APPENDIX

Mountain Top Mining: New Challenges and New Opportunities

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Synopsis

§ MTM.01. Introduction ................................................................. 444
§ MTM.02. Historical Perspective and Useful Precedent .......... 445
[1] — Impacts ............................................................................. 448
§ MTM.03. Increasing Regulatory Scrutiny of Activities .......... 449
[1] — Litigation Developments .................................................. 449
[2] — EIS Developments ........................................................... 450
[3] — Evolving Regulatory Programs Affecting Other Industries ................................................ 452
[a] — Public Participation ......................................................... 452
[b] — Cumulative Impacts ........................................................... 452
[c] — Compensatory Mitigation ................................................ 453
[d] — Superfund “Brownfield” Program Precedent .......... 453
§ MTM.04. The Socio-Economic Benefits of Mountain Top Mining Activities ........................................... 454
§ MTM.05. Planning Process Model Based on Environmental Practices in Other Industries ............................... 456
[1] — Initial Survey ................................................................. 457
[2] — Scoping Analysis ............................................................... 458
§ MTM.06. Conclusion ................................................................. 459
§ MTM.07. Table 1 .................................................................................. 461

1 Editor’s Note: Presented at the 24th Annual Institute, 2003.
§ MTM.01. Introduction.

The mining industry in the Appalachian region has suffered through numerous challenges in recent years. Not only has it been rocked by economic hardship caused by an influx of cheap western coal into eastern markets, but it has also been forced to respond to complex litigation and regulatory developments that threaten to impose new and expensive environmental requirements on the coal mining industry. Judge Haden’s recent court decision in Kentuckians for the Commonwealth, Inc. v. Rivenburgh, though reversed on appeal, heralds a sea of change in environmental requirements that is gaining momentum and forcing fundamental changes in well accepted practices that have been in place for decades. Further, the generic Mountain Top Mining Valley Fill Environmental Impact Statement (MTM EIS) to be finalized in 2004 by state and federal agencies, outlines an ambitious environmental regulatory program that ultimately will change the way surface mining is conducted. Given these new developments, it is incumbent on the mining industry to take a fresh look at the changing regulatory scheme, look to relevant practices in other industries and identify proactive approaches that will allow the coal mining industry to survive and thrive in the swiftly changing regulatory climate. This article reviews some of the recent regulatory and legal developments affecting the mining industry and focuses on how these initiatives can be used not only to add value, but also serve as the catalyst for prosperity and growth.

Drawing from projects performed for coal companies and other industries, this article explores how positive environmental initiatives and other recognized land use planning concepts can be added to a coal mining development project to provide added economic value and tangible “social benefits” to the project sponsors and surrounding communities that not only meet Haden type tests, but will also satisfy evolving regulatory requirements.

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§ MTM.02. Historical Perspective and Useful Precedent.

To put the issues discussed in this article in perspective, it is important to take a quick look at the history of surface mining and the evolution of methods.

Coal was first discovered in Virginia in 1701, but the first recorded coal production did not occur in the United States until 1748. Kentucky was one of the first states to produce coal, with production beginning in 1750. By the end of the 1830s approximately 10,000 tons of coal was being mined in Kentucky each year. The first steam powered shovels appeared at the mines in 1877 and by 1879 the number of tons of coal produced in Kentucky topped 1 million. Federal regulation of the mines began in 1880 with the Mine Ventilation Law and the Miner Pay Law of 1890. By the end of the 19th Century, the coal industry had begun to mechanize mines and large machines were introduced to undercut coal beds.

World War I brought a large increase in the demand for coal and in 1914, 20.3 million tons of coal was produced in Kentucky. In 1918, pulverized coal was being fired in electric power plants for the first time. In 1920, the same year the Federal Mineral Leasing Act became effective, some of the first large scale mining of coal was conducted in western Kentucky, using the same shovels that had helped to build the Panama Canal. This continued until the 1930s when walking dragline excavators were developed along with auger surface mining in the 1940s. World War II pushed the demand for coal even higher and in 1940 over 72 million tons of coal were produced in Kentucky for the war effort. In 1942 Kentucky enacted its first state water contamination legislation. As mobile equipment became larger and more maneuverable, more yardage could be moved for less money and areas disturbed for mining became larger. In the 1960s and 70s, large draglines became commonplace in the gently rolling terrains of west Kentucky, Ohio, Pennsylvania, and the mountain tops of the Central Appalachian region.

During the 1960s, coal production in Kentucky rose to over 100 million tons and state surface mining legislation was enacted. Surface coal mining boomed in the early 1970s following passage of the Coal Mine Health and Safety Act of 1969 and the rising coal prices stemming from the Organization of Petroleum Exporting Countries (OPEC) oil embargo. The
environmental impacts associated with large-scale surface mining activities resulted in the passage of the federal Surface Mining Control Reclamation Act of 1977 (SMCRA).³ It is important to note that exemptions from the approximate original contour requirement of SMCRA have been in place since its passage. Many have argued that it was the intent of Congress to specifically allow exemptions, not only to benefit coal production, but also to add benefit to the economy by creating developable land after mining activities are completed.⁴ Section 515 of SMCRA specifically authorizes post-mining land use (PMLU) at mountain top mine sites if the PMLU constitutes an equal or better public use.⁵ Though this exemption has been variously interpreted, it does establish a workable regulatory mechanism for allowing innovative post-mining land uses to be approved and the criteria established for post-mining land use approval is entirely consistent with the alternative land use and planning concepts suggested in Sections MTM.04 and MTM.05 of this article. The approval criteria set forth in this section provide a means of satisfying evolving regulatory regulations suggested by the Haden decision and likely to be mandated by the generic MTM EIS and ensuing regulatory programs.

The environmental community might argue that the equal or better use is to leave the land in its natural condition. But one only needs to travel the roads of central Appalachia to observe the extraordinary efforts engaged in by residents and property owners to create developable land. Frequently along new four-lane highways, developers are creating large cuts akin to surface mining and leaving tremendous high walls in an attempt to create

⁴ See Post Mining Land Use: Exceptions to Approximate Original Contour Requirements for Mountain Top Removal Operations and Steep Slope Mining Operations, Office of Surface Mining Reclamation and Enforcement, October 1999, p 3-4.
⁵ Section 515(e) of SMCRA, 30 U.S.C. § 1265(e), states that approved mountain top mining operations may be exempted from returning the mountain to approximate original contour, “so as to render the land, after reclamation, suitable for an industrial, commercial, residential, or public use” which is “deemed to constitute an equal or better economic or public use.” 30 U.S.C.A. § 1256(e)(West 2005). Section 515(c) provides a similar exception for surface mining operations.
flat areas that can be developed. Mountain top mining creates identical opportunities for development as a byproduct of the mining process. By doing so, the mining industry may be able to not only satisfy emerging regulatory programs, but also provide improved economic returns to the owner and lessors of the property where mining operations occurred, and improved options for development to the host community and its residents. This concept of encouraging post-mining land use planning and integrating it into the mountain top mining process is discussed in Sections MTM.04 and MTM.05.

After the passage of SMCRA, the mining industry began to adapt to the new requirements. The U.S. Clean Coal Technology Demonstration Program was established in 1983, providing $2.5 billion dollars in federal matching funds in 1983 to assist the private coal industry in efforts to develop and demonstrate clean coal technologies. Many had said that the SMCRA reclamation would be the death of surface mining, especially in the Appalachian Mountains. As it turned out, over the past 22 years SMCRA has had a positive effect on the mining industry by encouraging larger scale operations and mountain top operations in particular. Several federal agencies funded research on mining methods and actually helped to establish more efficient surface mining practices. By 1988, Wyoming had surpassed Kentucky as the leading coal producing state in the United States.

The 1990s saw many publicly funded projects. Examples of PMLUs indicate the creation of elk habitat and the reintroduction of elk into 14 Kentucky counties on previously mined lands in 1997 by the Kentucky Fish and Wildlife Commission; the development of recreation areas, sport facilities, federal buildings, industrial parks, mixed recreation, and residential areas. The vast majority of these projects involved after the fact retrofitting of mine sites with little or no planning. Nonetheless, the scores of land use options that resulted from this effort established a strong track record of compatible land use that can now be used by the coal industry to their advantage. The proven land uses at sites can now be incorporated into PMLU plans to not only justify permits, but minimize environmental impacts and maximize social benefits after the mining operations at these sites are completed. Table 1 at the end of this article identifies some of the numerous post-mining land use projects that have been built following operations.
During the current decade, emerging regulatory initiatives have focused on mountain top mining methods in even greater detail. Most in the coal industry involved in mountain top mining realize that significant adjustments in the process must be made to deal with the lasting impacts of the litigation and emerging regulatory requirements that emphasize the need for alternative environmental impacts analysis. The MTM EIS will require much more attention to be paid to the proposed post-mining land use as an integral part of the permitting process so that environmental impacts will be reduced and social benefits maximized. We have now reached the point where it might be said that the “end” land use must be developed in some fashion to justify the mining “means” to the regulatory agencies that issue permits, and an increasingly aware and skeptical public.6


It is useful to put impacts in perspective.

According to the Kentucky Transportation Cabinet, the acreage disturbed for roadway right of way in the state of Kentucky in 2002 was 251,324 acres. This is roughly comparable to the acreage disturbed by mining operations. According to the Office of Surface Mining, the surface acreage disturbed for mining in Kentucky in 2001 was 251,363 acres with 1,687,820 acres permitted for underground operations. For the same year, West Virginia had surface disturbances of 185,764 acres with 288,463 acres permitted for underground operations.

Mining disturbs only one-quarter of one percent of the United States’ land surface.

According to the Environmental Impact Statement, in a 12 million acre study area including 59,000 miles of streams, only 6.8 percent of the acreage has been or could be affected by activities.

Twelve miles of headwater streams, or only two percent, have or will be directly impacted by mountain top mining.

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6 A Table of Post Mining Land Use Projects is included at the end of this article.
Though the impacts associated with activities should not be minimized, by putting it in perspective with other activities, it is clear that impacts are not necessarily unique or more significant that those resulting from other industrial activities.

§ MTM.03. Increasing Regulatory Scrutiny of Activities.


The Haden decisions, which are viewed by some as resulting from poorly defined terms rather than establishing significant legal precedent, have nonetheless forced the mining industry to re-examine many practices for disposal of fill materials. Perhaps engineers share some of the blame for these rulings, for their identification of the excess dirt and rock fill material created during construction projects as “waste.” Unfortunately, this term was carried over to surface mining and used to refer to all material not necessary to backfill disturbed areas. The amount of fill material created increased as mountain top mining became more prevalent and the need for fill areas increased. Of necessity these fills were located in the extreme elevations of watersheds and eliminated those drainage channels at those elevations while creating constructed drains that equaled or exceeded the footage of the original drains. The drainage areas that were filled were termed streams, giving the mistaken impression that the mining industry was wantonly filling in rivers and creeks all over Appalachia.

Judge Haden has thrown the coal industry into a quandary. In his May 8, 2002 decision in Kentuckians for the Commonwealth, Inc. v. Rivenburgh, (commonly referred to as Haden I) Judge Haden ruled that, “§ 404 fills may not be permitted solely to dispose of waste.” Judge Haden enjoined the U.S. Army Corps of Engineers (USACE) defendants, “from issuing any further § 404 permits under § 404 of the Clean Water Act (CWA) that have no primary purpose or use but the disposal of waste.” Also specifically enjoined is the “issuance of mountain top removal

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8 Id. at 946-947.
overburden valley fill permits solely for waste disposal under § 404 of the Clean Water Act.”

Judge Haden’s clarifying opinion issued on June 17, 2002, (commonly referred to as Haden II) reinforces his prohibition on the placement of fill material in drainage areas:

The Corps Defendants are enjoined from issuing any further § 404 permits within the District that have no primary purpose or use but the disposal of waste, except dredged spoil disposal. In particular, issuance of mountain top removal overburden valley fill permits solely for waste disposal under § 404 is enjoined. Movants’ motion for a stay pending appeal is denied.

Though the Haden decisions were subsequently overturned on appeal, the appellate court did agree that § 404 of the Clean Water Act was applicable, leaving open the possibility that the “beneficial primary purpose” test relied on by Judge Haden could be applied in the future to regulate fill areas. It also should be noted that more recent reviews of permits by the State of West Virginia indicate a growing trend toward strict regulatory interpretation that is making it increasingly difficult to get state regulatory approval for fill disposal in conjunction with operations.


The MTM EIS is the result of litigation filed on July 16, 1998 by the West Virginia Highlands Conservancy and ten other plaintiffs, alleging that permit approvals granted by the West Virginia Department of

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9 Id. at 947.
11 The October 2, 2000 issue of Coal Outlook quoted an unidentified federal official as stating that mountain top mining litigation and its ramifications could “sterilize” 80 percent of eastern coal. See Coal Outlook, Financial Times Energy.
Environmental Protection and the U.S. Army Corps of Engineers for the construction of excess spoil fills associated with surface mining activities had resulted in the loss of West Virginia streams. To settle the claims raised by this lawsuit against the federal defendants, on December 23, 1998 the West Virginia Highlands Conservancy, the Environmental Protection Agency, the Fish and Wildlife Service, the COE, the West Virginia Department of Environmental Protection and the Office of Surface Mining Reclamation and Enforcement entered into a settlement agreement. The terms of the settlement agreement require the federal agencies to prepare an environmental impact statement on the effects of mountain top mining and valley fills. More specifically, the agencies are, “to consider developing agency policies, guidance, and coordinated agency decision-making processes to minimize, to the maximum practicable extent, the adverse environmental effects to waters of the United States and to fish and wildlife resources affected by mountain top mining operations, and to environmental resources that could be affected by the size and location of excess spoil disposal sites in valley fills.”

The current draft of the MTM EIS establishes a process that is likely to require strong regulatory controls and strong environmental scrutiny and continues to raise controversial issues. Until it is finalized in 2004, the U.S. Army Corps of Engineers has agreed to limit the use of nationwide permits for excess spoil fill to drainage areas of greater than 250 acres or less. Fills with drainage areas of greater than 250 acres would require individual permits from the U.S. Army Corps of Engineers. The EPA and the Department of Justice, in particular, have controlled the environmental impact statement process thus far. Due to its broad scope, the MTM

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13 Following several delays, it is anticipated that the Programmatic EIS will be issued in the spring of 2004. After it is issued, a 48-day comment period will follow. At least 1 public meeting will be convened to facilitate public comment.
EIS is likely to shape major changes in the regulatory regime dealing with permitting and performance standards for mining. The MTM EIS could impact surface and underground mining methods not only in Appalachia but possibly the eastern United States and other regions. Many in the mining industry have voiced concern that regulations created in accord with the MTM EIS will increase costs and lower the number of permits being issued to mine coal in the eastern United States. Concerns have also been raised that these regulations may also prevent the development of large coal reserves. The October 2, 2000 issue of *Coal Outlook* quotes unidentified federal officials as stating that the mountain top mining litigation and its ramifications could “sterilize” 80 percent of eastern coal.


There are a number of environmental regulatory programs that could influence the permitting programs likely to result from the MTM EIS. A few of the key elements of these programs are discussed in this section.

[a] — Public Participation.

One trend that is increasingly prevalent is that the public be fully informed of the proposed activities before permits are granted. Public outreach programs are being required for power plants, waste permits, air permits, and environmental impact statements. The new MTM EIS contains a recommendation for similar public participation programs to be developed before mountain top mining permits are issued.

[b] — Cumulative Impacts.

The concept of cumulative impacts has arisen in nearly all federal permitting contexts and is increasingly common in connection with state

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permit reviews as well. Not only must the project sponsor consider the impacts associated with his own project, but must also take into consideration the impacts of other proposed and existing projects as well. The concept here is that only by presenting information on all such environmental impacts can the permitting authority accurately assess the overall impact of a proposed project on the community, existing infrastructure, public health and the environment. Obviously, this new requirement can complicate the regulatory approval process and add significant expense to a project. The MTM EIS is likely to require this type of analysis for future mountain top mining permit approvals.

[c] — Compensatory Mitigation.

Compensatory mitigation is a concept that requires impacts identified in an environmental impact statement or permit review to be addressed by having the project sponsor develop a program that will somehow compensate the impacted community through the development and implementation of an environmental mitigation plan. For example, if streams are impacted, a compensatory mitigation plan could be required that would require the project sponsor to establish a treatment plant, establish walking trails or restore impacted stream to enhance the habitat or diversity of regional wildlife, plant life or benthic communities. The MTM EIS makes reference to these types of mitigation planning activities.


The federal Superfund program, in general, establishes a predisposition toward planned, integrated remediation. On brownfield projects in particular, where funding is limited and social benefit associated with certain development are encouraged, remediation plans have begun to focus not only on clean up but future land use as well. For example, in approving a clean up of contaminated property in an urban area, the project sponsor may increase the likelihood of regulatory agency approval and local community acceptance, and decrease project costs by focusing on a larger development project like a waterfront park, shopping mall, or convention center or sport stadium complex that would include the clean up of historic, low level contamination as a component of the larger project.
By proposing an integrated investigation and remediation design that allows properly managed low level contaminated material to remain on-site, reduces the volume of material required to be disposed of at off-site locations, and allows site investigation, design, construction, and waste disposal activities to be implemented in a coordinated fashion, one can minimize project development costs and provide great benefits to the community. This idea of maximizing value by developing a well-planned approach to reduce costs and benefit the community is a concept that is further discussed in Section MTM.04 below.

§ MTM.04. **The Socio-Economic Benefits of Mountain Top Mining Activities.**

For purposes of this article, an alternative post-mining land use is defined as a use that is different from the pre-mining land use. For the most part, in the Central Appalachian Region, pre-mining land use would be unmanaged forest. The approved list of alternate post-mining land use includes residential, commercial, industrial, institutional, educational, recreation, fish and wildlife, agricultural, or even managed timberland. A listing of post-mining land use projects achieved at mountain top mining sites is included in Table 1 at the end of this article. While not all sites have actually accomplished a successful post mining land use, the number that have is impressive. Given the large array of programs that have been developed after completion of mining operations, it is safe to say that mountain top mining has made opportunities available that would not have been possible before. Mountain top mining serves as a mechanism to achieve potential economic development by returning property to the highest and best use. Previously these properties would lie fallow after mining activity. Mountain top mining can serve to sustain the tax base after industrial uses have utilized the raw materials present. Regulatory agencies under pressure from opponents are requiring significant up front financial commitments for development. The West Virginia Department of Environmental Protection is now requiring companies to make specific financial commitments for land development projects on sites for industrial or commercial uses. Large land companies are reluctant to make these types of commitments on their land for projects that may not be developed for 20 years on more. Small landowners may not be able to make any
kind of commitment. The solution has to include more flexibility in the planning process.

Landowners of mountain top mining sites should not only be motivated solely by revenue generated by coal production, but also by the prospect of significantly increased land value that can occur after the coal mining activity is completed. The nation has seen a rapid increase in demand for new housing in recent years, fed by fast population growth, new immigration and easier credit. Some rural Kentucky counties have seen small increases in population from retirees fleeing cities for a rural lifestyle or farmers from other states seeking cheaper land. A report prepared for the West Virginia Disaster Recovery Board in 2002 after severe flooding and damage to communities in Southern West Virginia concluded that entire towns may need to be moved out of the flood plains to continue to be viable.¹⁷

What better opportunity for achieving this type of growth in land values than promoting new commercial developments as post-mining land use on mountain top mining sites? The Kentucky Coal Association recently took an informal survey of the Property Valuation Administrators (PVA)¹⁸ in the eight largest coal-producing counties. Typical undeveloped mountain property is valued at $100-150 per acre, with the value growing to $250-300 per acre for undeveloped land with mineral rights. The PVA survey identified sales of reclaimed mountain top mining sites in excess of $10,000 per acre. In Bell County a 500-acre tract recently sold for almost $2000 per acre. Floyd County reports lots on a mountain top mining residential golf course development are selling for $40,000–$50,000, the most expensive in the county.

¹⁸ The survey reference was an informal survey conducted by Bill Marcum, Vice President of the Kentucky Coal Association, and witnessed by J. Steven Gardner.
Critics of the mountain top mining method have stated that very few mountain top mining sites are developed for beneficial uses. Other critics of mountain top mining development projects suggest that the development costs are extremely high due to the site preparation necessary for publicly funded projects, such as industrial parks and prisons. One thing that these arguments do not consider is that developing a site for those uses would cost many times that amount if the site were not already made available through the mountain top mining process. Also not considered is the fact that the sites were not mined with a specific post-mining land use in mind and that if these uses were considered at the early stages of mine permit approval, considerable cost savings for post-mining land use projects could be achieved that would benefit the mining industry, the landowner, and the host community.

With the increased focus on mountain top mining activity and fills by regulatory agencies, due in large part to the Haden decisions, mining companies must pay much closer attention to post-mining land use that not only will provide economic benefits to all concerned, but also satisfy the language of Section 515 of SMCRA so as to justify a waiver from approximate original contour requirements referenced in Section MTM.02 of this article. In some respects, it is possible to call mountain top mining a “value added process.” The achievement of this value requires a new way of thinking that integrates some of the previously discussed regulatory trends and the key planning concepts already adopted in other industries, including:

- Reviewing the planning process;
- Gathering data on the post-mining land use value of existing mountain top mining sites; and
- Developing a consistent protocol for developing justifiable post-mining land use.

These concepts are discussed in greater detail in Section MTM.05 of this article.
§ MTM.05. Planning Process Model Based on Environmental Practices in Other Industries.

Given the foregoing, it may be possible to use the mountain top mining regulatory process as a way to add significant value to a project that will benefit both the host community, as well as the project sponsor. This can best be accomplished by implementing some of the evolving regulatory programs developed in other industries that were discussed in Section MTM.03[3] and integrating them into the traditional environmental impact statement approval process described in this section. By integrating these evolving concepts into one process, the mining industry will be able to avoid permitting and regulatory approval delays, while at the same time taking advantage of the opportunities that these innovative approaches present to add value. A description of the key environmental impact statement process elements that could be readily applied to a mountain top mining permit review are discussed below. By engaging in a systematic, phased review of the project impacts and potential community concerns and integrating evolving concepts that have been developed in other industries, all parties with a stake in the project will benefit by reducing impacts during the period of mining operations and identifying compatible and economically viable post-mining land use consistent with community goals.19


During this phase, the project sponsor conducts a preliminary site assessment and identifies potential environmental concerns. During this process, compatible land uses are considered, current land uses are inventoried, significant environmental resources are identified and

19 It should be noted that a number of states are moving toward a more comprehensive approach to PMLU planning. Though state regulatory agencies have traditionally not focused on PMLU issues to any significant degree, West Virginia is getting more actively involved in analysis of PMLU and some of their initiatives should be watched closely. For example, West Virginia has implemented a Special Reclamation Program which imposes per ton tax on each ton of coal mined which is then used by the West Virginia DEP to complete reclamation plans.
stakeholder inputs are evaluated through a public involvement/outreach program. Goals are established for both the mining project and the post-mining land use projects will follow when mine operations are completed.


During the scoping analysis phase, the proposed mining project and post-mining land use are defined and potential alternatives are identified. Significant impacts, sources of information, permits required and potential mitigation measures are identified. The depth of the required study for the use is also defined. The mining and post-mining land use aspects of the project are then defined in terms of their potential impact on the environment, socioeconomic benefits, impacts on existing land uses, impacts on natural resources, and fiscal implications for both construction, operation and maintenance. The result of this phase is the development of a short list of potential alternative post-mining land use projects for further examination.


Once the scoping is completed, most environmental impact evaluations focus on defining alternative impacts and their likely fiscal implications. Applying this to the mining and post-mining land use projects, the alternative impact analysis is likely to consider a number of issues including:

- Consistency with project goals;
- Environmental factors such as aesthetics, health, quality of life, sensitive species, natural resources, air, water, and waste disposal issues;
- Sustainability over time;
- Cost/benefit analysis to evaluate environmental, social and economic costs associated with each alternative including stakeholder interest and the balancing of competing development and preservation concerns; and
- Development of mitigation, construction oversight, and operation plans.

By addressing post-mining land use projects as an integral component of the mining and permitting process, all of the key legal, regulatory, and environmental concerns identified in this article are addressed in a coordinated and effective manner. The Haden litigation concerns are
mitigated because the recommended approach which combines the evaluation of mining and post-mining land use projects together, provides a coordinated plan to deal with fill materials. No longer is the fill deposited in drainage areas “solely for disposal,” but rather is deposited in strategic locations that will create defined post-mining land use projects that are endorsed by the community and approved by regulatory agencies.

Similarly, the stringent environmental concerns raised by the MTM EIS are addressed through the coordinated review process outlined above. This coordinated review process addresses all elements of the evolving regulatory trends in a controlled, reasonable manner that encourages public participation, compensatory mitigation, and the analysis of pertinent environmental impacts. By combining both aspects of the project into a single application, the project sponsor can better plan his activities and realize significant economic benefits similar to those endorsed by the federal superfund brownfields program. Simply stated, segmentation of the post-mining land use construction project is eliminated. This allows the sponsor to realize added value from the mountain top mining approval process. The alternate post-mining land use projects that result from this process not only benefit the host community, but also the project sponsors who are able to realize equal or better uses of their property and achieve an improved economic return from their investment in the land and the associated mining operations. Although this process may require additional time and costs during the initial stages of a project, more costly delays stemming from litigation or regulatory issues during construction will be avoided. The projects in Table 120 identify viable historic precedent that can provide a significant social benefit to the host community and economic return to the project sponsors who are seeking an mountain top mining permit and/or post-mining land use approval for future development of the mountain top mining sites.

§ MTM.06. Conclusion.

The concepts identified in this article are evolving and by no means represent a final recommended approach for improving the mountain top

\[20\] See Section MTM.07.
mining approval process. This article is intended to identify some concepts that hold promise for mountain top mining activity but will remain subject to reinterpretation as the regulatory programs continue to change.

Environmental groups successfully orchestrated the passage of SMCRA in 1977. While it imposed new and rigid environmental standards on the industry, several significant benefits resulted from the regulatory program:

- State regulatory programs became more uniform as the mining industry was able to operate on a move level “playing field” between states;
- Innovative mining methods, like mountain top mining were allowed and encouraged, and
- State control became more prevalent as federal programs were delegated to state agencies.

Similarly, the new mountain top mining regulatory programs that will take shape as an outgrowth of the Haden litigation and the MTM EIS, offers the mining industry a unique opportunity to take advantage of the ensuing changes. By anticipating these changes, and integrating an element of post-mining land use planning into the mountain top mining approval process, the mining industry can go a long way in establishing the framework for a sustainable, economically viable business model that promises long-term benefits to project sponsors, landowners, and host communities.
§ MTM.07  Table 1: Representative Post Mining Land Use Projects

Post Mining Land Use Projects in West Virginia
- Twisted Gun Golf Course, Mingo County
- Mt. View High School, McDowell County
- FBI Complex, Clarksburg
- Pete Dye Golf Course, Bridgeport
- New Hope Village, McDowell County
- Knights of Columbus Community Park, Tucker County
- Davis Cemetery
- R.C. Byrd High School, Harrison County
- Logan County Airport
- Southwest Regional Jail, Logan County
- East Pointe Mall Area, Harrison County
- Mountain Greeneries, Fayette County

Post Mining Land Use Projects in Kentucky
- Free-Ranging Elk Mountain Region
- Big Sandy Regional Airport, Martin County
- Wood Fabrication Plan, Boyd County
- Wildlife Management Area, Muhlenberg, Ohio and Perry Counties
- Wetland Development, Muhlenberg County
- Martin County Coal Corp. Farm
- E. C. Clements Job Corp. Center,
- Muhlenberg County
- Veterans Nursing Home, Perry County

Post Mining Land Use Projects in Virginia
- St. Mary’s Hospital
- Norton Elementary School
- Norton Community Hospital
- Wise County Community Fairgrounds
- B.A. Mullican Flooring Plant, Blackwood
- Lonesome Pine Airport
- Buchanan County Park Air Mall
- Wal-Mart Shopping Center, Norton
- Mountain Top Golf, Buchanan County
- Grundy Airport
- Red Onion Prison, Clintwood

461