Joint IMCC-EPA Summary Meeting Notes[1]
from the
State/Tribal/Federal Meeting on Mine Placement of Coal Combustion Waste
Williamsburg, Virginia
October 29 and 30, 2002

Opening Remarks

(Greg Conrad, Executive Director, IMCC)

Greg Conrad welcomed attendees and provided some background on the purpose of the meeting. A great deal of information has been shared over the last two years and the group is moving closer to points of understanding. In addition, EPA and OSM are nearing the point where key decisions will have to be made regarding potential federal regulations for mine placement of coal combustion wastes (CCW).[2] In the near future, EPA may be briefing its upper management on the decision. The following particular issues have been identified by the group:

- Should there be a distinction between beneficial use and disposal?
- Do gaps exist in current regulations, given consideration of SMCRA, RCRA, coal mine programs, and non-coal mine programs?
- How should a decision address the relationships between programs within each State (e.g., mining and solid waste programs, coal and non-coal mining programs)?
- How should a decision address the relationship between the two federal programs (SMCRA and RCRA)?
- Prior to any decision making, we need to sit down with representatives of the environmental community, relay the data and findings, and listen to their perspective.

The States held a meeting in Reston, Virginia this summer that focused on these remaining key issues. EPA should leave this meeting with fairly clear picture of where this group stands on these issues. IMCC and the States would like to continue the momentum gained in previous meetings.

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[1] These meeting notes are summary in nature and should be read in conjunction with the meeting materials included on the EPA website.

[2] Throughout this meeting, speakers used various terms to refer to the solid materials generated as a result of the combustion of coal, including: coal combustion waste, coal combustion byproducts, coal combustion products, and coal ash. For ease of presentation, these notes use the abbreviation "CCW" throughout, except in cases where the speaker was making a point regarding distinctions between the terms used. The use of "CCW" in these notes is not meant to imply a preference for the categorization of these materials as "waste."

Part I: Update on EPA's State Minesite Visits
(Bonnie Robinson, EPA Office of Solid Waste)

EPA has completed its program of visits to the following States: Oklahoma, Illinois, Indiana, Pennsylvania, Ohio, West Virginia, Maryland, North Dakota, New York, and the Navajo Nation. The Agency hopes to have the reports from all of the visits completed and posted on the website by the end of this year. EPA appreciates the time and effort contributed by the State participants in setting up and conducting these visits. The Agency has gained valuable information as a result of the visits.

According to IMCC, the States are looking forward to seeing the results of the visits to their sister States. States that hosted visits since the last meeting provided the following feedback on their experiences:

- West Virginia hosted EPA's visit during the first part of this month. The EPA discussion guide was useful in getting all the nuances of the West Virginia mine placement program on paper. It seemed that EPA gained valuable experience as a result of the discussions and the site visits.

- Oklahoma hosted EPA's visit at the end of July. The visit was very productive. On the first day, EPA and the State reviewed permits and the State's program guidelines. On the second day, they toured several placement sites, including active and inactive sites and a site in the reclamation phase. This provided different perspectives on different sites.

- The visit to Maryland included representation not only from the State's mining program, but also from the State's solid waste and NPDES programs. The EPA discussion guide was helpful for the State to gain a broad perspective on the program elements of interest to EPA. The participants visited a hard rock mining site on the first day. On the second day, the group visited a project involving underground injection of flue gas desulfurization (FGD) material at a coal mine and a cogen power facility.

- The New York visit included representation from the State's solid waste program and the division of mineral resources. The participants visited the only minefill site in the State, which is a 70-acre dolomite quarry near Rochester. The State believes that EPA was satisfied with the project and the procedures in place to monitor its performance.

IMCC believes it is key to marry the results from these visits with EPA's continuing regulatory concerns and hopes the insights gained inform EPA's final decision.

Part II: Update on EPA's State Regulatory Program Analysis Reports
(Greg Conrad, Executive Director, IMCC)

EPA, through IMCC, has provided the latest drafts (dated August 2002) of the following two reports:

- Regulation and Policy Concerning Mine Placement of Coal Combustion Waste in Selected States
- Mine Placement of Coal Combustion Waste – State Program Elements Analysis

EPA is still incorporating information from some of the last few State visits, but the reports are essentially final. States should make sure these reports are accurate. Any remaining comments should be submitted to EPA within 30 days before the reports become part of EPA's administrative record. Contact Bonnie Robinson (phone: 703-308-8429; email: robinson.bonnie@epa.gov) to submit comments.

Part III: Update on MRAM Project
(Andy Wittner, EPA Office of Solid Waste)

EPA is in the process of an empirical evaluation of monitoring data from mine placement sites. The Agency appreciates the monitoring data provided by the States participating in this meeting. To date, EPA has conducted preliminary evaluations of eight sites – four in Indiana and four in Pennsylvania. This presentation will show a great deal of detail regarding these eight sites, but EPA has not yet drawn conclusions from the analysis. EPA is not prepared to draw conclusions because the analysis to date covers only a small sample with limited geographic/geochemical representativeness, and the analysis is not even complete for this small sample. Therefore, EPA is presenting its preliminary analysis here, but not offering conclusions based on the analysis.

EPA estimates there are roughly 150 coal mines, plus more non-coal mines, receiving CCW. There are potentially 600 additional coal mines, and maybe 1,000's of non-coal mines, that could use CCW. Therefore, if placement is done protectively, there is a great deal of upside potential for this beneficial use. As a note, unlike mine placement, other beneficial uses of CCW have a host of competitive products. This may explain the general lack of uptrends in these uses.

EPA chose the sites evaluated so far from among some 65 reports from sources including academic institutions, State agencies, OSM, etc. EPA believes the data set is as unbiased as possible because of the variety of sources. EPA encountered certain complexities in analyzing the eight sites, including changes in well placement as mine placement progressed and changes in the water table. EPA also notes that it does not necessarily have all the data available for each site.

EPA presented its preliminary evaluation of the monitoring data for the eight sites. Copies of the presentation slides are included among the meeting materials. EPA discussed in detail the

evaluation of three Pennsylvania sites (Big Gorilla, B-D Mine, and Revloc Refuse Site) with the following overall comments:

- None of the results so far show anything that looks conclusively like an environmental problem at these sites.
- It is tempting to draw a null conclusion based on this, but EPA does not yet have a large enough sample of sites.
- Therefore, it seems advisable to continue the analysis.

The preliminary evaluation of the other five sites does not show anything dramatically different from the evaluation of the first three, so EPA did not discuss the remaining sites in detail.

Meeting participants had the following questions and comments on this presentation:

- Pennsylvania commented that the Big Gorilla evaluation compares an upgradient well to the surface overflow. The State believes CCW has blocked the flow from the pit to the underground mine complex to the surface outfall. A more accurate analysis would look at contaminant loading rates.

- Question: How are the results of the MRAM analysis going to be factored into any regulatory decision? The previous understanding was that EPA's regulatory determination is on a separate track and that the MRAM analysis would take longer. Is completion of the evaluation necessary for an effective administrative record for the regulatory determination?
- Answer: the evaluation should be complete by January 2004 in time for the regulatory determination. The results of the evaluation may be an important factor in the determination, as the issue of whether or not existing practices are protective is critical. It is uncertain, though, what EPA's senior management will view as most critical.

- Question: Is EPA evaluating CCW placement in comparison to the alternatives, such as other fill materials or doing nothing at all?
- Answer: No. The analysis is of the impacts of CCW placement alone, without comparison to alternatives.

- IMCC commented that it appears EPA could use more data to conduct this analysis. If States have concerns about how the evaluation relates to the overall effort or the methodology used to conduct the analysis, they should be sure to articulate those to EPA. (Note: additional discussion of State concerns relating to the MRAM project occurred later in the meeting. See Section VIII, below.)

Part IV: Presentation on Beneficial Use of Dredged Material with CCW
(Andrew Voros, NJ/NY Clean Oceans and Shore Trust)

The NJ/NY Clean Oceans and Shore Trust (COAST) represents a bi-State Legislative committee. Its purpose is to address any environmental or economic issue between the two States – including the major issue, disposal of dredged material from New York Harbor. For eight years, NJ/NY COAST has devoted all of its resources to disposal of dredged materials. New York Harbor generates approximately 4 million tons of dredged materials per year. Due to increases in shipping and in the size of container ships (the largest of which currently cannot enter New York harbor), there are plans to deepen to 50 feet. This process will cost approximately $2.3 billion and generate approximately 150 million tons of material containing trace contaminants.

Due to the sensitivity about interstate movement of waste, NJ/NY COAST started consulting with the Pennsylvania Department of Environmental Protection seven years ago about whether dredged material would be appropriate for abandoned mine reclamation. Ultimately, after one and a half to two years, they decided to do a demonstration project using dredged materials amended with fly ash to remediate a high wall. The goal was to create a monolithic mass of cementitious material with low permeability that expands as it cures. The site selected for the demonstration is not optimal in terms of geographic location (in western Pennsylvania, distant from New York Harbor). The site was selected, however, because of its long history of baseline environmental testing.

The project is a $20 million demonstration. There is a port-side processing facility at which the dredged material is sized and amended with pozzolanic material (fly ash from New York State). The dredged material is 65% water, but 15% amendment with fly ash makes it stand up. The amended material is transported via train to a processing facility at the site. The material is then trucked onto the site, spread, and compacted in lifts to establish original contour.

The site is one with exposed acid generating material. It has been filled using 0.5 million tons of the processed dredged material and 0.5 million tons of amendment (CCW, cement kiln dust, other lime materials). The fill is topped with artificial topsoil material. Part of lift was left unfilled as control site. The project includes extensive monitoring of the dredged material - in-place in the harbor, arriving by rail, and the final pugmill blend. The local community has been involved in every step of the process. Their greatest concern was the potential for using the project as a "cover" for disposing of something else. There is extensive historical monitoring data and ongoing surface water monitoring and ground-water monitoring (including 6 downgradient wells and 12 domestic wells). There have been over 18,000 individual tests, with about 4 detects in the waste itself. No contaminants have been detected in the water monitoring. They also have conducted an extensive geophysical underground profile of the material in place, finding no cracks or fissures, no water moving underneath, and no anomalies. The reclamation permit for this project was written so that the bond covers removal of the material should any impact be detected.

From a cost-benefit standpoint, this project balances maybe a chance of 1 in 10 million risk over 20 years from ground-water contamination versus potential fatalities from falls and drownings and the impacts of acid mine drainage. It is important to emphasize the situational aspect of contaminant hazards.

NJ/NY COAST also is conducting a GIS analysis of dredge sites, AML sites, fly ash generation, and rail connections to identify opportunity sites. Even this demonstration project, which moves dredge material 360 miles, is economically competitive as a means for dredge disposal. More information can be obtained at www.nynjcoast.org.

Part V: OSM Response to EPA's Minefill Regulatory Concerns Document
(Kim Vories, Office of Surface Mining)

OSM has prepared a technical response to EPA's minefill regulatory concerns document. The details of this response are presented in a side-by-side comparison document, which is included among the meeting materials. The point of OSM's response is to clarify the SMCRA approach, which is presented incompletely in EPA's regulatory concerns document and regulatory reports. From OSM's perspective, all of the 30 CFR potentially applies to CCW mine placement, even though there are few places where the regulations clearly mention CCW. In addition to 30 CFR, each State fills in the details with its own regulatory program as needed and OSM has prepared guidance documents, including the recently published technical reference document entitled *Permitting Hydrology, A Technical Reference Document for Determination of Probable Hydrologic Consequences (PHC) and Cumulative Hydrologic Impact Assessments (CHIA) – Baseline Data*.

OSM recommends that EPA delete the SMCRA approach language currently contained in the regulatory concerns document and replace it with the language from OSM's technical response. OSM presented a brief overview of the details of its technical response, as follows:

- Ground-water Monitoring: SMCRA monitoring is permit-specific, based on extensive baseline data and the PHC and CHIA. A Site- and CCW-specific monitoring plan is required.
  - Well Design and Deployment: permit-specific, based on baseline, PHC and CHIA, and operations plan data. The technical reference document identified above contains detailed information on this element.
  - Parameters: determined on a site-specific basis. Analyses must use standard methods.
  - Frequency: determined on a site-specific basis. Data must be submitted every three months.
  - Duration: until phase III liability, a 5 to 10 year minimum and all reclamation requirements achieved and all State and Federal water quality requirements in compliance.

- Performance Standards: SMCRA standards include, but are not limited to, the following: minimize disturbance, prevent material damage, protect or replace water rights, support post-mining land use. This approach allows operator and regulator creativity.
  - MCLs and Non-degradation: SMCRA requires compliance with all State and Federal water quality laws. Also, in preparation for this meeting, OSM has prepared a detailed response to the following questions: Does SMCRA provide for/require groundwater standards? If so, where are they in the regs. and/or statute? What, in fact, are they? How do they line up with MCLs (as opposed to effluent limits for surface water)? This response is included among the meeting materials.

- Prohibitions: under SMCRA, a permit cannot be approved until the regulatory authority finds that hydrologic performance standards can be met.
  - Aquifer Avoidance: under SMCRA, a permit cannot be approved until the regulatory authority finds that hydrologic performance standards can be met.
  - Unacceptable Ash Characteristics: site- and CCW-specific information is required. SMCRA relies on the expertise of the regulator in determining what characteristics are unacceptable.
  - Location Restrictions: SMCRA requires extensive detailed baseline information on the environmental resources within the proposed permit area.

- Permitting and Planning: SMCRA includes a comprehensive program.
  - Acid-Base Accounting: this element is not included in existing RCRA regulations. SMCRA, however, requires it and requires measures for protection from acid- and toxic-forming materials.
  - Deed Recordation: RCRA regulations require this because RCRA disposal areas change land use potential. SMCRA requires full support for future land use.
  - Baseline Monitoring: baseline monitoring requirements under SMCRA are extensive.

- Fugitive Dust Control: this element is not included in existing RCRA Subtitle D regulations. SMCRA, however, requires it for certain mines and can require it for all other mines.

- Risk Assessment: this element is not included in existing RCRA regulations. Under SMCRA, however, a permit cannot be approved unless it is demonstrated that the project will not pose a risk.

- Public Participation: SMCRA requires public participation.
  - Monitoring Information: public availability of monitoring information is not required under existing RCRA Subtitle D regulations. SMCRA, however, requires it.
  - Citizen Suits: SMCRA provides for citizen lawsuits.

- Corrective Action: SMCRA requires corrective action.

- Post-closure/Post-reclamation Care: EPA's regulatory concerns document suggests care should continue through the time period for which effects may be reasonably expected. However, 25 years of SMCRA and 20 plus years of CCW research demonstrate that impacts may NOT be reasonably expected after Phase III bond release.

Based on this comparison, observations from projects in the field, and research coming in, OSM believes there is no problem with mine placement of CCW. OSM has been incredibly impressed with the State programs in their handling of all the details that are merely concepts in 30 CFR.

Meeting participants had the following questions and comments on this presentation:

- EPA commented that the characterization of RCRA in the regulatory concerns document is based on a potential rule making that has yet to occur. For example, while existing Subtitle D regulations do not cover fugitive dust controls, EPA could propose such controls in a new rule (and has, for example, in the proposed cement kiln dust rule). The side-by-side comparison, however, is very helpful.

- In addition to the points mentioned in the OSM presentation, it is not possible to compare siting requirements under RCRA with those of SMCRA because SMCRA sites are, by definition, locations where coal is present.

- In addition to the letter of 30 CFR, OSM has an oversight role in that, if a state program is not sufficient, they can come in to assist.

- Question: If we could establish a level of trust and understanding that States will continue to work with OSM to address problems, then could an additional regulatory regime under RCRA be avoided?
- Answer: EPA has demonstrated a willingness to address issues in that way (for example, in the oil and gas sector). The Office of Solid Waste is not strictly limited to issuing regulations; it also has the role of promoting environmentally protective beneficial uses. The Agency is open to ideas.

Part VI: State Responses to ~~to~~ EPA's Minefill Regulatory Concerns Document

In July, a working group from among the State participants spent two days discussing EPA's regulatory concerns document. The working group agreed that the best response would be to address four key areas that capture the essence of the debate. To this end, members of the working group prepared four draft documents, which are discussed separately below. These are working draft documents, and have not been reviewed by all of the State participants yet.

Matrix of State Regulatory Components (SMCRA and RCRA) (Dan Wheeler, Illinois and Craig Kennedy, South Carolina)

Dan Wheeler and Craig Kennedy presented a working draft regulatory matrix and a discussion outline explaining the matrix. These draft documents are included among the meeting materials. In terms of Federal regulatory citations for SMCRA and RCRA, the result is similar to OSM's side-by-side analysis. The matrix, however, includes citations to two States' regulations, using Illinois as an example of State coal mine regulations and South Carolina as an example of State non-coal mine regulations. The presenters emphasized that the matrix is an initial analysis by two individuals and requested comments.

Meeting participants had the following questions and comments:

- EPA commented that the Federal RCRA citations shown are those applicable to municipal solid waste landfills. EPA has provided those citations as examples of the type of regulatory language that might be included in a RCRA regulation for mine placement, if one were proposed. A proposed RCRA regulation, however, is not a certainty and might also be different from the municipal solid waste regulations, particularly in terms of triggers. In either case, it would be misleading to construe these citations as currently applicable to mine placement.

- IMCC asked for reactions from EPA and OSM. Can we/should we use this document? Is it useful? Would it be helpful for other States to fill in the matrix with citations to their individual regulations?
- One State commented that their responses to the discussion guide from EPA's State visit included the applicable regulatory citations. It might be helpful, however, for those States that EPA did not visit to fill in this matrix.
- Another State commented that some program elements are handled on a site- or permit-specific basis, and there is no particular regulatory citation specific to these elements. That might lead someone reviewing the matrix to believe there is a gap in program coverage for a particular State when there really isn't one.
- Another State commented that the addition of more State citations would not resolve the basic issue of differences between the RCRA and SMCRA regulatory approaches.
- EPA commented that the matrix has great visual impact, but it begs the question of the substance and detail behind each citation. From this standpoint, the OSM side-by-side analysis is more useful. There is no danger in adding States to the matrix, but the result might not be persuasive.

Beneficial Use Versus Disposal (Susi Ferguson, Texas)

Susi Ferguson presented a working draft document outlining and describing beneficial uses of CCW at mine placement sites. This draft document is included among the meeting materials. The presenter explained that the basic concept behind the document is that an application should be considered beneficial use, as opposed to disposal, when CCW is substituting for a material that would otherwise be used, with no additional environmental impact. The purpose of the document is to define a segment of beneficial uses that the States believe do not require additional regulation aside from the existing regulatory "safety net." The categories of beneficial use covered in the draft document are the following:

(1) On-site construction applications: where CCW is used as a substitute for cement.
(2) Soil stabilization: where CCW is used to reduce shrink-swell (e.g., in road base).
(3) Soil amendment/acid mine drainage: where CCW is used as a substitute for agricultural lime or as an amendment to neutralize coal refuse.
(4) Structural fill/compaction: where CCW is used as a substitute to prevent underground mine subsidence, not necessarily for its pozzolanic properties, but for its soil/aggregate properties.
(5) Ramp advancement: where CCW is used as a substitute to construct ramps in active mine pits.
(6) Approximate Original Contour: where CCW is used as an alternative source of reclamation fill instead of spoil/overburden in cases of shortage.

Meeting participants had the following comments:

- One State suggested that item number 6 should be entitled "use as a non-toxic fill," rather than approximate original contour.

- EPA commented that, in the May 2002 Regulatory Determination, it decided additional regulation was not needed for the large scale non-minefill beneficial uses primarily because these uses generally involve incorporation into a product or encapsulation. EPA does not need to be convinced that there are benefits to minefilling; the Agency recognizes the subsidence, acid mine drainage, and contouring benefits. For minefilling, particularly as you move to the final three or four categories you've defined, the question remains as to whether there are environmental concerns. If there are potential problems, EPA would balance the environmental impacts versus the benefits. If the potential problems are being adequately addressed, there should be no disruption of the beneficial uses. Also, EPA, as part of its overall regulatory deliberations and determinations regarding CCW, is interested in knowing how it can help the States develop meaningful and appropriate incentives for the environmentally protective beneficial use of CCW, especially with regard to State-initiated or -sponsored activities.

Jurisdictional Framework and Diagram (Mike Menghini, Pennsylvania)

Mike Menghini presented a working draft document outlining the State jurisdictional and regulatory framework concerning CCW placement and utilization. This draft document is included among the meeting materials. The document identifies the regulatory authorities that are generally associated with each of the following types of CCW placement:

- Active coal sites,
- Abandoned mine lands (AML),
- Non-coal sites, and
- Beneficial uses.

Meeting participants had the following questions and comments:

- EPA believes it has a a pretty clear picture of State-Federal oversight of active coal sites, but is still unclear about AML sites and non-coal mines.
- Regulation of AML sites is discussed in detail as part of the next presentation.
- For non-coal mines, federal SMCRA doesn't apply, but there is usually a State regulatory program that applies. This may be either a State SMCRA-like program for non-coal mines (as in Pennsylvania) or a separate permit from the State solid waste authority for CCW disposal (as in Virginia) on a site permitted by State mining authority. Other States offered the following examples:
  - In Oklahoma, the mining authority has jurisdiction over non-coal mine placement, but will not issue a permit until the site has all appropriate permits from the State's water and air authorities.
  - In Montana, there is shared regulatory jurisdiction between the mining and solid waste programs.
  - The West Virginia solid waste act exempts mining sites because they are already under the jurisdiction of the mining program.
- EPA also asked about the regulation of abandoned non-coal mines. The general response was that this varies from State to State. For example, in South Carolina, if there is an abandoned mine site not covered by mining authority, the operator must characterize the CCW. Unless the CCW characterizes as inert fill, the placement is regulated as industrial solid waste disposal. Oklahoma has one site where no mining ever occurred and this site is permitted under a non-coal mine permit.

Placement of Coal Ash at Abandoned Mine Lands (AML) Sites
(Bruce Stevens, Indiana)

Bruce Stevens presented a working draft document describing the use of CCW in reclamation of AML sites. This draft document is included among the meeting materials. The AML program is under Title IV of SMCRA, while active coal mines are under Title V. The two programs have very different purposes. Title IV covers sites that were abandoned or left in an inadequate reclamation status prior to 1977. Title V regulates post-1977 sites to make sure these sites don't

become like the abandoned Title IV sites. Title IV is funded by a tonnage fee on coal that is collected by the Department of the Interior, then distributed to the States for use in reclaiming AML sites. While the purpose of the two programs is different, AML projects often employ very similar controls to active mine sites. The design of AML controls, however, is much more site-specific, dependent on the specific use. Also, the implementation of the AML program varies from State to State.

The AML program has been widely recognized as the best "white hat" program in the nation, and has done more good than any other program in terms of environmental remediation and public safety. There are a large number of sites, over 5,000 miles of streams affected by acid mine drainage, and over 400,000 acres subject to subsidence. The program incorporates a clean streams program that involves local grassroots efforts. Considering all the good that has come out of the AML program and the fact that there are really no other materials available to use in remediation, it is critical for this group to cover the program in its discussions. There is a real concern that there could be a disincentive for the use of CCW that would threaten the viability of AML reclamation, if CCW is regulated too tightly.

Meeting participants had the following questions and comments:

- Question: where CCW is placed on an AML site with no remining, does OSM have oversight of State regulatory authority?
- Answer: OSM has oversight for State AML programs, so there would be consultation on AML projects.

- States had the following comments about the design of their AML programs:
  - In Indiana, either the State AML staff designs a remediation project or a coal mine operator proposes something for an adjacent AML site. In most case, once the design is done, it is put out for competitive bid. A coal mine operator or electric utility may come in and complete a project at low cost if it is beneficial for them.
  - In promulgating its State CCW regulations, the Illinois EPA exempted the AML program because they recognized that the program tries to make a bad situation better. Still, AML projects often apply similar controls to those required under the active mine program.
  - In West Virginia, AML projects have to go through a NEPA-type procedure, involving other State agencies.
  - North Dakota has some AML sites that are permitted as landfills and regulated by the State Department of Health, which is a bit unique. Also, there are some grouting sites that are using CCW. The State's mining program applies controls to these, especially where there are concerns about groundwater quality. The grout mixes are approved by the Department of Health.
  - In Pennsylvania, almost all active sites are actually AML sites, but the AML reclamation is accomplished as part of an active mine permit (i.e., remining).
  - Ohio's beneficial use program covers both active and AML sites.

- In Maryland, reclamation of abandoned non-coal mines is regulated under the ground-water permit program. Reclamation of abandoned coal mines is covered under the SMCRA Title IV AML program.

Part VII: Discussion of EPA's CCW Regulatory Development Plans

From the perspective of IMCC and the State representatives, this process has reached a crossroads. The States have provided a great deal of information, including monitoring data, site visits, regulatory reports, an outline on positions, and the four working draft documents discussed here. This leaves the States with the following questions and concerns:

- The States are uncertain what more EPA wants from them, but would like to know. Is there value in continuing to meet? If so what would be the topic of discussion?
- The States are more convinced than ever that the existing process is adequate. If this is not the case, what would be the most effective way for the States to communicate their position? By specific issue?
- The States do not want to receive an urgent information request six months from now that is difficult to respond to in a timely manner or to hear about EPA moving forward with a decision without the opportunity to be informed of the direction of that decision.
- The States are aware of the four issues identified in the Clean Air Task Force/Hoosier Environmental Council letter to Marianne Horinko. Is there an additional list of issues important to EPA?

EPA responded to these questions and concerns as follows:

- EPA appreciates the useful products IMCC and the States have provided.
- Although the Agency may come back to the States with issues/problem areas, it does not mean the Agency does not recognize the potential benefits of mine placement.
- There are a number of analytical steps EPA still needs to complete. These include:
  - Finalizing the State Regulatory Program Analysis Reports, incorporating information from the most recent State visits and any outstanding State comments.
  - Additional work on the MRAM project, including a determination of how much additional data and information is needed to complete the analysis.
  - A meeting with the environmental community to further discuss their concerns. EPA's inclination would be to include OSM and IMCC in this meeting.
  - EPA would welcome additional information regarding regulation and environmental impacts of non-coal mine placement.
  - EPA retains an open mind about efforts to increase environmentally protective beneficial use of CCW and would welcome ideas in this area.

The mention of a meeting with the environmental community prompted additional discussion, which included the following points:

- Question: could the meeting include State environmental groups that have been supportive of State reclamation programs?
- Answer: Yes.

- Question: Are the environmental community's issues primarily related to process/public involvement or to technical standards?
- Answer: Both, but it is most important to get their feedback on what technical standards they would like to see, based on the information that is available about existing standards.

- It will be important to set out what the agenda and discussion points are going to be for such a meeting in advance so that participants are prepared to discuss the issues at hand.

- It was noted that industry has requested representation at past meetings as well. A proposal was made for a sequential meeting: one day involving the environmental community, one day involving the industry, and one day of follow-up among the State and Federal regulators.

Part VIII: Next Steps

Key Next Steps

The following were identified as key next steps:

- *States should comment on EPA's draft site visit reports and discussion guides.*

  The final reports from the States visited should be available on the EPA web site by the end of the year. To the extent that States that were not visited want to respond to EPA's discussion guide, it would be welcomed.

- *The State participants should finalize the working draft documents presented here.*

  For the final three documents, comments should be sent to the authors within 30 days after these meeting notes are published. For the second document (beneficial use versus disposal) there may be a change in format, so that document may require a second iteration of comments after the first revision. There was some discussion of the first working draft document (regulatory matrix). The addition of regulatory citations from additional States might not be the best use of time, but the Federal RCRA and SMCRA citations should be included in the side-by-side analysis prepared by OSM. It was proposed that the regulatory matrix be merged with the third working draft document (jurisdictional framework).

- *Set up the next meeting to include the environmental community.*

  This meeting should be arranged for sometime after the start of next year. The agenda should be developed in advance and State attendees identified to make sure there is representation (regional, SMCRA, RCRA, coal, non-coal) without being uncomfortably large. Should this be a 3-session program (i.e., one session each for the environmental community, industry, and State and Federal representatives)? Make sure we give comment and finalize state regulatory documents.

Discussion Issues

IMCC presented a list of the issues likely to be raised at the next meeting. The first four of these are from the Clean Air Task Force/Hoosier Environmental Council letter to Marianne Horinko. The purpose of this list is not to limit the agenda for the meeting, but to prepare for what might be discussed. The list is as follows:

- *Placement of CCW in ground water*
- *Ground-water monitoring*
- *Post-closure monitoring, financial assurance, and corrective action*
- *Lack of restrictions for post-reclamation use of property*
- *Imbalance among State programs*
- *Acid-forming materials and acid mine drainage*

  There was further discussion of the first issue, placement in ground water. This issue is of concern to EPA, particularly given the presence of this factor at the sand and gravel damage case sites. EPA would like some response to the question of why the problems that occurred at those sites might not happen at coal mine sites or sites under current regulations. OSM noted that it presented a discussion on a response to environmental concerns in a paper presented at its Technical Interactive Forum on "Coal Combustion By-Products and Western Coal Mines" in Golden Colorado in April of 2002. This document is included among the meeting materials. It would also be useful to receive a response from State solid waste programs and the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). A format for such response might be to analyze the damage cases as hypotheticals, and show how a given program would evaluate such a proposed scenario and prevent similar damage.

MRAM Concerns

There was also additional discussion of State concerns regarding the MRAM project, including the following topics:

- *How do you anticipate using the data in the regulatory determination process?*

The States were concerned about conflicting information on the timing and track of MRAM with regard to the regulatory determination. EPA clarified that further discussions at EPA would take place regarding the future MRAM analyses, the timing, and its use.

- *The States have the following "conditions" for providing additional data: they need to understand (1) how the data will be used, (2) how it will be analyzed, and (3) their role in determining its use, the methodology for analysis, and the conclusions drawn from it.*

  Based on the presentation summarized under Part III, above, States are concerned about what the project is looking at. Specifically, is the analysis using the right parameters and comparisons, given the concerns? For example, some of the parameters analyzed (sulfate, iron, aluminum) can be mining-related, not ash-related. There are concerns that conclusions are being drawn without looking at the big picture of the analysis, that raw data is being presented without an analysis, and that the methodology is not clear. States would like some input on how the data is interpreted, so the selected sites are analyzed in a complete manner and based on information from those familiar with the sites. The data need to be evaluated in a manner that's defensible. EPA responded that these comments are clear and well taken, and committed to providing more information to the States on the MRAM project.

<u>Non-Coal Mine Concerns</u>

There was also discussion of how to best address non-coal mine concerns. Suggestions included:

- *An expanded matrix of regulatory citations specific to the non-coal sector.*
- *A side-by-side analysis for non-coal regulations similar to that prepared by OSM.*
- *A process of benchmarking or review of regulatory information.*
- *A technical guidance document or demonstration of equivalent performance standards to those contained in the Industrial D guidance or some other Federal guidance.*
- *A focus on several key issues.*

  EPA responded that its State Regulatory Program Analysis Reports include review of non-coal mine regulations and States should review and comment on these sections of the reports. It also would be helpful for States to evaluate the non-coal mine (sand and gravel pit) damage cases as discussed above under placement in ground water – analyze these cases as hypotheticals, and show how a given non-coal regulatory program would evaluate such a proposed scenario and prevent similar damage. To this end, EPA committed to providing the States detailed information on the sand and gravel damage cases.

Remaining EPA Concerns/Issues

Finally, the States want to understand EPA's primary concerns in the following specific areas:

- *Risk assessment*
  - Question: RCRA Part 258 does not include risk assessment, so what brought it up in this case and is this an element likely to be added for CCW mine placement?
  - Answer: If EPA decides to promulgates a regulation, it will likely be an element.
  - Question: What type of risk assessment is EPA contemplating in its regulatory concerns document? The PHC and CHIA performed under SMCRA can be considered a risk assessment, even though they are not called that. But they are not, in a strict sense, what EPA calls a formal risk assessment. Therefore, would risk assessment be a formal (potentially expansive and expensive) process that involves a great deal of toxicology and modeling or the type of risk assessment that already occurs under the PHC and CHIA?
  - Answer: The Office of Solid Waste would likely defer to the Clean Water Act to control impacts to surface water and focus on ground-water impacts. Therefore, this should be a part of what is already done under SMCRA. The assessment should consider both CCW characteristics and site characteristics and determine whether key constituents present in CCW would adversely impact ground water.
- *Material damage*
  - Question: Does it trouble EPA that there's no specific definition of this SMCRA concept, but that it is an element of analysis interpreted on a case-by-case basis?
  - Answer: The environmental community views this concept as vague and confusing. We should discuss this further with them.
- *Post-closure care*

  EPA commented that the Agency's decision on this depends on the evaluation of whether up front planning is sufficiently protective. It may be the case that if a project is designed to correct a problem and there is no potential for long term issues, post-closure care becomes less of an issue. If, however, a remediation project involves something that is long term in nature (e.g. AMD treatment), an alternate means of financial assurance beyond the SMCRA bond might be required. EPA would like input on why this should be viewed from a solid waste perspective versus a reclamation/remediation perspective. Also, if there's going to be a long-term groundwater monitoring program, should it be done separately from SMCRA program, allowing that bond and permit to terminate?

- *Monitoring*

  There was no additional discussion of this issue.

Action Items

- EPA, IMCC, and OSM will plan the next meeting, to include the environmental community, for after the first of the year.
- The States have one final opportunity to review EPA's State Regulatory Program Analysis Reports.
- States will have the opportunity to examine all of EPA's State visit reports and discussion guides.
- States that were not visited are welcome to prepare their own responses to the discussion guide.
- The States will finalize the working draft documents presented here before the next meeting.
- EPA will provide additional information on the MRAM project.
- EPA will make available detailed information on the sand and gravel damage cases.

Meeting Materials available on EPA's web site at
www.epa.gov/epaoswer/other/fossil/index.htm:

- Meeting Attendees
- EPA's MRAM Presentation Slides
- OSM's Side by Side Comparison of RCRA to SMCRA
- OSM's Response to Questions Regarding Ground-water Standards Under SMCRA
- States' Working Draft Regulatory Matrix
- Discussion Outline for States' Working Draft Regulatory Matrix
- States' Working Draft Description of Beneficial Uses
- States' Working Draft CCB Placement and Utilization Jurisdictional Framework and Diagram
- States' Working Draft on Placement of Coal Ash at Abandoned Mine Land Sites
- OSM's Response to Environmental Concerns