Item #080183
RUC Meeting 11/28/11

Regulation of Surface Mining and Mountaintop Mining by Federal and State Authority

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U.S. Environmental Protection Agency (EPA)

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Question:

What laws and/or regulations apply to Mountain Top Mining in Central Appalachia?

Answer:

Mountaintop Mining
Mining operations are regulated under the Clean Water Act (CWA), including discharges of pollutants to streams from valley fills (CWA Section 402) and the valley fill itself where the rock and dirt is placed in streams and wetlands (CWA Section 404). Coal mining operations are also regulated under the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

Read more at Mid-Atlantic Mountaintop Mining.

- Surface Coal Mining Activities under Clean Water Act Section 404

Source: U.S. Environmental Protection Agency Website, Laws and Regulation, Water, Mountaintop Mining

What is mountaintop mining?

Mountaintop coal mining is a surface mining practice involving the:

- removal of mountaintops to expose coal seams, and
- disposing of the associated mining overburden in adjacent valleys -- "valley fills"

Valley fills occur in steep terrain where there are limited disposal alternatives. Mountaintop coal mining operations are concentrated in eastern Kentucky, southern West Virginia, western Virginia, and scattered areas of eastern Tennessee. In 1998, the US Department of Energy estimated that 28.5 billion tons of high quality coal remain in the Appalachia coal mining region. Restricting mountaintop mining to small watersheds could substantially impact the amount of extraction that takes place.

There are 5 basic steps to this method of mining:

diagrams of the process

1. Layers of rock and dirt above the coal (called overburden) are removed.
2. The upper seams of coal are removed with spoils placed in an adjacent valley.
3. Draglines excavate lower layers of coal with spoils placed in spoil piles.
4. Regrading begins as coal excavation continues.
5. Once coal removal is complete, final regrading takes place and the area is revegetated.

Regulations

Mining operations are regulated under the Clean Water Act (CWA), including discharges of pollutants to streams from valley fills (CWA Section 402) and the valley fill itself where the rock and dirt is placed in streams and wetlands (CWA Section 404). Coal mining operations are also regulated under the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

Source: U.S. Environmental Protection Agency Website, Laws and Regulation, Water, Mountaintop Mining

Programmatic Environmental Impact Statement

EPA, in conjunction with the US Army Corps of Engineers, the US Department of the Interior's Office of Surface Mining and Fish & Wildlife Service, and the West Virginia Department of Environmental Protection, prepared an environmental impact statement (draft EIS | final EIS) looking at the impacts of mountaintop mining and valley fills. This was done as part of a settlement agreement in the court case known as *Bragg v. Robertson, Civ. No. 2:98-0636 (S.D. W.V.)*.

The purpose was to evaluate options for improving agency programs that will contribute to reducing the adverse environmental impacts of mountaintop mining operations and excess spoil valley fills in Appalachia. The geographic focus was approximately 12 million acres encompassing most of eastern Kentucky, southern West Virginia, western Virginia, and scattered areas of eastern Tennessee.

Environmental Impacts

Based on studies of over 1200 stream segments impacted by mountaintop mining and valley fills the following environmental issues were noted:

- an increase of minerals in the water -- zinc, sodium, selenium, and sulfate levels may increase and negatively impact fish and macroinvertebrates leading to less diverse and more pollutant-tolerant species
- streams in watersheds below valley fills tend to have greater base flow
- streams are sometimes covered up
- wetlands are, at times inadvertently and other times intentionally, created; these wetlands provide some aquatic functions, but are generally not of high quality
- forests may become fragmented (broken into sections)
- the regrowth of trees and woody plants on regraded land may be slowed due to compacted soils
- grassland birds are more common on reclaimed mine lands as are snakes; amphibians such as salamanders, are less likely
- valley fills are generally stable
- cumulative environmental costs have not been identified
- there may be social, economic and heritage issues

Source: U.S. Environmental Protection Agency Website, Laws and Regulation, Water, Mountaintop Mining

Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools (PDF) (21 pp, 1.1MB, About PDF) by Gregory J. Pond, Margaret E. Passmore, Frank A. Borsuk, Lou Reynolds, and Carole J. Rose, US EPA.

Healthy Waters Priority

EPA's mid-Atlantic regional office has incorporated a new approach to maximizing efficiency in watershed protection and restoration by using the best available data to sharpen our focus and appropriately allocate and mobilize resources. Mining is one of 4 Priority Sectors in this Healthy Waters Priority approach. Efforts are being made to protect healthy waters and restore degraded waters within watersheds affected by coal mining.

Source: U.S. Environmental Protection Agency Website, Laws and Regulation, Water, Mountaintop Mining

Attachment #1

EPA Press Release, Final Guidance on Mitigating Impacts of Mountaintop Mining

EPA Issues Final Guidance to Protect Water Quality in Appalachian Communities from Impacts of Mountaintop Mining / Agency to provide flexibility while protecting environment and public health

Release Date: 07/21/2011
Contact Information: Stacy Kika, kika.stacy@epa.gov, 202-564-0906, 202-564-4355

WASHINGTON — The U.S. Environmental Protection Agency (EPA) today released final guidance on Appalachian surface coal mining, designed to ensure more consistent, effective, and timely review of surface coal mining permits under the Clean Water Act and other statutes. The guidance, which replaces the interim-final guidance issued by EPA on April 1, 2010, is based on the best-available science and incorporates input and feedback from over 60,000 comments received from the public and key stakeholders. By providing EPA's regional offices with the latest information on existing legal requirements, the guidance enables them to work together with states, the U.S. Army Corps of Engineers, mining companies, and the public towards a balanced approach that protects communities from harmful pollution associated with coal mining. EPA will apply the guidance flexibly, taking into account site-specific information and additional science to arrive at the best decisions on a case-by-case basis.

The science forming the basis for the interim-final guidance was also successfully applied in a number of mining decisions, including the Hobet 45 permit in West Virginia where EPA worked closely with a company to eliminate nearly 50 percent of their stream impacts, reduce contamination and lower mining costs. Successful outcomes resulting from the Corps' Coal Mac-Pine Creek permit decision also provide evidence that the practices in the interim guidance are both feasible and effective.

"Under this guidance, EPA will continue to work with other federal agencies, states, local communities, and companies to design mining operations that adequately protect our nation's waters and people's health," said Nancy Stoner, acting assistant administrator for EPA's Office of Water. "We have a responsibility under the law to protect water quality and this guidance allows EPA to work with companies to meet that goal, based on the best science."

EPA's final guidance reflects significantly enhanced science, extensive public comment and experience working with federal and state agencies and mining companies. It is based on improved, peer-reviewed science on impacts of mountaintop mining; extensive public and stakeholder input; and, lessons learned from the implementation of the interim guidance. The final guidance, like the interim guidance, is not a rule and is not binding legally or in practice.

EPA is committed to working with coal companies and stakeholders to reduce and prevent harm to water quality and human health and over the past two and a half years, EPA has built a strong foundation, working with federal and state agencies and mining

companies to significantly reduce impacts to the environment.

• In January 2010, EPA worked with the Corps on the Hobet 45 permit in West Virginia to reduce stream impacts by almost 50 percent and minimize mine runoff into surface waters.

• In June 2010, EPA worked to ensure that the permit issued for the Pine Creek mine included an enforceable trigger for protecting downstream water quality and ensuring that the overall mining operation could protect water quality.

• In July 2011, EPA worked with Mid-Vol, Inc. and the West Virginia Department of Environmental Protection to develop a Clean Water Act Section 402 permit that includes limits on ionic pollution to protect water quality.

Mountaintop mining is a form of surface coal mining in which explosives are used to access coal seams, generating large volumes of waste that bury adjacent streams. The resulting waste that then fills valleys and streams can significantly compromise water quality, often causing permanent damage to ecosystems and rendering streams unfit for drinking, fishing, and swimming. It is estimated that almost 2,000 miles of Appalachian headwater streams have been buried by mountaintop coal mining.

Attachment #2

EPA Final Guidance

Mining Operations Under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order
July 21, 2011

On July 21, 2011, EPA released final guidance to its Appalachian Regional offices to clarify EPA's roles and expectations, in coordinating with Federal and State partners, to assure more consistent, effective, and timely review of Appalachian surface coal mining operations with respect to provisions of the Clean Water Act (CWA), the National Environmental Policy Act (NEPA), and the Environmental Justice Executive Order (E.O. 12898).**1**

1 This summary of EPA's final guidance is provided for informational purposes only. It does not by itself provide guidance to EPA's Regional offices. To view the actual guidance document, please visit http://www.epa.gov/owow/wetlands/guidance/mining.html.

EPA's final guidance replaces interim guidance that was released on April 1, 2010. While developing this final guidance, EPA has worked to ensure that it reflects the most recent science, responds to public comments, and reflects the experience EPA has gained in working with its Federal and State partners:

- Peer-Reviewed Science: EPA's final guidance reflects additional peer-reviewed science on the impacts of mountaintop mining and valley fills on Appalachian streams and the communities that depend on them. In particular, it incorporates the recommendations provided by EPA's independent Science Advisory Board, which reviewed two draft EPA scientific reports and was supportive of their methodology and conclusions.

- Public Input: EPA's final guidance was developed after reviewing more than 60,000 public comments received by EPA during an eight-month comment period.

- Implementation Experience: EPA's final guidance recognizes the experience that EPA has gained over the past year in implementing the April 1, 2010 interim guidance, working collaboratively with state and federal agencies, mining companies, and the public.

EPA's final guidance retains EPA's expectation that permits for Appalachian surface coal mining operations reflect best-available science and comply with the law, while providing additional clarity and flexibility on the use of Clean Water Act tools in protecting Appalachian streams and safeguarding the health of Appalachian communities.

Clean Water Act Section 402
EPA's final guidance reiterates the importance of protecting water quality through state-issued National Pollutant Discharge Elimination System (NPDES) permits for Appalachian surface coal mining operations. As EPA Regions exercise their Clean Water Act responsibility to oversee authorized state NPDES programs, Regions should work to ensure that permits comply with the Clean Water Act in the following ways:

- Ensure Adequate Effluent Characterization: The applicant should characterize the effluent from the proposed operation using facility-specific data, data from similar mining operations, or data submitted in support of permit applications under other laws.

- Conduct Adequate Reasonable Potential Analyses: The permitting authority should conduct an adequate analysis as to whether a discharge has the reasonable potential to include numeric triggers for conductivity (or similar parameters), that are tied to adaptive management actions, and that incorporate offsets in already degraded watersheds (as appropriate) in order to promote watershed-level restoration.

- Minimize Impacts: Regions should recommend implementation of appropriate BMPs on a case-by-case basis to help prevent downstream water quality impacts from conductivity, selenium, and other parameters. Techniques could include materials handling plans, fill construction best practices, sediment pond impact reductions, and sequencing of multiple valley fills.

- Adequately Mitigate for Project Impacts: Regions should ensure that adequate structural and functional assessments are conducted and that mitigation timeframes, monitoring, and adaptive remedial action are adequately incorporated. Regions should carefully review proposals for stream creation and ditch conversion, which the scientific literature has shown may not compensate for lost stream functions.

Regions should also work to ensure that Section 404 permits require adequate water quality and biological monitoring and that the Regions evaluate and make recommendations for mitigating potential environmental justice concerns while ensuring effective public participation.

Clean Water Act Section 401
EPA Regions should work with states to ensure that they meaningfully utilize their Section 401 certification authority in order to protect state water quality standards.
National Environmental Policy Act (NEPA)
Regions should work with the Corps and the Office of Surface Mining (OSM), as appropriate, to:

- Ensure the public availability of key NEPA documents, such as draft environmental assessments;

- Engage with local communities, including low-income and minority populations, to identify potential adverse human health and environmental impacts and mitigation measures;

- Conduct appropriate watershed-scale cumulative impact analysis;

- Review the use of mitigation measures to ensure that they will be effective at avoiding or compensating for significant impacts; and

- Recommend preparation of an Environmental Impact Statement (EIS) when impacts are not reduced to levels below significance.

Environmental Justice Executive Order (E.O. 12898)

Regions should work with States, the Corps and OSM to ensure that applicable provisions of the Clean Water Act and NEPA are recognized as opportunities to address environmental hazards in minority communities and low-income communities, to prevent disproportionate environmental and human health effects, and to provide transparency and meaningful participation by these communities in government decision-making regarding surface coal mining.

Attachment #3

Summary of the Clean Water Act
(As displayed on the US EPA Website)

33 U.S.C. §1251 et seq. (1972)

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1977.

Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. We have also set water quality standards for all contaminants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

Compliance and Enforcement

- Clean Water Act Compliance Assistance
- Clean Water Act Compliance Monitoring: investigations and inspections
- Clean Water Act Enforcement

History of this Act

- History of the Clean Water Act
- EPA History: Clean Water Act: documents and other resources

More Information

The Office of Water (OW) ensures drinking water is safe, and restores and maintains oceans, watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants, and wildlife.

- The EPA Watershed Academy's *Introduction to the Clean Water Act* .

Attachment #4

Clean Water Act, Section 402: National Pollutant Discharge Elimination System

(a) Permits for discharge of pollutants

(1) Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either

(A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or

(B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

(3) The permit program of the Administrator under paragraph (1) of this subsection, and permits issued thereunder, shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder under subsection (b) of this section.

(4) All permits for discharges into the navigable waters issued pursuant to section 407 of this title shall be deemed to be permits issued under this subchapter, and permits issued under this subchapter shall be deemed to be permits issued under section 407 of this title, and shall continue in force and effect for their term unless revoked, modified, or suspended in accordance with the provisions of this chapter.

(5) No permit for a discharge into the navigable waters shall be issued under section 407 of this title after October 18, 1972. Each application for a permit under section 407 of this title, pending on October 18, 1972, shall be deemed to be an application for a permit under this section. The Administrator shall authorize a State, which he determines has the capability of administering a permit program which will carry out the objectives of this chapter to issue permits for discharges into the navigable waters within the jurisdiction of such State. The Administrator may exercise the authority granted him by the preceding sentence only during the period which begins on October 18, 1972, and ends either on the ninetieth day after the date of the first promulgation of guidelines required by section 1314(i)(2) of this title, or the

date of approval by the Administrator of a permit program for such State under subsection (b) of this section, whichever date first occurs, and no such authorization to a State shall extend beyond the last day of such period. Each such permit shall be subject to such conditions as the Administrator determines are necessary to carry out the provisions of this chapter. No such permit shall issue if the Administrator objects to such issuance.

(b) State permit programs
At any time after the promulgation of the guidelines required by subsection (i)(2) of section 1314 of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State water pollution control agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program. The Administrator shall approve each submitted program unless he determines that adequate authority does not exist:

(1) To issue permits which –

(A) apply, and insure compliance with, any applicable requirements of sections 1311, 1312, 1316, 1317, and 1343 of this title;

(B) are for fixed terms not exceeding five years; and

(C) can be terminated or modified for cause including, but not limited to, the following:

(i) violation of any condition of the permit;

(ii) obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

(iii) change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(D) control the disposal of pollutants into wells;

(2)

(A) To issue permits which apply, and insure compliance with, all applicable requirements of section 1318 of this title; or

(B) To inspect, monitor, enter, and require reports to at least the same extent as required in section 1318 of this title;

(3) To insure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

(4) To insure that the Administrator receives notice of each application (including a copy thereof) for a permit;

(5) To insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing;

(6) To insure that no permit will be issued if, in the judgment of the Secretary of the Army acting through the Chief of Engineers, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby;

(7) To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement;

(8) To insure that any permit for a discharge from a publicly owned treatment works includes conditions to require the identification in terms of character and volume of pollutants of any significant source introducing pollutants subject to pretreatment standards under section 1317(b) of this title into such works and a program to assure compliance with such pretreatment standards by each such source, in addition to adequate notice to the permitting agency of

(A) new introductions into such works of pollutants from any source which would be a new source as defined in section 1316 of this title if such source were discharging pollutants,

(B) new introductions of pollutants into such works from a source which would be subject to section 1311 of this title if it were discharging such pollutants, or

(C) a substantial change in volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time of issuance of the permit. Such notice shall include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works; and

(9) To insure that any industrial user of any publicly owned treatment works will comply with sections 1284(b), 1317, and 1318 of this title.

(c) Suspension of Federal program upon submission of State program; withdrawal of approval of State program; return of State program to Administrator

(1) Not later than ninety days after the date on which a State has submitted a program (or revision thereof) pursuant to subsection (b) of this section, the Administrator shall suspend the issuance of permits under subsection (a) of this section as to those discharges subject to such program unless he determines that the State permit program does not meet the requirements of subsection (b) of this section or does not conform to the guidelines issued under section 1314(i)(2) of this title. If the Administrator so determines, he shall notify the State of any revisions or modifications necessary to conform to such requirements or guidelines.

(2) Any State permit program under this section shall at all times be in accordance with this section and guidelines promulgated pursuant to section 1314(i)(2) of this title.

(3) Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with requirements of this section, he shall so notify the State and, if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program. The Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

(4) Limitations on partial permit program returns and withdrawals. – A State may return to the Administrator administration, and the Administrator may withdraw under paragraph (3) of this subsection approval, of –

(A) a State partial permit program approved under subsection (n)(3) of this section only if the entire permit program being administered by the State department or agency at the time is returned or withdrawn; and

(B) a State partial permit program approved under subsection (n)(4) of this section only if an entire phased component of the permit program being administered by the State at the time is returned or withdrawn.

(d) Notification of Administrator

(1) Each State shall transmit to the Administrator a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State.

(2) No permit shall issue

(A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or

(B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator.

(3) The Administrator may, as to any permit application, waive paragraph

(2) of this subsection.

(4) In any case where, after December 27, 1977, the Administrator, pursuant to paragraph (2) of this subsection, objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator on such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing, or, if no hearing is requested within 90 days after the date of such objection, the Administrator may issue the permit pursuant to subsection (a) of this section for such source in accordance with the guidelines and requirements of this chapter.

(e) Waiver of notification requirement
In accordance with guidelines promulgated pursuant to subsection (i)(2) of section 1314 of this title, the Administrator is authorized to waive the requirements of subsection (d) of this section at the time he approves a program pursuant to subsection (b) of this section for any category (including any class, type, or size within such category) of point sources within the State submitting such program.

(f) Point source categories
The Administrator shall promulgate regulations establishing categories of point sources which he determines shall not be subject to the requirements of subsection (d) of this section in any State with a program approved pursuant to subsection (b) of this section. The Administrator may distinguish among classes, types, and sizes within any category of point sources.

(g) Other regulations for safe transportation, handling, carriage, storage, and stowage of pollutants
Any permit issued under this section for the discharge of pollutants into the navigable waters from a vessel or other floating craft shall be subject to any applicable regulations promulgated by the Secretary of the department in which the Coast Guard is operating,

establishing specifications for safe transportation, handling, carriage, storage, and stowage of pollutants.

(h) Violation of permit conditions; restriction or prohibition upon introduction of pollutant by source not previously utilizing treatment works
In the event any condition of a permit for discharges from a treatment works (as defined in section 1292 of this title) which is publicly owned is violated, a State with a program approved under subsection (b) of this section or the Administrator, where no State program is approved or where the Administrator determines pursuant to section 1319(a) of this title that a State with an approved program has not commenced appropriate enforcement action with respect to such permit, may proceed in a court of competent jurisdiction to restrict or prohibit the introduction of any pollutant into such treatment works by a source not utilizing such treatment works prior to the finding that such condition was violated.

(i) Federal enforcement not limited
Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to section 1319 of this title.

(j) Public information
A copy of each permit application and each permit issued under this section shall be available to the public. Such permit application or permit, or portion thereof, shall further be available on request for the purpose of reproduction.

(k) Compliance with permits
Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 1319 and 1365 of this title, with sections 1311, 1312, 1316, 1317, and 1343 of this title, except any standard imposed under section 1317 of this title for a toxic pollutant injurious to human health. Until December 31, 1974, in any case where a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of

(1) section 1311, 1316, or 1342 of this title, or

(2) section 407 of this title, unless the Administrator or other plaintiff proves that final administrative disposition of such application has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. For the 180-day period beginning on October 18, 1972, in the case of any point source discharging any pollutant or combination of pollutants immediately prior to such date which source is not subject to section 407 of this title, the discharge by such source shall not be a violation of this chapter if such a source applies for a permit for discharge pursuant to this section within such 180-day period.

(l) Limitation on permit requirement

(1) Agricultural return flows
The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture, nor shall the Administrator directly or indirectly, require any State to require such a permit.

(2) Stormwater runoff from oil, gas, and mining operations
The Administrator shall not require a permit under this section, nor shall the Administrator directly or indirectly require any State to require a permit, for discharges of stormwater runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations.

(m) Additional pretreatment of conventional pollutants not required To the extent a treatment works (as defined in section 1292 of this title) which is publicly owned is not meeting the requirements of a permit issued under this section for such treatment works as a result of inadequate design or operation of such treatment works, the Administrator, in issuing a permit under this section, shall not require pretreatment by a person introducing conventional pollutants identified pursuant to section 1314(a)(4) of this title into such treatment works other than pretreatment required to assure compliance with pretreatment standards under subsection (b)(8) of this section and section 1317(b)(1) of this title. Nothing in this subsection shall affect the Administrator's authority under sections 1317 and 1319 of this title, affect State and local authority under sections 1317(b)(4) and 1370 of this title, relieve such treatment works of its obligations to meet requirements established under this chapter, or otherwise preclude such works from pursuing whatever feasible options are available to meet its responsibility to comply with its permit under this section.

(n) Partial permit program

(1) State submission
The Governor of a State may submit under subsection (b) of this section a permit program for a portion of the discharges into the navigable waters in such State.

(2) Minimum coverage
A partial permit program under this subsection shall cover, at a minimum, administration of a major category of the discharges into the navigable waters of the State or a major component of the permit program required by subsection (b) of this section.

(3) Approval of major category partial permit programs
The Administrator may approve a partial permit program covering administration of a major category of discharges under this subsection if -

(A) such program represents a complete permit program and covers all of the discharges under the jurisdiction of a department or agency of the State; and

(B) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b) of this section.

(4) Approval of major component partial permit programs
The Administrator may approve under this subsection a partial and phased permit program covering administration of a major component (including discharge categories) of a State permit program required by subsection (b) of this section if -

(A) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b) of this section; and

(B) the State submits, and the Administrator approves, a plan for the State to assume administration by phases of the remainder of the State program required by subsection (b) of this section by a specified date not more than 5 years after submission of the partial program under this subsection and agrees to make all reasonable efforts to assume such administration by such date.

(o) Anti-backsliding

(1) General prohibition
In the case of effluent limitations established on the basis of subsection (a)(1)(B) of this section, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 1314(b) of this title subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. In the case of effluent limitations established on the basis of section 1311(b)(1)(C) or section 1313(d) or (e) of this title, a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with section 1313(d)(4) of this title.

(2) Exceptions
A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if -

(A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

(B)

(i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

(ii) the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section;

(C) a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) the permittee has received a permit modification under section 1311(c), 1311(g), 1311(h), 1311(i), 1311(k), 1311(n), or 1326(a) of this title; or

(E) the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification). Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters, and such revised allocations are not the result of a discharger eliminating or substantially reducing its discharge of pollutants due to complying with the requirements of this chapter or for reasons otherwise unrelated to water quality.

(3) Limitations
In no event may a permit with respect to which paragraph (1) applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 1313 of this title applicable to such waters.

(p) Municipal and industrial stormwater discharges

(1) General rule
Prior to October 1, 1994, the Administrator or the State (in the case of a permit program approved under this section) shall not require a permit under this section for discharges composed entirely of stormwater.

(2) Exceptions
Paragraph (1) shall not apply with respect to the following stormwater discharges:

(A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.

(B) A discharge associated with industrial activity.

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

(E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) Permit requirements

(A) Industrial discharges
Permits for discharges associated with industrial activity shall meet all applicable provisions of this section and section 1311 of this title.

(B) Municipal discharge
Permits for discharges from municipal storm sewers -

(i) may be issued on a system- or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

(4) Permit application requirements

(A) Industrial and large municipal discharges
Not later than 2 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraphs (2)(B) and (2)(C). Applications for permits for such discharges shall be filed no later than 3 years after February 4, 1987. Not later than 4 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(B) Other municipal discharges
Not later than 4 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraph (2)(D). Applications for permits for such discharges shall be filed no later than 5 years after February 4, 1987. Not later than 6 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(5) Studies
The Administrator, in consultation with the States, shall conduct a study for the purposes of –

(A) identifying those stormwater discharges or classes of stormwater discharges for which permits are not required pursuant to paragraphs (1) and (2) of this subsection;

(B) determining, to the maximum extent practicable, the nature and extent of pollutants in such discharges; and

(C) establishing procedures and methods to control stormwater discharges to the extent necessary to mitigate impacts on water quality.
Not later than October 1, 1988, the Administrator shall submit to Congress a report on the results of the study described in subparagraphs (A) and (B). Not later than October 1, 1989, the Administrator shall submit to Congress a report on the results of the study described in subparagraph (C).

(6) Regulations
Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum,

(A) establish priorities,

(B) establish requirements for State stormwater management programs, and

(C) establish expeditious deadlines.

The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

Attachment #5

Clean Water Act, Section 404

(a) The Secretary may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites. Not later than the fifteenth day after the date an applicant submits all the information required to complete an application for a permit under this subsection, the Secretary shall publish the notice required by this subsection.

(b) Subject to subsection (c) of this section, each such disposal site shall be specified for each such permit by the Secretary:

(1) through the application of guidelines developed by the Administrator, in conjunction with the Secretary, which guidelines shall be based upon criteria comparable to the criteria applicable to the territorial seas, the contiguous zone, and the ocean under section 403(c), and

(2) in any case where such guidelines under clause (1) alone would prohibit the specification of a site, through the application additionally of the economic impact of the site on navigation and anchorage.

(c) The Administrator is authorized to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site, whenever he determines, after notice and opportunity for public hearings, that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas. Before making such determination, the Administrator shall consult with the Secretary. The Administrator shall set forth in writing and make public his findings and his reasons for making any determination under this subsection.

(d) The term "Secretary" as used in this section means the Secretary of the Army, acting through the Chief of Engineers.

(e)

(1) In carrying out his functions relating to the discharge of dredged or fill material under this section, the Secretary may, after notice of opportunity for public hearing, issue general permits on a State, regional, or nationwide basis for any category of activities involving discharges of dredged or fill material if the Secretary determines that the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effects on the environment. Any general permit issued under this subsection shall

(A) be based on the guidelines described in subsection (b)(l) of this section, and

(B) set forth the requirements and standards which shall apply to any activity authorized by such general permit.

(2) No general permit issued under this subsection shall be for a period of more than five years after the date of its issuance and such general permit may be revoked or modified by the Secretary if, after opportunity for public hearing, the Secretary determines that the activities authorized by such general permit have an adverse impact on the environment or such activities are more appropriately authorized by individual permits.

(f)

(1) Except as provided in paragraph (2) of this subsection, the discharge of dredge or fill material –

(A) from normal farming, silviculture, and ranching activities such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices;

(B) for the purpose of maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, and bridge abutments or approaches, and transportation structures;

(C) for the purpose of construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of drainage ditches;

(D) for the purpose of construction of temporary sedimentation basins on a construction site which does not include placement of fill material into the navigable waters;

(E) for the purpose of construction or maintenance or farm roads or forest roads, or temporary roads for moving mining equipment, where such roads are constructed and maintained, in accordance with best management practices, to assure that flow and circulation patterns and chemical and biological characteristics of the navigable waters are not impaired, that the reach of the navigable waters is not reduced, and that any adverse effect on the aquatic environment will be otherwise minimized;

(F) resulting from any activity with respect to which a State has an approved program under section 1288(b)(4) of this title which meets the requirements of subparagraphs (B) and (C) of such section,

is not prohibited by or otherwise subject to regulation under this section or section 1311(a) or 1342 of this title (except for effluent standards or prohibitions under section 1317 of this title).

(2) Any discharge of dredged or fill material into the navigable waters incidental to any activity having as its purpose bringing an area of the navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be impaired or the reach of such waters be reduced, shall be required to have a permit under this section.

(g)

(1) The Governor of any State desiring to administer its own individual and general permit program for the discharge of dredged or fill material into the navigable waters (other than those waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce shoreward to their ordinary high water mark, including all waters which are subject to the ebb and flow of the tide shoreward to their mean high water mark, or mean higher high water mark on the west coast, including wetlands adjacent thereto), within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program.

(2) Not later than the tenth day after the date of the receipt of the program and statement submitted by any State under paragraph (1) of this subsection, the Administrator shall provide copies of such program and statement to the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service.

(3) No later than the ninetieth day after the date of the receipt by the Administrator of the program and statement submitted by any State, under paragraph (1) of this subsection, the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, shall submit any comments with respect to such program and statement to the Administrator in writing.

(h)

(1) Not later than the one-hundred-twentieth day after the date of the receipt by the Administrator of a program and statement submitted by any State under paragraph (1) of this subsection, the Administrator shall determine, taking into account any comments submitted by the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, pursuant to subsection (g) of this section, whether

such State has the following authority with respect to the issuance of permits pursuant to such program:

(A) To issue permits which -

(i) apply, and assure compliance with, any applicable requirements of this section, including, but not limited to, the guidelines established under subsection (b)(l) of this section, and sections 307 and 403 of this Act;

(ii) are for fixed terms not exceeding five years; and

(iii) can be terminated or modified for cause including, but not limited to, the following:

(I) violation of any condition of the permit;

(II) obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

(III) change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

(B) To issue permits which apply, and assure compliance with, all applicable requirements of section 308 of this Act, or to inspect, monitor, enter, and require reports to at least the same extent as required in section 308 of this Act.

(C) To assure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application.

(D) To assure that the Administrator receives notice of each application (including a copy thereof) for a permit.

(E) To assure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendation to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing.

(F) To assure that no permit will be issued if, in the judgement of the Secretary, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby.

(G) To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement.

(H) To assure continued coordination with Federal and Federal-State water-related planning and review processes.

(2) If, with respect to a State program submitted under subsection (g)(l) of this section, the Administrator determines that such State -

(A) has the authority set forth in paragraph (1) of this subsection, the Administrator shall approve the program and so notify (i) such State, and (ii) the Secretary, who upon subsequent notification from such State that it is administering such program, shall suspend the issuance of permits under subsections (a) and (e) of this section for activities with respect to which a permit may be issued pursuant to such State program; or

(B) does not have the authority set forth in paragraph (1) of this subsection, the Administrator shall so notify such State, which notification shall also describe the revisions or modifications necessary so that such State may resubmit such program for a determination by the Administrator under this subsection.

(3) If the Administrator fails to make a determination with respect to any program submitted by a State under subsection (g)(l) of this section within one-hundred-twenty days after the date of the receipt of such program, such program shall be deemed approved pursuant to paragraph (2)(A) of this subsection and the Administrator shall so notify such State and the Secretary who, upon subsequent notification from such State that it is administering such program, shall suspend the issuance of permits under subsection (a) and (e) of this section for activities with respect to which a permit may be issued by such State.

(4) After the Secretary receives notification from the Administrator under paragraph (2) or (3) of this subsection that a State permit program has been approved, the Secretary shall transfer any applications for permits pending before the Secretary for activities with respect to which a permit may be issued pursuant to such State program to such State for appropriate action.

(5) Upon notification from a State with a permit program approved under this subsection that such State intends to administer and enforce the terms and conditions of a general permit issued by the Secretary under subsection (e) of this section with respect to activities in such State to which such general permit applies, the Secretary shall suspend the administration and enforcement of such general permit with respect to such activities.

(i) Whenever the Administrator determines after public hearing that a State is not administering a program approved under section (h)(2)(A) of this section, in accordance with this section, including, but not limited to, the guidelines established under subsection (b)(l) of this section, the Administrator shall so notify the State, and, if appropriate corrective

action is not taken within a reasonable time, not to exceed ninety days after the date of the receipt of such notification, the Administrator shall:

(1) withdraw approval of such program until the Administrator determines such corrective action has been taken, and

(2) notify the Secretary that the Secretary shall resume the programs for the issuance of permits under subsection (a) and (e) of this section for activities with respect to which the State was issuing permits and that such authority of the Secretary shall continue in effect until such time as the Administrator makes the determination described in clause (1) of this subsection and such State again has an approved program.

(j) Each State which is administering a permit program pursuant to this section shall transmit to the Administrator

(1) a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State, and

(2) a copy of each proposed general permit which such State intends to issue. Not later than the tenth day after the date of the receipt of such permit application or such proposed general permit, the Administrator shall provide copies of such permit application or such proposed general permit to the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service. If the Administrator intends to provide written comments to such State with respect to such permit application or such proposed general permit, he shall so notify such State not later than the thirtieth day after the date of the receipt of such application or such proposed general permit and provide such written comments to such State, after consideration of any comments made in writing with respect to such application or such proposed general permit by the Secretary and the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, not later than the ninetieth day after the date of such receipt. If such State is so notified by the Administrator, it shall not issue the proposed permit until after the receipt of such comments from the Administrator, or after such ninetieth day, whichever first occurs. Such State shall not issue such proposed permit after such ninetieth day if it has received such written comments in which the Administrator objects

(A) to the issuance of such proposed permit and such proposed permit is one that has been submitted to the Administrator pursuant to subsection (h)(l)(E), or

(B) to the issuance of such proposed permit as being outside the requirements of this section, including, but not limited to, the guidelines developed under subsection (b)(l) of this section unless it modified such proposed permit in accordance with such comments. Whenever the Administrator objects to the issuance of a permit under the preceding sentence such written objection shall contain a statement of the reasons for such objection

and the conditions which such permit would include if it were issued by the Administrator. In any case where the Administrator objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator on such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing or, if no hearing is requested within 90 days after the date of such objection, the Secretary may issue the permit pursuant to subsection (a) or (e) of this section, as the cause may be, for such source in accordance with the guidelines and requirements of this Act.

(k) In accordance with guidelines promulgated pursuant to subsection (i)(2) of section 304 of this Act, the Administrator is authorized to waive the requirements of subsection (j) of this section at the time of the approval of a program pursuant to subsection (h)(2)(A) of this section or any category (including any class, type, or size within such category) of discharge within the State submitting such program.

(l) The Administrator shall promulgate regulations establishing categories of discharges which he determines shall not be subject to the requirements of subsection (j) of this section in any State with a program approved pursuant to subsection (h)(2)(A) of this section. The Administrator may distinguish among classes, types, and sizes within any category of discharges.

(m) Not later than the ninetieth day after the date on which the Secretary notifies the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service that

(1) an application for a permit under subsection (a) of this section has been received by the Secretary, or

(2) the Secretary proposes to issue a general permit under subsection (e) of this section, the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, shall submit any comments with respect to such application or such proposed general permit in writing to the Secretary.

(n) Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to section 309 of this Act.

(o) A copy of each permit application and each permit issued under this section shall be available to the public. Such permit application or portion thereof, shall further be available on request for the purpose of reproduction.

(p) Compliance with a permit issued pursuant to this section, including any activity carried out pursuant to a general permit issued under this section, shall be deemed compliance, for purposes of sections 309 and 505, with sections 301, 307, and 403.

(q) Not later than the one-hundred-eightieth day after the date of enactment of this subsection, the Secretary shall enter into agreements with the Administrator, the Secretaries of the Departments of Agriculture, Commerce, Interior, and Transportation, and the heads of other appropriate Federal agencies to minimize, to the maximum extent practicable, duplication, needless paperwork, and delays in the issuance of permits under this section. Such agreements shall be developed to assure that, to the maximum extent practicable, a decision with respect to an application for a permit under subsection (a) of this section will be made not later than the ninetieth day after the date the notice of such application is published under subsection (a) of this section.

(r) The discharge of dredged or fill material as part of the construction of a Federal project specifically authorized by Congress, whether prior to or on or after the date of enactment of his subsection, is not prohibited by or otherwise subject to regulation under this section, or a State program approved under this section, or section 301(a) or 402 of the Act (except for effluent standards or prohibitions under section 307), if information on the effects of such discharge, including consideration of the guidelines developed under subsection (b)(l) of this section, is included in an environmental impact statement for such project pursuant to the National Environmental Policy Act of 1969 and such environmental impact statement has been submitted to Congress before the actual discharge of dredged or fill material in connection with the construction of such project and prior to either authorization of such project or an appropriation of funds for each construction.

(s)

(1) Whenever on the basis of any information available to him the Secretary finds that any person is in violation of any condition or limitation set forth in a permit issued by the Secretary under this section, the Secretary shall issue an order requiring such persons to comply with such condition or limitation, or the Secretary shall bring a civil action in accordance with paragraph (3) of this subsection.

(2) A copy of any order issued under this subsection shall be sent immediately by the Secretary to the State in which the violation occurs and other affected States. Any order issued under this subsection shall be by personal service and shall state with reasonable specificity the nature of the violation, specify a time for compliance, not to exceed thirty days, which the Secretary determines is reasonable, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. In any case in which an order under this subsection is issued to a corporation, a copy of such order shall be served on any appropriate corporate officers.

(3) The Secretary is authorized to commence a civil action for appropriate relief, including a permanent or temporary injunction for any violation for which he is authorized to issue a compliance order under paragraph (1) of this subsection. Any action under this paragraph may be brought in the district court of the United States for the district in which the defendant is located or resides or is doing business, and such court shall have jurisdiction to

restrain such violation and to require compliance. Notice of the commencement of such action shall be given immediately to the appropriate State.

(4)

(A) Any person who willfully or negligently violates any condition or limitation in a permit issued by the Secretary under this section shall be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or by both. If the conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by fine of not more than $50,000 per day of violation, or by imprisonment for not more than two years, or by both.

(B) For the purposes of this paragraph, the term "person" shall mean, in addition to the definition contained in section 502(5) of this Act, any responsible corporate officer.

(5) Any person who violates any condition or limitation in a permit issued by the Secretary under this section, and any person who violates any order issued by the Secretary under paragraph (1) of this subsection, shall he subject to a civil penalty not to exceed $10,000 per day of such violation.

(t) Nothing in this section shall preclude or deny the right of any State or interstate agency to control the discharge of dredged or fill material in any portion of the navigable waters within the jurisdiction of such State, including any activity of any Federal agency, and each such agency shall comply with such State or interstate requirements both substantive and procedural to control the discharge of dredged or fill material to the same extent that any person is subject to such requirements. This section shall not be construed as affecting or impairing the authority of the Secretary to maintain navigation.

Attachment #6

A BRIEF REVIEW OF SMCRA

Copied from The Surface Mining Handbook

The Surface Mining Reclamation and Control Act (SMCRA) establishes minimum federal standards for the regulation of coal mining. Using the federal standards as a guide, each state where there is (or may be) surface coal mining may propose a state regulatory program to control mining. SMCRA requires the Secretary of the Interior to approve any state program that meets or exceeds the federal standards. This procedure allows individual states to gain primary control over the regulation of surface mining.

The federal government must establish its own program for any state that fails to submit a program, or that submits an inadequate program. All of the major coal states have received federal approval of their state programs. However, a federal program was implemented in Tennessee when citizen groups uncovered serious problems with the state's administration of surface mining controls. Today, Tennessee remains the only significant coal mining state with a federal program.

SMCRA requires that each state program contain certain performance standards with which all operators must comply. These performance standards set levels of environmental damage that are deemed unacceptable and in some cases, they actually tell the operator how a mining operation must be conducted to protect the environment. SMCRA also requires each state to adopt certain provisions to govern permitting and bonding, inspection and enforcement, and to establish procedures for designating certain lands unsuitable for mining. This chapter provides an overview of the basic requirements established by SMCRA in each of these areas. Later chapters of the handbook contain more detailed discussions of the statute.

Scope of the Act

SMCRA covers all surface coal mining operations in the United States as well as the surface effects of underground coal mining. In addition, SMCRA covers coal preparation and processing facilities, coal waste piles, and those coal-loading facilities that are located at or near a mine site. The only exceptions to the Act's coverage are for: (1) operators who produce less than 250 tons of coal per year; (2) operations that extract coal solely for a landowner's personal (noncommercial) use; (3) operations that extract coal

secondarily to the extraction of other minerals (the coal may not exceed 16.6 percent of the total minerals removed); and (4) operations in which the extraction of coal is incidental to government-financed construction.

Permitting and Bonding

SMCRA requires that all operators obtain a valid permit from the state regulatory authority in order to mine. To obtain a permit, an operator must submit extremely detailed information. For example, the operator must describe the characteristics of the affected land and its ecology; the operator's legal status, financial situation, and past history of complying with the law; and plans for the proposed mining and reclamation operations. Based on the information submitted, an operator must show that he can meet all the requirements of SMCRA and can successfully reclaim the land in compliance with the standards of the Act and its implementing regulations. An operator may also need to obtain additional permits under other laws, such as the Clean Water Act. The permitting process is described in detail in Chapter 5.

The operator also must obtain adequate bonding and insurance. Bonding is intended to ensure that sufficient money will be available to the regulatory authority to pay for the reclamation of the affected land, if the permittee fails to live up to the terms of the permit. The operator's insurance must be sufficient to cover any personal injuries and property damage that may result from the operation.

Performance Standards

SMCRA requires the operator to restore the affected land to a condition capable of supporting the uses it could support before mining, or to "higher or better uses."[1] The operator must also:

1. restore the **approximate original contour (AOC)** of the land by backfilling, grading, and compacting;
2. minimize disturbances to the hydrologic system by avoiding acid mine drainage and preventing additional contributions of suspended solids (sediments from erosion) to nearby streams and other water bodies;
3. reclaim the land as soon as practicable after the coal has been extracted, and even as the mining operation moves forward; and
4. establish a permanent vegetative cover in the affected area.

If a site's annual rainfall exceeds 26 inches, the operator must ensure that the land remains successfully revegetated for five years *after* all seeding, fertilizing, and irrigation has ended. If the annual precipitation is less than 26 inches, the operator is responsible for successful revegetation for 10 years. Some 15 other performance standards apply to all surface mines. For example, standards are established for blasting, for wildlife protection,

for road construction and maintenance, and for disposal of excess spoil material. In addition, special performance standards apply to particularly vulnerable areas — alluvial valley floors in the West, prime farmland (most commonly found in the coalfields of the Midwest), and steep slope areas (which dominate Appalachia). Performance standards are described in detail in Chapter 6.

Inspection and Enforcement

A mine must also comply with all permit conditions and provisions of the approved state regulatory program, and SMCRA generally allows state standards to be more stringent than federal standards.[2] Moreover, a mine operator may not conduct operations in a manner that would pose an imminent hazard to public health and safety or to the environment, even if no other violation of the law results.

To help ensure compliance with the law, SMCRA requires at least one complete, on-site inspection per quarter and one partial inspection per month *without advance notice* to the operator. Partial inspections may include aerial surveys, so long as they are conducted in such manner that violations can be detected. SMCRA also provides for special inspections when citizens complain about hazards or violations at a particular mine.

When an inspector detects a violation, SMCRA requires the inspector to take enforcement action. Moreover, the inspectors are vested with full legal authority to shut down a mining operation where violations pose an imminent threat to the public or a significant, imminent threat to the environment.[3] If the violation does not cause imminent danger to the health or safety of the public, or significant imminent environmental harm, the inspector must, by law, issue a **notice of violation (NOV).**[4] If the violation is not abated within the time established by the inspector, the inspector must issue a **cessation order** (**CO**) and impose whatever affirmative obligations are necessary to remedy the violation.[5]

Corporate officers or agents may be assessed civil penalties (or face criminal prosecution) for willfully and knowingly failing to halt violations of SMCRA. Finally, no permit may be issued for any operation that is owned or controlled by any person, corporation, or other entity with outstanding violations of SMCRA. The federal government maintains a computer data base of outstanding violations, and citizens can ask the government to check this data base when questions arise about individual operators.

In states with approved programs, the federal Office of Surface Mining (OSM) must conduct a sufficient number of oversight inspections to ensure that the state is doing its job. OSM does not have authority to take enforcement action during these inspections — but if staff note violations during oversight inspections, or if the office otherwise has reason to believe that violations have occurred — OSM must notify the state. If the state fails to act within 10 days from the date it receives notice of a violation, OSM is

obligated to reinspect and take enforcement action. The inspection and enforcement provisions of SMCRA are discussed in more detail in Chapter 6.

Designating Lands Unsuitable for Mining

When Congress enacted SMCRA, it decided that coal mining should be banned completely on certain lands. Thus, the law flatly prohibits mining on lands where reclamation under the Act's standards is not technologically or economically possible,[6] and on certain categories of federal land, including lands within the National Park System, the Wild and Scenic Rivers System, and the National System of Trails. Mining is also prohibited within 300 feet of occupied homes, churches, public buildings, and public parks — and within 100 feet of cemeteries or public roads.[7] (Public roads, however, may be relocated after notice and an opportunity for a public hearing.) Finally, mining is prohibited whenever it will adversely affect a publicly-owned park or place included on the National Register of Historic Sites, unless the agency having jurisdiction over the park or site approves the proposed mining operation. The only exception to these prohibitions is for **valid existing rights (VER)**.[8] The VER exception was established to protect private property rights against infringements by the government that would otherwise be considered unconstitutional. (See box.) At a minimum, it seems clear that a party cannot invoke the mining prohibitions contained in the statute if, for example, the home, road or park was built after the mining operation was approved.

VALID EXISTING RIGHTS (VER)

Under the Fifth Amendment to the United States Constitution, the government may not take private property for a public use without paying the owner of that property "just compensation."[9] Over the years, the Supreme Court has held that a **"taking"** under the Fifth Amendment includes not only physical invasions of private property, but also regulations that are so onerous that they substantially diminish the value of the property. Although the development of the law in this area is murky, not all regulations that adversely affect property values result in a declaration that private property has been taken. In some circumstances, for example when the government adopts regulations to prevent activities that may harm society at large, regulations have been upheld, even where they dramatically reduce property values.

In prohibiting mining on certain lands, Congress was aware of these constitutional issues and sought to avoid the takings problem by declaring that enforcement of the prohibitions would be subject to "valid existing rights" (VER). In other words, the prohibitions simply don’t apply to someone who has VER. On several occasions, the Office of Surface Mining has tried to offer guidance as to what

> constitutes VER but these efforts have long been mired in controversy and litigation. In January, 2008, however, the Federal Court of Appeals for the D.C. Circuit, which is charged under SMCRA with reviewing rules that are national in scope, issued a decision[10] upholding an Interior Department interpretive rule requiring an operator claiming VER to:
>
> (1) produce a legal document vesting him with right to mine the land at the time it became subject to SMCRA *and*
>
> (2) prove either that the landowner at that time had made a good faith effort to obtain all necessary mining permits or that the coal was immediately adjacent to – and necessary to ensure economic viability of – a surface mining operation existing at SMCRA's enactment.

While this decision appears to resolve the issue for now, citizens should recognize that the VER concept is inherently ambiguous and will likely remain the subject of future litigation and administrative review.

SMCRA also gives the states discretionary authority to designate certain other lands as unsuitable for mining. These include lands where surface mining:

- is incompatible with existing state or local land-use plans;
- affects fragile or historic lands on which such operations could cause significant damage to important historical, cultural, scientific and aesthetic values and natural systems;
- affects renewable resource lands (such as forest lands and farmland); or
- affects natural hazard lands such as lands prone to earthquakes.

Later chapters of the handbook flesh out this brief overview of SMCRA. The next chapter reviews the rights of citizens to participate in the implementation and enforcement of the Act, both at the state and the federal levels.

Attachment #7

POSTMINING LAND USE

Exceptions to Approximate Original Contour Requirements for Mountaintop Removal Operations and Steep Slope Mining Operations

Office of Surface Mining Reclamation and Enforcement
June 2000

Table of Contents

I. INTRODUCTION AND SUMMARY

A. The purpose of this paper.

A general requirement under the Surface Mining Control and Reclamation Act (SMCRA) is that lands disturbed by mining must be reclaimed to their approximate original contour (AOC). 30 U.S.C. § 1265(b)(3). SMCRA creates limited exceptions to this requirement for mountaintop removal and steep slope mining operations, but operators wishing to take advantage of one of these exceptions must reclaim the mined land to a condition capable of supporting one of several allowable postmining land uses listed in SMCRA. 30 U.S.C. § 1265(c) (2) and (3) and 30 U.S.C.

§ 1265(e)(2). We have developed this paper to clarify the statutory and regulatory requirements
relating to these postmining land uses.
As discussed in this document, when Congress enacted SMCRA, it chose to allow exceptions
from AOC only in situations where beneficial postmining land uses could compensate for the
adverse effects of not returning the land to AOC. These adverse effects include more and larger
excess spoil fills being generated by mountaintop removal and steep slope mining operations.
This overarching principle of compensation is also reflected in the Office of Surface Mining's
(OSM) alternative postmining land use regulations which impose a _higher and better use _
reclamation standard on mountaintop removal and steep slope mining operations. Two
corollaries arise from the principle of compensation: (1) a postmining land use cannot be
approved where the use could be achieved without waiving the AOC requirement, except where
it is demonstrated that a significant public or economic benefit will be realized therefrom; and,
(2) where an exception or variance from the AOC requirement is sought, the postmining land use
must always offer a net benefit to the public or the economy.

B. Background principles established by SMCRA.

SMCRA establishes requirements for the regulation of surface coal mining and reclamation operations
and for the restoration of abandoned mine lands. Through these requirements, Congress
sought to establish requirements that would minimize the effects of mining. One of the most
important of these is the general requirement that disturbed lands be reclaimed to AOC. Pursuant
to Subsection 515(b)(3), mine operators must "backfill, compact * * *, and grade in order to
restore the approximate original contour of the land with all highwalls, spoil piles, and
depressions eliminated." 30 U.S.C. § 1265(b)(3).
At the same time, Congress also recognized that alternatives to AOC might be justified when certain
beneficial postmining land uses would result from the mining operation. These beneficial
land uses could compensate for the effects of mountaintop removal and steep slope mining and
for not returning the land in question to AOC. For example, in mountainous Appalachia, largescale
surface coal mining operations present an opportunity to create relatively flat, flood-free

[1]The soil and rock not needed to return a mined out area to AOC is called excess spoil. One easy way to envision this excess spoil phenomenon is to think of what happens when

plowing a garden. Plowing soil produces smaller, irregularly shaped pieces separated by voids or
air pockets. Because the plowed soil no longer fits together as compactly as it once did, the
overall volume of the soil is increased. For that reason, the ground level after plowing is always
higher than it was before. Similarly, mining breaks up solid rock layers and creates voids,
causing the overall volume of the material to increase. This phenomenon is known in the mining
industry as _bulking, _ or _swell. _ Excess spoil is the material produced by swell.
[2] The general requirement for a mountaintop removal variance is that the proposed postmining
land use must constitute _an equal or better economic or public use of the affected land,
as compared with premining use . . . _ 30 U.S.C. § 1265(c)(3)(A). For steep slope operations, a
general requirement is that the potential use of the affected land must constitute an "equal or
better economic or public use." 30 U.S.C. § 1265(e)(3).

land capable of supporting residential and industrial development and other valuable land uses.
To take advantage of this opportunity, Congress included provisions in SMCRA to allow exceptions
to the AOC restoration requirement. Under section 515(c) of the Act, 30 U.S.C. § 1265(c),
mountaintop removal operations, if approved, are exempt from the AOC restoration
requirements, and, under section 515(e) of the Act, 30 U.S.C. § 1265(e), steep slope mining
operations may seek a variance from those requirements.
Although mountaintop removal and steep slope variance operations create the opportunity for flat
land, there is a significant downside to these operations _ the larger valley fills that they produce
when compared to AOC reclamation. Even when land is returned to AOC, some excess spoil
material is created that must be disposed of in fills. The reason for this is that, during the mining
process, excavated material swells due to the creation of voids.[1] However, when a site is not
returned to AOC, a substantially greater amount of excess spoil is generated, all of which must
be placed off the mine bench or mountain. This additional excess spoil causes significantly more
disturbances to natural areas and water courses due to the creation of larger fills and the altering

of more stream valleys. Because mining operations with AOC variances usually cause greater
disturbances by generating more excess spoil for fills than those without AOC variances, it is
important to limit their occurrence to situations where beneficial postmining land uses offer real
compensation for the effects of not returning the land to AOC.
Congress considered both the benefits of and the liabilities for mountaintop removal and steep
slope mining when it imposed three sets of requirements to prevent the misuse of the exceptions
as a means of avoiding reclamation responsibilities and to ensure that significant economic or
public benefit would result from these operations.
First, it established a general requirement that acceptable postmining land uses for mountaintop
removal and steep slope mining variance operations must _constitute * * * **equal or better
economic or public use[s]** _of the land.[2] 30 U.S.C. § 1265(c)(3)(A), 1265(e)(3).
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Second, Congress specified the types of beneficial land uses that would be acceptable for each
type of mining. SMCRA section 515(c)(3), 30 U.S.C. § 1265(c)(3), allows the regulatory authority
to approve mountaintop removal operations only _in cases where an **industrial, commercial,
agricultural, residential or public facility (including recreational facilities) use** is proposed
for the postmining land use of the affected land." (Emphasis added.) SMCRA section 515(e)(2),
30 U.S.C. § 1265(e)(2), allows the regulatory authority to approve variances from AOC
restoration requirements for operations on steep slopes only _for an **industrial, commercial,
residential, or public use (including recreational facilities)**." (Emphasis added.)
Third, Congress specified specific approval criteria for both mountaintop removal mining and
steep slope mining operations. An applicant must address these criteria in the permit application.
A regulatory authority must use these criteria when evaluating the information submitted by an
applicant for a mountaintop removal permit or a request for an AOC variance for steep slope
mining operations.
An applicant for a mountaintop removal operation must provide appropriate assurances that the
use will be:

(i) compatible with adjacent land uses;
(ii) obtainable according to data regarding expected need and market;
(iii) assured of investment in necessary public facilities;
(iv) supported by commitments from public agencies where appropriate;
(v) practicable with respect to private financial capability for completion of the proposed use;
(vi) planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use; and
(vii) designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site.
30 U.S.C. § 1265(c)(3)(B).
An applicant for a variance from AOC for a steep-slope mining operation must include a request in writing from the owner of the property as part of the permit application; the watershed of the

area must be improved; the proposed use must be designed and certified by a qualified registered professional engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site; and only such amount of spoil may be placed off the mine bench as is necessary to achieve the planned postmining land use. 30 U.S.C. § 1265(e)(1) through (e)(4).
Taken together these provisions manifest a clear intention on the part of Congress to ensure that the proposed postmining land use is likely to afford some significant benefit either from a public policy or an economic standpoint in compensation for not returning the land to AOC. Because Congress made restoration to AOC a key element of SMCRA and allowed deviation from this standard only in limited situations and under certain prescribed conditions, OSM finds ample basis for its policy that any loss of AOC must be compensated for in the resulting postmining land use. All proposed postmining land uses should be judged against this overarching principle.
We codified our interpretation of the relationship between paragraphs (b)(2), (c), and (e) of section 515 of the Act by adopting regulations requiring that mountaintop removal and steep slope mining operations seeking AOC variances comply with pertinent provisions of 30 CFR

816.133. Under 30 CFR 785.14(c)(1)(ii), mountaintop removal operations must comply with the alternative postmining land use requirements of 30 CFR 816.133(a) through (c). Under 30 CFR 785.16(a)(2) and 816.133(d)(2), steep slope mining operations must comply with the alternative postmining land use requirements of 30 CFR 816.133(c) to obtain a variance from AOC restoration requirements. Like section 515(b)(2) of the Act, paragraphs (a) and (c) of 30 CFR 816.133 specify that the only acceptable *alternative* postmining land uses are those that are higher or better than the premining uses. Hence, the only acceptable postmining land uses for purposes of obtaining an exception from the AOC restoration requirements are those which are both higher or better than the premining use and are an equal or better economic or public use, compared with the premining uses. This does not mean that a proposed postmining land use cannot belong to the same general category as the premining use (e.g., forestry premining use/forestry postmining use). It does mean, however, that the postmining use must represent an added benefit from either a public or economic standpoint. Therefore, rather than being merely forestry/forestry, with an added benefit from either a public or economic standpoint it would be forestry premining use/commercial forestry postmining use. Any allowable postmining land uses or subcategories thereof would have to be part of the approved program prior to being authorized by the regulatory authority. (48 FR 39893; September 1, 1983).

In 30 CFR 701.5, we define _higher or better uses _ as meaning _postmining land uses that have a higher economic value or nonmonetary benefit to the landowner or the community than the premining land uses. _ There is no definition or explanation of _equal or better economic or public use _ in either the statute or our regulations.

The following table summarizes the interaction of the _equal or better economic or public use _ requirement with the requirement for compliance with the alternative postmining land use regulations (higher or better use). Under paragraphs (c)(3)(A) and (e)(3)(A) of section 515 of

SMCRA, 30 CFR 785.14(c)(1)(i) and (ii), and 30 CFR 816.133(d)(2) and (4), an applicant for a

mountaintop removal operation or a steep slope mining operation seeking a variance from approximate original contour restoration requirements must meet both of these postmining land
use standards.

Approvable Postmining Land Uses

When the proposed postmining use, compared with the premining use, is . . .

. . . does the proposed postmining use meet the threshhold for an exception from the requirement for restoration to approximate original contour?

A lesser economic use Only if the proposed use also is (1) a better public use or (2) an equal public use with a higher nonmonetary benefit to the landowner

An equal economic use Only if the proposed use also would provide a higher nonmonetary benefit to the landowner or community

A better economic use Yes (assumes better economic use is synonymous with higher economic value to the landowner or community)

A lesser public use Only if the proposed use also is (1) a better economic use or (2) an equal economic use with a higher nonmonetary benefit to the landowner

An equal public use Only if the proposed use also would provide (1) a higher economic value to the landowner or community or (2) a higher nonmonetary benefit to the landowner

A better public use Yes (assumes better public use is synonymous with higher nonmonetary benefit to the community)

As we stated above, as an overarching principle of the Act, exceptions from the AOC requirements are allowed only in situations where beneficial postmining land uses could compensate for the effects of not returning the land to its AOC. The two resulting consequences that arise from this overarching principle are discussed below.

1. A postmining land use will not be approved where the use could be achieved without waiving the AOC requirement, except where it is demonstrated that a significant public or economic benefit will be realized therefrom.

A major criterion that can be used in assessing the appropriateness of postmining land uses is whether the use can be achieved without an exception or variance from the AOC requirements, or, put another way, whether the proposed postmining land use is one for which flat land or

[3] The 95th Congress did place a different but somewhat analogous restriction on AOC variances for steep slope mining operations. Section 515(e)(4) of SMCRA and 30 CFR 816.133(d)(8) and 817.133(d)(8) require that the regulatory authority limit those variances to the amount of spoil necessary to achieve the planned postmining land use.

rolling terrain is necessary. Early versions of SMCRA made this criterion *the* dispositive factor
in assessing the appropriateness of proposed postmining land uses: they expressly limited approved postmining land uses for mountaintop removal operations to those that could not be
achieved without an exception from the AOC requirement. *See, for example,* H.R. CONF. REP.
NO. 93-1522 (1974). The 95th Congress, however, ultimately deleted this _flat land necessity
requirement _ as too restrictive. H.R. REP. NO. 95-218, at 67 (1977).[3] When Congress removed
this provision, it did not intend to eliminate consideration of the need for flat or rolling terrain as
an important criterion that regulatory authorities should use in determining whether proposed
postmining land uses are appropriate. Significantly, the 1977 House report we have just cited
also includes a discussion, taken from earlier reports, that uses the need for flat land as a criterion
for disfavoring certain low-intensity postmining land uses:

> It should be noted that pasture, grassland, and similar agricultural land uses are not considered intensive uses by the committee. Such agricultural activities can be conducted on reclaimed mine slopes without requiring variances from the approximate original contour and spoil placement standards.

H.R. REP. NO. 95-218, at 109 (1977).
Therefore, while the need for flat or rolling terrain should not be the exclusive test used to assess
proposed postmining land uses, regulatory authorities may use it as an important criterion in their
deliberations. Where the postmining use is proposed to belong to the same general category
(e.g., premining forestry, postmining commercial forestry), the operation should substantially
improve the ability of the land to achieve the proposed postmining use.

2. Where an exception or variance from AOC requirements is sought, the postmining land use must always offer a net benefit to the public or the economy.

As mentioned above, a general requirement under SMCRA for postmining land uses in connection
with both mountaintop removal and steep slope mining operations is that the proposed postmining land use must constitute _an *equal* or better economic or public use. _ *See* 30 U.S.C.
§§ 1265(c)(3)(A) and (e)(3) (emphasis added). While the meaning of _better use _ is fairly clear,

the meaning of _equal _ warrants clarification. Taken in context, we think the word _equal _
means that approvable postmining land use may sometimes fall into the same general land use
category as the premining land use, but only if there will be significant improvement to the site
that offers a net benefit to the economy or the public. For example, a premining forestry use may
be proposed as a postmining commercial forestry use. For several reasons, we do not think that
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Congress, in using the word _equal, _ intended to allow operators to restore a site to an unimproved
condition which, except for its now-flattened configuration, is essentially the same as its premining state.
The first reason for this conclusion is that, in SMCRA, Congress prescribed the AOC as the
normative postmining reclamation standard. 30 U.S.C. § 1265(b)(3). Congress also prescribed
those limited conditions under which an exception could be granted to the AOC restoration
requirement in exchange for some beneficial postmining result. A postmining land use on a
flattened and *unimproved* site can never really be _equal ... as compared with premining use _
because the loss of the original contour has not been compensated for in the postmining use. To
allow an unimproved postmining result, different from the premining conditions in only one
respect _ that the AOC has been lost _ would render the intent of Congress that the AOC
restoration be the standard for surface mining to have no meaning or effect whatsoever. In light
of the importance placed on restoration to the AOC in SMCRA, we cannot conclude that
Congress intended such a result. Consequently, on such sites the postmining land use can be
rendered _equal _ to the premining use only if the proposed postmining use compensates for not
returning the site to AOC. In other words, for a postmining use of a flattened site to be _equal _
to the premining use of the site there must always be some improvement to, or new benefit
resulting from, the site after mining.
Second, as explained earlier in this paper, the other postmining land use criteria in SMCRA for
both mountaintop removal mining and steep slope mining operations manifest a clear concern

that postmining land uses be likely to afford significant benefit either from a public policy or an economic standpoint. Section 515(c)(3)(B), 30 U.S.C. § 1265(c)(3)(B), requires that regulatory authorities examine the feasibility of a proposed postmining land use, the market need for the use, and the availability of financing. Section 515(e)(3), requires, among other things, an improvement of the affected watershed. These requirements, when read together, indicate that the acceptable postmining land uses for mountaintop removal mining and steep slope operations will take planning, work, and significant expenditure to effect. They also indicate that approved postmining land uses should result in some type of public or economic benefit. Interpreting the word _equal _ to allow a postmining land use that is merely an unimproved version of the premining land use would run counter to both sets of provisions.

A third reason for this conclusion is our understanding that Congress wished to include all postmining land uses that could afford a significant public or economic benefit. If Congress had required that mountaintop removal and steep slope sites always be restored to a _better economic or public use, _ such a provision might have been misconstrued as a requirement that the sites had to be put to a completely different category of use after mining. Congress used the term _equal _ in recognition that it sometimes might be beneficial to the public or to the economy to restore a site to an improved version of its premining land use.

Consequently, an approvable postmining land use, say agriculture, may fall into the same general land use category as the premining land use, but only if there will be significant improvements to

the site that offer a net benefit to the economy or the public. In accordance with this understanding, the Federal regulations at 30 C.F.R. § 785.14(c)(1)(ii) and 785.16(a)(2) provide that applicants for exceptions from the AOC restoration requirement must demonstrate compliance with the alternative postmining land use requirements of 30 C.F.R. § 816.133(c). One example of such an alternative would be a premining use of unmanaged forest that may or may not be harvested for timber being replaced by a postmining commercial forest that is carefully

managed to produce higher yields of better timber. Another example of such an alternative
would be going from an undeveloped, steep slope, sparsely forested premining condition that
provides limited recreational benefit to a postmining land use of commercial forestry with developed recreational facilities for public use. After mining, the steep terrain would be reclaimed creating a relatively flat plateau with unconsolidated soil material and gently rolling
contours to enhance the growth and harvesting of commercial species for an identified forest
product and to provide public recreational facilities. Such recreational facilities must be accessible to the public and would require structures or developments such as picnic shelters,
boat ramps, developed trails, and rest rooms to support such uses. Less intensive recreational
uses such as bird watching and hiking would also require developed facilities such as trails and
rest rooms. These public recreational uses would provide a significant public benefit, while the
harvesting of the commercial tree species would provide a significant economic benefit to the
community by providing jobs and a valuable forest product.

3. Conclusion

After carefully reviewing SMCRA, the legislative history and the implementing regulations, we
have determined that there is sufficient basis for the interpretation that postmining land uses for
mountaintop removal and steep slope mining operations with an AOC variance must incorporate
an added public or economic benefit in order to justify receiving an exception to the Act _s AOC
restoration requirements. This conclusion is supported by the importance Congress placed on
restoration to AOC when it mandated AOC as the standard for all mining operations except in
limited and prescribed circumstances. Furthermore, we find support in the applicability of the
_higher and better use _ requirement in OSM _s alternative postmining land use regulations.

II. WHAT ARE THE CRITERIA FOR AN EXCEPTION TO THE AOC RESTORATION REQUIREMENT?

A. What do our regulations require?

Our regulations (30 CFR 785.14 and Part 824 for mountaintop removal operations and 30 CFR
785.16 and 816.133(d) for steep slope mining operations) generally parallel the statutory

requirements, with a few additions and clarifications. The principal difference is the addition of
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language clarifying that the alternative postmining land use requirements of 30 CFR 816.133
apply to mountaintop removal operations and steep slope mining operations seeking an exception
from the AOC restoration requirement. Also, in 30 CFR 785.16(a)(3), we have added criteria for
determining when a proposed steep slope mining operation will be deemed to improve the
watershed.

B. Which Postmining Land Uses Qualify?

SMCRA and OSM _s regulations list the types of postmining land uses that qualify for an exception to the AOC restoration requirements for mountaintop removal and steep slope mining
operations. For an exception to the AOC restoration requirement for mountaintop removal
operations, the postmining land use must be _industrial, commercial, agricultural, residential or
public facility (including recreational facilities). _ The requirements for variances to the AOC
requirement for steep slope mining operations are the same, except that Congress excluded
_agricultural _ from the list and used the term _public use _ rather than _public facility. _
For a postmining land use to qualify for an exception to the AOC restoration requirements, it
must be one of the land uses enumerated in SMCRA and the regulations. Although forestry is
not one of the explicitly authorized postmining land uses, forestry may qualify for an exception
to AOC requirements as an _agricultural _ use at a mountaintop removal operation. Fish and
wildlife habitat cannot qualify in and of itself as a basis for an exception to AOC requirements.
However, ponds and wetlands might play a supporting role in the development of a facility that
does qualify for an exception to AOC requirements under the authorized _public facility _ use.
This paper is designed to provide guidance in granting exceptions to the AOC requirements
where regulatory authorities need clarification. Hence, its organization and content reflect this
need by including discussion of those land use categories that have proved difficult to interpret

consistently. Below, we briefly state how specific land uses do or do not qualify for an AOC exception, while further detailed explanation follows in Section C.

Forestry

Forestry can be approved as an _agricultural _ postmining land use for mountaintop removal permits. However, forestry cannot be approved as a postmining land use for a steep slope mining operation with an AOC variance. (See section III. B. below.)

Agriculture

For mountaintop removal operations, agriculture is an approvable postmining land use. Although forms of low-intensity, low-maintenance agricultural activities such as grazing and pastureland may be authorized, such uses are discouraged. (See section III.C. below.)

For steep slope mining operations, agriculture cannot be approved as a postmining land use for an AOC variance.

Fish and wildlife habitat

Fish and wildlife habitat (in and of itself) cannot be approved for mountaintop removal operations nor for steep slope mining operations with an AOC variance. It could, however, under certain circumstances, play a supporting role as part of an approved postmining land use, such as _public facility. _ (See section III. A. below.)

Public facility use or public use

SMCRA lists _public facility _ as a postmining land use for mountaintop removal operations.

However, the Act uses the term _public use _ when listing acceptable postmining land uses for an AOC variance for steep slope mining operations. These two terms should be interpreted as having identical meanings. (See section III. A. below.)

Commercial

Commercial operations would include retail or trade of goods or services, including hotels, motels, stores, restaurants, and other commercial establishments.

This use applies to both mountaintop removal and steep slope mining operations with an AOC variance.

Industrial

Industrial operations would include heavy and light manufacturing facilities, production of materials for fabrication, and storage of products.

This use applies to both mountaintop removal and steep slope mining operations with an AOC variance.

Residential
Residential areas would include land used for single and multiple-family housing, mobile home
parks, or other residential lodgings.
This use applies to both mountaintop removal and steep slope mining operations with an AOC
variance.

C. What are the Permitting Requirements?

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The following requirements apply only to those lands which are granted an exception from the
AOC requirements for mountaintop removal operations, or a variance from the AOC requirements for steep slope mining operations. Section 515(c)(3) of SMCRA and 30 CFR
785.14(c) establish criteria for approval of permits for mountaintop removal operations. Section
515(e) of SMCRA and 30 CFR 785.16(a) and 816/817.133(d) establishes criteria for the authorization of variances from the requirement to restore AOC for steep slope mining operations. Under paragraphs (c)(1) and (e)(1) of section 515 of SMCRA, States have the option
of deciding whether to include provisions for mountaintop removal operations and AOC variances for steep slope operations in their programs. However, if a State decides to authorize
these types of operations, its regulatory program must include permit application requirements
and review and approval criteria consistent with the Federal provisions cited above.
This document describes procedures for granting exceptions to AOC requirements for certain
postmining land uses. Section III discusses the three land uses which have been most confusing
relative to mountaintop removal: (1) public facility, including a discussion of fish and wildlife
habitat; (2) forestry; and (3) agricultural use in general. Section IV addresses the provisions for
steep slope mining operations, which differ from those applicable to mountaintop removal. The
postmining land uses _commercial, _ _industrial, _ and _residential, _ although enumerated in
SMCRA and the regulations, are not specifically addressed in this document. However, the
requirements for these land uses would be similar to those provided.

D. Are there any special bond release requirements?

There are no bond release requirements unique to mountaintop removal operations or steep slope
operations with an AOC variance. There is no requirement, either in SMCRA or the regulations,

that postmining land uses be implemented immediately following mining. To obtain full bond release, the permittee must demonstrate successful completion of all reclamation requirements of the permit and regulatory program. 30 CFR 800.40(c)(3). Under 30 CFR 816.133(a), one of those requirements is restoration of all disturbed areas to conditions *capable* of supporting the approved postmining land use. For mountaintop removal operations, the permittee must demonstrate adherence to the schedule approved as part of the reclamation plan, including installation of any infrastructure for which the permittee is responsible under that plan. In addition, Section 515(c)(2) of SMCRA describes mountaintop removal operations as creating sites that are _*capable* of supporting postmining land uses _ (emphasis added) in accordance with the requirements of the Act.

III. AOC EXCEPTION REQUIREMENTS FOR MOUNTAINTOP REMOVAL OPERATIONS

A. Public facility use, with a discussion of fish and wildlife habitat.

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There is some confusion in understanding the difference, if any, of term _public facility _ as set forth in SMCRA at section 515(c)(3), and the term _public use _ as set forth at section 515(e).

Both of these terms refer to public facilities. They appear in similar contexts and neither the statute nor its legislative history provides any indication that Congress intended that these terms have different meanings. Therefore, we will use them synonymously.

The land use category of _fish and wildlife habitat _ is defined at 30 CFR 701.5 under the definition of _Land use _ as land _dedicated wholly or partially to the management of species of fish or wildlife. _ Neither SMCRA at section 515(c)(3) nor the implementing Federal regulations at 30 CFR 785.14(c)(1) authorizes _fish and wildlife habitat, _ as a qualifying postmining land use for mountaintop removal mining operations. Therefore, a permit for mountaintop removal mining operations cannot be approved with a postmining land use of fish and wildlife habitat.

However, when fish and wildlife habitat features such as ponds and wetlands are to be created as part of a public recreational facility, they may play a supporting role in obtaining an exception

from the AOC restoration requirements. This is consistent with the Federal regulations at 30
CFR 816.97 concerning the protection of fish and wildlife habitat and related environmental
values. 30 CFR 816.97 encourages the enhancement of fish and wildlife habitat in all postmining land uses.
Neither SMCRA nor our regulations define _public use _ or _public facility use. _ However, when
OSM revised its definition of _land use _ at 30 CFR 701.5 (September 1, 1983, 48 FR 39892,
39893), OSM stated that a use is a public use if it involves benefit, utility, or advantage to the
public generally or any part of the public, as distinguished from benefitting an individual or a few
specific individuals. The term _public facility (including recreational facilities), _ implies structures or other significant developments that the public is able to use, or that confer some
type of public benefit. Depending upon individual circumstances, this term may include schools,
hospitals, airports, reservoirs, museums, and developed recreational sites such as picnic areas,
campgrounds, ballfields, tennis courts, fishing ponds, equestrian and off-road vehicle trails, and
amusement areas, together with any necessary supporting infrastructure such as parking lots and
rest facilities. In general, we expect those sites with a public or public facility postmining land
use will provide the public with access as a matter of right on a non-profit basis. Facilities that
meet a public need, like water supply reservoirs and publicly owned prisons, and facilities that
provide a benefit, like flood control structures and institutions of higher education, also qualify,
even if they are not readily accessible to all members of the public or completely non-profit.
However, a public facility does not include land used for private purposes, such as a private
hunting club, because the Act and regulations provide that only public recreational facilities
qualify a site for an exception to the AOC restoration requirements.
With these ideas in mind, we would expect that approval of a _public facility (including recreational facilities) _ postmining land use for an AOC variance for mountaintop removal
mining operations permit would require the following:

1. Consultation with the appropriate land use planning agencies, if any, to determine if the proposed postmining land use constitutes an equal or better economic or public use of the affected land, as compared with the premining use. [SMCRA §515(c)(3)(A); 30 CFR 785.14(c)(1)(i)]

As with any postmining land use, exceptions to the standards of AOC should only be granted where it is demonstrated that such exceptions result in an equal or better public or economic use for which some long-term and significant public benefit will be derived. Many recreational uses can be conducted on steep slopes that have been regraded to AOC. Therefore, it is not expected that many permits would be granted for the _public facility (including recreational facilities) _ postmining land use. However, through consultations with appropriate land use planning agencies, the regulatory authority may identify cases where the public would be well served if the land were reclaimed to a _public facility (including recreational facilities) _ postmining land use.

These consultations will assist the regulatory authority in determining if there is a public benefit derived from the resulting post mining land use. The regulatory authority should insure that the land use agencies are fully aware of the mining operations and reclamation plan and the proposed post mining contours and land use. The permit application should discuss the potential economic and environmental impacts of the proposed operation to assist the regulatory authority in making this determination even in the absence of any appropriate State or local planning agencies.

2. The applicant must present specific plans for the proposed postmining land use and assurances that such use will be:

(i) Compatible with adjacent land uses. [SMCRA §515(c)(3)(B)(i); 30 CFR 785.14(c)(1)(iii)(A)]

Here, the regulatory authority should require the submittal of documentation that compatibility has been determined through compliance with planning, zoning, and subdivision ordinances at the local and State level. Transcripts of all pertinent public meetings and hearings pertaining to the permit application should be required. The regulatory authority should ensure that any

necessary approvals (e.g., zoning) are received prior to approving a postmining land use. The permit application should discuss the potential impacts of the proposed mining operations on adjacent land uses, even in the absence of any appropriate State or local planning or zoning ordinances.

(ii) Obtainable according to data regarding expected need and market. [SMCRA §515(c)(3)(B)(ii); 30 CFR 785.14(c)(1)(iii)(B)]

Here, the regulatory authority should require specific demographic data and a market analysis which demonstrate a need for and the feasibility of a _public facility (including recreational facilities) _ postmining land use. The data and analysis should clearly document such things as a lack of other adequate, and similar public facilities of the proposed type nearby, and the expected public use of the proposed facility. The data and analysis should be sufficiently detailed as to

allow the regulatory authority to determine the feasibility of the post mining land use and ensure a public benefit is identified and can be obtained.

(iii) Assured of investment in necessary public facilities. [SMCRA §515(c)(3)(B)(iii); 30 CFR 785.14(c)(1)(iii)(C)]

Here, the regulatory authority should require evidence such as letters, and other supporting documents showing how appropriate local, county, regional, state, or Federal agencies intend to develop or support the proposed _public facility (including recreational facilities) _ postmining land use. This would include commitments, where appropriate, related to the development of access roads, structures, and adequate utilities such as water, storm water and sewage control, etc.

(iv) Supported by commitments from public agencies where appropriate. [SMCRA §515(c)(3)(B)(iv); 30 CFR 785.14(c)(1)(iii)(D)]

Here, the regulatory authority should require documented evidence that appropriate agencies concur with the proposed _public facility (including recreational facilities) _ land use and will provide the necessary reviews, advice, and support for development and implementation of the postmining land use. For example, support may be needed from agencies such as a Bureau of

Fish and Wildlife, or Bureau of Forestry for advice and concurrence related to park and recreation land designs. In addition, commitments of support may be needed for police protection, future maintenance of roads, structures and utilities, fire protection, etc.

(v) Practicable with respect to private financial capability for completion of the proposed use. [SMCRA §515(c)(3)(B)(v); 30 CFR 785.14(c)(1)(iii)(E)]

Here, the regulatory authority should require documentation which indicates a reasonable expectation that private financing, if appropriate, of the _public facility (including recreational facilities) _ postmining land use would be available. Such documentation could consist of letters of commitment by interested parties. However, financial contracts, while desirable, would not be necessary to fulfill the intent of this requirement.

(vi) Planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use. [SMCRA §515(c)(3)(B)(vi); 30 CFR 785.14(c)(1)(iii)(F)]

Here, the regulatory authority should require the details of how the specific plans for the postmining land use will be incorporated into the mining and reclamation operations. The schedule could serve to identify when the structures, utilities, and drainage controls would be constructed. The specific plans and schedule submitted must provide sufficient detail to allow the regulatory authority to assess whether the proposed _public facility (including recreational facilities) _ postmining land use is obtainable, practicable, and reasonable.

(vii) Designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use. [SMCRA §515(c)(3)(B)(vii); 30 CFR 785.14(c)(1)(iii)(G)]

Here, the registered engineer must ensure that the design will assure the stability, drainage, and configuration _of the reclaimed land _ necessary for the intended _public facility _ use.

3. The applicant demonstrates compliance with the requirements for acceptable alternative postmining land uses in 30 CFR 816.133(a) through (c). [30 CFR 785.14(c)(1)(ii)]

Under 30 CFR 816.133(a), a permittee must restore all disturbed areas to a condition capable of supporting either their premining uses or higher or better uses. Since 30 CFR 785.14(c)(1)(ii) incorporates the *alternative* postmining land use requirements of 30 CFR 816.133(a)-(c), restoration to conditions solely capable of supporting the premining uses is not an option for mountaintop removal operations. Instead, the permit application must propose higher or better postmining land uses, which are defined in 30 CFR 701.5 as those uses _that have a higher

economic value or nonmonetary benefit to the landowner or the community than the premining land uses. _ As discussed in Part II of this document, this requirement applies in addition to, not in place of, the requirement in 30 CFR 785.14(c)(1)(i) that the postmining land use be an equal or better economic or public use compared to the premining use.

Paragraph (b) of 30 CFR 816.133 pertains to determination of premining uses. Since it contains no requirements unique to alternative postmining land uses, we are not discussing it here.

Paragraph (c) of 30 CFR 816.133 provides that alternative postmining land uses must meet certain criteria. Specifically, the permit application must demonstrate that:

(1) There is a reasonable likelihood for achievement of the proposed use.

(2) The proposed use does not present any actual or probable hazard to the public health and safety, or threat of water diminution or pollution.

(3) The proposed use is not impractical or unreasonable.

(4) The proposed use is consistent with applicable land use policies or plans.

(5) There will be no unreasonable delay in implementation of the proposed use.

(6) The proposed use will not cause or contribute to a violation of Federal, State, or local law.

The fourth criterion duplicates the requirements of 30 CFR 785.14(c)(1)(iv), so the application need not contain any additional information to satisfy that requirement. Information submitted in

response to 30 CFR 785.14(c)(1)(iii) also may be useful in demonstrating compliance with the remaining criteria of 30 CFR 816.133(c). However, those criteria are not identical with the requirements of 30 CFR 785.14(c)(1)(iii), nor are they subsets of those requirements. Therefore, the application will need to include the additional economic, environmental, and other information necessary to demonstrate compliance with those criteria.

Determinations of reasonableness or practicality are judgment calls on the part of the regulatory authority. Consultation with land use planning and zoning agencies may assist the regulatory authority in making these determinations.

Finally, under 30 CFR 816.133(c), the regulatory authority must consult with the landowner or land management agency with jurisdiction over the lands in the proposed permit area. The decision record must include documentation of this consultation and the consideration given to

any comments received.

4. Federal, State, and local government agencies with an interest in the proposed land use
must have an adequate period in which to review and comment on the proposed use. [30
CFR 785.14(c)(1)(v)]

These comments, and the required consultations with appropriate land use planning agencies,
surface landowners, and State environmental agencies will be essential to the regulatory authority
in making the judgements and determinations under these provisions.

B. Forestry.

The term _Forestry _ is defined under _Land use _ in the Federal regulations at 30 CFR 701.5 as
_Land used or managed for the long-term production of wood, wood fiber, or wood-derived
products. _ Neither SMCRA nor the Federal regulations specifically designate forestry as an
approved post mining land use for sites granted an exception from the AOC requirements.

However, we have recognized forestry as an agricultural post mining land use since 1983 (September 1, 1983; 48 FR39893). The preamble to our 1983 rulemaking revising the definition
of land use in 30 CFR 701.5 discusses the relationship of the land uses listed in section 515(c)(3)
of the Act to the land use categories in the definition. Specifically, the preamble states that:
_Agricultural use is interpreted as including cropland, pastureland or land occasionally cut for
hay, grazingland, and forestry. _ Therefore, forestry can be approved for mountaintop removal
operations on the condition that it results in a long term and significant public or economic
benefit. However, because section 515(e) of the Act does not include _agriculture _ in the list of
approvable postmining land uses, forestry is not allowed for steep slope mining operations with
AOC variances. A permit application with forestry as a postmining land use for a mountaintop
removal operation would have to include the following:

1. Consultation with the appropriate land use planning agencies, if any, to determine if the

proposed postmining land use constitutes an equal or better economic or public use of the
affected land, as compared with the premining use. [SMCRA §515(c)(3)(A); 30 CFR

785.14(c)(1)(i)]
As with any postmining land use, exceptions to the standards of AOC should only be granted where it is demonstrated that such exceptions result in an equal or better public or economic use from which some long term public benefit will be derived. A comprehensive, realistic forest management plan should accompany any mountaintop removal permit application based on a postmining land use of forestry. The regulatory authority should seek the advice of the land use planning agencies in determining if the management plan will insure an equal or better economic or public use of the land. The regulatory authority should insure that the land use agencies are fully aware of the mining operations and reclamation plan and the proposed postmining contours and land use. The permit application should discuss the potential economic and environmental impacts of the proposed operation to assist the regulatory authority in making this determination even in the absence of any appropriate State or local planning agencies.

In addition, the regulatory authority could determine whether appropriate agencies concur with the proposed forestry postmining land use, and will provide any necessary reviews, advice, and support for development and implementation of the postmining land use. For example, support may be needed from agencies including but not limited to a Bureau of Forestry or a Bureau of Conservation for advice and concurrence related to tree species, landscape designs, and for erosion and sedimentation control measures.

2. (a) The applicant must present specific plans for the proposed postmining land use.

[SMCRA §515(c)(3)(B); 30 CFR 785.14(c)(1)(iii)]

The regulatory authority should insure that the applicant provides a credible forest management plan prepared by a professional forester who is fully cognizant of the final site configuration.

The forest management plan must discuss the proposed mining and reclamation activities and their impact on tree establishment and growth, and should also discuss the planting, maintenance and harvesting of the forest product. The forest management plan should include periodic

evaluation of the stand for disease and insect infestation and treatment if necessary, thinning, fire control, erosion control, soil supplements, control of competing species, harvesting, reforestation, and transportation of the final product.

The regulatory authority should also provide a copy of the management plan to the appropriate state agency qualified to assess the validity of the plan, i.e., Bureau of Forestry. This agency should be charged with reviewing the technical aspects of the plan to insure that: 1) the species planted is suitable for the postmining land use, 2) the plan provides all steps necessary for the landowner to protect the stand, and 3) the plan will allow efficient harvest of the timber. The State agency should further review the plan to determine whether the species proposed to be planted on the postmining site will produce a sufficient yield to insure the success of the 18 proposed market use.

(b) The applicant also provides appropriate assurances that the proposed postmining land use will be:

(i) Compatible with adjacent land uses. [SMCRA §515(c)(3)(B)(i); 30 CFR 785.14(c)(1)(iii)(A)]

In addition to requiring a showing of compliance with all local ordinances and zoning requirements, the regulatory authority should insure that there are no adjacent land uses that will make growing or harvesting of forest products impractical. Transcripts of all pertinent public meetings and hearings pertaining to the permit application should be required, if such pertinent transcripts exist. The responsibility for making the compatibility determination rests with the regulatory authority, not any other governmental entity. The permit application should discuss the potential impacts of the proposed mining operations on adjacent land uses, even in the absence of any appropriate State or local planning or zoning ordinances.

(ii) Obtainable according to data regarding expected need and market. [SMCRA §515(c)(3)(B)(ii); 30 CFR 785.14(c)(1)(iii)(B)]

The applicant should demonstrate anticipated need and market for the forest products planned to be grown on the site. The application must include information such as the frequency with which the proposed land use occurs in the region and studies of the projected need for or marketability

of the services or products resulting from the proposed use. For example, if the proposed land
use involves pulpwood production, is an existing or proposed pulp mill located within an economically realistic radius? Or, as another example, within the reasonably foreseeable future,
will there be sufficient demand for the proposed products? Documented studies by individuals or
organizations with expertise in economic forecasting would be particularly persuasive.

(iii) Assured of investment in necessary public facilities. [SMCRA §515(c)(3)(B)(iii); 30 CFR 785.14(c)(1)(iii)(C)]

The application must contain letters or resolutions from State or local governments, water and
sewer authorities, or other public agencies committing those entities to supplying the public
facilities (such as roads, water and sewer lines) needed to accomplish the proposed postmining
land use. If no such public facilities are necessary, the application must explain why not.

(iv) Supported by commitments from public agencies where appropriate. [SMCRA §515(c)(3)(B)(iv); 30 CFR 785.14(c)(1)(iii)(D)]

The application must provide the detailed descriptions of any necessary public facilities, and
must include letters or resolutions from the appropriate public agency committing that agency to
installing, maintaining, or providing advice or assisting to the proposed forestry operation. These

descriptions and letters must be supplied only in cases where the commitments of public agencies
are necessary to successfully complete the proposed use.

(v) Practicable with respect to private financial capability for completion of the proposed use. [SMCRA §515(c)(3)(B)(v); 30 CFR 785.14(c)(1)(iii)(E)]

Reforestation is a time-intensive investment that may not pay off for many years. The regulatory
authority should examine permit applications to determine if the applicant provides substantial
and credible information that suggests that forestry is a practical investment for this area.
Management plans submitted with the permit application should provide for management of the
forest lands beyond an initial harvest (i.e., sustainable yield). The management plan should
provide estimates on how much it will cost to implement each step of the plan. The regulatory
authority should require evidence that the landowners possess the ability to complete and manage
the proposed forestry operation, and financial capability to fund all steps of the management

plan. Additionally, there should be a demonstrated long term and significant economic or public benefit to establishing a postmining land use of forestry. Finally, letters from banks or other lending institutions indicating a willingness to loan money for the type of project proposed would be helpful.

(vi) Planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use.

[SMCRA §515(c)(3)(B)(vi); 30 CFR 785.14(c)(1)(iii)(F)]

At a minimum, the reclamation plan must require creation of the specific landforms and site configuration needed for the proposed postmining land use. All necessary roads or utility corridors should also be provided for in the reclamation plan. The plan must explain how suitable soils will be created and excessive compaction avoided. The schedule must identify how mining and reclamation activities will be structured to accommodate these needs. Limiting compaction and selection of the soil materials is crucial to success of tree growth on reclaimed areas. The regulatory authority must require the applicant to designate the areas of tree planting in the permit and specify measures to limit compaction in those areas. The reclamation plans must limit the amounts and type of equipment in the tree planting areas during final reclamation to reduce the amount of soil compaction that occurs. Reclamation must be conducted in a manner that includes handling the material as little as possible and limiting grading to only that which is necessary to achieve the postmining land use. A professional forester or soil scientist should be consulted to determine the proper soil horizons and soil depth to segregate during mining and replace after mining to insure sufficient growth for the targeted forest products.

In addition, the application should designate the species of trees to be planted, and the measures taken to insure erosion will be controlled so that will not interfere with tree growth. Reclamation and planting plans should include the establishment of fire breaks and access routes to allow timber stand management practices. Information regarding the type of equipment to be used during harvesting should be submitted with the application.

(vii) Designed by a registered engineer in conformance with professional standards

established to assure the stability, drainage, and configuration necessary for the intended use. [SMCRA §515(c)(3)(B)(vii); 30 CFR 785.14(c)(1)(iii)(G)]
Applications should be prepared by both a registered engineer and a forester to insure that the land configuration is compatible with forestry and that compaction in the proposed tree planting area is kept to a minimum. The types and specifications of equipment contemplated for harvesting should be specified in the permit application. A professional forester should evaluate the equipment in light of the final slope configuration to insure the equipment will be able to operate safely and economically on the site.

3. The applicant demonstrates compliance with the requirements for acceptable alternative postmining land uses in 30 CFR 816.133(a) through (c). [30 CFR 785.14(c)(1)(ii)]
Under 30 CFR 816.133(a), a permittee must restore all disturbed areas to a condition capable of supporting either their premining uses or higher or better uses. Since 30 CFR 785.14(c)(1)(ii) incorporates only the *alternative* postmining land use requirements of 30 CFR 816.133(a), restoration to conditions solely capable of supporting the premining uses is not an option for mountaintop removal operations. Instead, the permit application must propose higher or better postmining land uses, which are defined in 30 CFR 701.5 as those uses _that have a higher economic value or nonmonetary benefit to the landowner or the community than the premining land uses. _ As discussed in Part I of this document, this requirement applies in addition to, not in place of, the requirement in 30 CFR 785.14(c)(1)(i) that the postmining land use be an equal or better economic or public use compared to the premining use. This does not mean that a proposed postmining land use cannot belong to the same general category as the premining use (e.g., forestry premining use/forestry postmining use). It does mean, however, that the postmining use must represent an added benefit from either a public or economic standpoint.
Therefore, rather than being merely forestry/forestry, with an added benefit from either a public or economic standpoint, it would be forestry premining use/commercial forestry postmining use.
The regulatory authority would have to establish these _added benefit _ categories (e.g., commercial forestry) as part of its approved program (48 FR 39893; September 1, 1983).

Paragraph (b) of 30 CFR 816.133 pertains to determination of premining uses. Since it contains no requirements unique to alternative postmining land uses, we are not discussing it here.

Paragraph (c) of 30 CFR 816.133 provides that alternative postmining land uses must meet certain criteria. Specifically, the permit application must demonstrate that:

(1) There is a reasonable likelihood for achievement of the proposed use.

(2) The proposed use does not present any actual or probable hazard to the public health and safety, or threat of water diminution or pollution.

(3) The proposed use is not impractical or unreasonable.

(4) The proposed use is consistent with applicable land use policies or plans.

(5) There will be no unreasonable delay in implementation of the proposed use.

(6) The proposed use will not cause or contribute to a violation of Federal, State, or local law.

The fourth criterion duplicates the requirements of 30 CFR 785.14(c)(1)(iv), so the application need not contain any additional information to satisfy that requirement. Information submitted in response to 30 CFR 785.14(c)(1)(iii) also may be useful in demonstrating compliance with the remaining criteria of 30 CFR 816.133(c). However, those criteria are not identical with the requirements of 30 CFR 785.14(c)(1)(iii), nor are they subsets of those requirements. Therefore, the application will need to include the additional economic, environmental, and other information necessary to demonstrate compliance with those criteria.

Determinations of reasonableness or practicality are judgement calls on the part of the regulatory authority. Consultation with land use planning and zoning agencies may assist the regulatory authority in making these determinations.

Finally, under 30 CFR 816.133(c), the regulatory authority must consult with the landowner or land management agency with jurisdiction over the lands in the proposed permit area. The decision record must include documentation of this consultation and the consideration given to any comments received.

4. Federal, State, and local government agencies with an interest in the proposed land use must have an adequate period in which to review and comment on the proposed use. [30 CFR 785.14(c)(1)(v)]

These comments, and the required consultations with appropriate land use planning agencies,
surface landowners, and State environmental agencies will be essential to the regulatory authority
in making the judgements and determinations under these provisions.

C. Agricultural uses.

An exception from the AOC requirements for an agricultural postmining land use is authorized
for mountaintop removal operations (at SMCRA section 515(c)), but is not authorized for steep
slope mining operations (see SMCRA at section 515(e)). For mountaintop removal operations,
Congress intended that the _agricultural _ postmining land use would encompass a broader range
of agricultural activities than simply commercial agricultural uses. However, the Congress also
indicated that this expanded use of the term _agriculture _ is not intended to favor less managed

and low intensity activities such as grazing, pastureland and the like. H.R. Rep. No. 95-218, at
109 (1977).

Among other things, 30 CFR 785.14(c) requires consultation with appropriate land use planning
agencies, if any exist; a demonstration that the proposed postmining land use is an equal or
better economic or public use of the land, compared with the premining use; a finding that the
use is not impractical or unreasonable and that it will not involve an unreasonable delay in
implementation; and a demonstration that the proposed use is obtainable according to data
regarding need and market.

An approval of an _agricultural _ postmining land use for mountaintop removal operations would
require the following.

**1. Consultation with the appropriate land use planning agencies, if any, to determine if the
proposed postmining land use constitutes an equal or better economic or public use of the
affected land, as compared with the premining use.** [SMCRA §515(c)(3)(A); 30 CFR 785.14(c)(1)(i)]

As with any postmining land use, exceptions to the standards of AOC should only be granted
where it is demonstrated that such exceptions result in an equal or better public or economic use

for which some significant public benefit will be derived. Through consultations with appropriate land use planning agencies, the regulatory authority should determine if there is a need for an agricultural postmining land use. That identified need should be documented and the beneficial aspects of the agricultural postmining land use should be sufficiently clear. The regulatory authority should insure that the land use agencies are fully aware of the mining operations and reclamation plan and the proposed post mining contours and land use. The permit application should discuss the potential economic and environmental impacts of the proposed operation to assist the regulatory authority in making this determination even in the absence of any appropriate State or local planning agencies.

In addition, the regulatory authority could determine whether appropriate agencies concur with the proposed agricultural postmining land use, and will provide any necessary reviews, advice, and support for development and implementation of the postmining land use. For example, support may be needed from agencies including but not limited to a Bureau of Agriculture and a Bureau of Conservation for advice and concurrence related landscape designs, and for erosion and sedimentation control measures.

2. (a) The applicant must present specific plans for the proposed postmining land use.

[SMCRA §515(c)(3)(B); 30 CFR 785.14(c)(1)(iii)]

The regulatory authority should insure that the applicant provides a credible plan for the proposed agricultural activities. The agricultural plan must discuss the proposed mining and reclamation activities and their impact on crop establishment and growth, and should also discuss

the planting, maintenance and harvesting of the agricultural products.

The regulatory authority should also provide a copy of the agricultural plan to the appropriate state agency qualified to assess the validity of the plan, i.e., Bureau of Agricluture. The reviewing agency should be fully cognizant of the final site configuration. This agency should be charged with reviewing the technical aspects of the plan to insure that: 1) the postmining soils are suitable for the proposed agricultural plants, 2) the plan provides all steps necessary for the landowner to protect the soil, and 3) the plan will allow efficient harvest of the agricultural

products.
(b) The applicant also provides appropriate assurances that the proposed postmining land use will be:
(i) Compatible with adjacent land uses. [SMCRA §515(c)(3)(B)(i); 30 CFR 785.14(c)(1)(iii)(A)]
In addition to requiring compliance with all local ordinances and zoning requirements, the regulatory authority should insure that there are no adjacent land uses that will make growing, spraying, or harvesting of agricultural products impractical. Transcripts of all pertinent public meetings and hearings pertaining to the permit application should be required. The responsibility for making the compatibility determination rests with the regulatory authority, not any other governmental entity. The permit application should discuss the potential impacts of the proposed mining operations on adjacent land uses, even in the absence of any appropriate State or local planning or zoning ordinances.
(ii) Obtainable according to data regarding expected need and market. [SMCRA §515(c)(3)(B)(ii); 30 CFR 785.14(c)(1)(iii)(B)]
Here, the regulatory authority should require specific demographic data and a market analysis which demonstrate a need for and the feasibility of an agricultural postmining land use. The data and analysis should be sufficiently detailed to allow the regulatory authority to assess the validity of the proposal. That is, the data and analysis should clearly document such things as the expected demand and markets for the agricultural products proposed to be produced. For example, if the proposed land use involves the commercial production of crops, is a consumer population, or is a processing facility located within an economically realistic radius? Or, as another example, within the reasonably foreseeable future, will there be sufficient demand for the proposed products? Documented studies by individuals or organizations with expertise in economic forecasting would be particularly persuasive.
(iii) Assured of investment in necessary public facilities. [SMCRA §515(c)(3)(B)(iii); 30 CFR 785.14(c)(1)(iii)(C)]
This may not be applicable to an agricultural use. The application must contain letters or

resolutions from State or local governments, water and sewer authorities, or other public agencies

committing those entities to supplying any necessary roads, water and sewer lines, or other public facilities needed to accomplish the proposed postmining land use. If no public facilities are necessary, the application must explain why not.

(iv) Supported by commitments from public agencies where appropriate. [SMCRA §515(c)(3)(B)(iv); 30 CFR 785.14(c)(1)(iii)(D)]

The application must provide the detailed descriptions of any necessary public facilities, and must include letters or resolutions from the appropriate public agency committing that agency to installing, maintaining, or providing advice or assistance to the proposed agricultural operation.

The permittee should document any commitments of support that may be needed for police protection, future construction and maintenance of roads, structures and utilities, fire protection, schools, etc.

(v) Practicable with respect to private financial capability for completion of the proposed use. [SMCRA §515(c)(3)(B)(v); 30 CFR 785.14(c)(1)(iii)(E)]

Here, the regulatory authority should require documentation that indicates a reasonable expectation that private financing of the development and operation of an agricultural postmining land use would be available. The permit application should provide substantial and credible information that suggests that agriculture is a practical investment for this area. Such documentation should provide sufficient details of the expected developmental and operational costs as to allow the regulatory authority to assess whether the proposed agricultural use is obtainable, practicable, and reasonable. The regulatory authority should require evidence that the landowners possess the financial capability to fund all steps of the operational plan. Additionally, there should be a demonstrated long term and significant economic or public benefit to establishing a postmining land use of agriculture. Finally, letters from banks or other lending institutions indicating a willingness to loan money for the type of project proposed would be helpful.

(vi) Planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use. [SMCRA §515(c)(3)(B)(vi); 30 CFR 785.14(c)(1)(iii)(F)]

Here, the regulatory authority should require the details of how the specific plans for the postmining land use will be incorporated into the mining and reclamation operations. At a minimum, the reclamation plan must require creation of the specific landforms and site

configuration needed for the proposed postmining land use, along with any necessary roads or utility corridors, even though the permittee is not required to actually implement the postmining land use. The plan must explain how suitable soils will be created and excessive compaction avoided. The schedule must identify how mining and reclamation activities will be structured to accommodate these needs. The specific plans and schedule submitted must provide sufficient

detail to allow the regulatory authority to assess whether the proposed agricultural postmining land use is obtainable, practicable, and reasonable.

(vii) Designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use. [SMCRA §515(c)(3)(B)(vii); 30 CFR 785.14(c)(1)(iii)(G)]

Applications should be prepared by a registered engineer to insure that the land configuration is compatible with an agricultural postmining land use, and that compaction in the proposed agricultural areas is appropriate to the agricultural products to be grown.

3. The applicant demonstrates compliance with the requirements for acceptable alternative postmining land uses in 30 CFR 816.133(a) through (c). [30 CFR 785.14(c)(1)(ii)]

Under 30 CFR 816.133(a), a permittee must restore all disturbed areas to a condition capable of supporting either their premining uses or higher or better uses. Since 30 CFR 785.14(c)(1)(ii) incorporates only the *alternative* postmining land use requirements of 30 CFR 816.133(a), restoration to conditions solely capable of supporting the premining uses is not an option for mountaintop removal operations. Instead, the permit application must propose higher or better postmining land uses, which are defined in 30 CFR 701.5 as those uses _that have a higher economic value or nonmonetary benefit to the landowner or the community than the premining land uses. _ As discussed in Part II of this document, this requirement applies in addition to, not in place of, the requirement in 30 CFR 785.14(c)(1)(i) that the postmining land use be an equal or better economic or public use compared to the premining use. This does not mean that a proposed postmining land use cannot belong to the same general category as the premining use

(e.g., forestry premining use/forestry postmining use). It does mean, however, that the postmining use must represent an added benefit from either a public or economic standpoint.
Therefore, rather than being merely forestry/forestry, with an added benefit from either a public
or economic standpoint it would be forestry premining use/commercial forestry postmining use.
The regulatory authority would have to establish these _added benefit _ categories (e.g., commercial forestry) as part of its approved program (48 FR 39893; September 1, 1983).
Paragraph (b) of 30 CFR 816.133 pertains to determination of premining uses. Since it contains
no requirements unique to alternative postmining land uses, we are not discussing it here.
Paragraph (c) of 30 CFR 816.133 provides that alternative postmining land uses must meet
certain criteria. Specifically, the permit application must demonstrate that:
(1) There is a reasonable likelihood for achievement of the proposed use.
(2) The proposed use does not present any actual or probable hazard to the public health and

safety, or threat of water diminution or pollution.
(3) The proposed use is not impractical or unreasonable.
(4) The proposed use is consistent with applicable land use policies or plans.
(5) There will be no unreasonable delay in implementation of the proposed use.
(6) The proposed use will not cause or contribute to a violation of Federal, State, or local law.
The fourth criterion duplicates the requirements of 30 CFR 785.14(c)(1)(iv), so the application
need not contain any additional information to satisfy that requirement. Information submitted in
response to 30 CFR 785.14(c)(1)(iii) also may be useful in demonstrating compliance with the
remaining criteria of 30 CFR 816.133(c). However, those criteria are not identical with the
requirements of 30 CFR 785.14(c)(1)(iii), nor are they subsets of those requirements. Therefore,
the application will need to include the additional economic, environmental, and other information necessary to demonstrate compliance with those criteria.
Determinations of reasonableness or practicality are judgement calls on the part of the regulatory
authority. Consultation with land use planning and zoning agencies may assist the regulatory
authority in making these determinations.
Finally, under 30 CFR 816.133(c), the regulatory authority must consult with the landowner or
land management agency with jurisdiction over the lands in the proposed permit area. The

decision record must include documentation of this consultation and the consideration given to
any comments received.

4. Federal, State, and local government agencies with an interest in the proposed land use must have an adequate period in which to review and comment on the proposed use. [30 CFR 785.14(c)(1)(v)]

These comments, and the required consultations with appropriate land use planning agencies, surface landowners, and State environmental agencies will be essential to the regulatory authority in making the judgments and determinations under these provisions.

IV. AOC VARIANCE REQUIREMENTS FOR STEEP SLOPE MINING OPERATIONS

A. Acceptable postmining land uses.

The land use category of _fish and wildlife habitat _ is defined at 30 CFR 701.5 under the 27 definition of _Land use _ as land _dedicated wholly or partially to the management of species of fish or wildlife. _ Neither SMCRA at section 515(e)(2) nor the implementing Federal regulations at 30 CFR 785.16(a)(1) authorize _fish and wildlife habitat, _ as a qualifying postmining land use for steep slope mining operations that seek a variance from the AOC requirements. Therefore, a permit application which includes an AOC variance cannot be approved for steep slope mining operations when a postmining land use of fish and wildlife is proposed. However, when fish and wildlife habitat features such as ponds and wetlands are to be created as part of a public recreational facility, they may play a supporting role in obtaining an exception from the AOC restoration requirements.

The term _public use, _ which appears in section 515(e)(2) of SMCRA as part of the requirements for obtaining an AOC variance for steep slope mining operations, has a meaning identical to that of the term _public facility use, _ which appears in section 515(c)(3) of SMCRA as part of the requirements for mountaintop removal operations. They appear in similar contexts and neither the statute nor its legislative history provides any indication that Congress intended that these

terms have different meanings. Based on characterizations of the public use provision in the
Congressional floor debate concerning the amendment that became the AOC variance for steep
slope mining operations, we must conclude that the term _public use _ means the same as public
facility use.
Unlike section 515(c)(3), which lists agricultural uses as acceptable postmining land uses for
mountaintop removal operations, section 515(e)(2) does not include agriculture as an approvable
postmining land use for AOC variances for steep slope mining operations. Therefore, because
we have recognized forestry as an agricultural land use since 1983 (48 FR 39893, September 1,
1983), forestry is not an allowable postmining land use for AOC variances for steep slope mining
operations.

B. Permitting Requirements.

The following discussion pertains to selected permitting requirements for AOC variances for
steep slope mining operations. It does not address all applicable requirements.

1. Consultation with the appropriate land use planning agencies to determine if the potential use of the affected land is deemed to constitute an equal or better economic or public use. [SMCRA §515(e)(3)(A); 30 CFR 816/817.133(d)]

The guidance provided in Part III.A.1. of this document applies here. The regulatory authority
should strive to identify cases where the public would be better served if the land were reclaimed
to the proposed postmining land use rather than being returned to AOC. In addition, the
applicant must demonstrate that the site will be suitable for the proposed postmining land use.

2. The postmining land use must be designed and certified by a qualified registered 28
professional engineer in conformance with professional standards established to ensure the stability, drainage, and configuration necessary for the intended use of the site. [SMCRA§515(e)(3)(B); 30 CFR 816/817.133(d)(5)]

The discussion in Part III.A.2.(vii) applies here, but for all land uses, not just public uses.

3. The watershed of the permit and adjacent areas is deemed to be improved. [SMCRA §515(e)(3)(C); 30 CFR 785.16(a)(3); 30 CFR 816/817.133(d)(6)]

Section 515(e)(3)(C) of SMCRA authorizes the regulatory authority to grant a permit that
provides a variance from AOC restoration requirements for steep slope mining operations if,
among other things, _after approval of the appropriate state environmental agencies, the
watershed of the affected land is deemed to be improved. _ Our regulations at 30 CFR

785.16(a)(3) and 30 CFR 816/817.133(d)(6) flesh out this provision by requiring that the permit
application demonstrate, and the regulatory authority find, that the proposed mining operations
will improve the watershed of lands within the proposed permit and adjacent areas. Under 30
CFR 785.16(a)(3), the basis for comparison may be either the premining condition of the watershed or the projected condition of the watershed if the mining operations restored the site to
its AOC.

This regulation [30 CFR 785.16(a)(3)] also specifies that the watershed will be deemed improved
only if the following three conditions are met:

"_ The proposed operation will reduce either (1) the amount of total suspended solids or other pollutants discharged to ground or surface water from the permit area so as to improve public or private uses or the ecology of the water, or (2) flood hazards within the watershed by lowering the peak flow discharge from precipitation events or thaws.

"_ During each season, the total flow from the proposed permit area will not vary in a way
that adversely affects surface water ecology or any existing or planned use of surface or ground water.

"_ The appropriate State environmental agency or agencies approve the watershed improvement aspects of the proposed operation and reclamation plan. Our regulations at 30 CFR 816/817.133(d)(6) clarify that this condition applies only when the approval of those agencies is otherwise required.

The application must include the hydrologic data and analyses necessary to demonstrate that
these three conditions exist.

**4. The regulatory authority must assure that the surface landowner of the permit area
has knowingly requested, in writing, that the AOC variance be granted.** [SMCRA §515(e)(2); 30 CFR 785.16(a)(4); 30 CFR 816/817.133(d)(9)]

**5. In granting a variance, the regulatory authority shall require that only that amount
of spoil will be placed off the mine bench as is necessary to achieve the planned postmining land use, insure stability of the spoil retained on the bench, and meet all other SMCRA requirements.** [SMCRA §515(e)(4); 30 CFR 816/817.133(d)(8)]

6. The alternative postmining land use requirements of 30 CFR 816/817.133(c) are met. [30 CFR 785.16(a)(2); 30 CFR 816/817.133(d)(2)]

Our regulations at 30 CFR 816/817.133(c) effectively define alternative postmining land uses as
higher or better uses. As defined in 30 CFR 701.5, higher or better postmining land uses are
those uses _that have a higher economic value or nonmonetary benefit to the landowner or the

community than the premining land uses. _ Therefore, the permit application must demonstrate
that the proposed postmining land use is a higher or better use than the premining use. This
requirement applies in addition to, not in place of, the requirement in 30 CFR 816/817.133(d)(4)
that the postmining land use be an equal or better economic or public use compared to the premining use.
Paragraph (c) of 30 CFR 816.133 provides that alternative postmining land uses must meet
certain criteria. Under this paragraph, the permit application must include the economic, environmental, and other information necessary to demonstrate that:
(1) There is a reasonable likelihood for achievement of the proposed use.
(2) The proposed use does not present any actual or probable hazard to the public health and
safety, or threat of water diminution or pollution.
(3) The proposed use is not impractical or unreasonable.
(4) The proposed use is consistent with applicable land use policies or plans.
(5) There will be no unreasonable delay in implementation of the proposed use.
(6) The proposed use will not cause or contribute to a violation of Federal, State, or local law.
Determinations of reasonableness or practicality are judgement calls on the part of the regulatory
authority. Consultation with land use planning agencies may assist the regulatory authority in
making these determinations.
Finally, under 30 CFR 816.133(c), the regulatory authority must consult with the landowner or
land management agency with jurisdiction over the lands in the proposed permit area. This
requirement is effectively subsumed by the requirement in 30 CFR 785.16(a)(4) and 30
816/817.133(d)(9) that the surface landowner submit a written request for a variance.
7. Federal, State, and local government agencies with an interest in the proposed land
use must have an adequate period in which to review and comment on the proposed use. [30 CFR 816/817.133(d)(10)]
The regulatory authority must consider these comments and the result of the required consultations with appropriate land use planning agencies, surface landowners, and State environmental agencies when making the judgements and determinations required under these
rules.

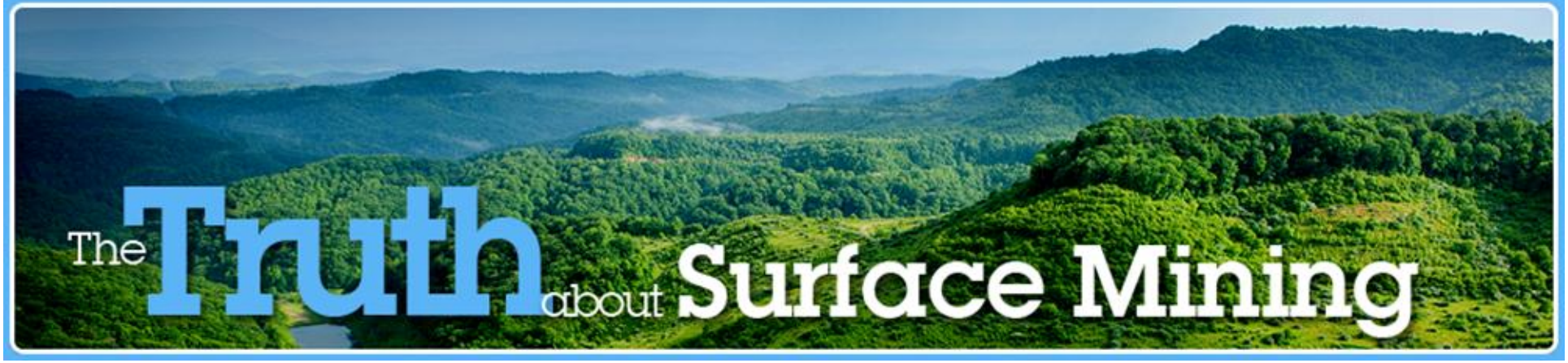
Appendix

Statutory and Regulatory Citations
FEDERAL

PROVISIONS
Approximate
Original Contour
(AOC) Restoration
Mountaintop
Removal
Operations
Steep Slope AOC
Variance
SMCRA citations 515(b)(3) 515(c) 515(e)
30 CFR citations 816.102-816.107
817.102-817.107
785.14, Part 824 785.16,

816/817.133(d

How is Mining Regulated?



Introduction

- Before a company can begin mining, they must go through the long and rigorous process of obtaining a mining permit. The permit application process is initiated by collecting baseline data to adequately characterize the pre-mine environmental condition of the permit area. This work includes surveys of cultural and historical resources, soils, vegetation, wildlife, assessment of surface and groundwater hydrology, climatology, and wetlands. In conducting this work, the company collects geologic data to define and model the soil and rock structures and coal that will be mined. We develop mining and reclamation plans by utilizing this geologic data and incorporating elements of the environmental data. The mining and reclamation plan incorporates the provisions of Surface Mining Control and Reclamation Act (SMCRA), state programs, and the complementary environmental programs that affect coal mining. Also included in the permit application are documents defining ownership and agreements pertaining to coal, minerals, oil and gas, water rights, rights of way and surface land.
- Some mine permits take over a year to prepare, depending on the size and complexity of the mine. Once a permit application is prepared and submitted to the regulatory agency, it goes through a completeness review and technical review. Proposed permits also undergo a public notice and comment period. Some mine permits may take several years or even longer to be issued. Regulatory authorities have considerable discretion in the timing of the permit issuance and the public and other agencies have rights to comment on and otherwise engage in the permitting process, including through intervention in the courts.
- Before a mine permit is issued, a mine operator must submit a bond or otherwise secure the performance of reclamation obligations. The Abandoned Mine Lands (AML) Program, which is part of SMCRA, requires a fee on all coal produced. The proceeds are used to reclaim mine lands closed prior to 1977 when SMCRA came into effect. The current fee is $0.315 per ton on surface-mined coal and $0.135 on deep-mined coal from 2008 to 2012, with reductions to $0.28 per ton on surface-mined coal and $0.12 per ton on deep-mined coal from 2013 to 2021.

Compliance & Oversight

The Surface Mining Control and Reclamation Act (SMCRA) is the primary environmental law governing coal mining and reclamation activities. This law requires that all coal mining related land disturbances should be minimized while maximizing coal recovery. The Federal Office of Surface mining (OSM) has an oversight role in the states in which we operate, with each state having their own regulatory program

- West Virginia
  The West Virginia Department of Environmental Protection (WVDEP) regulates coal mining and reclamation operations in West Virginia
- Pennsylvania
  The PA Department of Environmental Protection regulates PA operations
- Kentucky
  The KY Department of Natural Resources regulates KY operations
- Virginia
  The VA Division of Mined Land Reclamation (VADMLR) regulates VA operations.
- Tennessee
  Tennessee has given all SMCRA governing rights back to the OSM
- Ohio
  The OH Division of Mineral Resources Management (ODMRM) regulates OH operations.

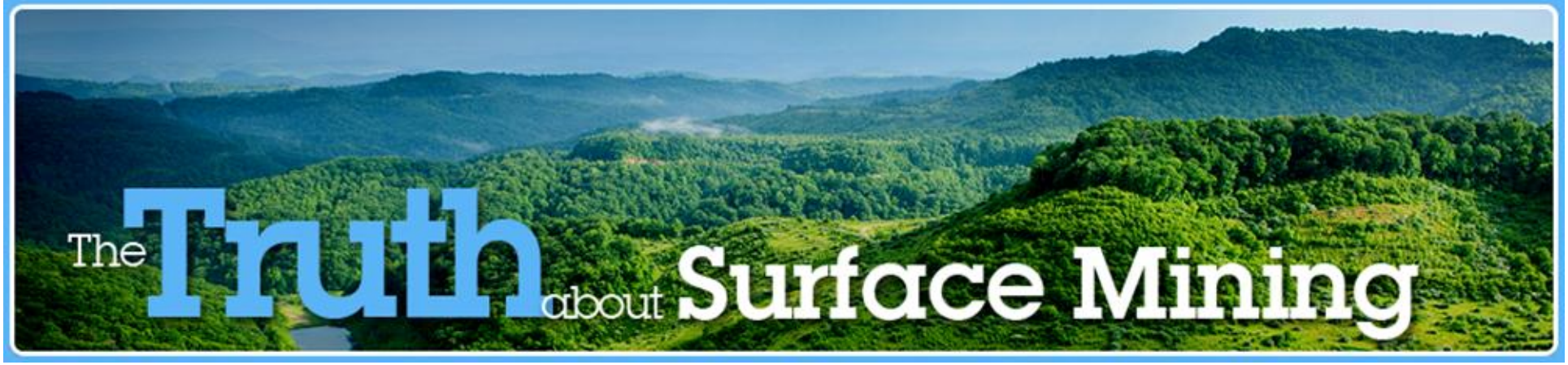
Environmental laws

Mining operations abide by a number of other federal environmental laws:

- 1972: Clean Water Act (CWA)
- 1970: Clean Air Act (CAA)
- 1965: Solid Waste Disposal Act (SWDA)
- 1969: National Environmental Policy Act (NEPA)
- 1973: Endangered Species Act (ESA)
- 1974: Safe Drinking Water Act (SDWA)
- 1976: Toxic Substances Control Act (TSCA)
- 1976: Resources Conservation and Recovery Act (RCRA)
- 1980: Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Permitting

Surface Mining Control and Reclamation Act (SMCRA)

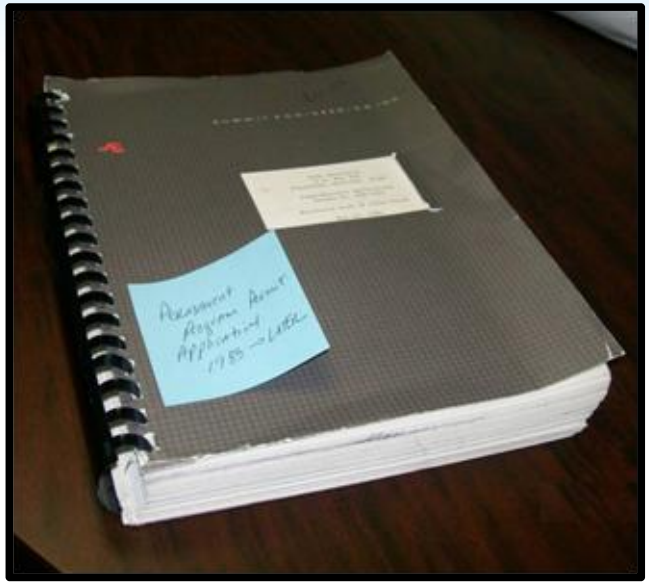


The implementation of SMCRA

- Congress intended that the states would have the primary governmental responsibility for regulating surface mining and ensuring reclamation. However, they wanted the states to exercise this responsibility in a way that would meet minimum national environmental protection standards.
- Due to this new regulatory framework, Congress then created the Office of Surface Mining (OSM) within the Department of the Interior and instructed it to create federal regulations that established minimum standards for the states to meet in developing and carrying out their individual programs on private and state lands.
- The agency also had the responsibility of approving the state programs and with overseeing their implementation. In its role as overseer of state regulatory programs, OSM conducts mine site inspections, reviews permits issued by state regulatory agencies, analyzes state coal mining data, and evaluates whether regulatory programs are meeting the set requirements.

State regulatory primacy

- The states have the primary governmental responsibility for developing, authorizing, issuing, and enforcing regulations for surface mining and reclamation operations subject to SMCRA because of the diversity in terrain, climate, biologic, chemical, and other physical conditions in areas subject to mining operations.
- Some states with coal reserves have elected not to develop their own regulatory programs. These States are called Federal Program States, and their coal mining and reclamation operations are regulated by OSM. As of 2007, Tennessee and Washington were the only two Federal Program States with active coal mining operations.
- Requires at least one (1) inspection of each active mining site every calendar quarter and one (1) partial inspection every month. Inspections are performed by a State Regulatory authority. Or the Office of Surface Mining (OSM) if the State is a Federal Program State.



Typical mining permit application, 1983

Typical mining permit application, 2010

SMCRA standards

- SMCRA requires the operator to restore the land to a condition capable of supporting the uses it could support prior to mining, or to "higher or better uses." in order to achieve this, the operator is required to do the following:
  - Restore the Approximate Original Contour (AOC) of the land
  - Avoid acid mine drainage and prevent erosion to minimize impacts to nearby waters
  - Reclaim the land in a timely manner
  - Establish appropriate vegetation that will cover the previously disturbed area

During mining

After mining (1+ years of reclamation)

Inspection and enforcement requirements

- Every year, state regulatory agencies must conduct a minimum number of complete inspections of active and inactive mines – at least one complete, on-site inspection per quarter – and a minimum number of partial inspections – one partial inspection per month without advance notice.
  - Whenever a state inspector finds a violation at a mine, SMCRA requires that at a minimum, a notice of violation (NOV) be issued, giving the receiving mine a specified period of time to abate the violation.
  - If the violation is not abated within the time established by the inspector, then a cessation order (CO) can be issued. Corporate officers of the mining company bear ultimate responsibility for compliance with SMCRA regulations.
- SMCRA provides the public with the right to file written objections to any permit application, and to request the right to a public hearing or a mine inspection.

Agencies & Permits – Example: West Virginia

Federal and State Regulatory Agencies

- U.S. Office of Surface Mining
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- WV Department of Environmental Protection (WVDEP)
- WV Division of Natural Resources (WVDNR)
- WV Division of Culture and History (WVDCH)

State Permits

- WVDEP Prospecting/Exploration Permit
- WVDEP Article 3 Surface Mining Permit
- WVDEP NPDES Article 11 402 Permit
- U.S. Army Corps of Engineers 404 Dredge and Fill Permit
- WVDEP 401 Clean Water Certification
- WVDNR Public Land Corporation
- WV Office of Coalfield Community Development Community Impact Statement Pursuant to 145 CSR 8
- Required (WV as an example)

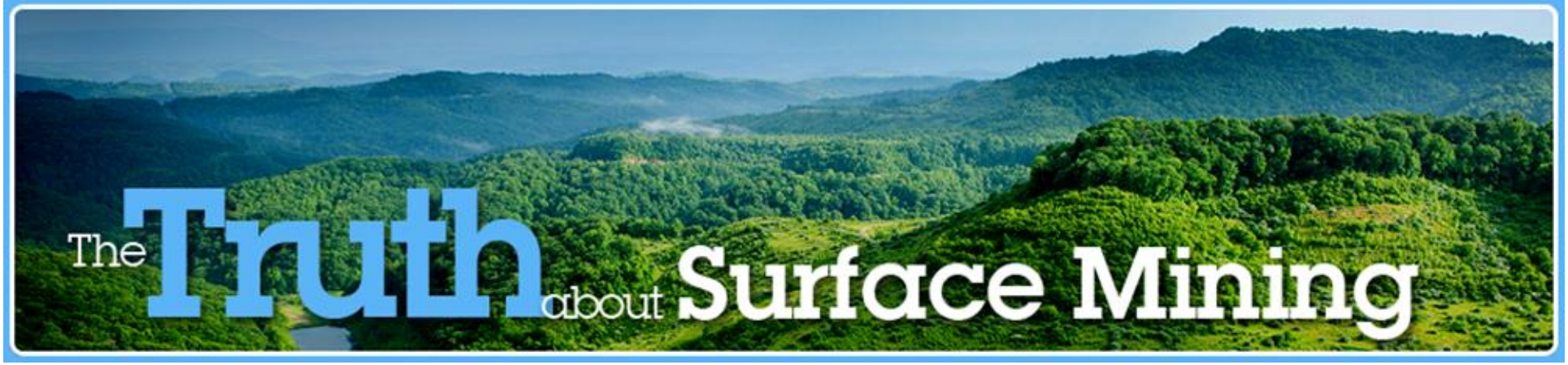
Approximate permit processing time frames

WVDEP Prospecting/Exploration Permit	2-6 months
WVDEP Article 3 Surface Mining Permit	16-24 months
WVDEP NPDES Article 11 402 Permit	18-26 months
U.S. Army Corps of Engineers 404 Dredge and Fill Permit	18-30 months
WVDEP 401 Clean Water Certification	16-24 months
WVDNR Public Land Corporation	2-6 months
WV Office of Air Quality Permit	6-12 months
WV Office of Coalfield Community Development Community Impact Statement Pursuant to 145 CSR	1-4 months
Approximate Review Processing Time	18-36 months

Note: Many, but not all, of the permitting activities will occur concurrently

Permitting

Checklist



Permitting Checklist: Part 1 – Administrative information

Section A: Applicant Ownership and Control Information
- All information ownership and control information can be obtained through the Office of Surface Mining (OSM) website through the Applicator/Violator System (AVS).

Section B: Applicant Violation Information
- Information from the applicant will be incorporated into this section and updated throughout the permit process.
- Can be readily accessed through the OSM AVS.

Section C: Property Information
- Information from the applicant will be incorporated into this section. Applicant will supply surface and mineral ownership and lease information. The applicant may be required to supply a copy of documents granting the legal right to enter and conduct operations.

Section D: Insurance/Bonding Information
- Information from the applicant will be incorporated into this section.

Section E: Applicant's Certification of Application
- An appropriate company official will certify application.

Note: The federal office will supply the appropriate filing fees.

Permitting Checklist: Part 2 – Environmental resource information

Section F: Land-use Information
- A Registered Professional Forester will complete this section based on existing land uses and the post-mining land use of unmanaged forestland.

Section G: Parks and Historic Lands Information
- The WV State Historical Preservation Office (SHPO) will be contacted early in the process to determine the need of a Phase I Archaeological Survey.

Section H: Fish and Wildlife Information
- The company will coordinate with state and federal agencies for Lands Inquiry clearance. A bat survey may be required to ensure that bats are not put in danger during the mining process.

Section I: Geologic Information
- The company will utilize Acid Base Analysis (ABA), selenium analysis and slake durability index (SDI) information obtained during proposed core drilling as outlined herein. The company will review existing geochemical data and utilize any available information to supplement the new data. The company will arrange a pre-submittal meeting with WVDEP to determine exact core hole locations. A certified lab will have to be obtained to complete analysis.
- If a topsoil substitute is requested, the company will coordinate with a lab to perform the proper analysis.

Permitting Checklist: Part 2 – Environmental resource information

Section J: Hydrologic Information

- The company will complete this section with water analysis to be obtained during the baseline sampling period. The company will review existing water data and utilize any available information to supplement the new water data. The Probable Hydrologic Consequences (PHC) and Hydrologic Reclamation Plan (HRP) will be written under direct supervision of a senior hydrologist.
- The company will conduct a groundwater inventory for all groundwater resources located within ½ mile of the permit area.

Section J-6: The Surface Water Runoff Analysis (SWROA)

- The SWROA will be completed by the company to ensure that the final design can be achieved at the operations.

Section K: National Pollution Discharge Elimination System (NPDES) Information

- All appropriate modules of the NPDES will be included in the permit. A minimum of 12 Baseline Water Quality (BWQ) samples for each site that meet the established protocol for precipitation events will be required.

Permitting Checklist: Part 3 – Mining and reclamation information

Section L: Variance/Waivers
- The company will list any variances or waivers as required in this section.

Section M: General Mining Information
- Section M is associated with the estimated amount of mineral to be extracted annually and for the life of the mine. It also summarizes what equipment is to be used, as well as what structures are anticipated to be constructed for the application.

Section N: Mining & Reclamation Plan
- The company will supply a generalized mine plan. The company will utilize this information to create a timing/sequence map for the operation.

Section O: Site-Specific Backfilling, Regrading & Re-vegetation Plan
- The company will prepare regrade cross sections based on the mine plan. The preliminary excess spoil disposal plan will dispose of spoil on adjacent permits or pre-law surface mine benches. A detailed materials-handling plan will be developed for any acid-toxic producing or selenium laden materials if encountered during overburden analysis.

Section P: Drainage & Sediment Control
- The drainage and sediment plan will be developed with input from the applicant with attention to the SWROA. On-bench sediment structures are to be used on the mine benches.

Permitting Checklist: Part 3 – Mining and reclamation information

Section Q: Transportation Plan
- The company will design the transportation plan for new haul road(s). Existing roads located on adjacent operations will be utilized as much as practicable.

Section R: Excess-Spoil Disposal
- A detailed regrade plan will be included to meet the approximate original contour guidelines for the proposed mine.

Section S: Underground/Subsidence Information
- Subsidence information is part of the application.

Section T: Blasting Plan
- Personnel with extensive blasting experience will prepare the blasting plan. The company will conduct field surveys to obtain locations of all man-made structures and the owner's name and address of each. These structures will be within 1,000 feet of the blast area and ½-mile of permit area. Pre-blast structural surveys may be conducted.

Section U: Water Monitoring
- The water-monitoring plan will be developed by utilizing the existing surface water and groundwater sampling sites previously established during baseline sampling.

Section V: Coal Processing Refuse Disposal Plan
- This may apply depending on the type of mine being constructed.

Permitting Checklist: Part 3 – Mining and reclamation information

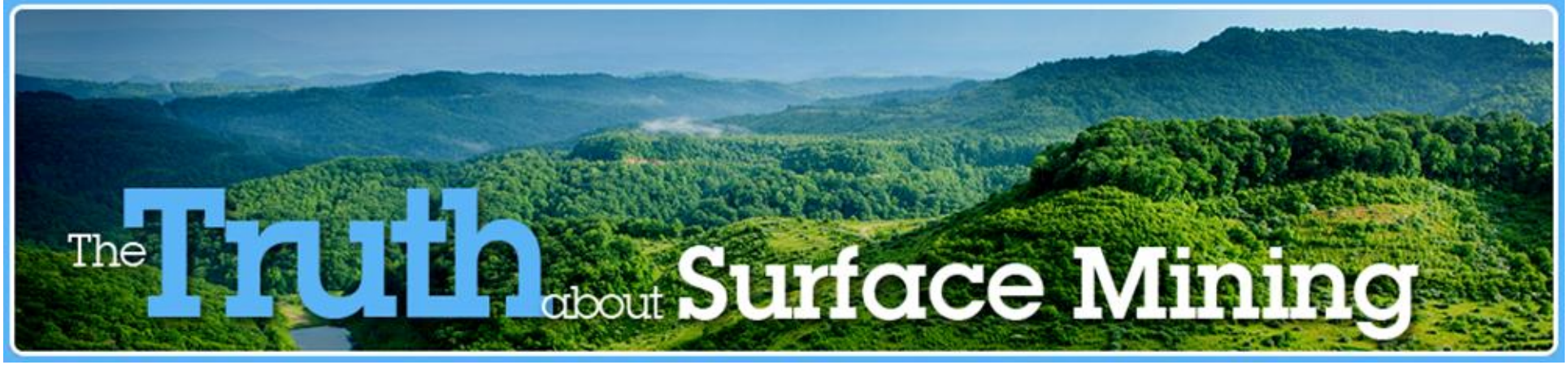
Section W: Underground Disposal Plan
- This may apply depending on the type of mine being constructed.

Section X: Examples of maps submitted in this section:
- Proposal & Drainage Map
- Soils Map
- NPDES Flow Chart
- SWROA Maps
- Geologic Cross Sections
- Geohydrologic Map(s)
- Drainage Structure Plan Views and Cross Sections
- Surface Water and Groundwater Baseline Sampling Map
- Mine Sequence Map
- Regrade Plan View/Regrade Cross Sections
- Haul Road Plan View Profile and Cross Section Map
- Subsidence Map
- Blasting Map
- Stream and Wetland Delineation Map
- Stream Buffer Zone Map
- Reforestation Planting Plan

Section Y: Certifications
- Consulting professional engineers will certify all sections of the MR-4, MR-5, and maps as required by the WVDEP.

Permitting

Cost of Permitting



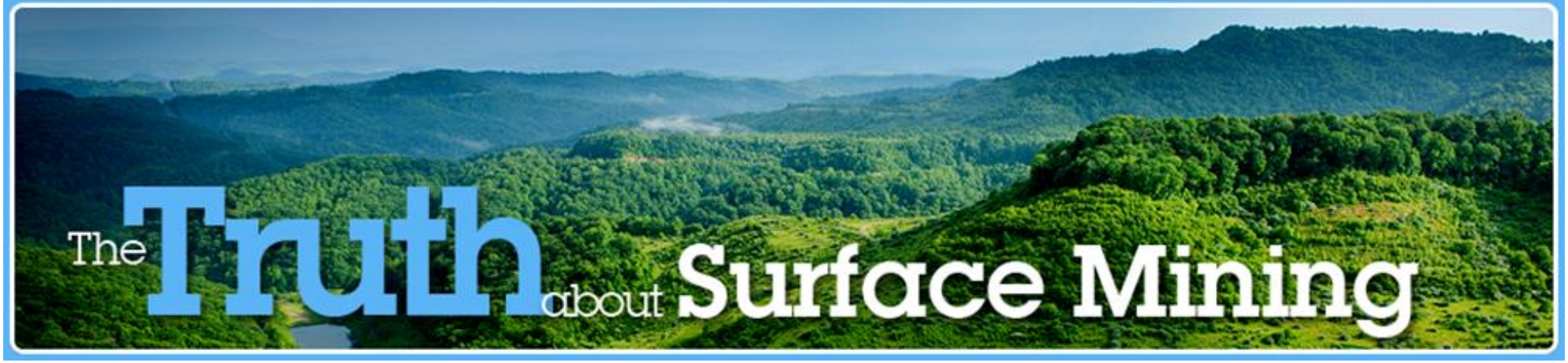
Permitting costs

- ~700 acre surface mine)
- Southern West Virginia
- 4 Valley Fills
- 3 in-stream ponds
- 10,000 feet of stream impacts

Baseline Data - Water Sampling		
20 baseline surface water sites ($45 each) x 6 events	$	5,400
10 BWQ sites ($45 each) x 12 events	$	5,400
20 heavy metals x $400	$	8,000
30 groundwater baseline ($45 each) x 1 event	$	1,350
10 groundwater ($45 each) x 6	$	2,700
Subtotal, Baseline Data - Water Sampling	**$**	**22,850**
Baseline Data - Overburden		
Corehole drilling – 5 holes at 500 ft depth x $35 FT	$	87,500
Geochemical testing-$8,300 per hole (ABA, Sulphur forms, Selenium)	$	41,500
Subtotal, Baseline Data - Overburden	**$**	**129,000**
Baseline Data - Biological Assessment Stations (Benthics)		
10 Benthic Sampling Sites ($1,500 each)	$	15,000
Subtotal, Baseline Data - Biological Assessment Stations	**$**	**15,000**
Baseline Data - Stream Delineation and Assessment		
25,000 Linear Feet for Project Area	$	25,000
Subtotal, Baseline Data - Stream Delineation and Assessment	**$**	**25,000**
Permit Applications		
Article 3 Mining Permit	$	140,000
NPDES Permit	$	25,000
Public Land Corporation Permit	$	25,000
401 Permit	$	30,000
404 (w/CMP) Permit	$	250,000
Subtotal, Permit Applications	**$**	**470,000**
TOTAL PERMITTING COSTS	**$**	**661,850**

Mitigation & Restoration

The Plan



Approximate Original Contour (AOC)

- The mining permit requires that the mine and all reclamation efforts be fully designed on paper and submitted to the regulatory agency within the permit document
- *The first step in the design of a surface coal mine, is known as the AOC determination. This is a modeling process which:
  - Establishes the "footprint" for the coal mine
  - Uses site exploration data and computer modeling to design the return (reclamation) of the site to AOC
  - Determines if there is a need for disposal of any excess material using valley fill construction then minimizes the size of fill(s)

**The definition of approximate original contour (AOC),*
as found in The Surface Mining and Coal Reclamation Act of 1977 (SMCRA)

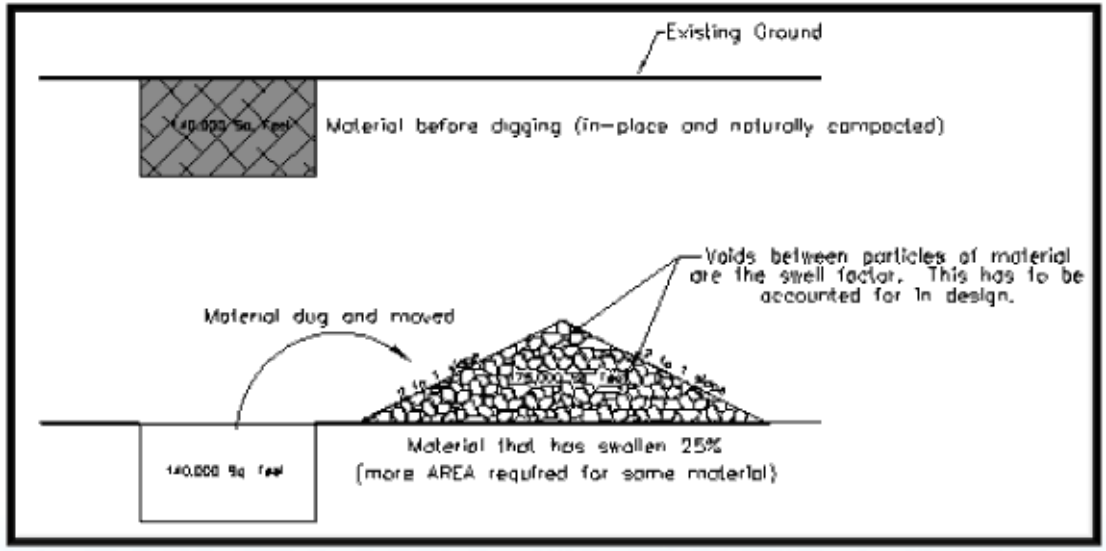
Approximate Original Contour (AOC)

Design components that are used for an AOC model are:

- Mine Volumes: The volume of material (rock and coal) to be managed typically represented in cubic yards and tons.
- Regrade Backfill Material: The volume of material that will be placed back onto the site to bring the new surface as close as possible to the original surface topography and in a stable configuration
- Topography: The mapped physical features of an existing location describing the shape and height of the land, represented by contours (lines of equal elevation)
- Valley Fills: The footprint for excess material placed in hollows typically for permanent storage. The footprint is only allowed to be as large as calculated in accordance with the AOC determination process.

Approximate Original Contour (AOC)

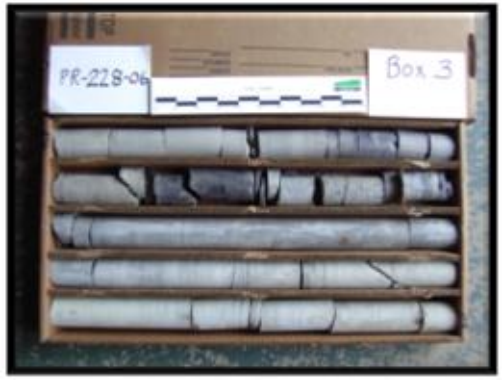
- Swell Factor: An allowance for voids (empty space) between fragments of material typically represented as a percentage
- "Swelling" of material occurs every time you dig it up. When an AOC model is developed, the percentage of swell has to be identified and managed as a part of the mining process. A simple test for swell is to dig a hole the size of a shoe box in compacted earth and take that material and place it in the shoe box you used to measure the hole. Is some material left over? This is the result of swelling. Swell is one reason that valley fills are sometimes necessary for a coal mine
- The modeling process involves step by step calculations to prove that AOC has been accomplished
- There must be Mine volume calculations establishing the amount of coal and rock to be managed as the result of the mine design



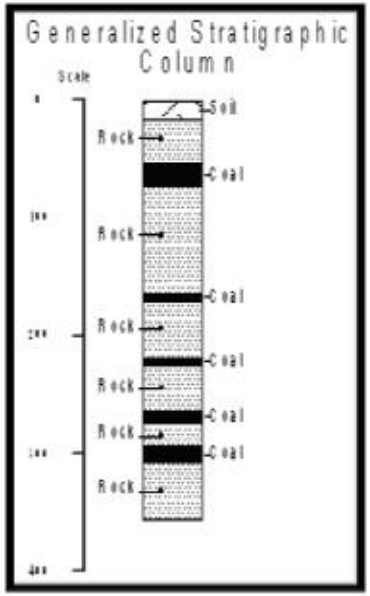
Approximate Original Contour (AOC)

- A core hole is a test drilling location for the site. Many core holes will be drilled to ensure accuracy.
- A tubular drill bit is driven into the ground and a complete core sample is retrieved and stored for identifying and measuring all of the materials (shale, clay, coal, sandstone, etc.) in the order they exist underneath the surface of the existing ground.
- Each measurement from the core hole is entered into a computer database. The databases are then used to create a computer model which will then be used to develop the AOC model for mine design

Core Drilling



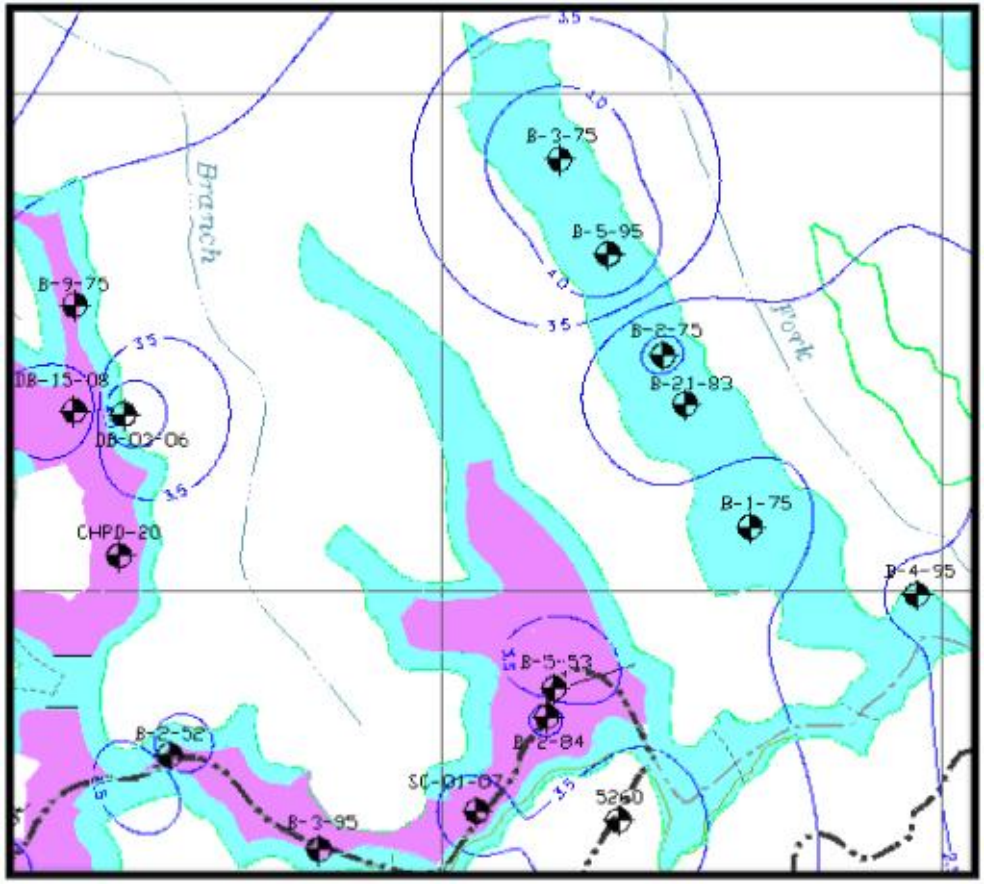
Core Samples



Core Hole Diagram

Approximate Original Contour (AOC)

- The area to be mined is evaluated using 3-D computer modeling to determine the volume of the coal and rock (overburden) to be mined
- Core hole locations are identified on this example of a coal reserve map. Geologic modeling provides data for mine volume calculations

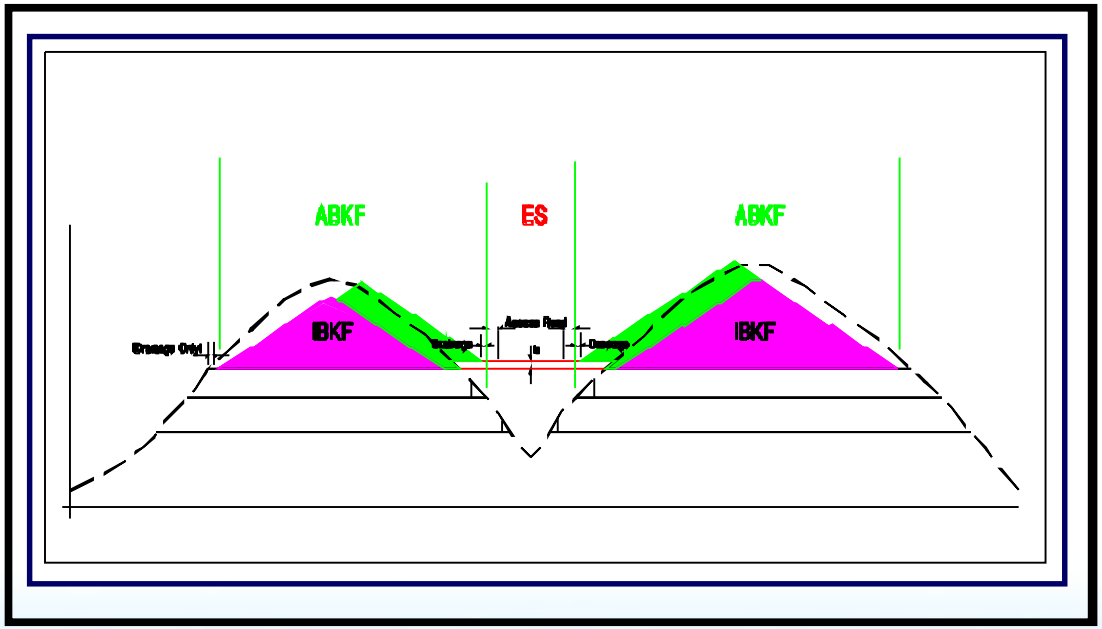


LEGEND

- CORE HOLE LOCATION
- MINEABLE COAL RESERVE
- COAL SEAM THICKNESS
- COAL SEAM OUTCROP
- STREAM LOCATIONS

Approximate Original Contour (AOC)

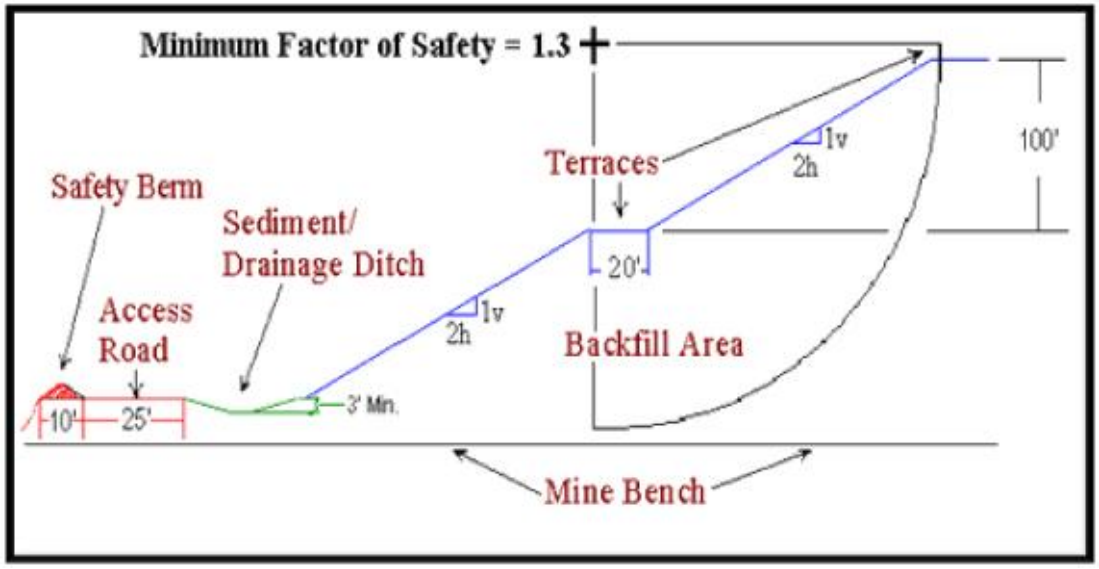
- Backfill calculations are prepared to prove that you have placed the maximum amount of material back onto the mine site before considering valley fills. If valley fills are necessary for storage of excess material, you are required to prove that you have placed additional backfill on top of the valley fill, as required by the AOC guidelines, before final design of the valley fill (to make the footprint of any fill as small as possible).
- The Cross Section represents the material used for backfill in the AOC model. IBKF is the initial backfill (material placed first onto the mined area). ABKF is the additional backfill (material placed on top of the valley fill to allow for more material stored on the ridge and less volume stored in the valley fill). ES (Excess Spoil) is the area where the valley fill would be constructed if the design calculation shows that additional excess material must go there.



Example of an AOC Model
Cross Sectional View

Approximate Original Contour (AOC)

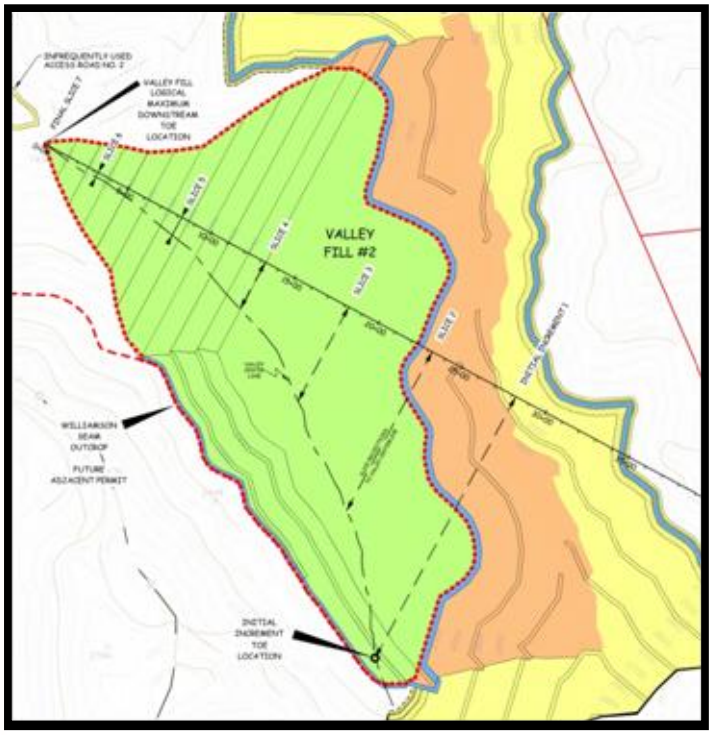
In addition to swelling, other AOC design requirements control the amount of space available for backfill on the mine site. Shown here is an example of backfill design requirements necessary for stability, access, and drainage. These contribute to the need for valley fills as well.



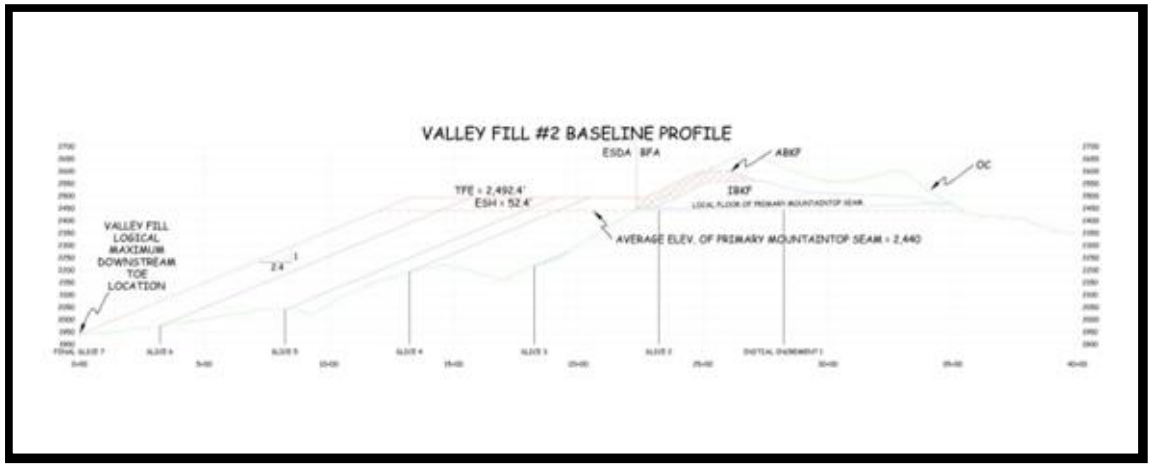
Approximate Original Contour (AOC)

Valley Fill Design: For valley fill design you must prove that the size of the fills have been minimized in accordance with the AOC guidelines.

Example of an AOC Valley Fill determination



Plan View

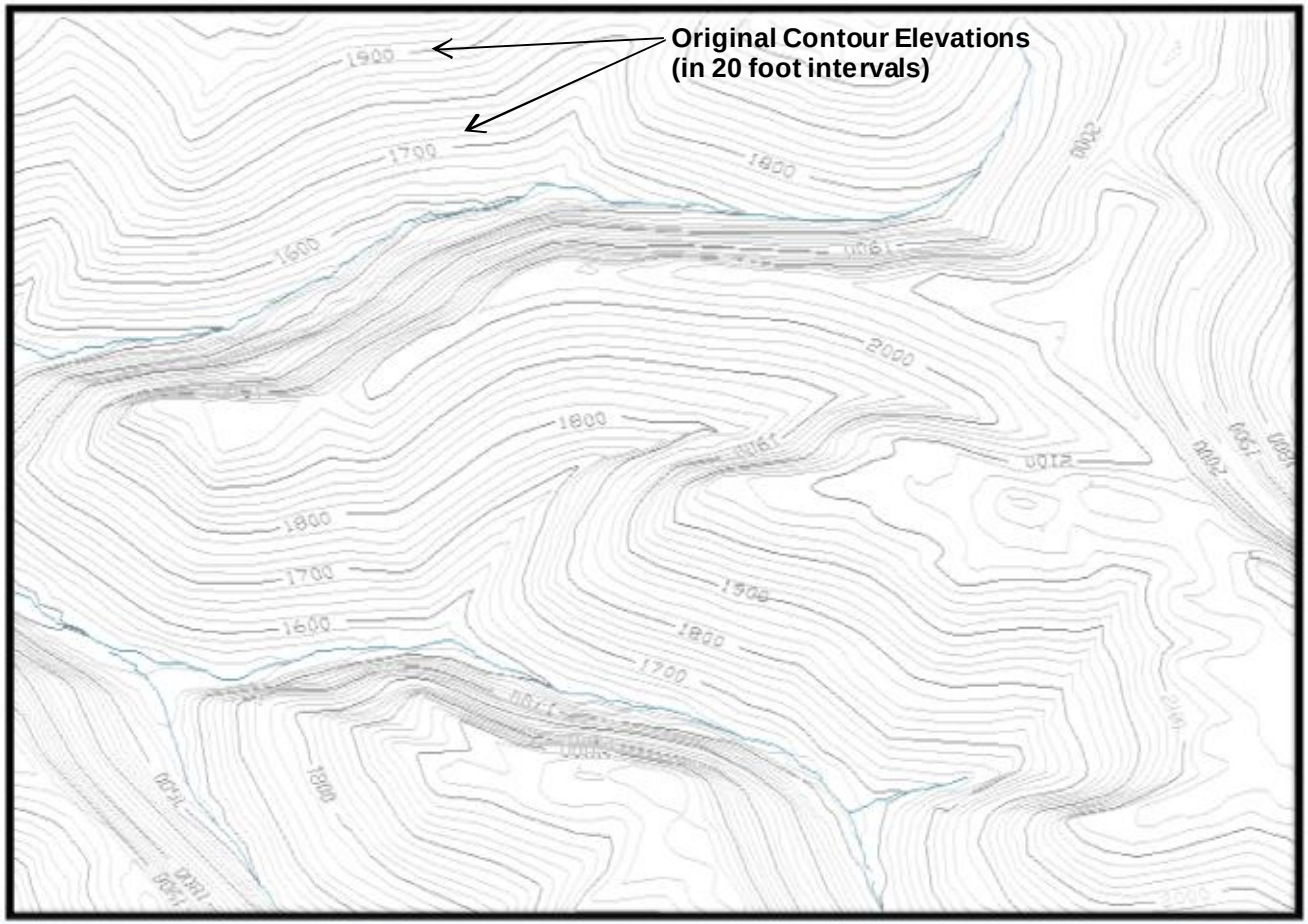


Profile View

Valley fill design requires the engineer to calculate the amount of storage available slice by slice. This analysis determines how much material can be stored, starting at the mine location and working down the hollow. The process ensures that the maximum amount of material is stored closer to the mine site and the amount of hollow used for construction of the valley fill is minimized.

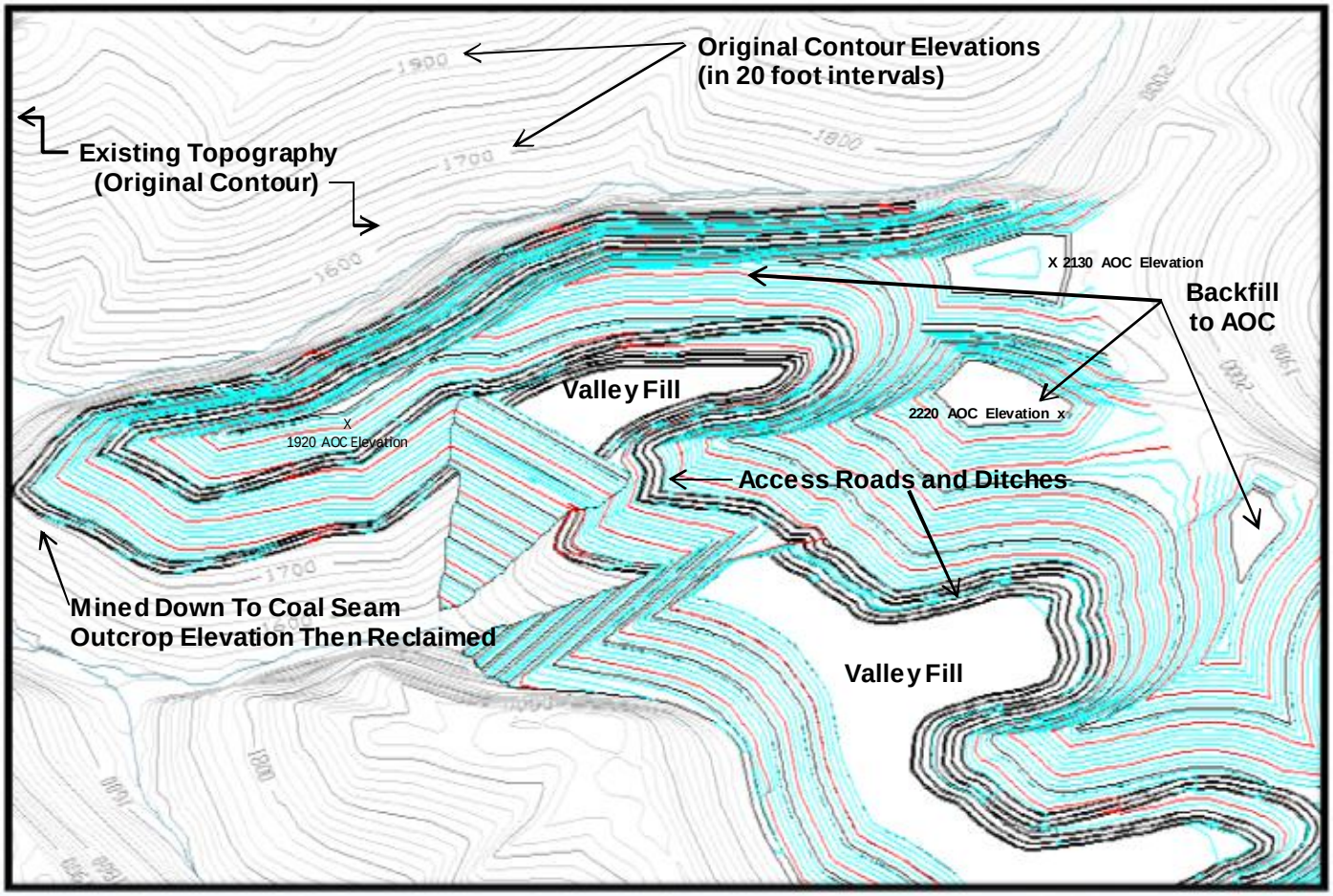
Approximate Original Contour (AOC)

An example of a three dimensional computer simulation:
Original contour before AOC design



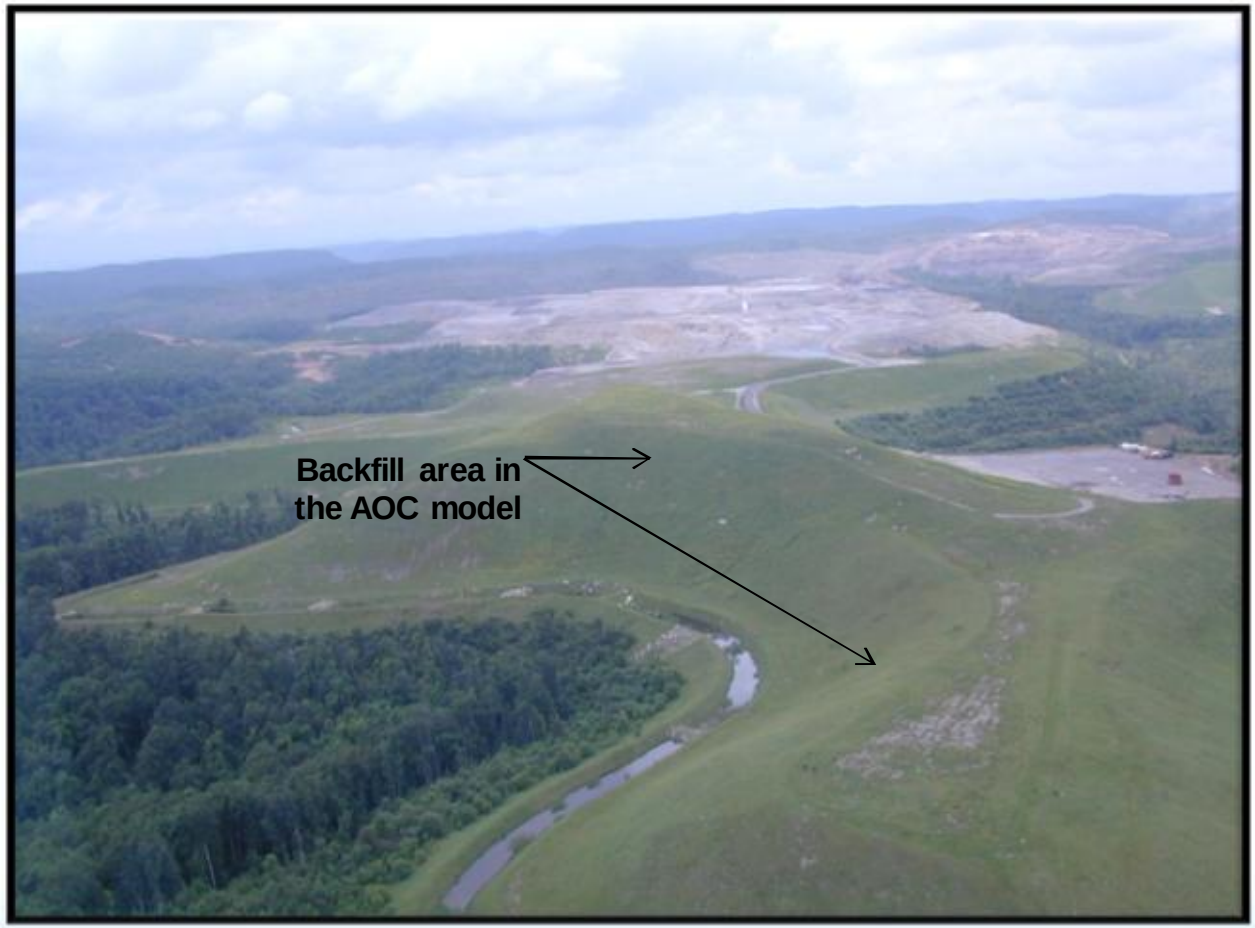
Approximate Original Contour (AOC)

Same location:
With AOC design



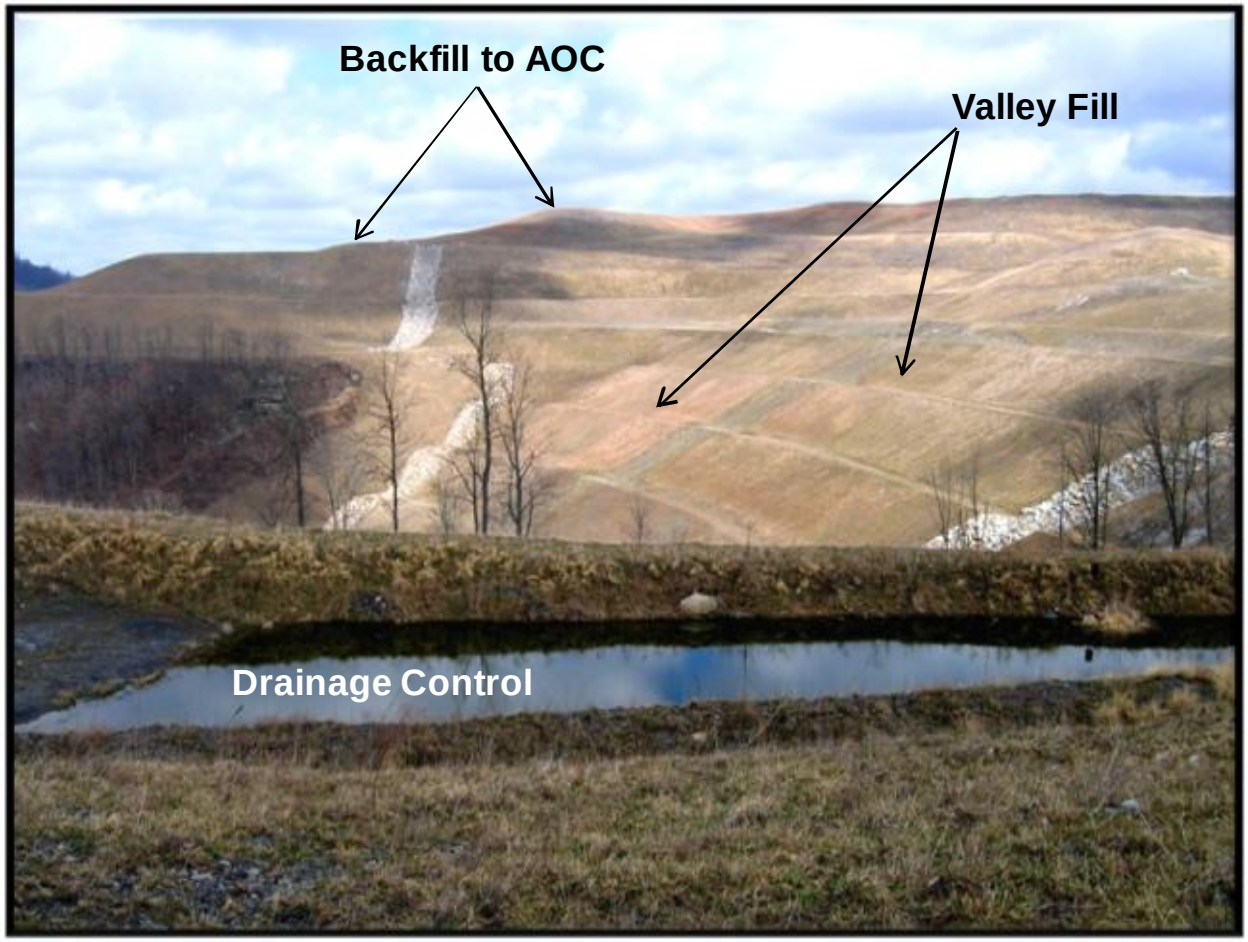
Approximate Original Contour (AOC)

The AOC design is applied to the mine site after coal removal and during the "reclamation" of the site. This photograph shows in-progress reclamation in the foreground, with active mining occurring in the background.

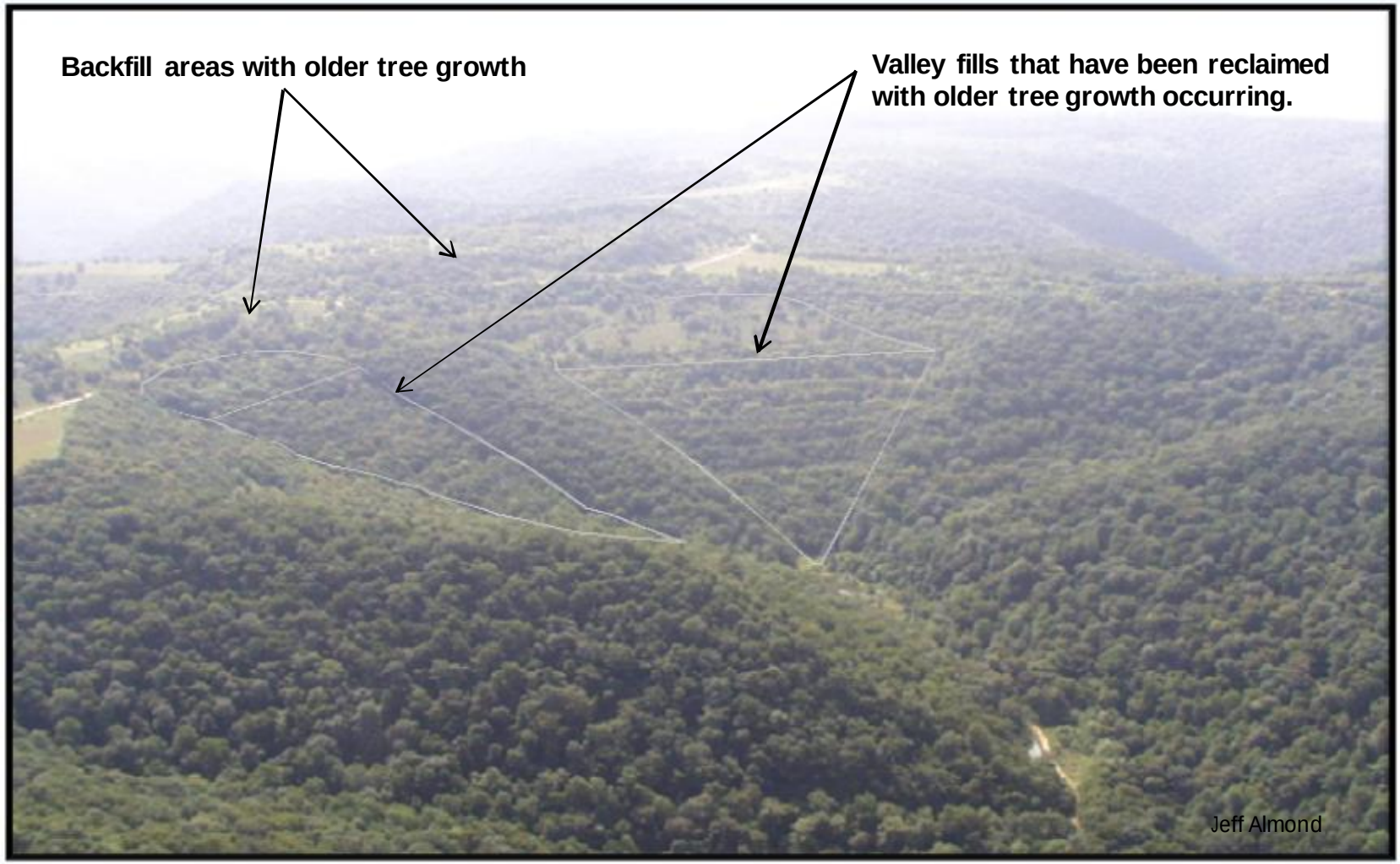


Approximate Original Contour (AOC)

Example of reclaimed valley fill and backfill area with early growth



Approximate Original Contour (AOC)



AOC Variance and Post Mining Land Use

Reclamation plans either allow for the land to be put back to it's Approximate Original Contour (AOC) or a variance to the AOC will need to be applied for in order to restore the land back to a better or higher intended use.

In conjunction and with the permission of the land owner, the mining company will decide what the post mining land use will be. This will determine whether an AOC variance is requested.

- AOC Variance
  Allows the mining company to reclaim the land in a manner other than what is required by the AOC determination. The alternatives are limited by law under SMCRA and any alternative to AOC must provide: *a higher and better use reclamation standard whereby the variance from AOC demonstrates significant public or economic benefit.*
- Post Mining Land Use (PMLU)
  - Defined as use of the land after mining and reclamation is complete. The property will be reclaimed (shaped and replanted) to achieve the post mining land use consistent with permitting regulations.
  - Applies to properties under both AOC determination and AOC variance. There will be a post mining land use designation for all mined property.

AOC Variance and Post Mining Land Use

In adopting the Surface Mining Control and Reclamation Act (SMCRA), Congress required that land be returned to AOC in most instances. However, Congress also provided exceptions from this requirement when a community is in need of flat or gently rolling terrain to achieve certain postmining land uses such as:

- Industrial
- Commercial
- Residential Development
- Public Facilities (airports, schools and hospitals for example)

Source: (Final Policy) Postmining Land Use, Office of Surface Mining Reclamation and Enforcement, dated June 2000

Approximate Original Contour (AOC)

With the use of today's technology, the coal company and engineers will know what steps must be taken to design a coal mine that will minimize the impact to the environment.

Boone County, West Virginia

Webster County, West Virginia

Compensatory Mitigation Plan (CMP)

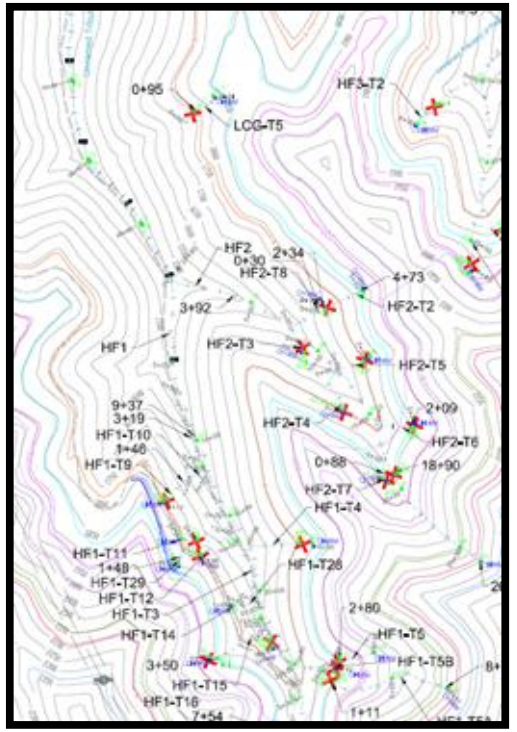
The CMP is a USACE 404 (Dredge and Fill) permit requirement. During the planning stages of a newly proposed mine site, engineers carefully avoid impacting wetlands and streams.

When the site conditions do not allow for a practical approach to removing coal without causing impacts to wetlands or streams, then a Compensatory Mitigation Plan must be created.

A Compensatory Mitigation Plan is a detailed set of instructions, designs, and accounting sheets that show how the impacted wetlands or streams will be replaced.

Identifying wetlands and streams

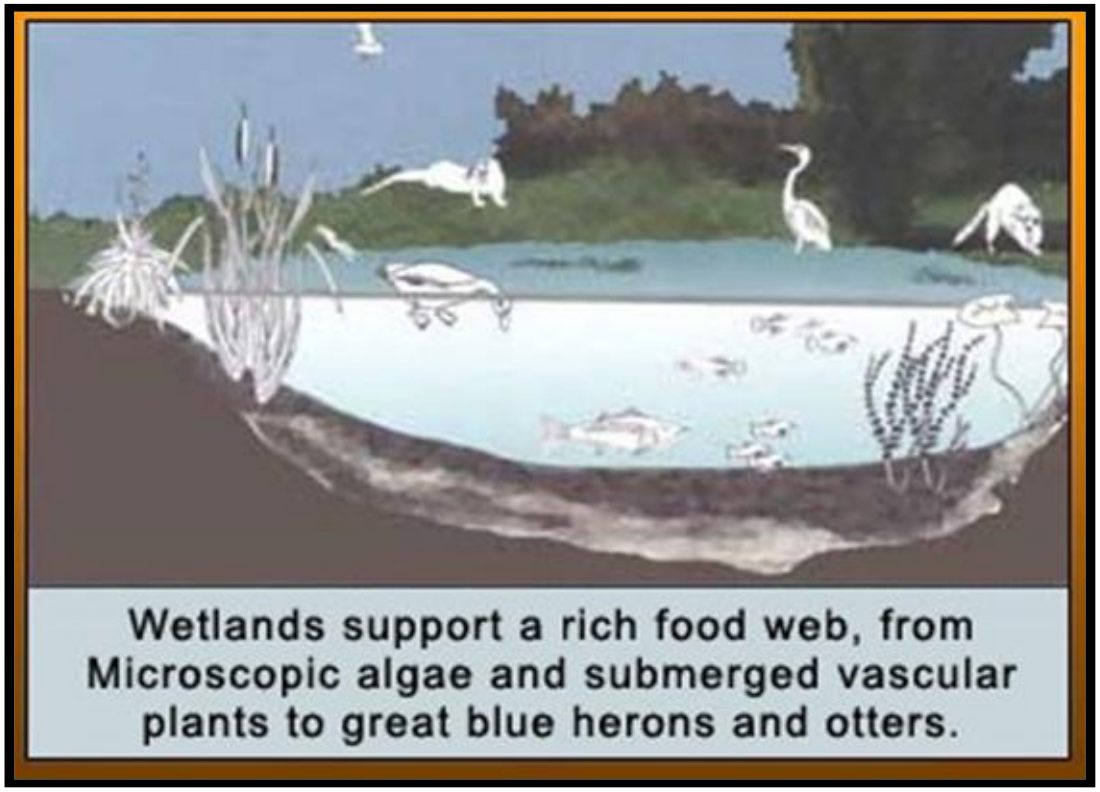
- Early in the planning stages of a mine, all streams and wetlands in the planned permitted area are identified and carefully mapped by scientists, in a process called 'delineation.'
- Length measurements and GPS data are used in combination with detailed topographic maps to accurately map the locations and sizes of wetlands and streams.



Functions and values

Details about the functional aspects of the streams and wetlands are also recorded, to help planners make decisions that will limit impacts. The functions and values that scientists measure are simply the recognizable things that streams and wetlands do.

- Surface water storage
- Subsurface water storage
- Nutrient cycling
- Retention of particles
- Maintenance of plant and animal communities
- Values to society



Wetlands support a rich food web, from Microscopic algae and submerged vascular plants to great blue herons and otters.

Sources: U.S. EPA and NRCS wetlands facts sheets.

Avoidance and minimization

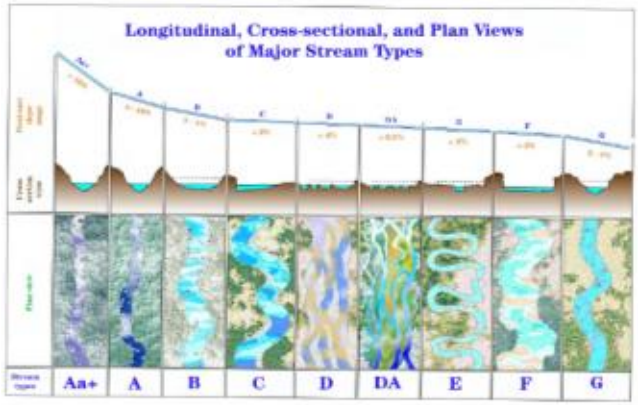
- Coal companies, scientists, and government regulators work together to understand which streams or wetlands may be affected during mining. They avoid impacts as much as possible (Avoidance), and when impacts are not avoidable, they make them as small as possible (Minimization).
- This Avoidance and Minimization process is considered during the entire mine design phase. It may include things as simple as clearly marking streams and wetlands near mining areas, or it may include careful engineering to limit the footprint of mine activities near streams and wetlands.

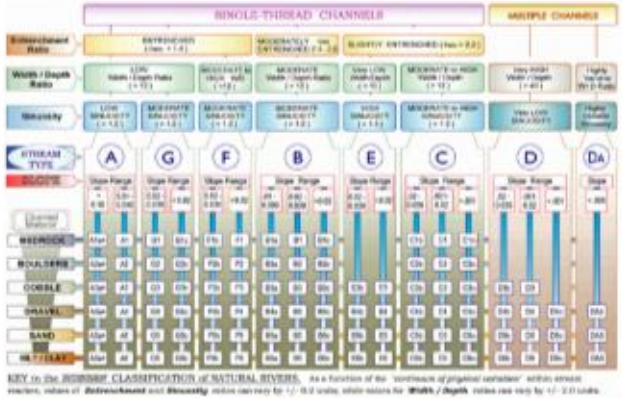
Design

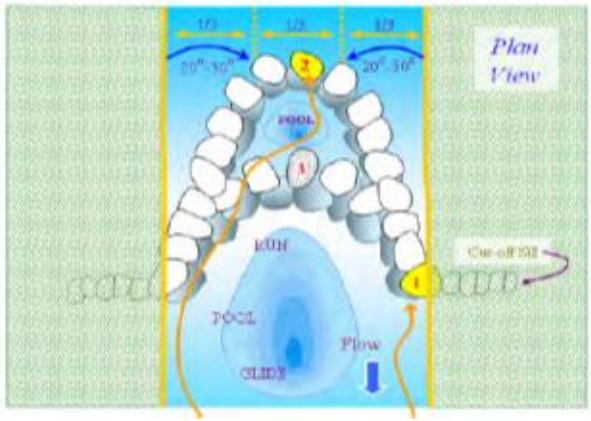
If impacts to wetlands or streams are unavoidable, engineers and scientists design plans to replace the impacted wetlands or streams. They use the best available science and information about the functions and values that are lost during the impacts. Replacing these functions and values is called “Restoration.”

Restoration science

Our knowledge of how to restore streams or wetlands has greatly increased during the past 20 years. Restoration science includes knowledge of hydrology, biology, geology, ecology, and physical engineering.



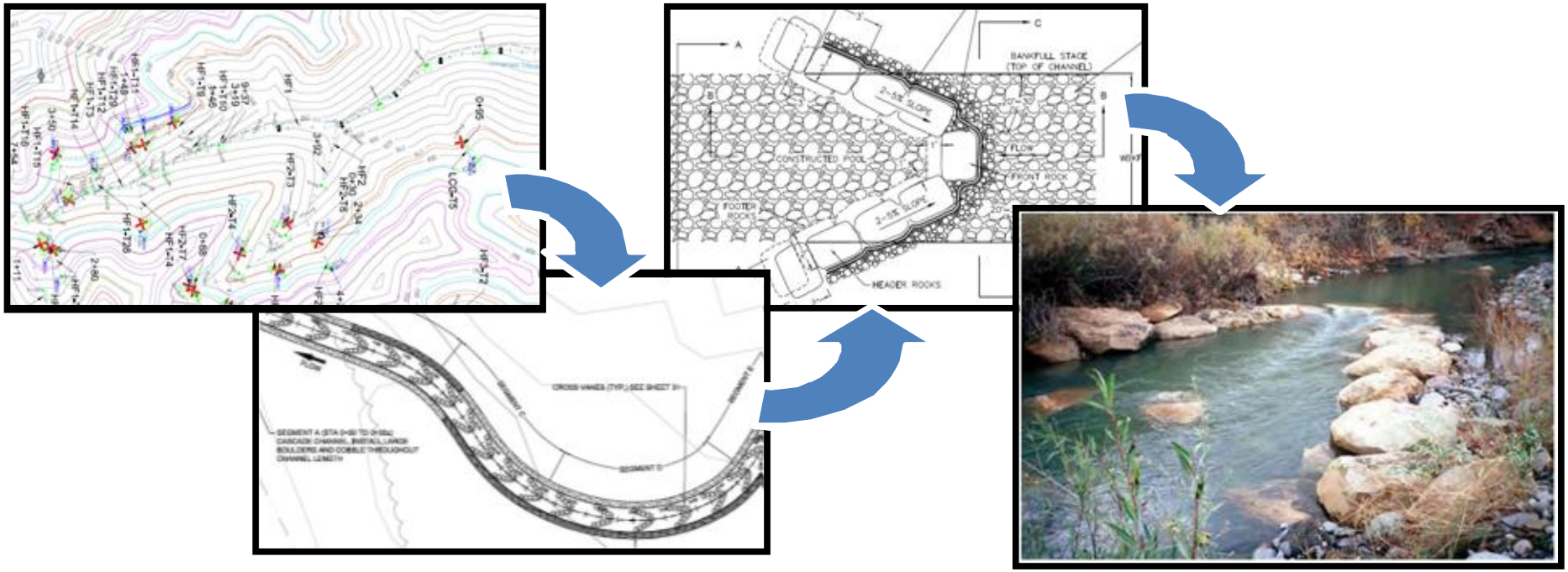




Sources: NRCS Stream Restoration Design Handbook

Permitting

The mitigation plan, with details on how to construct or restore wetlands, is submitted to government agencies as part of a request for permission to impact stream functions and values and replace them later. These documents summarize all of the scientific studies, engineering, and design plans that were a part of the mine planning process.

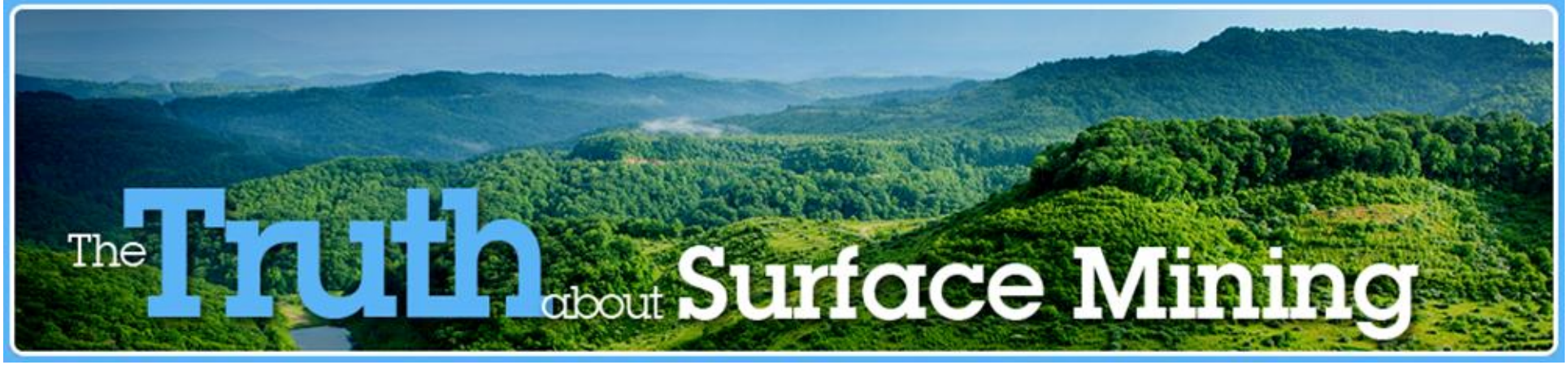


Construction

- Once all designs and permits are in place, mitigation construction can take place. This type of construction often requires specialized equipment and materials to limit the amount of disturbance. The final steps of mitigation construction include making sure that exposed soils are stabilized, flows are restored, and plants are growing.
- Before the machines and workers leave the site, the functions and values for the mitigation areas are growing.
- Monitoring
  Details about the functional aspects of the restored streams and wetlands are also recorded, much in the same way as the original stream and wetlands were measured. This allows scientists to know which functions and values are returning, and how fast.

Enhanced Coordination Procedure (ECP)

& Multi-Criteria Integrated Resource Assessment (MIRA) Process



Enhanced Coordination Procedure (ECP)

- The June 11, 2009 Environmental Protection Agency's (EPA) Memorandum of Understanding (MOU) specified that the EPA and the Army Corps of Engineers will begin immediately to implement "Enhanced Coordination Procedure," or (ECP), to more closely scrutinize the Clean Water Act "dredge-and-fill" permits issued by the U.S. Army Corps of Engineers.
- EPA identified 79 projects for additional environmental review and developed a joint Enhanced Coordination Procedure with the Corps for evaluation of the permits. Based on its initial review, EPA stated that each of the 79 projects, as proposed, is likely to result in significant harm to water quality, either individually or cumulatively. EPA cited its responsibilities under the Clean Water Act as authority for evaluating 404 permit applications and site-specific environmental conditions. Under the coordination process, the Corps is responsible for beginning discussions with EPA and the mining companies.

Congressional Research Service, April 12, 2010. Environmental Protection Agency.

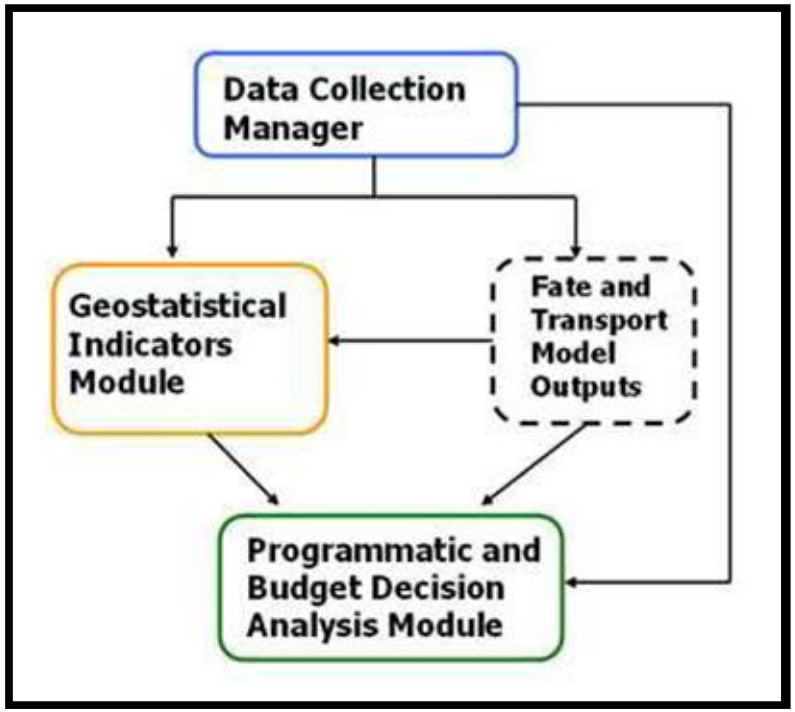
MIRA (Per EPA)

MIRA is a tool that EPA has developed to assist decision makers to make more informed environmental decisions by allowing the consideration of a broad array of scientific and technical information in their program and policy decisions. MIRA assists program managers by organizing and comparing pieces of relevant project data and information. It allows decision makers to compare different decision options based upon one or more common criteria and become more informed regarding the various criteria and how those criteria can be considered. In essence, MIRA is a process that helps decision makers organize and rank decision criteria or indicators, link the data to a policy decision, use the decision context to determine the relative importance of the decision criteria, and explore alternative decision options.

MIRA (Per EPA)

How the tools connect with each other and with outside information:

- Data Collection Manager
  Allows users to store, sort, and retrieve data such as source emissions, demographics and environmental quality values.
- Geostatistical Indicators Module
  Allows users to take spatial fields (i.e., maps) and collapse them into a single number in order to compare one map to another in making a decision.
- Programmatic and Budget Decision Analysis Module
  Provides a way to organize all decision criteria (i.e., indicators), include expert opinions and include what's important to stakeholders in making a decision.
- Fate and Transport Model Outputs
  Outputs from Cause and Effect Models (from EPA and non-EPA sources) become inputs into MIRA; connects science with decision making (via the MIRA Decision Analysis Module).



The tools in the MIRA toolbox

Environmental Protection Agency

MIRA and Appalachian Surface Coal Mining (Per EPA)

- With respect to Appalachian surface coal mining, MIRA was used to process an extensive set of technical data and generate summary information to facilitate program management decisions. In this case, the MIRA approach promoted consistency by allowing decision makers from three EPA regions to review, discuss and reach consistency and consensus using a common set of data for discussion and analysis.
- Data in the MIRA screening analysis was obtained from the Corps permit application, from the Surface Mining Control and Reclamation Act permit application and from watershed-level data available to EPA from public sources such as the USGS and State Section 303(d) lists. The same categories of data were entered for each permit application. The permit applicants were provided with an opportunity to confirm or correct certain categories of data and many took advantage of this opportunity. Each piece of data used in the MIRA analysis for this screening application was relevant to one or more of the considerations required by the Section 404(b)(1) Guidelines.

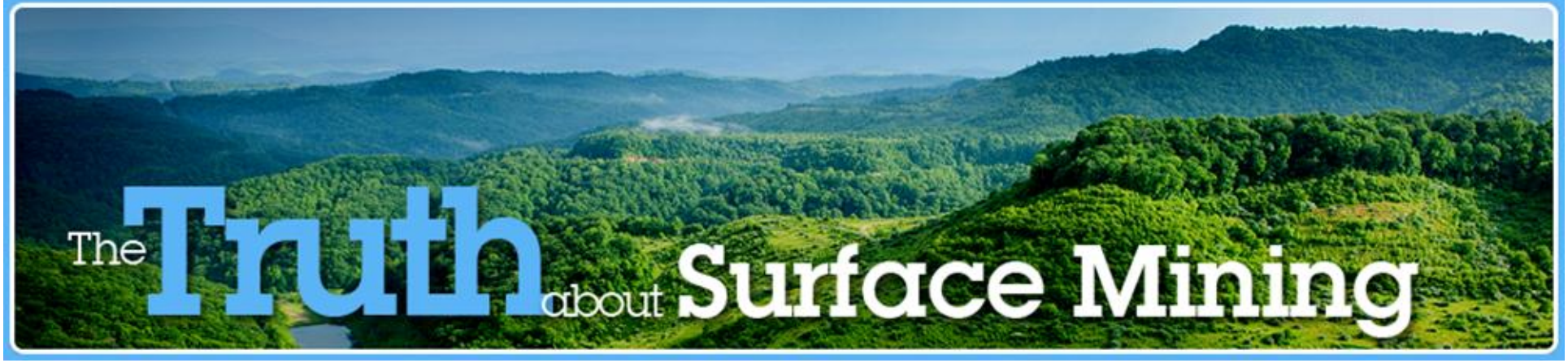
Environmental Protection Agency

Valley fill located off of the Twisted Gun Golf Course located in Mingo County, West Virginia

Effects of the ECP/MIRA Process: Halting the Permit Process

- Statement from FACES website
  A report from the Republican members of the U.S. Senate Committee on Environment and Publics works has found that more than 190 permits are under scrutiny by the EPA as off March 2010. That's over a hundred more than the 79 publicly acknowledge by the EPA. The hold of mining permits – acknowledged or not – has potentially devastating consequences for the Appalachian region as more and more jobs are threatened by ongoing permitting delays or the increased activity of an activist EPA that will likely revoke additional existing mining permits.
- About 40 percent of coal produced in Central Appalachia is mined using surface mining methods, as is 70 percent of all U.S. coal. Surface mining operations provide enough energy to power more than 25 million American homes. These permits are needed to provide affordable coal-based electricity throughout the eastern United States.
- The U.S. Senate Committee on Environment and Public Works found that "actions by the Environmental Protection Agency under the Obama administration are disproportionately affecting small companies in the eastern U.S." and nearly 41 percent of the region's coal production is on hold.

Bonding

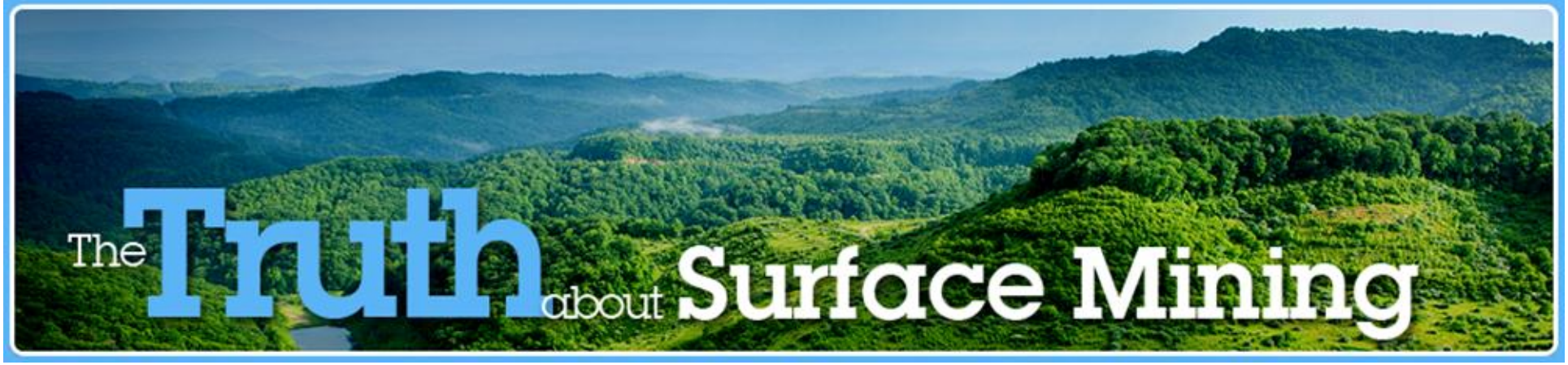


Bonding overview (OSM)

- The Surface Mining Control and Reclamation Act of 1977 (SMCRA or the Act) requires that, as a prerequisite for obtaining a coal mining permit, a person must post a reclamation bond to ensure that the regulatory authority will have sufficient funds to reclaim the site if the permittee fails to complete the reclamation plan approved in the permit.
- There are three major types of reclamation bonds:
  - Corporate surety bond
    A corporate surety bond is a guarantee, in which the money put forth guarantees that the contractor, called the “principal” in the bond, will perform the “obligation” stated in the bond.
  - Collateral bond
    This is a short term debt security, issued usually by a holding company against securities of it subsidiary firms or by an investment trust against its own bonds or other obligations (cash; certificates of deposit; first-lien interests in real estate; letters of credit; federal, state, or municipal bonds; and investment-grade securities); and,
  - Self bond
    Legally binding corporate promises without separate surety or collateral, available only to permittees who meet certain financial tests. State regulatory programs vary somewhat in terms of which financial instruments are acceptable. A few states also have exercised their discretion to exclude the self-bond option.

Timeline

Significant Events



Timeline of Significant Events

- January 20, 2009 – EPA, as evidenced in comment letters, had initiated an extra-regulatory review process for CWA Section 404 permits that had no basis in the Corps' or EPA's codified procedures. At this time, EPA raised concerns about conductivity levels in water quality citing the 2008 Pond, Passmore study .
- February 13, 2009 – The U.S. Court of Appeals upheld four proposed CWA Section 404 permits for coal mining operations in the Ohio Valley Environmental Coalition v. Aracoma Coal Company.
- April 27, 2009 – Interior Secretary Ken Salazaar announced that he was asking the DC Circuit Court to vacate the 2008 Stream Buffer Zone (SBZ) Rule.
- March 23, 2009 – In response to the Court of Appeals ruling, EPA sent letters to the Corps expressing concerns regarding two coal mining projects in West Virginia and Kentucky. The letters indicated the need for EPA to be "actively involved" in review of anticipated permits after the Court's decision.
- April 2009 – EPA submitted similar letters to the Corps objecting to at least four proposed coal mining projects in Virginia, West Virginia, and Kentucky.
- June 11, 2009 – The EPA, the Corps, and the Department of the Interior released a Memorandum of Understanding on Implementing the Interagency Action Plan on Appalachian Surface Coal Mining (the "MOU"). A key component of the MOU was to formalize the extra-regulatory review process of CWA Section 404 permits that EPA had previously commenced in January 2009. EPA would use a process called MIRA to determine which permits would receive this enhanced review.
- July 15, 2009 – A proposal was published in the Federal Register (75 FR 34311) to modify and suspend Nationwide Permit (NWP) 21 in the Appalachian region of Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia. All 38 Corps districts also published local public notices to inform citizens of the proposal and their opportunity to provide comments or request public hearings.

NMA Suit Against EPA and Army Corps

Timeline of Significant Events

- August 12, 2009 – The DC circuit court ruled that the SBZ rule could not be vacated in this manner.
- November 30, 2009 – OSM published an Advanced Notice of Proposed Rulemaking with respect to development of a comprehensive stream protection rule to replace the SBZ rule.
- March 2010 – EPA initiated a review of the previously issued water quality permit for Spruce No. 1 Mine in Logan County, WV– a permit that underwent 13 years of review, including a full Environmental Impact Statement (EIS) before being issued in January 2007.
- April 1, 2010 – EPA released the Detailed Guidance as one of a series of documents to provide "detailed guidance" to EPA Regions 3, 4, and 5 for those Regions' review of all surface coal mining operations under the CWA, NEPA, and the Environmental Justice Executive Order. While EPA issued the Detailed Guidance for public comment, it nevertheless stated that the Detailed Guidance is effective immediately. In this Detailed Guidance, EPA makes the assumption that "conductivity levels below 300 µS/cm generally will not cause a water quality standard violation and that in-stream conductivity levels above 500 µS/cm are likely to be associated with adverse impacts that may rise to the level of exceedances of narrative state water quality standards."
- Early April 2010 - OSM Director Joseph Pizarchik held several scoping meetings with the public, the regulators and the industry to announce his plans to replace the 2008 SBZ rule with a new set of Stream Protective Measures.
- April 30, 2010 – OSM issued its Notice of Intent to initiate development of a new Stream Protection Rule and an Environmental Impact Statement.
- June 18, 2010 - OSM issued its Revised Notice of Intent listing a range of proposed alternatives to prevent downstream impacts.

NMA Suit Against EPA and Army Corps

Timeline of Significant Events

- June 18, 2010 – Effective date of the suspension of NWP 21, which authorizes discharges of dredged or fill material into waters of the United States for surface coal mining activities, in the Appalachian region of Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.
- July 2010 - OSM conducted several "Open Houses" to inform the public on the alternatives to be examined in the Stream Protection Rule Environmental Impact Statement.
- July 20, 2010 - The National Mining Association (NMA) filed a lawsuit against the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) challenging agency actions that have unlawfully obstructed the issuance of Clean Water Act (CWA) permits and created a de facto moratorium on surface and underground coal mining within the Central Appalachian region and beyond. West Virginia filed a similar suit and Kentucky intervened in an action filed by the Kentucky Coal Association.
- September 3, 2010 – Technical public comment period ends on two related draft documents: (1) "The Effects of Mountaintop Mines and Valley Fills on Aquatic Ecosystems of the Central Appalachian Coalfields" (EPA/600/R-09/138A) and (2) "A Field-based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams" (EPA/600/R-10/023A) released on April 1, 2010 as part of EPA's Detailed Guidance. Effective immediately, these memoranda—one labeled "Summary Guidance" and one labeled "Detailed Guidance"—seek to clarify EPA's roles and expectations, in coordinating with its Federal and state partners, with regard to environmental review of Appalachian surface coal mining operations under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order (E.O. 12898).

NMA Suit Against EPA and Army Corps

Timeline of Significant Events

- December 1, 2010 – General public comment period ends on the issues addressed in two EPA guidance memoranda released on April 1, 2010, titled Improving EPA Review of Appalachian Surface Coal Mining Operations under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order. Effective immediately, these memoranda—one labeled "Summary Guidance" and one labeled "Detailed Guidance"—seek to clarify EPA's roles and expectations, in coordinating with its Federal and state partners, with regard to environmental review of Appalachian surface coal mining operations under the Clean Water Act, National Environmental Policy Act, and the Environmental Justice Executive Order (E.O. 12898).

NMA Suit Against EPA and Army Corps