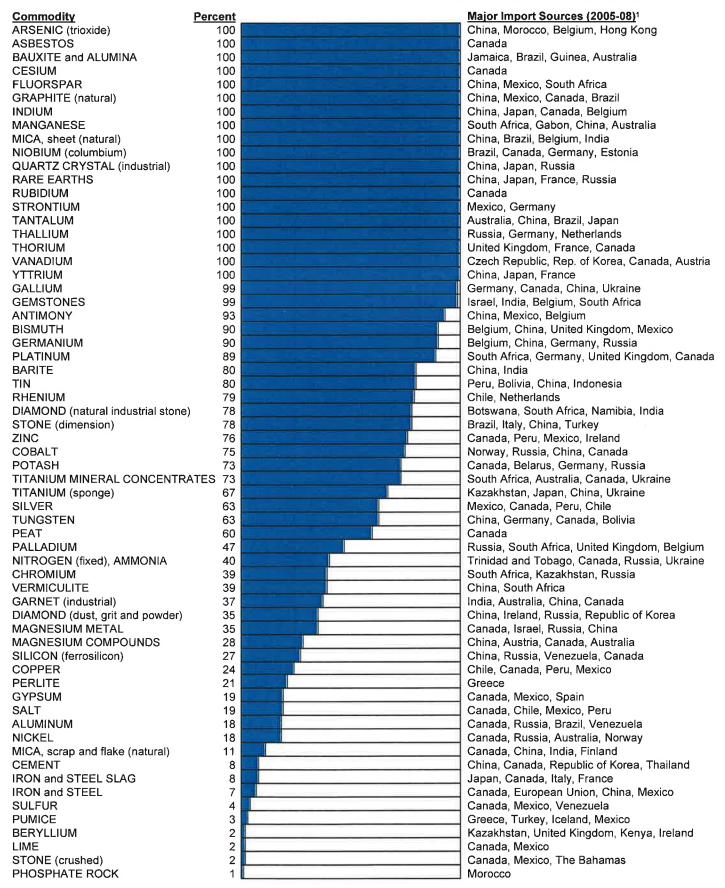
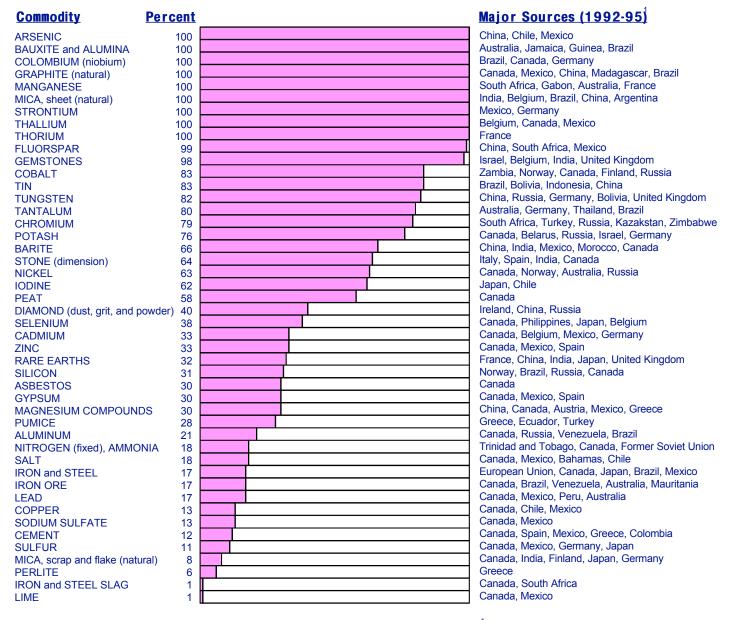


2009 U.S. NET IMPORT RELIANCE FOR SELECTED NONFUEL MINERAL MATERIALS



¹In descending order of import share.

1996 U.S. NET IMPORT RELIANCE FOR SELECTED NONFUEL MINERAL MATERIALS



¹ In descending order of importance

Additional commodities for which there is some import dependency include:

Antimony China, Bolivia, Mexico, South Africa
Bismuth Mexico, Belgium, China, United Kingdom
Gallium France, Russia, Germany, Hungary

Germanium China, United Kingdom, Ukraine, Russia, Belgium

Ilmenite South Africa, Australia, Canada Indium Canada, France, Russia, Italy

Kyanite South Africa

Mercury Russia, Canada, Kyrgyzstan, Germany

Platinum South Africa, United Kingdom, Russia, Germany, Belgium

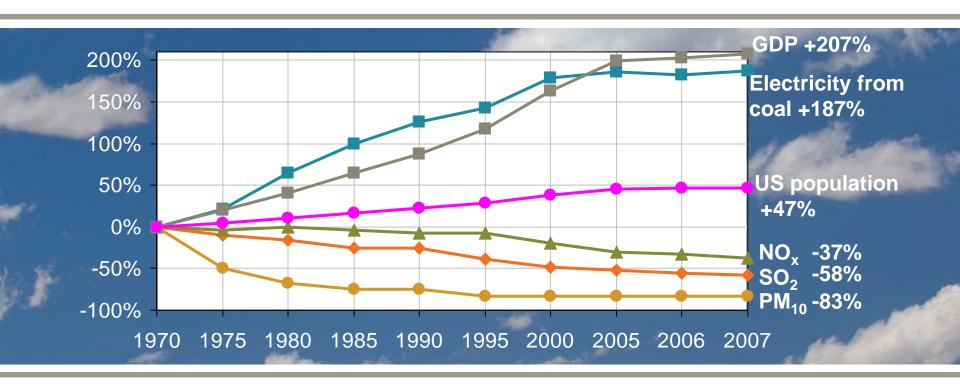
Rhenium Chile, Germany, Sweden Rutile Australia, South Africa, Sierra Leone

Adstrain, South Africa, Sieha Leone
Silver Mexico, Canada, Peru, Chile
Titanium (sponge)
Vanadium South Africa, Canada, Peru, Chile
Russia, Japan, China, Ukraine
South Africa, Canada, Russia, Mexico

Vermiculite South Africa

Zirconium Australia, South Africa

Since 1970, Coal has been used in increasingly Clean Ways in the United States



 Higher efficiency rates and carbon capture technologies create opportunities for reducing carbon intensity as well

Wind Power Needs American Metals and Minerals



A Single 3MW Wind Turbine Needs:

- ☑ 4.7 tons of copper
- ☑ 1,200 tons of concrete cement and aggregates)
- ☑ 3 tons of aluminum
- ☑ Aluminum
- ☑ Zinc
- ☑ Molybdenum

However, we are increasingly dependent on foreign nations for many strategic minerals ...

Metals / Minerals Used in	% Net Import Reliance
Clean Power Systems	
Steel	8%
Concrete	12%
Copper	32%
Lithium	50%
Titanium	54%
Silver	60%
Zinc	73%
Cobalt	81%
Platinum	91%
Aluminum	100%
Rare earth elements	100%
Nickel (new sources)	100%

QUESTIONS FOR POLICYMAKERS:

- ► Should we purchase rare earths from <u>California</u> and provide jobs for Californians, or rely on China?
- ► Should we purchase silicon from <u>Washington</u> and provide jobs for Californians, or rely on China, Russia and Venezuela?
- ► Should we purchase cobalt from <u>Idaho</u> and provide jobs for Idahoans, or rely on the Congo, Tibet and Siberia?
- ► Should we purchase copper from <u>Arizona and Utah</u> and provide jobs for Arizonans and Utahns, or rely on Peru, Chile, and Mexico?
- ► Should we purchase zinc from <u>Alaska and Washington</u> and provide jobs for Alaskans and Washingtonians, or rely on Peru and Mexico?





Solar Photo Voltaic Systems Need These Metals and Minerals:

-- Rare Earths

-- Silicon

-- Steel

-- Titanium

-- Copper

-- Phosphorus

-- Quartzite Gravel

-- Lead

-- Aluminum

However, we are increasingly dependent on foreign nations for many strategic minerals ...

Metals / Minerals Used in Clean Power	% Net Import Reliance	
Systems		
Steel	8%	
Concrete	12%	
Copper	32%	
Lithium	50%	
Titanium	54%	
Silver	60%	
Zinc	73%	
Cobalt	81%	
Platinum	91%	
Aluminum	100%	
Rare earth elements	100%	
Nickel (new sources)	100%	

Questions for Policymakers:

- ▶ Should we purchase cobalt from <u>Idaho</u> and provide jobs to Idahoans, or rely on Congo, Tibet, and Siberia?
- ► Should we purchase rare earths from <u>California</u> and provide jobs to Californians, or rely on China?
- ► Should we purchase silicon from <u>Washington</u> and provide jobs for Washingtonians, or rely on China, Russia, and Venezuela?
- ► Should we purchase copper from <u>Arizona and Utah</u> and provide jobs for Arizonans and Utahns, or rely on Peru, Chile, and Mexico?
- ► Should we purchase titanium from Nevada, Colorado, and Utah and provide jobs for Nevadans, Coloradans, and Utahns, or rely on Kazakhstan & China?



Restoring Sanity on the Regulatory Front

The ability of agencies to create rules based upon the laws passed by Congress began with the passage of the Administrative Procedures Act in 1946.

Since 1976, **170,000** regulations have been issued by the various agencies of federal government. In addition, many of the federal regulations require states by mandate to issue state regulations. Current cost of regulation is projected at \$15,000 per household. The process gives a great deal of latitude towards the issuing agency allowing the agency to spend months developing a regulation without input from the public. The rules are provided to Office of Management and Budget (OMB) for review prior to any public comment. Based upon this review the OMB issues questions for the agency and once answered, the rule is usually cleared by OMB for publication in the Federal Register. This is the first time the public or stake holders are allowed to comment on the rule and usually have a time frame of 60 to 90 days for comments. Agencies, after the comment period, have the ability to change the rule after their review of public comment. The rule is then sent back to OMB to review based upon any changes the agencies may have made. After their final approval of the rule, it becomes rule to live by.

The current system of rulemaking needs change. The method currently employed does not take into account job loss or cost benefit analysis based upon any methods proposed under a rule at any point of the process. This is not viewed as a portion of the process. It does not take into account the cost of small businesses to operate within the rules. Several agencies have developed a new method to get around the long process of rulemaking by issuing guidance documents which are being treated by local enforcement as rules. Several law suits have been filed on the issuance of guidance by agencies and their use as the law of the land. The **Environmental Protection Agency** has indicated on many occasions that it is not its job to look at the job loss or cost effect of its rules. Recently, this has led to a great deal of litigation regarding the interpretation of the law which the rule is based upon and passed by Congress and the rule developed by the agency.

Agencies indicate that these should not have the same level of scrutiny as rulemaking since they are not rules but independent agency (OMB), group or the stake holder is allowed to be in the process. Several ideas could be looked at to make the system fairer to all involved:

- 1. Statutorily require published jobs and cost impact study of any proposed rule to be developed and made public prior to the public comment period. This would be a jobs and cost analysis similar to an environmental impact statement.
- 2. Statutorily require that each rule must be accompanied by a study by the Small Business Administration regarding its effect of small business prior to the public comment period.
- 3. Any rule which affects the American economy by \$100,000,000 or more must be presented to Congress for its vote prior to its taking affect. (Enact Reins Act)
- **4. Prohibit Guidance Documents** as a way of circumventing rule making. All existing Guidance Documents should be withdrawn and a determination should be made if it is appropriate based upon laws created by Congress, a rule is necessary.





A Single Hybrid Car Needs These Metals and Minerals:

-- Iron -- Copper -- Platinum
-- Rare Earths -- Silicon -- Gold
-- Steel -- Cobalt -- Lead
-- Zinc -- Titanium -- Nickel
-- Molybdenum -- Lithium -- Cadmium

However, we are increasingly dependent on foreign nations for many strategic minerals ...

Metals / Minerals Used in Clean Power	% Net Import Reliance
Systems	•
Steel	8%
Concrete	12%
Copper	32%
Lithium	50%
Titanium	54%
Silver	60%
Zinc	73%
Cobalt	81%
Platinum	91%
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- ► Should we purchase zinc from <u>Alaska and Washington</u> and provide jobs for Alaskans and Washingtonians, or rely on Peru and Mexico?



EPA Regulation of Greenhouse Gases An Economic Train Wreck

Background:

Today, EPA is developing, finalizing and implementing nearly 30 major regulations and more than 170 major policy rules with the ultimate result of increasing energy costs, causing negative impacts to jobs and the economy, imposing expanding energy costs on American families, decreasing the competitiveness of American business, and overriding the rights of states.

EPA's near-term regulatory agenda focuses on employing the Clean Air Act to restrict the use of coal for electric generation and for commercial and industrial purposes. A recent study completed by the McIlvaine Company predicts EPA's actions could cause the retirement of more than 42 percent of coal-based capacity, the loss of nearly 54,000 coal-based utility and coal mining jobs and 476 million tons of annual coal production by 2020.

The EPA regulatory agenda includes:

- Regulation of greenhouse gas (GHG) emissions from industrial, manufacturing and electric generation facilities under the enormously inefficient New Source Review program;
- Regulation of essentially the same emissions from the same facilities under the Clean Air Act New Source Performance standards program;

The Clean Air Act is completely unsuited to addressing GHG emissions, as EPA itself admits that unilateral action by the U.S. will have no meaningful impact on the level of greenhouse gases over time in the global atmosphere.

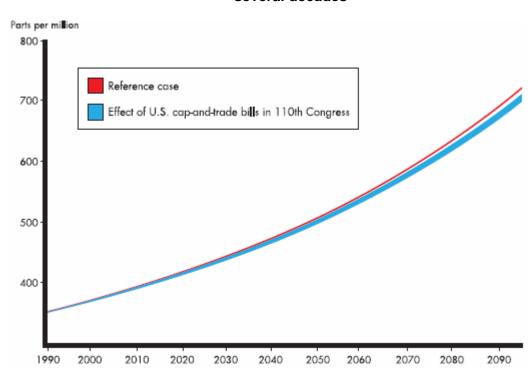


Figure 1. Global CO2 Concentrations: Carbon emissions are projected to rise over the next several decades

Impact:

- ➤ EPA's unilateral effort to impose these regulations would spread economic pain across the entire economy, including American mineral and metal producers, small and large manufacturers and businesses of every variety.
- ➤ Energy costs for residential utilities and gasoline continue to strain low- and middle-income family budgets. The expanding energy costs that will result from regulation of GHG under the Clean Air Act will disproportionately impact lower-income American households. (See Figure 2)
- ➤ The use of cost/benefit analysis suggests that regulating GHG under the Clean Air will slow investment and job growth and have no significant impact on reducing global GHG emission growth. Consequently, it makes little economic or environmental sense for EPA to regulate GHGs under the Clean Air Act.

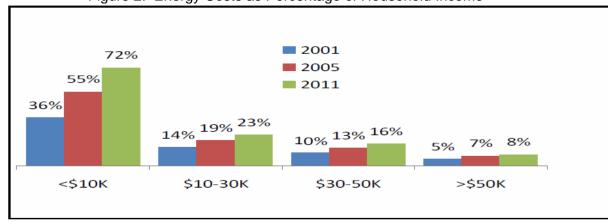


Figure 2. Energy Costs as Percentage of Household Income

Request: The Women's Mining Coalition urges Congress to:

- > Adopt legislation prohibiting the EPA from regulating GHG emissions, including, if necessary, defunding EPA GHG regulatory activities
- Support a long-term energy policy that provides :
 - A focused effort to advance clean coal technologies
 - A clean energy standard that is rational from a timetable and target perspective and promotes:
 - Regional diversity
 - o Includes clean coal, nuclear, etc.
 - Recognition that we need all resources including coal the nation's most abundant and low-cost source of energy – to fuel a strong economy.

Sources: American Legislative Exchange Council; American Council for Capital Formation; American Coalition for Clean Coal Electricity, National Mining Association.



EPA IS IMPOSING NEW RULES

What they are, when they're coming and what they could mean for America's jobs, power and most important domestic energy reserve

With 14 million Americans out of work, our nation's extraordinary, domestic reserves of coal are more critical than ever before - especially as a source of abundant, low-cost electricity capable of powering and sustaining a robust, long-term recovery.

But even at a time of great economic stress, EPA is poised to enact a series of back-door mandates that threaten to cost millions of Americans their jobs, and increase the cost of their electricity while they're at it. Collectively, it's called the EPA "Train Wreck" - and it's right around the bend.

Transport Rule

- · Final rule expected: July 2011
- · Estimated cost: \$130 billion by 2015 (Brattle Group)

In 2005, EPA finalized the Clean Air Interstate Rule aimed at reducing nitrogen oxide and sulfur dioxide emissions 70 percent by 2025. Only six years later, EPA is poised to impose a new nationwide mandate that, according to an analysis by Bernstein Research, has the potential to severely impact nearly 20 percent of the nation's coal-based generation.

MACT Rule

- · Draft EPA rule expected: March 2011
- Projected coal-plant closures as result of rule: 30-70 GW (FBR Capital)

EPA has proposed new standards requiring costly emissions controls, forcing coal units to install equipment that in some cases is prohibitively expensive, and other cases simply doesn't yet commercially exist. According to FBR Capital, the combination of the Transport and MACT rules could force the retirement of between 30-70 GW of the lowest cost electricity generating capacity.

Ozone Rule

- EPA decision/draft rule expected: July 2011
- Estimated number of U.S. jobs lost: 7.3 million (Manufacturers Alliance/MAPI)

After imposing new rules lowering standards for ozone to 85 parts per billion (ppb) in 1997 and reducing them again to 75 ppb in 2008, EPA has proposed new reductions as low as 60 ppb. According to an analysis by the Congressional Research Service, moving the goalposts yet again would push 565 new U.S. counties into non-attainment status under the Clean Air Act.

Coal Combustion Residuals Rule

- New draft rule expected: Fall 2011
- · As many of 350 coal-based facilities shuttered (EPRI)

Cement, drywall, kitchen counters, even bowling balls - just some of the products that rely on recycled coal residuals as an essential component in their manufacture. Such recycling activities could come under new threat if EPA re-categorizes these materials as "hazardous," costing as much as \$75 billion over the next two decades according to EPRI.



Workers Agree: New Rules Result in Lost Middle-Class Jobs

According to a report from the United Mine Workers of America, job losses associated with the closure of EPA-targeted coal units could be significant, amounting to more than 50,000 direct jobs in the coal, utility and rail industries, and an indirect job loss figure exceeding 250,000. Following are the regions expected to be hit the hardest.

Potential Job Losses Due to Closure of Coal "Units at Risk"

25-400 MW, > 40 years old w/o existing or planned scrubbers

	No. of units	Direct jobs	Total jobs
New England	11	1,975	6,552
Middle Atlantic	34	2,564	13,101
E. No. Central	146	17,605	82,873
W. No. Central	74	6,868	29,880
So. Atlantic	98	14,324	63,304
E So. Atlantic	55	9,141	46,570
Mountain	15	1,675	9,010
Total U.S.	433	54,151	251,291

UMWA, 5/2010

Since 1970, emissions have declined significantly, while coal-based generation has increased by more than 180% in that time.

New EPA Rules Ignore Enormous Environmental Progress

Enormous progress has been made over the past three decades to reduce air emissions per kilowatt-hour of electricity generated even as electricity demand increased **85 percent** in that time. Notably, these gains were achieved without the command and control approach envisioned now by EPA.

Sulfur Dioxide (SO₂)

• Since 1980, SO₂ emissions have fallen by **56 percent** even as America's utilities have increased their coal use by 75 percent.

Nitrogen Oxide (NO,)

 Since 1990 NO_x emissions have decreased by **77 percent** nationwide.

Mercury

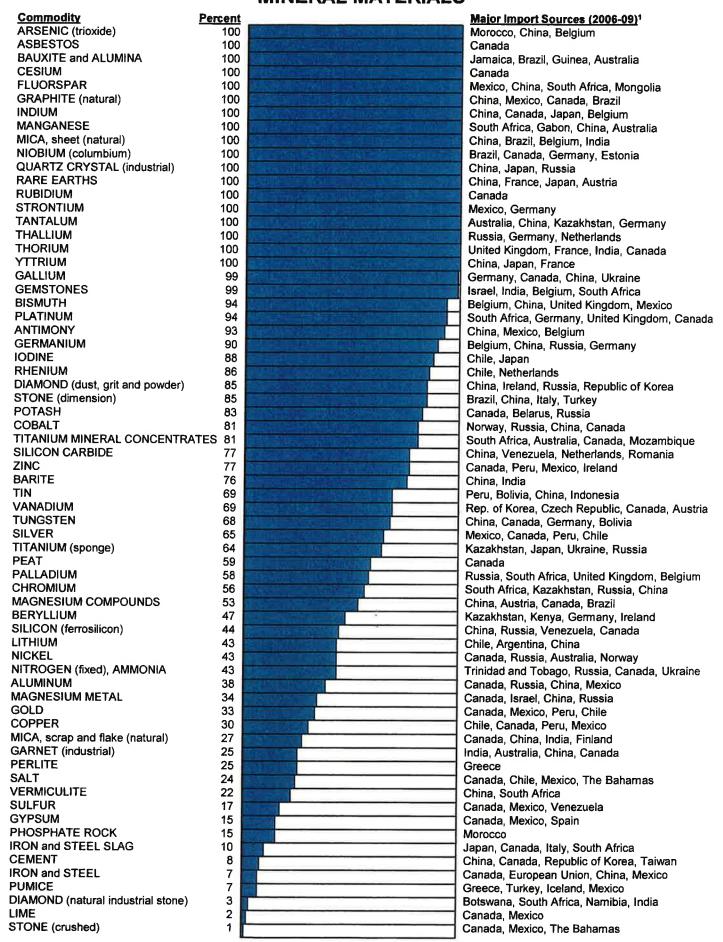
 Mercury emissions have been cut in half over the past 30 years, even without direct EPA regulation during that period.

Edison Electric Institute / EPA 2009





2010 U.S. NET IMPORT RELIANCE FOR SELECTED NONFUEL MINERAL MATERIALS



¹In descending order of import share



Women's Mining Coalition Witnesses How Permitting Delays Cost Americans Jobs

Background

The United States already has one of the longest permitting processes in the world for energy and mineral development. "Permitting delays in the United States are the most significant risk to mining projects. The United States is ranked next to lowest due to the average 5-year to 7-year period required before mine development can commence," According to Behre Dolbear's analysis, "Where Not to Invest, 2009." Since mining is a capital-intensive process, investment dollars for mineral exploration and development tend to flow to countries where investors are likely to get the earliest return on their investment. The uncertainties regarding length of time for approval of mining activities has contributed to an all-time low amount of mineral exploration dollars being invested in the United States and to increased reliance on foreign supplies of minerals.

An Avoidable Bureaucratic Roadblock

One avoidable source of delay is the Department of the Interior's policy for processing certain administrative notices under the National Environmental Policy Act (NEPA) for mining operations. This "clearance process" for NEPA <u>Federal Register</u> notices, requiring notice to be sent from state offices to D.C. to undergo 14 separate levels of review within DOI, needlessly adds months to the permit process. (See attached chart.) Delays were exacerbated further by a December 2009 decision to eliminate the categories of routine notices that were previously exempt from review.

Agency Resources

Delays can also be attributed to the strained resources of the agencies responsible for permit approvals. For example, the Bureau of Land Management and the U.S. Forest Service are facing ever-growing responsibilities and obligations to process the notices and plans of operation necessary for domestic mineral and energy development projects while simultaneously facing retirements of their most knowledgeable personnel. Additional funding is imperative to lessen this backlog of notices and plans of operation.

Delays Cost Jobs

At a time when job creation is the nation's top priority, it is imperative that we use an efficient and timely permitting process for energy and mineral development rather than creating unnecessary bureaucratic hurdles. Delays in processing mining permits have impacts far beyond any particular mining project. Delays impact investment; lack of investment results in less exploration; less exploration results in less development of domestic resources; less development of domestic resources leads to greater reliance on foreign sources, creating a greater reliance on foreign sources, thus impacting our economic and national security and eliminating jobs. According to a 2010 U.S. Geological Survey report, America is now 100 percent reliant on foreign sources of 19 mineral commodities, many of which have no substitute in developing green energy, and more than 50 percent reliant on an additional 38 mineral commodities.

Office of Surface Mining

Stream Protection Rule Timeline

- 1983 OSM finalizes the original stream buffer zone rule; 48 Fed. Reg. 30,312-30,316 (June 30, 1983).
- 1999 Environmentalists Successfully Challenge OSM Stream Buffer Zone Rule; Surface coal mining operations are halted all across West Virginia for 11 days (*Bragg v. Robertson*, 72 F. Supp. 2d 642, 660-663(S.D. W.Va. 1999)); Judge Haden stays his own ruling pending a decision on appeal.
- 2001 Fourth Circuit Court reverses Judge Haden's decision. See Bragg v. West Virginia Coal Association, 248 F.3d 275, 296 (4th Cir. 2001).
- 2002 Judge Haden again rules that the 1983 stream buffer zone rule does not allow fills in streams (*Kentuckians for the Commonwealth v. Rivenburgh*, 204 F. Supp. 927, 942 (S.D. W.Va. 2002)).
- 2003 Fourth Circuit again reverses Judge Haden and holds that "it is beyond dispute that SMCRA recognizes the possibility of placing excess spoil material in waters of the U.S." *Kentuckians for the Commonwealth v. Rivenburgh*, 317 F. 3d 425, 442 (4th Cir. 2003).
- 2003 OSM decides to address the uncertainty caused by the litigation--releases discussion draft of ways to clarify the stream buffer zone rule
- 2003 OSM, EPA, COE, FWS and WV complete a 5,000 page programmatic environmental impact statement on mountaintop mining as part of a settlement agreement in *Bragg*. The EIS contained 30 federal studies on all aspects of MTM and concluded that "impacts below valley fills did not cause or contribute to significant degradation of waters of the U.S." (see EIS at p. II D-9).
- 2004 OSM proposes additional changes to stream buffer zone rule based on public input. See 69 Fed. Reg. 1036 (Jan. 7, 2004)
- 2007 OSM completes an EIS specifically on their stream buffer zone rule (see OSM-EIS-34, April 2007).
- 2007 OSM publishes a modified and more protective proposed rule on stream buffer zones which clarifies OSM's longstanding interpretation of the rule and includes

- restrictions on the placement of excess spoil material in perennial and intermittent streams. 72 Fed. Reg. 48,889-48,926 (Aug. 24, 2007).
- 2008 OSM, with the concurrence of the EPA, publishes its final rule on stream buffer zones and placement of excess spoil after consideration of 43,000 public comments. 73 Fed. Reg. 75,813-75,885 (Dec. 12, 2008).
- 2009 Secretary of the Interior Ken Salazar signs MOU on Surface Coal Mining in Appalachia vowing to revisit the SBZ rule. (June 11, 2009).
- 2009 OSM attempts to vacate the 2008 SBZ rule without public participation using guidance; federal court says agency must follow APA rulemaking. *See National Parks Conservation Association v. Salazar*, Civil Action No. 09-00115 (HHK), D.D.C. (Aug. 12, 2009).
- 2009 OSM published advanced notice of proposed rulemaking to change 10 significant elements relating to the SBZ Rule. Only 30 days allowed for public comment despite its publication immediately after Thanksgiving and comments due right after Christmas and numerous requests for comment period extensions. 74 Fed. Reg. 62,663-62,668 (Nov. 30, 2009).
- 2010 OSM secretly negotiates and signs settlement agreement with environmental groups agreeing to pay them attorneys' fees despite any success by such groups on the merits, and OSM agrees to propose a new SBZ Rule by Feb. 2011 (See Settlement Agreement dated March 19, 2010).
- 2010 OSM publishes its first notice of intent to prepare an EIS on the stream protection rule and decides to vastly expand the scope of the rule from the stream buffer zone to include 15 major changes in SMCRA regulations. 75 Fed. Reg. 22,723 (April 30, 2010).
- 2010 OSM published revised notice of intent to prepare an EIS containing rough outline of alternatives under consideration. OSM admits in this notice that the agency "had already decided to change the [stream buffer zone] rule following the change of Administrations on January 20, 2009." See 75 Fed. Reg. at 34,667 (June 18, 2010).
- 2010 OSM conducts "Open House" meetings in July where members of the public are not allowed to speak publicly about the agency's rule.
- 2010 Eight states write to OSM raising concern about the need and justification for the rule and calling the draft EIS nonsensical and difficult to follow. See letter from 8 state cooperating agencies to OSM (Nov. 23, 2010). Letters critical of the stream protection rule and process soon follow from Governors of Wyoming (Dec. 6, 2010) and Kentucky (Dec. 21, 2010).

FEDERAL REGISTER CLEARANCE PROCESS

