (round down to the nearest $100.00) **=**

$__________________

SCHEDULE OF RECLAMATION COSTS
(Based upon range of $500 - $5000 per affected acre)

COMMODITY CODES: **SG** = Sand and/or Gravel, **Borrow** = Borrow/fill dirt, **CS** = Crushed Stone, **CL** = Clay/Shale,
DS = Dimension Stone, **MI** = Mica, **PE** = Peat, **AU** = Gold, **TI** = Titanium, and **OT** = Other

Type	Tailings/ Sediment Ponds	Stock piles	Waste piles	Plant area/ Haul roads	Mine Excavation
SG, Borrow	$500/ac. (L) $1,500 (FI)	$1,800/ac.	$2,000/ac.	$1,800/ac.	$500/ac. (L) 2,000 (PD)
CS, DS, MI	500 (L) 1,500 (FI)	1,800	2,000	2,000	500 (L) 2,500 (PD)
CL	1,000 (L) 2,500 (FI)	2,500	5,000	5,000	2,000 (L) 3,700 (PD)
PE, AU, TI, OT	1,000 (L) 2,500 (FI)	2,500	3,000	3,500	2,000 (L) 5,000 (PD)

(L) = reclamation to a lake and revegetating sideslopes
(FI) = reclamation by filling in and revegetating
(PD) = reclamation by grading for positive drainage and revegetating

As per the S.C. Mining Act Regulations 89-200b, "For mining operations with affected lands greater than twenty-five (25), the Department may require the operator to prepare a written estimate of the costs of reclamation activities. Cost estimates prepared by the operator may be used by the Department in establishing reclamation bond amounts. The cost estimate shall reflect the customary and prevailing rate for performing and completing all reclamation requirements". If you disagree with the bond amount determined by the bond calculation worksheet, you may submit an estimate of reclamation costs from a third party contractor. Said estimate must be provided within thirty days to the following address:

S.C. DHEC
Bureau of Land and Waste Management
Division of Mining and Solid Waste Management

2600 Bull Street
Columbia, SC 29201

ALL ESTIMATES MUST INCLUDE THE FOLLOWING, AS A MINIMUM:

- FINAL GRADING COSTS PER ACRE
- LIME AND FERTILIZER COSTS PER ACRE
- YEAR-ROUND SEEDING MIXTURE COSTS PER ACRE (from approved revegetation plan in application/permit document)
- MULCH AND ANCHORING COSTS PER ACRE
- ANY OTHER RECLAMATION COSTS NECESSARY TO COMPLY WITH THE APPROVED RECLAMATION PLAN FOR THE SITE IN QUESTION

You will be notified as soon as possible of the mining section manager's final bond determination.