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CLEAN WATER ACT: REVIEW OF PROPOSED REVISIONS TO SECTION 404 DEFINITIONS OF "FILL" AND "DREDGED FILL"

HEARING

BEFORE THE

SUBCOMMITTEE ON CLEAN AIR, WETLANDS, AND CLIMATE CHANGE

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

JUNE 6, 2002

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C O N T E N T S

CLEAN WATER ACT: REVIEW OF PROPOSED REVISIONS TO SECTION 404 DEFINITIONS OF "FILL" AND "DREDGED FILL"

THURSDAY, JUNE 6, 2002

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON CLEAN AIR, WETLANDS,
AND CLIMATE CHANGE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:14 a.m. in room 406, Senate Dirksen Building, Hon. Joseph I. Lieberman (chairman of the subcommittee) presiding.

Present: Senators Lieberman, Carper, Clinton, Corzine, and Jeffords [ex officio].

OPENING STATEMENT OF HON. JOSEPH I. LIEBERMAN, U.S. SENATOR FROM THE STATE OF CONNECTICUT

Senator LIEBERMAN. The hearing will come to order.

I express my apologies to all those here for being late. I was in a meeting with several of my colleagues and President Mubarak, who is in town in regard to the crisis in the Middle East, and the meeting went on for a while. As a matter of fact, it is still going on. Thank you for your patience.

I want to welcome you to this hearing of the Environment and Public Works Committee's Subcommittee on Clean Air, Wetlands, and Climate Change.

We are here today to discuss what on its face is a very technical subject, which is, changes in the definition of "fill material" under the Clean Water Act. This is, in fact, a matter of critical importance to the health of America's rivers and America's streams.

Streams and rivers provide drinking water for people, and habitats for many aquatic species, not to mention places of recreation and tranquility. They also provide a means of transporting water during heavy storms. Waterways are our planet's circulatory system and we should no sooner allow them to be unnaturally blocked than we would accept such blockages in our own veins or arteries.

In 1972, Congress passed the Clean Water Act, one of the landmark pieces of environmental legislation in our Nation's history; one of the most successful governmental initiatives in the last century. As a result of that Act, our lakes, rivers, and streams are today much cleaner than they otherwise would have been.

Under the Act, the Federal Government has allowed industry to put some materials into our rivers and streams. The idea there was

that limited deposits of certain materials in particular places would not harm our water supply and our bodies of water. Sometimes the deposits can even serve a useful or constructive purpose, such as providing the foundation for a building or a bridge. When that is the case, what is dumped is not called waste, it is called "fill."

Ever since the passage of the Clean Water Act, the Army Corps of Engineers has, in fact, given industry permits for such deposits on a case-by-case basis. We now know that the Army Corps has also been issuing permits to companies which allow them to dump vast quantities of blasted rubble, literally tons and tons of rock, dirt, and toxic materials, right into our rivers and our streams. The environmental consequences of this short-sighted policy, in my opinion, have been severe. Water has been polluted, aquatic life has been terminated, and ecosystems have been drastically, and perhaps irreparably, damaged.

As is well known, mountaintop removal is the most prominent activity associated with and allowed under the changing definition of "fill material" under the Clean Air Act. If this type of activity and the mining associated with it is to continue, the waste created by this practice and others must be disposed of in compliance with the Clean Water Act. That is the law. For years, in my opinion, it has been shameful that our own Government was not following the law. Unfortunately, the Bush administration is not looking for ways to stop the dumping allowed under the current definition of "fill material." It seems to be looking for ways to continue it indefinitely and, in fact, to expand it in the future.

Just last month, when my colleague, Senator Jeffords of Vermont, who is the chairman of the full committee, the Environment and Public Works Committee, and I learned that the Administration was on the verge of finalizing rule changes which would do just that, which is to say not only continue the current definition of "fill material" but expand it, we sent a letter to the President urging him to reconsider. We asked for the opportunity, particularly through this committee, to work with the Administration and others to fully assess the environmental and other effects of the changes before they went into effect. Two days later, unfortunately, despite not only our request but that of many other people, the Administration changed the rule anyway.

I am honored to note the presence of the chairman of the full committee, Senator Jeffords, who has worked very closely with me in this matter, as I just mentioned.

I believe that the new rule actually violates the Clean Water Act. Just days after the rule was issued, a Federal District Court in fact agreed with that belief, stating that the Clean Water Act does not allow filling the waters of the United States solely for waste disposal, and that Agency policy that holds otherwise is beyond the power conferred by the Clean Water Act.

The new EPA/Corps rule not only puts a seal of approval on the dumping of mountaintop removal waste in our waters, but effectively invites new kinds of waste to be put in our rivers and streams, because the rule redefines "fill material" so broadly that it seems to me it would include mining overburden, wood chips, and even construction debris. It no longer requires those seeking

permits to demonstrate that the dumping would serve any useful purpose.

Now, if this Administration wants to change the Clean Water Act to allow such dumping, it seems to me that the way to do it is to come to Congress and ask us to change the law, not to do it through the administrative fiat that has been carried out. As long as the Clean Water Act is the law of the land, this practice cannot be permitted and should literally not be permitted by the Army Corps of Engineers.

We are going to hear testimony this morning on the relevance of the fill definition to the health of the environment and local economies, how this problem has been addressed at the State level, and the impacts mountaintop removal waste have had on the waters in Appalachia.

Now let me just say a word about an unfortunate dispute that has occurred between Senator Voinovich and me about one of the witnesses, Kevin Richardson. It is a serious matter, although I must say perhaps affected by my teenage daughter, and I cannot resist saying that when it came to the question of one of the Backstreet Boys testifying here this morning, Senator Voinovich and I were not "in sync."

[Laughter.]

Senator LIEBERMAN. I could not resist.

Look, Senator Voinovich, the Ranking Republican on this committee, and I have had a good relationship and this dispute began with a misunderstanding I am afraid between our staffs. It was my staff's understanding that as we negotiated and discussed witnesses for this hearing, we retained the right to call at least one more witness. When we found that Mr. Richardson was available today, we chose to exercise the powers that I have as a subcommittee chair to call him. Senator Voinovich's staff obviously felt that that was not the case. We offered them the opportunity to call another witness on the other side. They turned down that opportunity. So, as I presume most of you know, Senator Voinovich has decided not to be at the hearing and to exercise the right he has as a Senator to terminate this hearing at approximately noon.

I do want to say that Mr. Richardson is here as much more than just a well-known celebrity. He is a native of the State of Kentucky, which is directly affected by the question of the definition of fill material under the Clean Water Act. He is knowledgeable on this issue and, in fact, has worked to protect the environment in his home State through the Just Within Reach Foundation that he founded and on whose behalf he will testify today. So I believe his voice will add to our understanding of the issue before us today, and I am grateful that he could be here.

[The prepared statement of Senator Lieberman follows:]

STATEMENT OF HON. JOSEPH I. LIEBERMAN, U.S. SENATOR FROM THE STATE OF CONNECTICUT

Good morning, and welcome to this hearing of the Environmental and Public Works Committee's Subcommittee on Clean Air, Climate Change and Wetlands. We're here today to talk about a matter of critical importance to the health of America's rivers and streams, the changing of the definition of fill material under the Clean Water Act.

Streams and rivers provide drinking water for people and habitats for many aquatic species. They also provide a means of transporting water during heavy

storms. Waterways are our planet's circulatory system, and we should no sooner allow them to be disrupted than we would accept blockages in our own veins or arteries.

In 1972 Congress passed the Clean Water Act, one of the landmark pieces of environmental protections in our nation's history. Under the Act, and under the careful oversight of government ever since, our lakes, rivers and streams have been cleaned and safeguarded for us and for future generations.

Under the Act, the Federal Government has allowed industry to put some materials in our rivers and streams. The idea is that limited deposits of certain materials in particular places do not harm our water supply. Sometimes, the deposits serve a useful and constructive purpose—such as providing the foundation for a building or a bridge. When that's the case, what's dumped is not called waste—it's called "fill." Ever since the passage of the Clean Water Act, the Army Corps of Engineers has given industry permits for such deposits on a case-by-case basis.

But we've learned that the Army Corps has been issuing permits to companies which allow them to dump vast quantities of blasted rubble—literally, tons and tons of rock, dirt, and toxic materials—right into our rivers and streams. And the environmental consequences of this shortsighted policy have been severe: water has been polluted, aquatic life has been terminated, and ecosystems have been irreparably changed.

Mountaintop removal is the most prominent historical and current activity associated with the fill issue under the Clean Water Act. It is an important industry on which many American communities depend.

But if this type of mining must continue, the waste created by this practice and others must be disposed of in compliance with the Clean Water Act. That's the law—and for years, it's shameful that our own government wasn't following it.

Unfortunately, the Bush administration isn't looking for ways to stop the dumping. It is looking for ways to allow it to continue indefinitely and expand it in the future. Just last month, when EPW Committee Chairman Jeffords and I learned that Bush administration was on the verge of finalizing rule changes that do just that, we sent a letter to the President urging him to reconsider. We asked for the opportunity to work with the Administration and others to fully assess the environmental and other effects of the changes first.

Two days later, despite the concern we and many others had expressed, the Administration changed the rule anyway. I believe that the new rule violates the Clean Water Act. And just days after the rule was issued, a Federal district court agreed with that belief—stating that the Clean Water Act does *not* allow filling the waters of the United States solely for waste disposal, and that agency policy that holds otherwise is beyond the power conferred by the Clean Water Act.

What's doubly disturbing is that the new EPA/Corps rule not only puts a seal of approval on the dumping of mountaintop removal waste in our waters, but effectively *invites* many new kinds of waste to be put in our rivers and streams. The rule redefines "fill material" so broadly as to include mining overburden, woodchips, and even construction debris. And it no longer requires those seeking permits to demonstrate that the dumping would serve any useful purpose.

If the EPA wants to change the Clean Water Act to allow this dumping, not to mention new dumping, it should seek to change the law, but not through administrative fiat. As long as the Clean Water Act is the law of the land, this practice cannot be permitted—and must literally not be permitted by the Army Corps of Engineers.

We will hear this morning testimony on the relevance of the fill definition to the health of the environment and local economies, how this problem has been addressed in the State of West Virginia, and impacts mountaintop removal waste has had on the waters in Appalachia.

Before starting the hearing I must address an issue that has caused some controversy regarding the hearing. I am sorry to report that my good friend Senator Voinovich is not here today to hear testimony on this important topic. There was a misunderstanding between our staffs over witnesses, specifically our calling Mr. Kevin Richardson to testify, that led him to boycott this hearing and invoke a Senate rule that requires this hearing to end 2 hours after the Senate opens for business. Forgive the pun but Senator Voinovich and I were not "N'Sync" with about having a Back Street Boy testify today. I am sorry about this, especially because I know so many of you have travelled so far to be here today.

Mr. Richardson, I am sorry that you have been subjected to criticism about your coming here to testify. I know that you were born in Kentucky and raised on the edge of the Daniel Boone National Forest, and still own a farm there. You have family and friends throughout the Appalachian region. I understand that you are the founder and president of the Just Within Reach Foundation. Your foundation pro-

motes personal responsibility and promotes environmental education, including the granting of scholarships. Finally, you have been involved in the issue before us today, and have flown over the coal fields in Kentucky, West Virginia, and Tennessee, so you have seen first hand the consequences of the granting of fill permits to allow the disposal of waste from mountaintop removal.

Mr. Richardson is here as more than a well-known celebrity. He is knowledgeable on this issue and has in fact worked to protect the environment in his home State. I believe his voice will add to our understanding of the issue.

Senator LIEBERMAN. Senator Jeffords.

OPENING STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Senator JEFFORDS. Good morning. I would like to thank and commend Senator Lieberman for holding this hearing today, and thank the witnesses for being here.

The reason we are all here is because we all care about clean water. The Clean Water Act is a great success story in the country's short history of environmental legislation. It has served as a model for how States and the Federal Government can work together to be more responsible stewards of our precious resources. During the past 30 years, significant progress has been made in attaining the goals set in the Clean Water Act—the primary goal of zero discharge, and the interim goal of fishable/swimmable water conditions.

The issue we are considering today is the impact that changes in the rule defining "fill material" and the "discharge of fill material" will have on achieving the goals of the Clean Water Act. Concerns have been raised that the new definition will take us a step backward from achieving the goals, while others believe the revised definitions will eliminate confusion caused by EPA and the Corps having different definitions of "fill material."

I look forward to hearing from our witnesses today about why the changes are being made and their opinions as to what the impacts of the new rules will have on our Nation's waters. Thank you, Mr. Chairman.

[The prepared statement of Senator Jeffords follows:]

STATEMENT OF HON. JIM JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Good morning. I would like to thank Senator Lieberman for holding this hearing today and thank the witnesses for being here.

The reason we are here today is because we all care about clean water. The Clean Water Act is a great success story in this country's short history of environmental legislation. It has served as a model for how States and the Federal Government can work together to be more responsible stewards of our precious resources.

During the last 30 years, significant progress has been made in attaining the goals set in the Clean Water Act—the primary goal of zero discharge and the interim goal of fishable and swimmable water conditions.

The issue we are considering today is the impact that changes in the rule defining "fill material" and the "discharge of fill material" will have on achieving the goals of the Clean Water Act.

Concerns have been raised that the new definition will take us a step backward from achieving the goals, while others believe the revised definitions will eliminate confusion caused by EPA and the Corps having different definitions of "fill material".

I look forward to hearing from our witnesses about why the changes are being made and their opinions on what the impacts of the new rule will be on our nation's waters and the quality of the water.

Thank you, Mr. Chairman.

Senator LIEBERMAN. Thank you, Senator Jeffords. Mr. Chairman, thanks for your leadership on this and so many other environmental questions.

Senator Carper of Delaware.

Senator CARPER. I am just happy to be here and look forward to the testimony of our witnesses, and delighted to be in your company.

Senator LIEBERMAN. Thank you, Senator Carper.

Our first panel is composed of Mr. Benjamin Grumbles, Deputy Assistant Administrator, Office of Water, U.S. Environmental Protection Agency, who is accompanied by Mr. George Dunlop, Deputy Assistant Secretary of the Army for Policy and Legislation, Office of the Assistant Secretary of the Army for Civil Works, which is to say the Corps of Engineers.

Mr. Grumbles, I gather that you will deliver the testimony for the Administration, and both you and Mr. Dunlop are available for questioning.

Mr. GRUMBLES. If the chairman would yield, I would simply say that, if it is OK, the way we were going to proceed was that Mr. Dunlop was going to give a 5-minute presentation and then I would give a 5-minute presentation.

Senator LIEBERMAN. Go right ahead. Do you want to go first, Mr. Dunlop?

Mr. DUNLOP. Yes, sir, thank you very much.

STATEMENT OF GEORGE S. DUNLOP, DEPUTY ASSISTANT SECRETARY OF THE ARMY FOR POLICY AND LEGISLATION, OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY FOR CIVIL WORKS

Mr. DUNLOP. We welcome the opportunity to be here and thank you very much for enabling us to present this testimony which provides our views about the way we have come to the circumstance at which we are at.

Mr. Chairman, as you explained at the outset, the Clean Water Act involves definitions of "pollutants" and includes in those definitions "dredge" and "fill materials" that are regulated by the Corps of Engineers under Section 404 of the Clean Water Act as those materials have the effect of changing the bottom elevation of the waters of the United States or to convert wetlands into dry lands. Under Section 404 of the Clean Water Act, the EPA regulates all other pollutants that have degradation effects through various programs that the EPA administers.

Under the Section 404 program, unlike the Section 402 program, the Section 404 program specifically provides for circumstances in which the waters are converted to non-waters, to use the technical term, in ways that avoid, minimize, and compensate for the impacts of such conversions. We do that by requiring specific mitigations. That is found only in the Section 404 authorities.

Further, Section 404 of the Act provides for the regulation of discharges of fill materials, but Congress never really defined what fill material is. They left that up to the Agencies. The way we have gotten into this fix is that prior to 1977, for their respective programs, both Agencies, that is, the Corps and the Environmental Protection Agency, used the same effect-based definition of fill ma-

terial that is found in the Act. However, in 1977, the Corps of Engineers amended its 404 definition of fill material to add this primary purpose test, to which the chairman alluded, and this focused on whether or not the primary purpose of the material was, in fact, to raise the bottom elevation or to convert wetland into dry land.

It is important to note that the Corps, so as not to find itself regulating garbage, which had been a certain practice in certain areas in the United States at that time, specifically excluded waste from those 1977 definitions. At that time, the EPA retained the original effects-based definition in its 402 program governing the discharge of pollutants that have the water quality degradation effect.

Over time, these two differing definitions of what constituted "fill" pertaining to the purpose of what the fill material was put created uncertainty, both for the regulators and for the regulated community. In an effort to resolve that, in 1986 the EPA and the Corps of Engineers entered into a Memorandum of Agreement that sought to clarify these circumstances.

Well, that Memorandum of Agreement did not clarify very much because all these differing opinions continued. The consistency of the Federal approach by the different Agencies did not exist; it was not always consistent. Of course, as you can well imagine, what did that lead to? Litigation. As you well know, there are a variety of cases; the *RII* case, the *Bragg* v. *Robertson* case, and of course the *Rivenburgh* case, which the chairman referred to, which even as we speak is before the courts.

So, because virtually all of the projects that place fill in the waters of the United States have some purpose other than raising the bottom elevation or turning wetland into dry land, one court's interpretation of the primary purpose test, if taken to an extreme, could exclude all traditional fill material in the waters of the United States from regulation of Section 404. Mr. Chairman, that is why all of these things were modified and changed.

The bottom line of what we have done in our newly harmonized May 2002 rule is to define "fill material" for the 404 program in terms of its effect on raising the bottom elevation of waters of the United States, regardless of the purpose that caused that fill to exist. It specifically excludes garbage from the definition. It leaves the pollution, that is, the water degradation effects, to be regulated by EPA's Section 402 program.

Mr. Grumbles will then pick up from there how we got into this present circumstance.

Senator LIEBERMAN. Thanks, Mr. Dunlop.

Mr. Grumbles.

STATEMENT OF BENJAMIN H. GRUMBLES, DEPUTY ASSISTANT ADMINISTRATOR, OFFICE OF WATER, ENVIRONMENTAL PROTECTION AGENCY

Mr. GRUMBLES. Thank you, Mr. Chairman. I would like to focus specifically on a brief history of how EPA developed its "effects-based test" and has applied this long-standing approach to defining "fill material," and also the steps that we are taking to ensure that the Clean Water Act Section 404 program continues to provide protection for human health and the environment.

Mr. Chairman, I know that you and your colleagues know that there are essentially two basic issues that are involved here. One is a jurisdictional issue. The question is whether Section 404, which has traditionally been designed to regulate the discharge of dredged or fill materials, should apply, or Section 402 of the Clean Water Act, which traditionally has been, and continues to be, focused more on industrial and municipal waste and all other pollutants under the Clean Water Act. So there is an important jurisdictional question, and our rulemaking, which George Dunlop has just described, is an attempt to resolve and to harmonize the Agencies' differing definitions.

The other issue is implementation. How do we implement the 404 program? How can we be responsive to the concerns that have been raised in the past and that continue to be raised about mountaintop mining and other practices that are subject to the 404 program?

So what I would like to do is focus more on the history of the jurisdictional question, and essentially the difference, after 1977, between having an "effects-based test," which is what EPA has had since then, and a "primary purpose test," which is what the Corps had, where you might end up having to look into the minds of those who are going to do the discharge and figure out what was their purpose. The rule that we finalized adopts the long-standing EPA approach of an effects-based test: Look to see what the effect of a discharge is on the environment.

Now, as George talked about, the 404 program under the Clean Water Act specifically says you need a permit issued by the Corps of Engineers for the discharge of dredged or fill material. As George mentioned, the statute does not define dredged or fill material; it was left to the Agencies. Mr. Chairman, our view has been, and continues to be, both under the previous Administration and this Administration, the lawyers looking at the Act, looking at the congressional intent, the consistent implementation, the bottom line legal conclusion is that we believe that when you look at fill material in the definition, that mining material overburden is more appropriately consistent with the Clean Water Act regulated under the Section 404 program as opposed to the Section 402 program which traditionally regulates industrial and municipal waste, of a liquid nature, in particular.

I just want to point out a couple of things about the 404 program that we have, and the difference with 402. Under 402, there are no statutory or regulatory provisions designed to address discharges that convert waters of the United States to dry land. That is a fundamental concept to keep in mind. If we were told to start regulating mountaintop mining discharges under 402, it would require a comprehensive overhaul of the existing 402 program. The program is simply not designed, and has not been implemented, to regulate that type of material. In essence, the view is that regulations under 402 would result in an up-front, categorical ban of any type of discharge associated with that type of mining because you are, in essence, converting waters of the United States into dry land. That is precisely what the 404 program, in our view, was intended to regulate, that type of discharge.

What are some of the protections under 404? Specifically, under the 404 program, the Corps of Engineers issues the permits and follows EPA guidelines. "Guidelines" is really a misnomer. These are binding regulations. It also is called the "404(b)(1) guidelines," and the whole exercise there is to go through an analysis where you look at the practicable alternatives to the discharge. You have to go through a process of minimizing the effects of the discharge, and then, finally, provide for what is called "compensatory mitigation." If there are no practicable alternatives to the discharge of the fill material into the waters of the United States, then you have to minimize the effects, and then, finally, provide for compensatory mitigation.

As George said, there has been in the past no single definition. Over time, again and again there was controversy and confusion that has arisen. I think one of the key points to highlight is that this rule is not just about mining, it is also about the regulation of placement of materials in wetlands and other waters of the United States for the construction of solid waste landfills. A 9th-circuit case in 1998 is one of the primary motivations behind this rulemaking. It is to clarify that, yes, safeguards under the Clean Water Act, not just under RCRA but under the Clean Water Act as well, would apply to that type of activity, of putting sand and gravel in a wetland for a liner or a leachate collection system. So one of the points is that the rulemaking that we are finalizing is attempting to address that concern as well; to try to harmonize the differing definitions between the Corps and the EPA.

Finally, I just want to talk about implementation. We are not here to defend mountaintop mining practice, we are not here to defend any type of practice that is regulated under the Clean Water Act. We recognize that there have been in the past, and there continue to be problems and environmental impacts associated with a wide range of activities regulated under the Clean Water Act. Our purpose was to clarify, to resolve the different definitions and also to make clear in the rulemaking that trash and garbage was not something that could be subject to the Section 404 permitting program. These are materials, that, traditionally, we have never authorized permits for nor tolerated in any form or substance.

So, one of the purposes of the rulemaking was to clarify the landfill issue and the role of 404 in activities related to landfill liners and leachate collection systems, but also to harmonize the differences between the Corps and EPA. The EPA and the Corps are working to do several things to strengthen the regulatory protections under the nationwide permit program as it relates to mountaintop mining. We are working to include numeric thresholds as to the acreage limits that might come into play with respect to a nationwide permit for mountaintop mining. The Corps District Engineers in each of the Districts throughout Appalachia will be looking specifically at the cumulative impacts of mountaintop mining in the context of permits or authorizations. We are also involved in a multi-agency effort looking at the cumulative impacts, reviewing these, in particular for mountaintop mining.

So, Mr. Chairman, I appreciate your allowing me to go over time. I guess the bottom line is that we believe that our current interpretation of the Act and the intent of Section 404 is the correct one,

and that the rulemaking, nothing more, nothing less, is intending to harmonize that difference in definitions. We also look forward to more regulatory efforts to make sure that cumulative impacts and safeguards are in place with respect to mountaintop mining.

Senator LIEBERMAN. Thanks, Mr. Grumbles.

Senators will have 5-minute rounds of questioning of you.

Look, the concern here is that in the clarification that you have done, as you describe it, you have legitimized a practice that is in fact harmful to the Nation's waterways. I looked over some of the files in that 1998 case *Bragg* v. *Robertson*, and it was interesting to read the testimony of several of the Army Corps of Engineers officials who were deposed and acknowledged, as I read it, that the Corps did not have the legal authority to issue permits for valley fills because the Corps' own regulations prohibited the use of waste as fill. One of the Corps officials, when asked why the Corps did issue such approvals without legal authority, said that the Corps "sort of oozed into that." That is the concern.

So let me ask this question. Is it not possible that Congress in adopting the Clean Water Act and the President signing it did not anticipate allowing such discharges under either Section 402 or Section 404? In other words, you have clarified the interpretations, according to your testimony, but it seems to me that there is an argument to be made pursuant to the obvious intention of the Act, which was to clean up our waterways, that under 402 or 404 Congress did not intend such discharges to be legal.

Mr. GRUMBLES. If I may, Mr. Chairman, I think there are a couple of things to keep in mind. One of them is that while the Act does have as its overarching objective to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, and it does have some non-binding important goals at the front of the Act about specifically reducing and eliminating discharge over a period of time, any discharges, the whole purpose of the Act is to have the two primary operative regulatory programs, 402 and 404, to allow for the addition of pollutants under stringent conditions and requirements.

Specifically, Section 404 does allow for the discharge of dredged or fill material into specified "disposal sites." It is specifically contemplated. It is part of the Act that there will be disposal of waste and other materials, dredged or fill material into the waters, but they need to be regulated and there need to be safeguards and controls.

The point you mentioned about the confusion over whether or not the Corps had the legal authority to be authorizing these activities I think is the precise reason why we felt, and why the previous Administration felt, there was a need to clarify the different definitions that were in the regulations. The Corps had a specific provision that said if it is the primary purpose to dispose, that is what you look at, and there was a waste provision, an exclusion that waste would not be under 404. Our definition was different. To our lawyers in reading through the Act, it seemed very clear that you should look at the effect of the discharge into the waters of the United States and then that should be the primary test. If you change the bottom elevation of a waterbody, what you needed to do was to have to go through the 404 permit program.

Senator LIEBERMAN. Just on a non-legal basis, is it really possible to think of the dumping of millions of tons of debris into valleys as "strictly controlled," to use the words of the statute?

Mr. GRUMBLES. I do not know what the precise number is. There is no doubt that there has been a lot of material, whether it is mountaintop mining overburden or other materials, that have over the years been discharged into the Nation's waters. The safeguards, the attractiveness of the 404 permit program, as opposed to the 402 program, is that it is specifically designed to take the permit right through an analysis where they look at practicable alternatives and they also look at the cumulative impacts.

One of the things that we are committed to doing is to look in a very rigorous way at the individual and cumulative impacts of those discharges. Since 1998, we understand that the number of valley fills has been reduced by 30 percent, and that the overall size impact of the valley fills has been reduced by approximately 20 or 25 percent.

The bottom line is that these discharges do have an effect. We do not believe that the statute, the current reading and correct reading of the statute, would impose an absolute categorical ban on the discharge of this type of waste. We do believe it needs further restrictions both under the nationwide permit program and the individual program, and there needs to be continued analysis of cumulative impacts of such activities.

Senator LIEBERMAN. OK, Mr. Grumbles, my time is up.

Senator Corzine.

Senator CORZINE. Thank you, Mr. Chairman. I must admit that I am not a lawyer, so this language seems overdrawn. Filling up valleys strikes me as not necessarily consistent with what a non-lawyer would read in looking at the Clean Water Act.

Senator LIEBERMAN. Your status as a non-lawyer may, in fact, give you clearer vision in this case.

[Laughter.]

Senator CORZINE. So I am having a little problem with coal mining overburden and placement of overburden as confusing the issue.

Let me switch gears a little bit and maybe show some of my ignorance. This is actually very troubling relative to a common sense interpretation of what, at least my understanding, the Clean Water Act was all about. Are there any changes in these definitions that have anything to do directly with the dredging activities in New York-New Jersey Harbor and the definitions of what will be appropriate fill material, both for this and for other activities?

Mr. GRUMBLES. Well, we are not attempting in the rulemaking to define "dredged" material. In terms of the definition of "fill material," I want to check with the lawyers and will get back to you for the record. The HARS, I believe is regulated under the Marine Protection Research and Sanctuaries Act. So that is a different statute.

[The referenced material follows:]

> Clarification on the Effect of the rule on the New York/New Jersey Harbor HARS: "Placement of dredged material from New York/New Jersey Harbor at the Historic Area Remediation Site (HARS) is regulated under Title I of the Marine Protection, Research, and Sanctuaries Act (33 U.S.C. 1401 et seq.). The rulemaking to clarify the definition of 'fill material' under Section 404 of the CWA thus does not affect the HARS."

Senator CORZINE. The same material that would be dredged from that harbor then deposited in coal mine shafts in Pennsylvania would be subject to 404?

Mr. GRUMBLES. That is correct. If you were putting it into other waters or inland waters, then the Section 404 program would apply.

Senator CORZINE. Would you consider coal mine shafts water sources?

Mr. GRUMBLES. I do not know about coal mine shafts. I was thinking you were going more in terms of other streams or waters.

Senator CORZINE. So there are concerns about using these dredged materials as pollutants that undermine the water tables and seepage into them. I am just curious as to whether these same issues of definition apply to that discussion and debate as they do here.

Mr. Chairman, I am going to plead ignorance on my legal ability, but I have serious trouble at a common sense level of the juxtaposition of these kinds of overdrawn legal definitions blocking what I think is the clear intent of the Congress with regard to the Clean Water Act. I am pleased to hear that we have fewer filled-in valleys. Somehow or other, that does not seem good enough relative to at least the limited study I have given to this particular issue. I think it is very worthy that we dig deeply into this and challenge some of these definitions because, frankly, I am troubled, and I think the American people would be, with regard to the usage of these statutes to justify those purposes.

[The prepared statement of Senator Corzine follows:]

STATEMENT OF HON. JON S. CORZINE, U.S. SENATOR
FROM THE STATE OF NEW JERSEY

Thank you Mr. Chairman for holding today's hearing on the issue of the Army Corps' change to their definition of "fill" material. This may seem like a minor technical change. But as we will hear today, there are much broader and potentially damaging implications that such a change may have.

I want to start by noting that this year marks the 30th anniversary of the Clean Water Act. The Act's objective is clear: "to protect and restore the physical, chemical and biological integrity of the nation's waters." The Clean Water Act has resulted in many successes since 1972. Thirty years ago, only 30–40 percent of the nation's rivers, lakes and coastal waters were estimated safe for swimming and fishing. Today that percentage has risen to over 60 percent. In my home State of New Jersey—which has over 120 miles of ocean coastline, 6,450 miles of rivers, and 24,000 acres of public lakes—considerable progress has been made as well. All coastal beaches from Sandy Hook South to Cape May are fully swimmable, 73 percent of the monitored estuary waters and 76 percent of the monitored ocean waters fully support shellfish harvesting—this wasn't the case 30 or even 20 years ago.

These are good achievements, but there is still a lot of work to be done in New Jersey and across the country. So in this year of the 30th anniversary of the Clean Water Act, I think we ought to be taking steps to strengthen the Act to address remaining water quality problems. We certainly shouldn't be weakening the Act, or making changes to regulations that will create new water quality problems. Unfortunately, that's exactly what the Administration is doing with this change to the wetlands program.

It is my understanding that the new "fill" definition is such that any material that has the effect of replacing portions of waters with dry land or changing the bottom elevation of a water body is permissible for use as "fill" material. As my colleagues have pointed out, the effect of this change is that many types of wastes—including hardrock mining waste, coal mining waste, and construction and demolition debris—will be allowed to be dumped in our Nation's waterways.

Needless to say, Mr. Chairman, this could be devastating to streams, lakes and wetlands across the country. And it goes against the heart of the Clean Water Act,

whose purpose is to clean up the nation's waterways, not to dump waste into them. So I'm extremely dismayed by the Administration's actions.

Thank you, Mr. Chairman. I look forward to hearing the testimony.

Senator LIEBERMAN. Thank you, Senator Corzine. I agree with you.

Gentlemen, I have a couple of other questions, but I am going to leave the record open and submit them to you in writing.

I gather, under the Senate rules and Senator Voinovich's objection, we are going to have to adjourn by 11:30. Some folks have come from some distance on the second panel and I want to give them an opportunity to testify.

So, thank you for your testimony.

Mr. DUNLOP. Mr. Chairman, as a matter of housekeeping, may we ask that our prepared formal statement be inserted in the record.

Senator LIEBERMAN. Without objection, the full statements will be included in the record, as they will for those who testify on the second panel. I thank you.

I now call the second panel. The panel is composed of Mr. Kevin Richardson, founder and president of the Just Within Reach Foundation, from Lexington, KY; Joan Mulhern, senior legislative counsel, Earthjustice Legal Defense Fund; Mike Callaghan, secretary, West Virginia Department of Environmental Protection; J. Bruce Wallace, Ph.D., professor of entomology from the University of Georgia, Athens, GA; and Mike Whitt, executive director, Mingo County Redevelopment Authority, Williamson, WV.

I thank you all for being here. Obviously, this is a very important hearing on a very important subject and your testimony is of significance to us.

We are going to start with you, Ms. Mulhern, then we are going to go to Mr. Callaghan, Mr. Richardson, Mr. Wallace, and Mr. Whitt.

STATEMENT OF JOAN MULHERN, SENIOR LEGISLATIVE COUNSEL, EARTHJUSTICE LEGAL DEFENSE FUND, WASHINGTON, DC

Ms. MULHERN. Chairman Lieberman and members of the subcommittee, thank you for holding this hearing to review one of the most destructive changes to Clean Water Act regulations in decades. My name is Joan Mulhern. I am senior legislative counsel for Earthjustice Legal Defense Fund, a national non-profit law firm.

Present for your hearing today, Mr. Chairman, are citizen groups and individuals from the coal field who are among the people who will be most directly hurt by the Administration's weakening of the Clean Water Act rules. I have some statements from these individuals and others, as well as from local groups and religious leaders in the region, and with your permission, Mr. Chairman, I would like to ask that these be entered into the record for the hearing.

Senator LIEBERMAN. Without objection, they will be entered. Thank you.

Ms. MULHERN. On May 3, the Bush administration eliminated from the Army Corps of Engineers' Clean Water Act regulations a 25-year old legal prohibition on using waste material to fill waters of the United States. This change in the definition of fill material

was made to give the Corps authority to permit any industry to bury any waterway under almost any kind of solid waste. The rule change is indefensible as a matter of law and policy. It is directly contrary to the Clean Water Act, which, as you stated, Mr. Chairman, has the central purpose of protecting the integrity of our Nation's waters. No activity is more inconsistent with the goal of protecting the integrity of waters than allowing them to be buried forever under piles of industrial waste.

The EPA has declared this to be the "Year of Clean Water" in honor of the Clean Water Act's thirtieth birthday, which happens this year on October 18. Opening the Nation's waters for obliteration in the way that this rule change does is a perverse way of marking an important milestone in this landmark law's history.

Much of the attention on the new waste dump in water rule has been on mountaintop removal and the destruction of streams into which the coal companies dump enormous quantities of waste. This is because of not only the unparalleled destruction that this practice causes, but it is precisely for the coal companies that the Bush administration adopted this rule.

Estimates vary, but most suggest in West Virginia and Kentucky alone where mountaintop removal is most concentrated more than 1500 miles of streams have already been destroyed under valley fill waste dumps. It is impossible to overstate the harmful effects of mountaintop removal on the surrounding environment and communities. Not only are the waters buried under tons of rubble, the forested mountains become barren moonscapes. Mining complexes can be 10 or even 20 square miles in size. The communities below these massive operations are devastated. People are forced from their homes by blasting, by dust, noise, flying rocks, and the degradation of stream and well water. Life near mountaintop removal operations become so unbearable that generations old communities are forced to move away.

Many people, including some coal field residents who have lost homes and loved ones in the recent floods, believe flooding is made worse by mountaintop removal. It is a reasonable conclusion. When mining strips the land bare of all trees and vegetation and the natural water courses are filled under tons of rubble, stormwater will come rushing down more quickly into communities and valleys. In the floods last month, nearly a dozen people lost their lives and four West Virginia counties were declared Federal Disaster Areas.

As you noted, Mr. Chairman, recently a Federal District Judge, Charles Haden, ruled that the Administration's rewrite of the Clean Water Act regulations was beyond its legal authority. He wrote:

> "To read the Clean Water Act otherwise presumes Congress intended the Act to protect the Nation's waterways with one major exception: the Army Corps was to be given authority to allow the waters of the United States to be filled with pollutants and destroyed, even if the sole purpose is waste disposal."

He wrote:

> "Amendments to the Act should be considered and accomplished in the sunlight of open congressional debate, not within the murk of administrative after-the-fact ratification of questionable regulatory practices."

Earthjustice could not agree more. The questionable regulatory practice referred to is the fact that the Corps, without legal author-

ity, has been permitting this filling of streams with coal mining waste for many years. This was not a matter that was unclear, as Mr. Dunlop suggests. The waste exclusion that has been in the Corps' regulations for 25 years was all too clear. In fact, it was only when citizens moved to enforce the Clean Water Act against the Federal and State Agencies that were permitting it that the Bush administration tried to change the rule.

The coal industry and the Bush administration argue that companies must bury streams and that forbidding them from doing so would cause economic havoc both regionally and nationwide. Yet the evidence shows neither of these claims is true. Most mining operations do not require valley fills. For the others there are alternatives to dumping waste in waters. According to an economic study recently prepared for the Bush administration, even severe restrictions on the size of valley fills would only add one dollar to the price of a ton of coal and a few cents to the cost of a megawatt of electricity.

Some proponents of mountaintop removal claim it is needed to create flat land for development. While there are a few such examples, it is extremely unlikely that any significant percentage of any of the hundreds of square miles that have already been flattened will ever be developed. According to one estimate, less than 1 percent of mine land is currently used for any development purpose.

It is important to understand that the way that the rule was changed would also allow almost any other industry to seek approval from the court to dump any kind of waste into waterways. As the chairman noted, plastics, construction debris, along with wood chips, overburden, slurry tailings, and similar mining materials would all be allowed to be permitted in water, including wastes that are chemically contaminated.

Perhaps the most startling thing about the Administration's change to the regulations is it was done without any study or analysis of the environmental or societal consequences. If you look at the Environmental Analysis prepared by the Corps, Mr. Chairman, you will find that it lacks one thing—an environmental analysis. The document cites not one study, report, or fact of any kind to support the Agency's conclusions that there will be no environmental effects from this rule change. Not only does common sense tell us otherwise, but recently released documents from the EPA and Corps show that the effects already caused by mountaintop removal are significant and likely irreversible.

I am over my time, so I will just say that I could not disagree more with Mr. Grumbles and Mr. Dunlop's explanation of the Clean Water Act and the reasons that they give for changing this rule. It is one thing to fill a stream or wetland because a constructive use needs to be made of a certain area. It is something else altogether to allow it to be filled with waste just because that is the cheapest means of disposal.

Because Judge Haden enjoined the Corps from issuing any new permits, our waters are protected from this rule change for now. As the courtroom battles on the rule change continue, as they undoubtedly will, it makes sense for Congress to step in and settle this matter once and for all by reconfirming what the Clean Water

Act already says, that it forbids the use of our Nation's waters as dumps.

Thank you again, Mr. Chairman, for the opportunity to testify.

Senator LIEBERMAN. Ms. Mulhern, I agree with you. One of the questions I was going to ask the previous panel was exactly the one you stated, which is, there was no Environmental Impact Analysis that I can see, it was just asserted. Second, it is my intention to introduce legislation to do exactly what you have said, which is to assert in law the original intention of the Congress, which is not to allow this kind of dumping in our waters.

Senator LIEBERMAN. Secretary Callaghan, secretary of the West Virginia Department of Environmental Protection. Thanks for being here.

STATEMENT OF MIKE CALLAGHAN, SECRETARY, WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHARLESTON, WV

Mr. CALLAGHAN. Thank you, Mr. Chairman, and thanks for having me back. You might recall I testified on some air issues several months ago.

Senator LIEBERMAN. I do.

Mr. CALLAGHAN. At that stage, I blamed my premature balding on air issues. Today, I am going to blame it on mountaintop mining.

[Laughter.]

Mr. CALLAGHAN. As you mentioned, I am Mike Callaghan, cabinet secretary for West Virginia DEP. What I want to relate to you is West Virginia's perspective on what is happening in the coal fields with respect to valley fills and mountaintop mining.

To put it in some kind of perspective, I am a fifth generation West Virginian. So I go back to when the State was a State. I have been around the issue of coal mining all my life. We have discussed the benefits and the burdens that that has brought to our State, and it has brought both.

When you look at mountaintop removal, it is, as the name suggests, a mining method in which the soil and rock are basically pulled from the top of the mountain, the coal seam is extracted, and then the materials tried to be placed back into the fields and into the mountain in as best condition as possible. The excess soil and rock, which they refer to as "spoil," is commonly placed in the nearby valleys and hollows, creating large sloped areas called "valley fills."

Mountaintop removal is one of the most economical ways to mine coal in a steep sloped terrain, such as in southern West Virginia, but it does have the consequence of filling miles of mountain streams with rock and dirt. The practice of mountaintop mining has increased because the demand for low sulphur coal has been steadily increasing over the last decade. So that is what is driving the more mountaintop mining.

From a regulatory standpoint, the State of West Virginia issues mining permits through a federally approved program and we have primacy of our program through the Department of Interior. Basically, we apply the Surface Mine Control and Reclamation Act and its regulations dictate most aspects of the permitting process imple-

mented by the State of West Virginia, which includes a permitting of valley fills. In West Virginia, among other requirements, every permit for a mining operation which proposes filling a stream must include detailed provisions for minimizing the amount of excess spoil material, a stormwater runoff analysis to prevent flooding, and detailed engineering requirements to ensure structural stability of the valley fills themselves.

As you have seen today, in addition to State approval, the Army Corps of Engineers must issue a Section 404 permit before any waters of the United States can be filled.

Over the last 20 years, West Virginia and the Federal oversight Agencies, which include EPA, the Army Corps of Engineers, the Office of Surface Mining, have issued permits that authorized the construction of more than 4,000 valley fills in West Virginia. Those fills have ranged in size from a few hundred yards to over 2 miles in length and affected approximately 750 miles of our streams, creeks, and drainage ways.

One conclusion about mountaintop mining and valley fills that is certain though is that the use of these practices has enabled the mining industry to flourish and has put thousands of West Virginians to work. In numerous communities in southern West Virginia the coal mining industry has for many years formed the backbone of the economy. The industry draws its work force from the local population and many additional jobs are sustained through businesses that support mining industry.

Currently, market factors are having a significant impact on West Virginia coal. Western coal competition, depletion of reserves, economies of scale, and industry mergers all will likely lead to a decline in the employment in the mining industry in Appalachia. This is going to leave our region, and especially West Virginia, with an economic void.

Ironically, when you look at these valley fills and mountaintop removal sites, they can serve as effective development tools for filling the gap left by the mining industry when they move on. That is, when properly planned, mountaintop mining sites have proven ideal locations for industrial, commercial, residential, and recreational development. The flat topography of mountaintop removal sites in areas typically devoid of prime building locations has already proven beneficial to several businesses, including a large wood products factory, a world-class golf course, a multi-faceted recreational park, and residential development.

My department is working closely with the State economic development office to more fully utilize these surface mining sites. Individuals such as Mike Whitt, sitting here at the table with me, have been very instrumental in providing a vision for West Virginia's future post-mining. Unfortunately, former mining sites historically have been under-utilized as economic tools. Of the several hundred surface mining sites with valley fills in West Virginia, less than two dozen have been used for economic or community development.

Let me conclude by saying that prior to joining DEP, I was a Federal prosecutor with pretty extensive experience in prosecuting people who committed environmental violations. One of the first things I did was to appoint an environmental prosecutor from the Department of Justice here in Washington to come and run our

coal program. I say that, in West Virginia sometimes we like to talk in phrases, but basically I want you to understand that there is a new sheriff in town. We are running our program and we are doing a good job of enforcing the rules and regulations as they are written.

Please know that I am fully committed to the enforcement of the existing laws and regulations, and we want to demonstrate steady progress in improving our oversight of the coal industry in West Virginia. We certainly welcome the companies to mine our coal, but we also intend to do our jobs as regulators and enforce the law. Thank you.

Senator LIEBERMAN. Thanks, Secretary Callaghan.

Mr. Richardson, thanks for being here. As I indicated in my opening statement, I regret the dispute over your appearance. I am grateful that your schedule allowed you to be here. You have got a proven record of being involved in environmental protection. You come from a part of the country that is affected by this discussion. So I look forward to your testimony now.

STATEMENT OF KEVIN RICHARDSON, FOUNDER AND PRESIDENT, JUST WITHIN REACH FOUNDATION, LEXINGTON, KY

Mr. RICHARDSON. Thank you, sir. Mr. Chairman, honorable committee members, and guests, my name is Kevin Richardson. I was born in Lexington, KY, and I was raised in the Appalachian Mountains of eastern Kentucky. My father managed a camp and conference center that hosted retreats for religious groups and businesses from all over the world. There at the camp I mowed the grass, swept the cabins, cleaned the toilets, and led hikes all over the thousands of acres that border the Daniel Boone National Forest that we lived on. Our entire water supply was supplied from a natural spring.

I am here today to talk about a systematic destruction of one of the most beautiful, productive, and historical regions of our country—my home State of Kentucky, the mountains of West Virginia and Tennessee, and the other areas of Appalachia where the practice of mountaintop coal mining has taken over.

In the midst of their giant lakes of coal sludge that sometimes burst without warning, their constant dynamiting that shakes homes from their foundations, their transformation of forested mountain ranges into flat, gravel-covered moonscapes, and their contamination of well water and natural springs, coal companies engage in the practice of valley fill, our purpose for being here today.

For years, the Corps of Engineers has routinely issued permits to coal companies in the Southeast and Appalachia allowing them to fill valleys and waterways with overburden from the mountaintop removal coal extraction operations. Overburden, along with coal sludge, are the byproducts of extracting and washing coal, before shipping it to electric generating plants across the country.

EPA officials, residents living in the shadows of mines, and citizen groups have questioned the validity and legality of the Corps' decision to issue such permits—permits for an activity that dumps mining waste into the region's streams, rivers, and valleys. Hundreds of millions of tons of industrial mining byproducts are

pushed into the valleys surrounding coal extraction sites, to date burying over 1,500 miles of headwater streams in West Virginia and my home State of Kentucky. Valley fills destroy spawning grounds that support our recreational fishing industry, they contaminate our drinking water, and they trash our thriving tourist industry that relies on the natural beauty of our area. In addition, these stripped lands can no longer absorb the seasonal rainfall, causing massive flooding and loss of life. People should not have to die when it rains.

In April, a Federal District Court judge finally brought some needed attention to this issue by ruling that the Corps' practice of issuing valley permits violates Congress' intent in the Clean Water Act and its restrictions on using waterways for industrial waste disposal. The Administration's recent attempt to circumvent the Clean Water Act by rewriting the rules to define coal extraction waste as "fill" is a nice gesture to their friends in the industry. It clearly exceeds the Administration's legal authority granted under the Act. Such a gesture cannot alter the meaning of the law. I urge you to make this clear to the President and his Agencies.

The bottom line is that we have an industry that has thrived, not from honest business practices in a free market, but from passing its real costs to the people of Appalachia and the rest of the United States—with subsidies in the form of illegal permits from the Corps of Engineers and other Agencies that are supposed to protect us. Ending the practice of valley fills and making coal companies manage their industrial waste like any other industry is not about hugging trees and worshipping mountains. It is about making coal companies compete for our energy dollar on an equal playing field with natural gas, hydroelectric, solar, and wind. It is about recognizing that we own the streams and rivers of this country and that we own the fish and other resources in those waterways. Destroying the rivers, the fisheries, the forests and mountains through irresponsible coal extraction, as well as coal-produced acid rain deposition in your home State, Mr. Chairman, is no different than kicking down the doors of our homes and walking away with an armful of our valuables. Theft is theft.

I am not a scientist, but I know what I have seen on flights over the coal fields. My first flight was in Spring 2001. The historic resources that sustained Daniel Boone, the original Cherokees, and generations of mountain people are being converted on a mammoth scale into flat, lifeless plateaus. The first time I ever flew over the area at about 5,000 feet, I thought I would see a few scarred peaks. Instead, I saw the entire horizon filled with mountains with their tops blown off, huge lakes of toxic sludge, and piles of waste filling every valley around the mines. I was sick to my stomach.

I came here today to bring attention to an Administration policy and a Corps of Engineers practice on valley fills that is completely misguided and gives no consideration to the generations to come. When I move back home to Kentucky to raise my family on my farm, I would like my kids to be able to swim and fish in the same places I did when I grew up. I ask you, as our leaders, to look beyond the political clout of the coal lobby and do what is right for the forgotten Appalachian region.

In closing, I would like to personally invite each of you to take a flight with me over the coal fields and see firsthand how future generations are being robbed.

Mr. Chairman, I thank you for your invitation to speak here today before the committee and for your willingness to bring this difficult issue to light. Thank you very much.

[Applause.]

Senator LIEBERMAN. The hearing will come to order.

Thanks, Mr. Richardson. Your testimony vindicated my confidence that you would add something to the hearing, and you did. You have unique personal appearance and strong testimony to offer, and I thank you for it.

Senator Clinton, I thank you for being here. A cloture vote has started on the floor. We are under a threat of being closed off at 11:30. I wonder if we can do a tag team; I will run over now and vote and then come back. Next is Dr. Wallace and then Mr. Whitt. I will be right back. I really appreciate your being here.

Senator CLINTON [assuming the chair]. Thank you, Mr. Chairman.

Dr. Wallace.

STATEMENT OF J. BRUCE WALLACE, PROFESSOR OF ENTOMOLOGY, UNIVERSITY OF GEORGIA, ATHENS, GA

Mr. WALLACE. Thank you. Senators, ladies, and gentlemen, thank you for the opportunity to offer testimony on changing definitions of fill as it relates to central and southern Appalachian streams. Judge Charles Haden has concluded that these changes can only be allowed to stand if the U.S. Congress alters the intent of the Clean Water Act and allows fills so that waste from mining operations can be deposited in headwater streams. Based on more than 30 years of experience of working in Appalachian stream, I strongly urge you not to allow such changes.

The impacts of coal mining are significant and detrimental. We are burying streams and creating potential long-term environmental consequences as well as economic consequences that will haunt us into the future. Over 900 miles of Appalachian streams were buried between the years 1986 and 1998 alone because of mountaintop removal and valley fill coal mining activities, and that is an underestimate because those values were made from maps that do not show all of the smaller streams.

The significance of headwater streams is widely accepted by the scientific community, as demonstrated by an attached letter I submitted signed by 44 senior aquatic scientists as well as excerpts from a peer-reviewed publication. The message from the scientific community is clear: (1) headwater streams provide vital ecological goods and services, and (2) they are being destroyed at an extremely high rate by human activities.

Much of the diversity of aquatic biota in the Appalachians is found in the small streams such as those being buried. These streams receive most of their energy inputs from leaves, wood, et cetera, called detritus, from surrounding forests. This organic detritus is stored and processed by biota and physical processes into smaller particles and dissolved organic matter. This material is subsequently transported downstream to serve as food for inverte-

brates and ultimately fish. Destroying the linkage between headwaters and downstream areas alters the availability of organic matter as fuel for downstream animals.

One of the fundamental concepts of stream ecology is linkage of upstream to downstream segments. Former streams covered by valley fills no longer serve as a source of organic matter for downstream areas. Recent studies have shown that small streams in the drainage network are the sites of the most active uptake and retention of dissolved nutrients. Burying small streams results in increased downstream loading of nutrients and degradation of water resources and the loss of valuable ecosystem services.

Our potable water supplies will be harmed many years into the future because of large increases in concentrations of several chemicals, as recently found by the USEPA below valley fills. The large increases in concentrations of chemical elements, which I show in Table I of the things I submitted earlier, combined with increased discharge below valley fills increases the rate of downstream nutrient loading. Altered chemistry, altered temperature regimes contribute to the elimination of many species of invertebrates. EPA studies have shown that many sensitive species are absent from streams below valley fills. Who pays for this long-term pollution of our waterways? Unfortunately, those of us who live downstream pay.

This deliberation really boils down to short-term economic gain for long-term environmental degradation. However, the question should not be how can we extract coal resources with the minimum expense and maximum short-term profit for the mining companies. The question we should really be asking is how can we extract coal resources in a wise manner which ensures long-term environmental integrity, productive forests, unburied and unpolluted streams, and long-term productive economies for our children and grandchildren. Thank you for your attention.

[Applause.]

Senator CLINTON. Thank you very much, Dr. Wallace.

Mr. Whitt.

STATEMENT OF MIKE WHITT, EXECUTIVE DIRECTOR, MINGO COUNTY REDEVELOPMENT AUTHORITY, WILLIAMSON, WV

Mr. WHITT. Thank you Senator Clinton, members of the committee. I appreciate the invitation to speak about this very important issue in southern West Virginia. I appreciate your willingness to learn about the positive projects that are coming to fruition in the southern West Virginia coal fields.

The Mingo County Redevelopment Authority's mission is to create jobs, improve the quality of life, and increase the tax base throughout the next generation for the future of our children and grandchildren. We cannot meet these challenges unless mine sites are provided to us for the purposes of economic development.

The Authority brought together a very diverse group of citizens to develop the Mingo County land-use master plan. The Mingo County commission approved this plan after holding a public hearing and receiving the citizen's input to this plan. Now, for the first time in history, we have a road map to achieve economic development opportunities. Any company who volunteers will be provided

with this post-mine land-use that will ensure that we have economic development sites once mining is complete. Prior to our plan, Mingo County lost many economic development opportunities because most of the property that was mined was put back to the approximate original contour, leaving no suitable land for economic development. Our plan affords opportunities to change that.

Through the leadership of the Authority, we have developed an excellent partnership with private and public sectors. Mike Callaghan, the Director of DEP, and Governor Bob Wise have been very instrumental in our efforts to encourage post-mine land-use sites for proposed and ongoing surface mine activities. We have listened to the concerns of our citizens and one thing that everyone agrees on is the fact that we must diversify our economy. We must stop the cycle of schools being closed, we have lost 16 schools since 1991; good teachers having to leave, we have lost 120 teachers since 1993; major industry jobs vanishing, we lost over 800 jobs since 1990. Our county's population has dropped from 37,000 in 1980 down to 28,000 in the year 2000. That is a loss of over 1,800 students in our school systems.

One of our schools, 95 percent of the kids qualify for the free lunch program. The best case scenario, we have in our county seat one of our high schools where over half of their kids qualify for the free lunch program. That is very disheartening. We have not done a very good job down there providing opportunities for our folks.

The Redevelopment Authority has worked hard to form a team relationship between private and public sectors, and with the dedication of our board of directors we have achieved an excellent display of teamwork within our county. Everyone has come together to help save our county from economic devastation. We cannot wait to diversify the economy after the coal is depleted. We must diversify in conjunction with the ongoing and future mining activities, and our efforts must continue.

I would like to mention some projects that have come to fruition utilizing opportunities that have been created by the mining industry. We had three projects on reclaimed surface mine land:

The Wood Products Industrial Park. It is a $28 million capital investment. We have 90 employees there and expect another 100 by the end of this year. The first major diversification project ever in our county from coal.

We have an Agriculture Demonstration Project. For the first time, our kids have a horticulture curriculum and now they are maintaining and operating this facility. It broadens their education values.

The Twisted Gun Golf Course. The coal industry constructed an 18-hole PGA-type golf course, with a breathtaking view of our natural surroundings. This project will enhance our recreation opportunities.

We have two projects utilizing underground mine water, and that has created a new industry in southern West Virginia, particularly in my county. We have a fish hatchery which hatches and raises arctic char fingerlings and a grow-out facility is now in operation. That is a $3.5 million investment from the private sector which takes arctic char fingerlings and grows them to market size, about two pounds. Pro Fish is the distributor of our arctic char in the

Washington, DC. area and I would encourage you to try some for dinner. It is excellent.

Some of our potential projects in conjunction with ongoing mining that will help diversify our economy, save millions of tax dollars, and enhance the quality of life for Mingo County citizens are:

The King Coal Highway, I–73/74 corridor. In cooperation with the Department of Highways, the Department of Environmental Protection, and a local mining company, the coal industry plans to construct 5 miles of this road to rough grade and put two connectors in. That is an estimated savings of $90 million of taxpayer money.

We do not have an airport that will let any kind of corporate executive land there. In cooperation with Mingo County Airport Authority, the coal company has agreed to construct to rough grade an area to provide the county with an airport runway of 6,000 to 10,000 feet, with sufficient acreage for ancillary future development. That is an estimated savings of $30 million.

As you can see, the mining industry and our efforts to diversify the economy in southern West Virginia are connected in a substantial manner. I am not a lawyer, I am not an engineer, and I am not a chemist. I am just a local citizen who loves my county and its citizens. We care about our kids and our grandkids and opportunities that are provided to them. We want a county that will allow people who have had to move away to come back home to live and work. We care about our schools and the opportunities provided to our kids. We are working hard to make southern West Virginia economically viable.

The mining is necessary. The valley fills are needed for the continuation of surface, contour, and underground mining to create economic opportunities for Mingo County. We have found a solution to stop the downward plunge and it is not just a fleeting mission. It is reality. It is attainable. It works. We want it to continue.

Now you have a better understanding of our situation, and we can see the importance of diversification during the mining process in southern West Virginia. If there is anything that I can do to help ensure that our progress is not hindered, please feel free to contact me. I, like Mr. Richardson, I would like to invite you down to my county and I will personally take you around and show you the progressive steps that we have made. Then you can make a decision for yourself if we are on the right track.

I would like to leave you with a very powerful quote from former President John F. Kennedy. It sort of summarizes my county. The citizens down there is the first part, and I think the Redevelopment Authority and the teamwork we have put together is the second part of his phrase. He said: "Some people see things as they are and ask why."—and I am asked all the time why don't we have this kind of industry, or why don't we have this, and why don't we have that—"But I," I want to paraphrase here—"But [we] dream of things that never were and ask why not." We are answering the "why nots" down there right now. It has been very difficult. It is hard to turn a big ship around. But with your help and support, we are going to accomplish our goals.

With that, I thank you for giving me time to testify before you today.

Senator CLINTON. Thank you very much, Mr. Whitt.

Unfortunately, as you know, we have to end this hearing because of the disagreement that arose. I join Chairman Lieberman in thanking all of the panelists for being here, and, Mr. Richardson, we are very pleased that you were able to be part of this important hearing.

I think we will keep the record open because we did not get a chance to ask any questions. I have to leave to go vote. If Senator Lieberman gets back, he will have maybe 5 minutes before he has to close the hearing down because of the objection of one of our members. So at this point, I will adjourn the hearing and ask if all of you would be available for us to submit written questions, since we did not get a chance to orally.

I want to thank the audience which has come to demonstrate its concern, particularly everybody from West Virginia. I thank you very much for making the trip to be here. We look forward to working on this very difficult problem with you. I look forward to coming to see the area. I have enjoyed my visits to West Virginia and I look forward to coming back. Mr. Richardson, I will talk to Senator Lieberman and we may take you up on that offer to take a fly over and we will go over Kentucky as well as West Virginia and Tennessee and take a look at what is happening. Because the costs of this can no longer be borne by the people alone and we have to do more to make sure that we have a good relationship between economic development, which everyone knows is important, but if you do not protect the environment you are not going to have much of an economy in the future.

So thank you all very much.

[Applause.]

Senator CLINTON. The hearing is adjourned.

[Whereupon, at 11:22 a.m., the subcommittee was adjourned, to reconvene at the call of the chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF BENJAMIN H. GRUMBLES, DEPUTY ASSISTANT ADMINISTRATOR, OFFICE OF WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY AND GEORGE S. DUNLOP, DEPUTY ASSISTANT SECRETARY OF THE ARMY, POLICY AND LEGISLATION

Good morning, Mr. Chairman and members of the Committee. We welcome the opportunity to present joint testimony on the national implications of the recent Department of the Army (Army) and U.S. Environmental Protection Agency (EPA) Clean Water Act (CWA) rulemaking defining the terms "fill material" and "discharge of fill material" for the Section 404 program.

In today's testimony, we will explain the rule, its history, and how it will result in more effective regulation of activities under the CWA, leading to a reduction in environmental impacts. We also will address the ramifications of the May 8, 2002, decision in *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh* [No. 2:01–770 (S.D.W.Va.)] for the rule and how the agencies intend to proceed. Army and EPA are committed to protecting this nation's aquatic resources consistent with the requirements of the CWA and the final fill rule enhances our ability to do just that.

BACKGROUND

Before discussing the specifics of the rulemaking, let us first explain the underlying context. The definition of "fill material" has a long history that reflects the complexity associated with the purposes of the CWA. The CWA reflects a national commitment to protect the nation's aquatic resources, but it establishes that commitment in a context that also recognizes that our waters are used for a variety of purposes. The CWA establishes permitting programs that are designed to strike the appropriate balance between those competing purposes. The definition of "fill mate-

rial" is indicative of the challenge that exists in ensuring that all of the goals of the CWA are met.

The CWA governs the "discharge" of "pollutants" into "navigable waters," which are defined as "waters of the United States." Specifically, Section 301 of the CWA generally prohibits the discharge of pollutants into waters of the U.S., except where such discharges are authorized under either CWA Section 404, which regulates the discharge of dredged or fill material, or CWA Section 402, which regulates all other pollutants under the National Pollutant Discharge Elimination System (NPDES) program.

These two permit programs are designed to address different types of materials. In keeping with the fundamental difference in the nature and effect of the discharge that each program was intended by Congress to address, Sections 404 and 402 employ different approaches to regulating the discharges to which they apply. The Section 402 program is focused on (although not limited to) discharges such as wastewater discharges from industrial operations and sewage treatment plants, stormwater and the like. Pollutant discharges are controlled under the Section 402 program principally through the imposition of effluent limitations, which are restrictions on the "quantities, rates, and concentrations of chemical, physical, biological and other constituents which are discharged from point sources into navigable waters" [CWA Section 502(11)]. Section 402 permits must include effluent limitations that reflect treatment with available pollution control technology, and any more stringent limitations necessary to meet water quality standards for the receiving water [CWA Section 301(b)]. There are no statutory or regulatory provisions under the Section 402 program designed to address discharges that convert waters of the U.S. to dry land. Moreover, the Section 402 permitting process does not require an evaluation of alternatives to a proposed discharge or mitigation for unavoidable impacts.

In contrast, the Section 404 permitting program does specifically contemplate the possible conversion of waters to non-waters and is designed, therefore, to evaluate and provide for ways to avoid, minimize, and compensate for the impacts of such conversions. Just because material is characterized as "fill material" does not mean that a Section 404 permit will necessarily authorize a particular discharge—the permit process carefully screens proposed discharges and applies the 404(b)(1) Guidelines, which provide a comprehensive means of evaluating whether any discharge of fill, regardless of its purpose, is environmentally acceptable. First, a discharge is categorically prohibited if it would significantly degrade a water of the United States. In addition, no discharge may be allowed if there is a less environmentally damaging practicable alternative to placing the material in waters of the United States. Finally, where there is no other alternative, the discharge may be allowed if the permit applicant has taken all practicable steps to minimize the amount of material discharged, and compensate for the remaining, unavoidable impacts through mitigation.

This comprehensive environmental evaluation is specifically suited to addressing activities whose effect is to convert waters to dry land, because it ensures the associated habitat modification is avoided, minimized and compensated for to the maximum extent practicable. The sufficiency of this permitting process to provide appropriate environmental protection for waters of the U.S. does not depend on the purpose of the discharge of fill material. The Section 404(b)(1) Guidelines also provide for consideration of the effects of chemical contaminants on water quality in a number of ways, specifically requiring compliance with applicable State water quality standards [40 CFR 230.10(b)(1)], toxic effluent limits or standards established under CWA Section 307 [40 CFR 230.10(b)(2)], and appropriate use of chemical and biological testing to evaluate contaminant effects [40 CFR 230.11(d) and (e); 230.60]. However, because Section 404 was intended by Congress to provide a vehicle for regulating materials whose effects include the physical conversion of waters to non-waters or other physical alterations of aquatic habitat, the Section 404(b)(1) Guidelines go beyond such a water quality based approach to require careful consideration of the effects of the discharge on the aquatic ecosystem as a whole, as well as evaluation of alternatives to the discharge and measures to minimize and compensate for unavoidable adverse effects.

Although Section 404 provides for the regulation of discharges of fill material, Congress did not define "fill material" in the Act, leaving it to the agencies to define the term consistent with the overall goals of the Act. Prior to 1977, the Corps and EPA had the same "fill material" definition. We both defined "fill material" as "any pollutant used to create fill in the traditional sense of replacing an aquatic area with dry land or of changing the bottom elevation of a water body for any purpose. . . ." [40 FR 31325 (July 25, 1975); 40 FR 41291 (September 5, 1975)].

In 1977, the Corps amended its definition of "fill material" to add a "primary purpose test," which focused on whether the primary purpose of the material was to raise the bottom elevation of a water or convert wet to dry land. The definition also specifically excluded material that was discharged primarily to dispose of waste [42 FR 37130 (July 19, 1977)]. This change was adopted by the Corps because it recognized that some discharges of solid waste materials technically fit the definition of fill material; however, the Corps believed that such waste materials should not be subject to regulation under the CWA Section 404 program.[1] For example, the Corps sought to exclude the disposal of trash and garbage from regulation under section 404.

However, the definition of "fill material" is not just significant to the Section 404 program. Because Section 402 is applicable to all pollutants other than dredged or fill material, the definition of what does or does not constitute "fill material" impacts on the 402 program as well. Rather than change its regulations to adopt a "primary purpose test" similar to that adopted by the Corps, the EPA regulations retained a focus on the effect of the material (an "effects-based test") in determining whether a discharge would be subject to Section 404 or Section 402. The EPA regulations provided that any material that has the effect of raising the bottom elevation of a water body or converting wet to dry land is "fill material."[2] EPA retained the effects-based approach because it avoids the need to ascertain the "purpose" of a project in order to determine regulatory requirements, and ensures that discharges with similar environmental effects receive similar regulatory treatment.

Over time, the agencies began to see evidence that their differing definitions created uncertainty among both regulators and members of the regulated public. In 1986, the agencies entered into a Memorandum of Agreement (1986 MOA)[3] in an effort to clarify when Section 402 versus Section 404 was the appropriate framework. Nevertheless, there continued to be regulatory uncertainty.

In addition, the purpose test lends itself to the possible exclusion of materials from Section 404 that are most commonly used for the very purpose of raising the elevation of an area (i.e., of filling a water of the U.S.) if the materials are a waste product of some other activity, and thus can lead to incongruous results. For example, some might argue that test would preclude the Corps from allowing the excess rock and dirt that is generated on road construction projects in steep slope areas to be used as "fill material" because it is a waste by-product of that activity. Nevertheless, the very same material that is discharged under different circumstances would be generally regulated as fill material.

The uncertainty caused by differing definitions, in general, and the "primary purpose test," in particular, has also engendered litigation. We are concerned that if inconsistencies and ambiguities in the regulatory definitions of "fill material" are not corrected, further litigation will arise and future court decisions could reduce the ability of the CWA Section 404 program to protect the quality of the aquatic environment, and the overall public interest.

The court decision that most clearly illustrates the serious problems caused by the "primary purpose test" is the Ninth Circuit Court of Appeals decision in *Resource Investments Incorporated* v. *U.S. Army Corps of Engineers*, 151 F.3d 1162 (9th Cir. 1998) (the *RII* case). This case involved a CWA Section 404 permit application for a solid waste landfill proposed to be built in waters of the U.S. located in the State of Washington. The Corps' Seattle District Engineer denied the Section 404 permit, on the grounds that a solid waste landfill at that location could contaminate an important "sole source" aquifer, and on the basis that environmentally safer, practicable alternatives were available to handle the region's solid waste. When the permit applicant sued, the District Court upheld the Corps' permit denial, but the Ninth Circuit Court of Appeals reversed.

One of the Ninth Circuit's conclusions in the *RII* decision was that the "primary purpose" test in the Corps' definition of the term "fill material" meant that the Corps could not require a CWA Section 404 permit for pollutants that the applicant proposed to discharge into waters of the U.S. for construction of a proposed landfill.

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[1] The Corps' definition of "fill material" adopted in 1977 reads as follows: (e) The term "fill material" means any material used *for the primary purpose* of replacing an aquatic area with dry land or of changing the bottom elevation of an [sic] water body. The term does not include any pollutant discharged into the water primarily to dispose of waste, *as that activity is regulated under section 402 of the Clean Water Act."* 33 CFR 323.2(e) (2001) (emphasis added).

[2] 40 CFR 232.2 defines "fill material" as "any 'pollutant' which replaces portions of the 'waters of the United States' with dry land or which changes the bottom elevation of a water body *for any purpose"* (emphasis added).

[3] Memorandum of Agreement Between the Assistant Administrators for External Affairs and Water, U.S. Environmental Protection Agency, and the Assistant Secretary of the Army for Civil Works, Concerning Regulation of Discharges of Solid Waste Under the Clean Water Act.

Based on the Corps' definition of fill material, the Ninth Circuit determined that the layers of gravel, low permeability soil, and synthetic liner that would underlie the solid waste landfill did not constitute "fill material." The Court reasoned that the "primary purpose" of these materials (e.g., soil and gravel) to be placed in the waters of the U.S. was not to change the bottom elevation of a water body or replace an aquatic area with dry land, but to create a leak detection and collection system.

The Ninth Circuit's decision in the *RII* case illustrates the inherent problems in the "primary purpose" test. In *RII*, the litigant was successful in excluding from regulation under the CWA Section 404 program traditional fill material, by alleging an alternative primary purpose. Typically fill serves some purpose other than just creating dry land or changing a water body's bottom elevation. Thus, if this approach to interpreting the Corps' "primary purpose test" were to be taken to its extreme conclusion, the unreasonable end result could be that almost any traditional fill material proposed to be placed in waters of the U.S. does not need a Section 404 permit. Such an interpretation would be clearly contrary to the intent of Congress expressed in the plain words of CWA Sections 404 and 301, which require that any "fill material" to be placed in any water of the U.S. must be legally authorized by a permit under CWA Section 404.

Similarly, *Bragg* v. *Robertson*, 54 F. Supp. 2d 563 (S.D. W. VA. 1999) (and now the Rivenburgh case) are further evidence of how the uncertainty in the regulatory context resulted in a misinterpretation of the legal framework governing this program. In *Bragg*, despite its previous approval of a settlement agreement recognizing use of Section 404 to regulate overburden, the District Court, in a decision addressing claims under State law, stated in *dicta* that under the then-existing Corps regulations Section 404 was *not* the appropriate framework for regulating overburden because it was waste material. Although that decision was ultimately vacated by the Fourth Circuit Court of Appeals on jurisdictional grounds, the same court in its May 8, 2002, decision in the *Rivenburgh* case went even further and concluded that the CWA itself did not contemplate regulation of waste discharges under Section 404. We will further discuss the *Rivenburgh* decision later in our testimony, but decisions such as these underscore why a clear statement of regulatory policy, which the agencies have attempted to do in our recent rule, is essential.

For some time, there has been strong public concern surrounding the fill rule and related issues. In the past, both industry and environmental groups have urged the agencies to reconcile their differing definitions of "fill material." Industry was frustrated by the confusion and additional time that was sometimes necessary to process applications as the agencies sorted out their different regulatory perspectives. At one time, environmental groups believed that EPA's effects-based approach to the definition of fill material was more environmentally protective and went so far as bring suit in 1982 to have the Corps definition declared unlawful and invalid and to enjoin its implementation.

APRIL 2000 PROPOSAL

For the reasons just characterized, the Clinton Administration, on April 20, 2000, proposed a joint rule to revise the Army and EPA regulations defining the term "fill material." Consistent with the terms of the settlement agreement entered in the *Bragg* litigation between the Federal defendants and the plaintiffs, the proposal made clear that discharges into waters of the U.S. of coal mining overburden, and berms, dams, or roads associated with the sedimentation ponds would continue to be regulated as "fill material." In developing the regulatory revisions, the Army and EPA sought to improve regulatory clarity in a manner that is generally consistent with EPA's long-standing definition and current practice. The goal was to maintain or improve existing environmental protections in a manner that would avoid major disruptions or reallocations of responsibilities between the ongoing Section 404 and 402 programs and to ensure that no new types of pollutant discharges would now become allowable. The approach adopted by the proposal, and ultimately the final rule, best protects the environment, minimizes potential program disruptions, and properly reflects the differing regulatory approaches established by Sections 402 and 404 of the CWA.

The proposal was to amend both the Army and EPA definitions of "fill material" to provide a single definition of that term. The proposal, which was consistent with EPA's long-standing definition and the current practice of the agencies, would result in material that has the effect of filling waters of the U.S. being deemed "fill material" and thus subject to evaluation under the CWA Section 404(b)(1) Guidelines, which were specifically written to address material with that type of effect. At the same time, the proposal would have specifically excluded from the definition of "fill material" discharges subject to EPA proposed or promulgated effluent limitation

guidelines and standards under CWA Sections 301, 304, and 306, or covered by a NPDES permit issued under CWA Section 402. The proposed revisions also contained a change to the definition of the term "discharge of fill material," in order to provide further clarification that landfill construction and placement of coal mining overburden are regulated under Section 404. In addition, the preamble to the proposal sought comment on whether to amend the Corps' regulations so as to provide a definition of "unsuitable fill material" that could not receive a Section 404 permit, and set out a potential definition for that term.

The proposal originally was issued with a 60-day public comment period. However, in response to requests from the public, the agencies extended the comment period for an additional 30 days, providing a total comment period of 90 days, which closed on July 19, 2000. We received over 17,200 comments on the proposed rule, most of which consisted of identical or substantially identical e-mails, letters, and postcards opposing the rule and generated from websites that enabled the sender to submit an e-mail or fax by simply typing in their name and clicking a button. Approximately 500 of the comments consisted of more individualized letters, with a mixture of those comments supporting and opposing the rule.

The comments of environmental groups and the various form letters were strongly opposed to the proposal, in particular, the elimination of the waste exclusion and the discussion in the preamble regarding treatment of unsuitable fill material. Except for several representatives of landfill interests, comments from the regulated community generally supported the proposal, in particular, the fact that the rule would create uniform definitions of "fill material" for the Corps' and EPA's rules and maintain regulation of certain discharges under Section 404 as opposed to Section 402 of the CWA.

MAY 2002 FINAL RULE

The comments on the April 2000 proposal addressed a number of issues briefly discussed below, including adoption of a single consistent EPA and Corps definition of "fill material," the use of an effects-based test for defining "fill material,"and the elimination of the waste exclusion from the Corps' definition. This latter issue was a matter of particular concern to the environmental community.

With regard to adoption of a single EPA and Corps definition, the majority of the comments from both the environmental and industry perspectives expressed the general view that the agencies should have the same definitions for the key jurisdictional terms "fill material" and "discharge of fill material." Many such comments also noted that the differences between the Corps' and EPA's rules have historically caused confusion for the regulated community. The final rule, like the proposal, provides for a consistent Corps and EPA definition of these key terms.

Most of the comments that addressed use of an effects-based test for defining "fill material" expressed support for its use, as well as for elimination of the "primary purpose" test from the Corps' definition. However, there were some commenters who disagreed with such an approach. They gave a variety of reasons for their opposition, believing elimination of the primary purpose test from the Corps' definition was unnecessary, that purpose-based tests were successfully used in other statutes and elsewhere in the Section 404(b)(1) Guidelines, that alternative ways of resolving the issue without a rule change were available, and that the proposal represented an expansion of Section 404 jurisdiction.

We carefully considered such comments, but concluded that the objective standard created by an effects-based test will yield more consistent results in determining what is "fill material" and will provide greater certainty in the implementation of the program. An objective, effects-based standard also helps ensure that discharges with similar environmental effects will be treated in a similar manner under the regulatory program. As previously discussed, the subjective, purpose-based standard led in some cases to inconsistent treatment of similar discharges, a result which hampers effective implementation of the CWA. In addition, despite previous efforts to resolve the uncertainties resulting from the differing Corps and EPA definitions without rulemaking (e.g., the 1986 MOA), regulatory uncertainties continued to arise. Thus, the final rule, like the proposal, uses an effects-based approach to provide a single definition of the term "fill material."

In particular, the final rule defines "fill material" as material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water. This approach is similar to EPA's long-standing definition of the term "fill material." For purposes of increased clarity, the final rule also contains specific examples of "fill material" including rock, sand, soil, clay, plastics, construction de-

bris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in waters of the U.S.

With regard to elimination of the waste exclusion from the Corps' definition, comments from the environmental community and general public strongly opposed its elimination. Some of these comments recommended that the agencies include in the regulation a general exclusion from the definition of "fill material" for any discharge of "waste." Some commenters expressed the view that deletion of the waste exclusion language from the Corps' regulations violates the CWA, and pointed to the decisions in *RII* and *Bragg* to support that view. Many of these comments acknowledged, however, that when waste is discharged for a purpose other than mere disposal, (e.g., to create fast land for development), review under the Section 404 permit process in accordance with the Section 404(b)(1) Guidelines adequately protects the environment and is consistent with the CWA.

We believe that a categorical exclusion for waste would be over-broad, and the final rule thus does not contain such an exclusion. Simply because a material is disposed of for purposes of waste disposal does not, in our view, justify excluding it categorically from the definition of "fill material." Some waste (e.g., mine overburden) consists of material such as soil, rock and earth, that is similar in its characteristics and effects to "traditional" fill material used for purposes of creating fast land for development. In addition, other kinds of waste having the effect of fill (e.g., certain other mining wastes, concrete, rubble) also can be indistinguishable either upon discharge or over time from structures created for purposes of creating fast land. Given the similarities of some discharges of waste to "traditional" fill, we declined to categorically exclude all wastes from the definition, allowing the appropriateness of the material to be assessed in the permit review process. The final rule, however, was modified in light of the comments to specifically exclude trash or garbage.

The proposed rule's preamble addressed a related issue of whether to define "unsuitable fill material," and contained an example definition of that term. The comments on that proposal expressed almost unanimous opposition to this "unsuitable fill material concept," in some cases viewing it as too limited and an inadequate substitute for the elimination of the waste exclusion, in others' opinion, leaving too much discretion as to what is "unsuitable fill material," and impermissibly rejecting materials out of hand that might be acceptable when actually evaluated under the permitting process.

However, many of the comments received did assert that various types of trash or garbage are not appropriate to use, as a general matter, for fill material in waters of the U.S. We believe these impacts can be generally avoided because there are alternative clean and safe forms of fill material that can be used to accomplish project objectives and because there are widely available landfills and other approved facilities for disposal of trash or garbage. In light of this, the final rule was modified to add an exclusion of trash and garbage from the definition of "fill material."

In addition to the foregoing issues, the final rule itself, unlike the proposal, does not contain an exclusion from "fill material" for discharges covered by effluent limitation guidelines or standards or NPDES permits. This change was made in light of comments expressing concern that the proposed rule language regarding the exclusion was susceptible to differing interpretations and would result in uncertainty with respect to the regulation of certain discharges. However, while the language in question does not appear in the final rule itself, the preamble does emphasize that the effects-based definition is consistent with EPA's long-standing approach to defining fill material, and generally is intended to maintain our existing approach to regulating pollutants under either Section 402 or 404 of the CWA. In particular, as noted in the preamble, the final rule does not change any determination EPA has made regarding discharges that are subject to effluent limitation guidelines and standards, which will continue to be regulated under Section 402 of the CWA. In addition, the preamble notes the final rule does not alter the manner in which water quality standards currently apply under the Section 402 or the Section 404 programs.

With regard to solid waste landfills and the *RII* case, comments from the regulated community asserted that the regulation under Section 404 of discharges for creation of infrastructure associated with solid waste landfills (e.g., roads, liners, berms, dikes) was inconsistent with the court's decision in *RII*. However, as explained in considerable detail in the preamble to the final rule, we do not agree, and instead believe that an effects-based test is the appropriate means of evaluating whether a pollutant is "fill material." Like the proposal, the final rule thus makes clear that discharges having the effect of raising the bottom elevation of a water or replacing water with dry land, including fill used to create landfills such as liners, berms and other infrastructure associated with solid waste landfills are dis-

charges of fill material subject to the Section 404 program. These types of discharges have been consistently subject to regulation under Section 404, and the final rule clarifies that the important environmental protections of the Section 404 program continue to apply to such discharges.

RELATIONSHIP OF RULEMAKING AND MOUNTAINTOP MINING

We recognize that this rulemaking has been the subject of considerable public attention and controversy, largely because opponents of the practice of mountaintop mining have viewed this issue as an opportunity to halt that practice. Notably, neither this rule nor the CWA are the principal vehicle provided by Congress for regulating mountaintop mining activities. Rather, the responsibility was delegated to the Secretary of the Interior, through the Office of Surface Mining, under the Surface Mining Control and Reclamation Act (SMCRA). Nevertheless, this rulemaking has been incorrectly painted as being designed to facilitate the continuation of mountaintop mining. In actuality, it was undertaken in light of years of past experience in order to enhance regulatory clarity and improve environmental protection. However, because this rulemaking has been depicted as linked to promotion of mountaintop mining, we would like to take this opportunity to briefly discuss the Administration's efforts to provide for more effective and environmentally sound management of that practice under the existing regulatory framework.

Consistent with the *Bragg* settlement agreement, we are continuing to develop a programmatic Environmental Impact Statement (EIS) that will consider appropriate changes to agency policies, guidance, and coordinated agency decisionmaking processes to reduce the adverse environmental effects to waters of the U.S. and to fish and wildlife resources from mountaintop mining operations, and to other environmental resources that could be affected by the size and location of fill material in valley fill sites. This is an inter-agency activity being undertaken by EPA, the Corps, the Office of Surface Mining (OSM), and the U.S. Fish and Wildlife Service (FWS), in cooperation with the State of West Virginia.

In addition, on January 15, 2002, the Corps modified nationwide Permit 21 (NWP 21), which is the CWA Section 404 general permit most often used to authorize discharges of dredged or fill material associated with surface mining activities. Under the revised NWP, the District Engineer will make a specific determination on a case-by-case basis that the proposed activity complies with the terms and conditions of the NWP and that adverse effects to the aquatic environment are minimal both individually and cumulatively. Under revised NWP 21, the Corps also has clarified that it will require appropriate mitigation for impacts to aquatic resources.

In light of regional concerns about impacts in Appalachia from surface mining activities, Corps Headquarters has requested the relevant District Engineers to establish regional conditions in Appalachian States on the use of NWP 21 that are consistent with the provisions of the Federal District court approved settlement in the *Bragg* litigation in West Virginia, which generally limits use of NWP 21 for valley fills to watersheds draining 250 acres or less. As part of this, the Corps will make a project-specific evaluation of the cumulative loss of aquatic resources within the affected watershed. We believe these NWP changes, and continued development of the programmatic EIS, will further improve environmental protection with regard to surface mining activities in Appalachia.

In addition to the CWA-related activities described above, the Office of Surface Mining is responsible for developing the rules that govern mountaintop removal coal mining under the Surface Mining Control and Reclamation Act (SMCRA). Most Appalachian States administer these rules through programs delegated to them by OSM.

RIVENBURGH DECISION

The regulatory uncertainty associated with the differing Corps and EPA fill material definitions most recently has arisen again in *Kentuckians for the Commonwealth, Inc.* v. *Rivenburgh*, in which plaintiff challenged a Corps' Section 404 authorization under the then-existing regulations for the discharge of overburden associated with a mountaintop mining coal operation. Following initiation of this lawsuit, the plaintiff moved for summary judgment on several grounds, including the claim that the Corps lacked authority under the then-existing Corps definition of fill material to authorize the placement of valley fill in waters of the U.S. for purposes of waste disposal. The government argued that the Corps' longstanding practice of regulating valley fills under Section 404 was consistent with the CWA, particularly in light of EPA's then-existing definition of fill material as any pollutant that replaces a water with dry land or raises the water's bottom elevation for any purpose. On May 6, the Government informed the court that the Corps and EPA

had completed rulemaking reconciling the agencies' differing definitions which adopted an effects-based approach to defining the term.

On May 8, 2002, the court issued a decision finding that the Corps lacks the statutory authority to regulate any material discharged solely for purposes of waste disposal. While the new regulation was not challenged in this case, the court nonetheless stated that it was inconsistent with the CWA and exceeded the agencies' legal authority. The court decision enjoins the Corps from "issuing any further Sec. 404 permits that have no primary purpose or use but the disposal of waste."

We believe that the court misconstrued the CWA and its legislative history. EPA and the Corps explained in detail in the recent rulemaking the legal and policy basis for the agencies' revised definition of fill material, and we continue to believe that new definition is in full accord with the CWA. In light of this, USDOJ has requested a stay of the court's injunction because its economic and social impacts warrant such a stay pending appeal. In addition, we have argued we will likely prevail on the merits because (1) the Corps does have authority to issue permits under CWA 404 to allow for the discharge of mining overburden; (2) the court's approval of the Settlement Agreement in *Bragg* bars relitigation of that issue; and (3) the Court's injunction is overly broad. We also have requested that the court clarify the scope of its injunction. In addition, intervenors, including the Kentucky Coal Association, have moved to stay the injunction. Plaintiffs oppose the stay and seek to expand the injunction. Briefing was completed on May 28 and we are monitoring a decision now.

CONCLUSION

This rulemaking is about the need to reconcile differing regulatory definitions so as to provide consistency and regulatory predictability. In order to achieve that goal, the definition adopted is fully consistent with EPA's existing definition and the Corps' longstanding practice, and further ensures that material with the effect of filling waters of the U.S. is regulated under the regulatory regime best designed to deal with those effects—Section 404 of the CWA. This concludes our testimony and we would be pleased to answer any questions you might have.

RESPONSES BY BENJAMIN H. GRUMBLES AND GEORGE S. DUNLOP TO ADDITIONAL QUESTIONS FROM SENATOR LIEBERMAN

Question 1a. In your testimony, you described the revised definition of fill material as "consistent with the current practice of the agencies." According to the final rule, examples of wastes now eligible for § 404 permits include, but are not limited to *"rock, sand, soil, clay, plastics, construction debris, wood chips, [and] overburden from mining or other excavation activities"* in addition to *"placement of overburden, slurry, or tailings or similar mining-related materials"* are also to be permitted.

Does the Corps currently allow all of the types of waste material listed in the new definition to be permitted under § 404?

Response. Both under prior and current regulatory definitions, a project proponent could apply for § 404 permit to discharge any of these materials into waters of the U.S.; however, the discharge of these materials would not be authorized without a thorough review of their potential impacts on the environment, as well as other aspects of the public interest. Authorization would have to be conveyed either through compliance with a Corps Nationwide Permit or Regional General Permit, the terms and conditions of which are designed to ensure that impacts are no more than minimal, or through an individual permit process in which the effects are individually assessed. Please note that the revised definition of the term "fill material" only describes the materials that qualify for regulation under § 404. It does not confer any inherent authorization. All requirements of the CWA fully apply to the review of applications for § 404 permits.

Question 1b. Please provide the Committee with copies of all individual and nationwide permits it has issued in the past 5 years that allow these wastes to be placed in waters of the U.S. as "fill."

Response. The Corps maintains centralized permit data on the acreage of waters of the U.S. that of any fill material, we can not provide this information in response to this request, or the several that follow. Although Corps District Offices might be able to produce copies of the requested permits, this would have to be accomplished through hand-searches of several hundred thousand file documents, which would be prohibitively time-consuming and expensive.

Question 1c. Using your most recent available data, how many acres of wetlands, ponds and lakes and miles of streams and rivers does the Corps annually permit to be filled by coal mining overburden waste material?

Response. See response to 1b above.

Question 1d. Using your most recent available data, how many acres of wetlands, ponds and lakes and miles of streams and rivers does the Corps annually permit to be filled by hardrock mining tailings or similar mining-related materials?

Response. See response to 1b above.

Question 1e. Using your most recent available data, how many acres of wetlands, ponds and lakes and miles of streams and rivers does the Corps annually permit to be filled by other excavation waste material?

Response. See response to 1b above.

Question 1f. Using your most recent available data, how many acres of wetlands, ponds and lakes and miles of streams and rivers does the Corps annually permit to be filled by construction and demolition debris?

Response. See response to 1b above. In addition, we know from experience that the inclusion of construction and demolition debris as fill material is not uncommon. Demolition debris such as brick, concrete, and various quarry products is often used as stable fill material in both aquatic and non-aquatic construction projects.

Question 1g. Using your most recent available data, how many acres of wetlands, ponds and lakes and miles of streams and rivers does the Corps annually permit to be filled by waste wood chips?

Response. See response to 1b above.

Question 1h. Using your most recent available data, how many acres of wetlands, ponds and lakes and miles of streams and rivers does the Corps annually permit to be filled by slurry waste material?

Response. See response to 1b above.

Question 2a. As the new definition states, this is not an exhaustive list. What other types of wastes does the Corps already permit to be dumped into waters as fill?

Response. Under the former Corps purpose-based definition of fill material, any material proposed for a construction-related purpose would have qualified for consideration for a Section 404 permit, regardless of whether or not it was a 'waste' by-product of some other activity.

Question 2b. The preamble to the final rule even states that wastes that may be "chemically contaminated" would be eligible for a § 404 permit. What chemically contaminated wastes does the Corps currently permit to be placed in waters under the § 404 program?

Response. The discharge of chemically contaminated dredged material into waters of the U.S. has long been eligible for authorization under § 404 provided the discharge will comply with the applicable environmental criteria. Although the Corps is obliged to accept such applications, the subsequent permit process normally focuses on the use of appropriate material testing (e.g., chemical and biological tests) to identify the potential for adverse physical, chemical and biological effects associated with the proposed discharge, and on exploring methods of avoiding or ameliorating these adverse effects. If there is reasonable assurance that adverse effects can be sufficiently avoided, including chemically contaminated materials that are proposed for discharge into waters of the U.S. as fill under the new definition.

Question 3. Did either of your agencies do an assessment of all the likely or potential sources and amounts of all waste streams that would, under the new definition, qualify for disposal as fill material in waters of the U.S.? Please provide the Committee a list of the universe of potential waste dischargers under the definition and the amount of waste they generate each year.

Response. It is important to recognize that there were two definitions of "fill material" at issue when this rulemaking was undertaken. EPA's long-standing definition already used an effects-based test to define fill material. Thus, the new rule, which also uses an effects-based test, generally does not alter status quo from the perspective of EPA's previous definition. The Corps' previous definition used a primary purpose test in defining fill material. As a result, the very same material being discharged as fill material in one circumstance, under the Corps definition, would not be deemed fill material when discharged for the primary purpose of waste disposal. The consequence is that under the purpose-based definition virtually any discharge or material has the potential to be either fill material or excluded waste depending on the purposes/intentions of the discharger. As explained in the preambles to the proposed and final rules, the agencies undertook this rulemaking to eliminate uncer-

tainties associated with such a purpose-based test and to eliminate differences in the agencies' definitions in a manner consistent with their general practice in program implementation. In light of the above, we did not definitions of a key jurisdictional term.

Questions 4a-b. You testified "[s]ome waste (e.g., mine overburden) consists of material such as soil, rock and earth, that is similar in its characteristics and effects to 'traditional' fill material used for purposes of creating fast land for development. In addition, other kinds of waste having the effect of fill (e.g., certain other mining wastes, concrete, rubble) also can be indistinguishable either upon discharge or over time from structures created for purposes of creating fast land."

Do the agencies agree or disagree that allowing mining overburden, other mining wastes, concrete, rubble, construction and demolition debris, tailings, slurries and other materials placed in waters for the purpose of waste disposal will result in more streams, wetlands and other waters being filled than if these materials were not permitted in waters for disposal purposes?

How many more acres of wetlands, ponds and lakes and miles of streams and rivers will be filled with waste under the new rule as compared to a rule that retained (and enforced) a waste disposal exclusion?

Response. As we have indicated, the agencies do not believe that the revised rule will significantly alter current practice or result in more regulated waters being filled than was the case prior to the rulemaking. In fact, the agencies continue to take steps to improve the implementation of the Section 404 program in an effort to enhance protection for the Nation's waters. The Corps is currently moving to adopt regional conditions on the use of NWP 21 in Appalachian states consistent with the *Bragg* settlement agreement currently in place in West Virginia until the interagency stream assessment protocol is available for use throughout the entire Appalachian region. Since those limits were adopted in West Virginia in 1998, as indicated in our testimony the average size and number of valley fills has been reduced by nearly 25 percent. In addition, the agencies will continue to prepare their programmatic environmental impact statement evaluating the environmental effects of mountaintop coal mining practices in Appalachia. As a "programmatic" evaluation, the EIS is intended to identify areas where we can improve the implementation of Federal programs under the Surface Mining Control and Reclamation Act (SMCRA) and the Clean Water Act (CWA) applicable to the environmental review and permitting of surface coal mining operations. We are confident that this EIS will provide the technical and scientific bases to implement more effective measures for protecting human health and the environment.

Question 5a. When asked by a reporter on April 22 about the then-imminent rule change Administrator Whitman stated that the rule change "would codify what's going on and *wouldn't allow any new activity . . . it wouldn't allow anything new, any new operations*." (Emphasis added.)

What did the Administrator mean by that?

Response. The Administrator's quote is emphasizing two key aspects of the "fill material" rule that were discussed in the preamble to that rule and our recent testimony before the Subcommittee. First, the rule does not substantively alter the agencies' current regulatory practice. In adopting EPA's longstanding effects-based approach for defining fill, the agencies' intent was to minimize changes in the nature of discharges that were being regulated under the Section 404 and 402 permit programs. Moreover, the agencies' revision to the definition of fill material is not intended to allow any new categories of discharges to take place. The Administrator's statement is consistent with these two points.

Question 5b. Is EPA saying that not a single new individual, company or industry will seek to take advantage of this rule change to apply for waste disposal permits from the Army Corps in any water of the U.S.? That no waste fill will occur in any waterway not already filled? Is that what EPA means by "no new activity?"

Response. Any party may seek to apply for a permit under Section 404 that does not mean any party will obtain a Section 404 permit, because the environmental criteria under Section 404 and the Corps public interest review must be satisfied. Nonetheless, for the first time, the rule clarifies that the term "fill material" does not include trash or garbage. The Corps will, however, continue to accept applications under Section 404 for proposed discharges of material that fall under the definition of "fill." The characterization of "no new activity" means, as we have previously stated, that the rule change will not generally allow new categories of discharges to take place.

Question 6a. NEPA requires agencies of the Federal Government to prepare an environmental impact statement ("EIS") for all "major Federal actions significantly

affecting the quality of the human environment" including "*new or revised agency rules, regulations, plans, policies, or procedures.*" NEPA requires that the environmental impacts of a major Federal action must be evaluated before the agency decides whether or how to proceed.

I am concerned that the Corps appears not to have complied with these basic requirements of NEPA. It did not prepare an environmental impact statement for this rule despite its nationwide effect and the obvious harm caused when wastes bury waters. Instead, the Corps prepared an Environmental Assessment (EA) concluding—without reference to anything other than its own unsubstantiated assertions—that the rule change does not constitute a major Federal action significantly affecting the quality of the human environment. Not a single study or fact about the environmental effects of this rule is cited to support this conclusion.

Please provide the committee with copies of all studies, reports, data or other facts relied on to support the claim that the rule change will have "no significant effect on the human environment."

Response. First, as previously noted, the rule does not substantively alter current regulatory practice. Furthermore, the Corps concluded that since the rule change only defines the kinds of materials that are subject to regulation under § 404 of the CWA as "fill material," it does not authorize any activity, or cause or allow any change in the environment. Effects on the human environment may occur when the new definition is applied in actual § 404 permit situations, when the issuance of the Corps permit is actually being contemplated. At those times, regulated activities that the Corps intends to authorize under § 404, including the discharge of materials that qualify as 'fill material' under the new definition, are subject to applicable NEPA requirements. The definition change does not convey any exemption from NEPA requirements in any § 404 situation. In light of this, determination regarding whether an EIS will be required typically does not take place until all project modifications designed to avoid, minimize and mitigate potential adverse effects on the environment have been considered—the point at which the prospective environmental effects are no longer merely speculative. believes that, in the same way, determinations related to the need for an EIS should be conducted at the point where the new definition of the term "fill material" is actually applied in a permit situation, when actual environmental effects are reasonably predictable.

Question 6b. The EA states one of the reasons the Corps concluded it did not need to do an EIS is that the rule change would be consistent with current agency practice. Please provide the committee with copies of all studies, reports, data or other facts relied on to support the claim that all of the waste materials that would be allowed to be disposed of in waters under the new rule are already permitted by all Corps districts under the § 404 program.

Response. The statement referred to was based on the considered and informed professional judgment of the Corps officials who prepared and approved the rule under discussion. Collectively, these officials have decades of experience in overseeing and directing the implementation of the Section 404 regulatory program. This experience includes frequent contact with District-level personnel regarding issues that arise in individual permit applications and preparation of periodic regulatory guidance to ensure consistent practice across Districts. Also see response to 6a.

Question 6c. Please provide any legal analyses or court decisions relied on by the Corps in preparing the EA that support the theory that a change in long-standing regulations, even if "consistent with agency practice," does not require a true environmental analysis—one that actually analyzes the effects on the environment—or an EIS.

Response. As explained in the proposed and final rule's preamble, the new definitions are consistent with EPA's long-standing effects-based definition and are generally consistent with current practice. Moreover, the revised definitions do not authorize or allow any discharges to waters of the U.S., or cause environmental effects of any sort. These facts fully support decision not to prepare an EIS for the rulemaking. See response to 6a for further discussion.

Question 6d. The EA states one of the reasons the Corps concluded it did not need to do an EIS is that the Corps prepares an EIS for each of its permit decisions. Currently, what percentage of permits and approvals for activities under the § 404 program are subject to an EIS? What percentage of the approvals under the nationwide permit program are subject to an EIS? Currently, the Corps is working on a draft programmatic EIS for the NWP program. Does this programmatic EIS study the environmental effects of allowing waste materials, including but not limited to coal mining wastes, to be placed in waters as "fill"?

Response. As stated in the EA, the Corps prepares appropriate NEPA documentation for all of its permit decisions. The percentage of Corps § 404 permit authorizations that require the preparation of an EIS under NEPA is low (i.e., less than 1 percent). This is because most permitted activities do not result in significant environmental impacts and hence do not require an EIS under NEPA. However, all permit decisions are subject to NEPA requirements. It is through the application of these requirements that the need for an EIS, or other appropriate NEPA documentation is decided.

The purpose of that programmatic EIS is to evaluate the NWP program processes and procedures to ensure that NWP program authorizes only those activities with minimal adverse effects on the aquatic environment, individually and cumulatively. The programmatic EIS will also examine and compare programmatic and procedural alternatives to the NWP program. However, the programmatic EIS does not examine impacts associated with specific NWPs, or impacts of individual activities authorized by NWPs. The Corps, together with EPA and other Federal and State agencies, is also developing a programmatic EIS on mountaintop mining/valley fills to provide environmental impact information as well as recommendations for appropriate program revisions to address these impacts and strengthen environmental protection.

Question 7. You state in your testimony "The CWA reflects a national commitment to protect the nation's aquatic resources, but it establishes that commitment in a context that also recognizes that our waters are used for a variety of purposes. The CWA establishes permitting programs that are designed to strike the appropriate balance between those competing purposes. "

Section 301 of the Act prohibits the discharge of pollutants into waters of the U.S., except where such discharges are authorized under either § 402 or § 404.

Is it your testimony that all types of discharges of pollutants into the nation's waters are to be allowed under one of the permitting programs, but that no categories of discharges—such as *filling* waters completely with waste materials—should be flatly prohibited under § 301 and the goal of protecting the integrity nation's waters?

Response. We agree that Section 301 prohibits discharges except where such discharges are authorized under either § 402 or § 404. Our testimony did not indicate that all types of discharges are allowable under the CWA, but rather that the permitting programs are designed to evaluate when the discharge of certain pollutants may be appropriate. Specifically, the Section 402 program is not designed to address discharges that have the effect converting waters of the U.S. to dry land, nor does it require an evaluation of alternatives to a proposed discharge or mitigation for unavoidable impacts. In contrast, the Section 404 permitting program is designed to address the potential conversion of waters to non-waters and thus specifically addresses such effects as well as ways to avoid, minimize, and compensate for such impacts. Because of such provisions, Section 404, is the appropriate regulatory regime for discharges that have the effect of filling waters of the U.S.

Question 8. One of the goals of the Clean Water Act is to eliminate the discharge of pollutants into waters of the U.S., including the discharge of dredged materials into waters as soon as possible. The permitting programs are exceptions to the "no discharge" goal, but clearly Congress intended discharges would not just be permitted to continue but that they would be eliminated whenever technically feasible. Discharges that threaten the physical, chemical and biological integrity of waters should not be allowed. How does your recent change to the definition of fill help to achieve this goal?

Response. The revised definition of fill material is generally consistent with EPA's long-standing effects-based approach and past regulatory practice. Moreover, because various types of trash or garbage are generally not appropriate to use for fill material in waters of the U.S., and landfills and other approved facilities for disposal of trash or garbage are widely available, the final rule was modified to add an exclusion of trash and garbage from the definition of "fill material." Section 404 and its implementing regulations provide for evaluation of impacts associated with filling waters of the U.S., as well as whether there are practicable alternatives to such discharges, and authorize discharges only where they will not cause or contribute to significant environmental degradation. The revised definition of "fill material" is consistent with the goals of the Act, and as indicated in our testimony, the use of an objective "effects-based" standard will yield more consistent results in determining what is "fill material" and provide greater certainty in the implementation of the Act.

Question 9. Federal regulations require the States to designate water quality standards, which include appropriate water uses that are to be achieved and pro-

tected. 40 C.F.R. § 130.3. A state may not adopt water quality standards that are less stringent than the Federal standards established by the Clean Water Act. This is because the Clean Water Act "provides a Federal floor, not a ceiling on environmental protection." *Dubois* v. *U.S. Dept. of Agriculture*, 102 F.3d 1273, 1300 (1st Cir. 1996), cert. denied, 521 U.S. 1119 (1997). Thus, Federal water quality standards are the floor below which state water quality standards may not fall. Federal regulations clearly state that "[i]n no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States." 40 C.F.R. § 131.10(a). As a result, no waters of the United States, regardless of their location, may be used for waste transport or assimilation.

How do EPA and the Corps reconcile the new rule—which would allow so much waste in waters that the waters are buried—and the Federal rule forbidding waste transport or waste assimilation as a designated use for any water?

Response. The definition of fill material clarifies what types of material are subject to the Section 404 permitting program and does not alter State water quality standards or Federal water quality standards regulations dealing with designated uses. Section 404 was designed to address discharges that have the effect of filling waters of the U.S., i.e., converting waters to non-waters. In adopting Section 404, Congress recognized that such filling of waters could be permitted, but wanted to ensure that it was conducted in a manner that minimized adverse environmental impacts. This is why, among other provisions, the Act requires that before a Section 404 permit can be issued, any potentially affected state must certify that the permit will not result in a violation of its water quality standards. The revised regulation does not, in any way, alter this requirement. Under the revised regulation, as previously stated, discharges of material that have the effect of filling waters of the U.S. are only allowed if all relevant provisions of the CWA are satisfied and a Section 404 permit obtained.

Question 10. Is it your testimony the Army Corps of Engineers and the U.S. Environmental Protection Agency are unable to discern when a business or other entity is trying to dispose of waste as opposed to filling a wetland or a stream for a constructive purpose?

Response. No. The agencies are often required to make a determination of project purpose (in the evaluation of alternatives, for example) but this determination can be difficult to make and the government and applicant sometimes disagree. The more relevant concern regarding the waste versus fill debate, however, is what is the most environmentally effective and programmatically consistent way to determine how discharges are to be regulated under the Act. Our strong conclusion, based on over 30 years of program administration, is that defining fill based on its physical effect ensures the most effective environmental review of proposed discharges, provides the most consistent and predictable application of CWA permit programs, and has the added benefit of avoiding the often difficult determination of the applicant's intent. EPA and the Corps also believe that this approach best reflects the purposes of the Clean Water Act as it seeks to distinguish discharges of dredged or fill material under Section 404 from all other point source discharges.

Question 11. You testified that the Section 404(b)(1) Guidelines "require . . . evaluation of alternatives to the discharge." How do the agencies consider "alternatives to the discharge" if they are not able to discern the purpose of the discharge? In other words, if you cannot tell if the purpose of a proposed "fill" is waste disposal or construction, how can you evaluate alternatives—such as sending the materials to a landfill or construction of the facility in an dry, upland area?

Response. The agencies are required, in the context of an individual permit review, to evaluate project purpose as a part of the Section 404(b)(1) Guidelines alternatives analysis. The Corps issues, on average, 3,000—4,000 individual permits annually where this analysis is required versus nearly 80,000 General permits each year where the Corps is not making that kind of evaluation. The determination of project purpose is often difficult and contentious because it is a critical aspect of establishing the scope of alternatives review. As we stated above, however, our decision to rely on EPA's long-established effects based definition of fill material was not based on the difficulties associated with discerning project purpose. Rather, it was based on our firm belief that this approach provides for the most effective environmental review of proposed discharges and ensures greater consistency and predictability in EPA and Corps permit programs. We also made the point in the preamble to the rule, however, that this approach has the additional programmatic benefit of avoiding the often difficult and contentious determination of an applicants project purpose in every case.

Question 12. You testified that "because Section 404 was intended by Congress to provide a vehicle for regulating materials whose effects include the physical conversion of waters to non-waters or other physical alterations of aquatic habitat, the Section 404(b)(1) Guidelines go beyond . . . a water quality based approach to require careful consideration of the effects of the discharge on the aquatic ecosystem as a whole, as well as evaluation of alternatives to the discharge and measures to minimize and compensate for unavoidable adverse effects." You also testified that the § 404 the permit process "carefully screens proposed discharges and applies the 404(b)(1) Guidelines, which provide a comprehensive means of evaluating whether any discharge of fill, regardless of its purpose, is environmentally acceptable."

Please describe in detail how these provisions have been applied to the permitting of the disposal of coal mining overburden in streams. Specifically, what effects on the aquatic ecosystem as a whole does the Corps consider when it issues permits or authorizations under § 404 for valley fills? What alternatives does the Corps require the coal companies to utilize? How do the coal companies "compensate for unavoidable adverse effects"?

Response. When processing any Section 404 permit, potential direct and indirect impacts to the aquatic ecosystem are included in the evaluation. Coal companies, like any other applicant for a Section 404 permit, must show that they have avoided and minimized adverse effects to the maximum extent practicable. Those impacts that are unavoidable must be mitigated. mining coal is constrained by the fact that a mine must be located at a coal source. However, coal companies are expected to consider alternative sites for placement of excess overburden and to select sites that minimize adverse impacts to the aquatic environment. The Corps stream assessment protocols currently under development will assist this analysis. In addition, coal companies are required to mitigate for permanent impacts to the aquatic resource and various options are available for mitigation. Specific examples include: streams that have been degraded due to previous mining activities can be restored (e.g., sediment ponds removed, channels reconstructed), sources of sediment can be controlled, riparian and wetland vegetation planted, and sources of acid mine water can be neutralized to improve the overall watershed.

As discussed above, while compensatory mitigation may include restoration of degraded streams or creation of new ones, it may also include other activities (e.g., elimination of acid mine drainage from previously abandoned mine sites) that enhance general watershed health.

Question 13. A document prepared by the MTM/VF EIS Steering Committee, "Problems Identified/Confirmed/Inferred by Technical Studies," (August 15, 2002 working draft) concludes that it is "difficult if not impossible to reconstruct free flowing streams on or adjacent to mined sites."

Do the EPA and Corps agree with this conclusion? If not, please explain how you think new, free flowing streams can be created to compensate for the stream miles filled and please provide to the Committee the scientific literature you rely upon for your conclusion? If you do agree that this is impossible, how does (or will) the Corps ensure that the miles of streams filled are compensated for? (Preserving other streams or waters offsite does not *replace* lost streams and would still represent a *net loss* of waterways.) How is this destruction of streams consistent with the goal of maintaining or restoring the physical, biological, or chemical integrity of streams?

Response. In the course of generating technical information for the ongoing EIS, the agencies have been evaluating the potential for stream restoration and creation on or adjacent to mines sites. Certain circumstances in Appalachia lend themselves more to successful restoration of stream function than others. As part of the EIS process, the agencies plan to publish for public comment the information relevant to stream impacts and potential restoration and creation, including relevant literature citations. Avoidance and minimization practices will be discussed as well. As discussed above, while compensatory mitigation may include restoration of degraded streams or creation of new ones, it may also include other activities (e.g. elimination of acid drainage from previously abandoned sites) that enhance general water shed health.

Question 14. According to the Mountaintop Mining EIS Presentation to the EPA Office of Water on March 5, the EIS studies show that macroinvertebrate indices indicate that stream segments located downstream of valley fills are being impaired, stream chemistry monitoring efforts show significant increases in conductivity, hardness, sulfate, and selenium concentrations downstream of valley fills. Other documents indicate that EPA's stream chemistry study found "The selenium data clearly show 'hot spots' with higher concentrations of selenium in each of the five watersheds [that were studied] and located downstream of 'Filled' sites ONLY. There are 66 violations of the stream water quality criteria identified and each is

at a Filled site. No other category of site had violations of selenium!" Email from Gary Bryant (EPA WV) to William Hoffman (EPA Region 3), March 27, 2002 (capitalization and exclamation point in original). Selenium is a metalloid that is released to water from both natural and anthropogenic sources; it can be highly toxic to aquatic life at relatively low concentrations, according to EPA.

How has the Corps "carefully considered" these kinds of effects on the aquatic ecosystems when it issues § 404 approvals for valley fills? Has the Corps issued permits or approvals for valley fills even when downstream, water quality standards will be violated?

Response. Section 404 permits address the placement of rock and other material in the heads of valleys, as well as material placed for the berms, or dams, used to create associated sedimentation ponds. Under the Act, Section 404 permits are subject to State certification under Section 401 as to compliance with, among other things, State water quality standards, and the Corps primarily relies on the Section 401 certification process to address such impacts (see 33 320.4(d)). The actual effluent discharges into waters of the U.S. from sedimentation ponds requires a CWA section 402 permit, and such permits are to contain effluent limitations consistent with applicable State water quality standards.

Issues specifically related to selenium are being considered as the Draft EIS is developed, and will be available for public comment.

Question 15. Dr. Bruce Wallace testified "Elimination of small streams from the drainage network results in increased downstream loading of nutrients and degradation of water resources. We should be most concerned with the valuable ecosystem services that are lost when streams are buried."

Do EPA and the Corps agree with Dr. Wallace's conclusion? If not, please provide the Committee with studies relied on by the agencies that reach a contrary conclusion.

Response. EPA and the Corps are concerned with the impact of the potential loss of small streams, including such potential results as increased loadings of downstream nutrients. Review of such potential impacts is incorporated in the CWA evaluations that are conducted when discharges of this nature are proposed. Several programmatic analyses along these lines are also being carried out as part of the EIS process. The agencies are evaluating a suite of potential impacts to streams for review and comment by the public when the Draft EIS is published.

Question 16. Please describe in detail what studies the Corps usually performs or requires the coal mining companies to perform and submit as part of its application for a permit or approval under § 404 for a valley fill to meet the requirements of the 404(b)(1) Guidelines (effects on the aquatic ecosystem, alternatives, minimization, compensation).

Response. The Surface Mining Control and Reclamation Act already requires a substantial amount of the information necessary for Guidelines compliance evaluations as part of the application package. This includes information on water quality, hydrology (flooding), endangered species, and historic properties, as well s a reclamation plan. While the information required to facilitate the Corps determination regarding project compliance with the Guidelines and the public interest is in the regulations, the Corps is currently preparing specific guidance for coal companies, consultants, etc., that outlines the information which is currently not part of the SMCRA permit review. This additional information includes wetlands linear feet of ephemeral, intermittent, and perennial streams proposed to be impacted (both temporary and permanent), locations of sediment control structures, and a summary of the condition of the aquatic resources on the site. This summary includes stream assessments using consideration of foreseeable future actions (e.g., logging and road construction), and results of benthic studies. Information obtained through application of the Corps stream assessment protocols will also be incorporated into this summary, when completed no practicable alternatives to the proposed discharge. Compliance with Sections 402 and 401 of the Clean Water Act is also required.

Question 17. Of the 5858 valley fills constructed since 1985, according to the March 5 Mountaintop Mining EIS Presentation, how many received individual permits from the Corps under § 404? How many were approved under the general permit, Nationwide Permit (NWP 21)?

Response. There are 5 Corps districts (Huntington, Pittsburgh, Louisville, Norfolk and Nashville) that regulate the discharge of fill material associated with mountaintop mining in the Appalachian coal region. Until recently, authorizations for valley fills occurred almost exclusively under NWP 21. However, this Administration is working to improve regulation of valley fills. For example, the settlement agreement for the court case *Bragg* v. *Robertson* generally limited the use of NWP 21 in West

Virginia by setting an impact threshold of 250 acres (valley fills extending to that point where the stream drained more than 250 acres generally require an individual permit). Under this Administration, the five Corps districts listed above will be placing three special conditions on NWP 21 which: (1) set the aforementioned 250 acre threshold for all valley fills not just those in West Virginia (until additional information is obtained via the Corps Stream Assessment Protocols), (2) evaluate cumulative impacts to aquatic resources as part of the application process and (3) require appropriate mitigation, over and above any that may be required under SMCRA or other State authorities, for all permanent fills. We also are continuing with efforts that were previously underway to develop a programmatic EIS evaluating further ways to improve regulation of mountaintop mining.

Question 18. Does the Corps apply the §404(b)(1) Guidelines to valley fills approved under NWP 21 as part of the "careful screening " process for proposed discharges described in your testimony?

Response. On a case-by-case basis, when evaluating whether a project may be authorized under NWP 21, the Corps must determine that the discharge of excess overburden fill material into higher value streams, etc. has been avoided and minimized to a degree that supports the Corps conclusion that the site specific and cumulative impacts to the aquatic environment are minimal. The Corps Stream Assessment Protocols, currently under development, will further support these determinations. In addition, the Corps has improved NWP 21 by further requiring additional mitigation for aquatic resource impacts (i.e, beyond that required by the SMCRA process) to assure that impacts are within the minimal effects threshold.

Question 19. Is it the position of the EPA that the valley fills approved by the Corps under NWP 21 has no more than a minimal adverse effect on the environment, both individually and cumulatively? Is it the position of the EPA that the effect of valley fills is "environmentally acceptable"?

Response. While EPA has raised concerns, in specific circumstances, about the environmental impacts associated with the placement of valley fills in waters of the U.S., the Agency has consistently concluded that valley fills involve the discharge of fill material and are appropriately regulated by the Corps under CWA Section 404. EPA has worked with the Corps to improve the application of NWP 21 to the regulation of mining related discharges, and is continuing those efforts. We have also coordinated with the Office of Surface Mining (OSM) to improve the environmental review of proposed coal mines under the Surface Mining Control and Reclamation Act, the review upon which NWP 21 relies to a great extent. Current data show that, as a result of this coordination, the number and size of valley fills, and their associated environmental impacts, have been reduced. The Corps is conducting more reviews of proposed coal mines under their individual permit program. The first Environmental Impact Statement under the National Environmental Policy Act for an individual surface coal mine in West Virginia is being prepared by the Corps to support its Section 404 permit process. In addition, EPA, the Corps, OSM, U.S. Fish and Wildlife Service and the State of West Virginia are currently developing a programmatic environmental impact statement to evaluate the environmental effects of surface coal mining and to make recommendations for improving the Federal programs responsible for environmental review of these mining operations. EPA and the Corps have committed to making improvements to the Section 404 permit program in response to this evaluation, including further revision, if necessary, of NWP 21.

Question 20. In your testimony, you state, "this rulemaking has been incorrectly painted as being designed to facilitate the continuation of mountaintop mining. In actuality, it was undertaken in light of years of past experience in order to enhance regulatory clarity and improve environmental protection." What formal activities to change the definition of "fill material" did the Corps and EPA undertake prior to the court's decision in *Bragg* v. *Robertson*? In actuality, didn't the Department of Justice file affidavits from EPA and the Corps with the Federal district court hearing the *Kentuckians For The Commonwealth* v. *Rivenburgh* case stating that the agencies were in the process of changing the fill rule in order to convince the court that it need not rule on the question of whether valley fills were being permitted in violation of the existing regulatory decision? How then could the rule change not be directly related to the concerns over mountaintop removal coal mining waste disposal practices?

Response. EPA and the Corps have worked for many years, virtually from the point that the Corps adopted a different definition of "fill material" in 1978, to reconcile for their field staff and the public how the differing definitions would be applied. The agencies have prepared guidance, written MOA's, and defended their reg-

ulations in court in an effort to apply their differing definitions in a consistent, fair and environmentally protective manner. These efforts were proceeding long before concerns regarding the regulation of mountaintop removal mining gained attention. It is correct that in April, 2000, the previous administration proposed the "fill" rule to resolve the various problems that were continuing to arise as a consequence of the differing definitions of fill, including the 1998 9th Circuit decision in *Resource Investments, Inc.* v. *U.S. Army Corps of Engineers* involving the regulation of a solid waste landfill, and the settled Southern District of West Virginia case, *Bragg* v. *Robertson*, which challenged the Corps regulation of a mountaintop coal mine. That case was settled, in part, on the basis that the Corps would continue to review mining associated discharges in waters of the U.S. under CWA Section 404. As with the positions the government took in those cases as well as more recently in *KFTC* v. *Rivenburgh*, the goal was to defend successfully the most environmentally effective administration of our programs, not to facilitate the continuation of any particular practice.

Question 21a. In your testimony you say "neither this rule nor the CWA are the principal vehicle provided by Congress for regulating mountaintop mining activities. Rather, the responsibility was delegated to the Secretary of the Interior, through the Office of Surface Mining, under the Surface Mining Control and Reclamation Act (SMCRA)." Notably, SMCRA was passed by Congress with a savings clause specifying that nothing in SMCRA limits or preempts any provision of the Clean Water Act, so clearly, by passing SMCRA, Congress did not intend to limit the responsibility of the EPA to protect the nation's waters from the potentially harmful effects of coal mining.

What role, if any, did officials from the Department of Interior play in the change of the regulatory definition of fill material?

Response. Two agencies from the Department of the Interior, the U.S. Fish and Wildlife Service and the U.S. Office of Surface Mining, participated in informal discussions during the rulemaking process to define the term "fill material." Neither agency, however, submitted written comments to EPA or the Corps in response to draft versions of the rule and preamble circulated for review among the Federal agencies. The only group within the Department to submit written comments was the Bureau of Reclamation, Yuma Area Office, who wrote in response to the April 2000 Federal Register notice of proposed rulemaking.

Question 21b. Did any Interior Department official formally or informally advocate for the change in the definition of fill material within the administration or to the Corps or EPA? If so, please identify the individual(s) and describe the circumstances.

Response. Department of the Interior representatives participated in informal discussions that occurred among the Federal agencies during the process to develop the definition of "fill material," including discussions regarding the development of the agencies' April 2000 proposed rule and the May 2002 final rule. Informal coordination among the Federal agencies is a valuable and routine aspect of the preparation of national wetlands policies, guidance, rules, etc. There was general agreement among the Federal agencies, including Department of the Interior representatives, with regard to the Corps and EPA decision to develop a single definition of fill. The only written comments received from the Department of the Interior in association with the interagency discussions or in response to versions of the rule and preamble circulated among the agencies for review, were comments sent by the Bureau of Reclamation, Yuma Area Office, in response to the agencies April 2000 Federal Register notice of proposed rulemaking.

Question 21c. Did any Interior Department official prepare any documents, analysis, memoranda, draft response to public comments, or other materials in connection to this rule change? If so, please identify the individual(s) and provide the Committee with all such documents.

Response. The only document, analysis, memoranda, draft response to public comments, or other materials in connection with the rule change prepared by an Interior Department official that was received by EPA or the Corps is a comment letter sent by the Bureau of Reclamation, Yuma Area Office, in response to the agencies' April 2000 Federal Register notice of proposed rulemaking. That letter is dated June 8, 2000, and is enclosed for your consideration.

Question 22. In your testimony you state: "In light of regional concerns about impacts in Appalachia from surface mining activities, Corps Headquarters has requested the relevant District Engineers to establish regional conditions in Appalachian States on the use of NWP 21 that are consistent with the provisions of the Federal District court approved settlement in the *Bragg* litigation in West Virginia,

which generally limits use of NWP 21 for valley fills to watersheds draining 250 acres or less. As part of this, the Corps will make a project-specific evaluation of the cumulative loss of aquatic resources within the affected watershed. We believe these NWP changes, and continued development of the programmatic EIS, will further improve environmental protection with regard to surface mining activities in Appalachia."

Response. The language is an accurate quotation taken from our written testimony.

Question 23. In the economic study prepared recently for the EIS, limits on valley fills to 250 acres and 35 acres had similar almost imperceptibly different economic effects on the price of coal, the price of electricity and the amount of coal that could be mined during the 10-year study period.

Given that limiting valley fills to 35 acres or less would undoubtedly have a greater environmental benefit than limiting them to 250 acres in size, on what scientific or economic basis is the Corps recommending the 250-acre limit?

Response. The 250 acre limit for valley fills is the threshold currently being applied by the Corps on the use of NWP 21. Proposed valley fills larger than 250 acres are reviewed under the Corps Individual Permit process. This threshold was implemented as part of the 1998 settlement agreement in *Bragg* v. *Robertson* and was accepted by the Corps, plaintiffs, and the Federal District court as the most appropriate threshold based on the information available at the time. Data on valley fills available since 1998 indicate that the average size and number of valley fills have decreased in West Virginia with a commensurate reduction in stream impacts when compared to data prior to 1998. The interagency team currently developing the draft programmatic EIS on mountaintop mining is considering several studies that compare the economic impacts and environmental effects of alternative limitations on the allowable size of valley fills. The agencies continue to evaluate the results of these studies and have thus far not reached any conclusions about an appropriate final threshold.

Question 24a. On Monday, June 3, the owners of the mine that is the subject of the *Kentuckians For The Commonwealth* lawsuit wrote to the Corps stating that they could mine the entire site without any new valley fills in waters of the U.S. In its letter, Beech Fork Processing Inc. said it could comply with Chief US District Judge Charles H. Haden II's ruling. Along with the letter, Beech Fork submitted to the Corps a pre-construction notice stating the company's intent to re-engineer its mine site without dumping waste into streams. The manager of engineering for Beech Fork said in the letter that his company had purchased an old mine site in the middle of its eastern Kentucky property that "provides substantial acreage for spoil disposal out of the waters of the United States." This letter raises several questions.

How is it that the Corps, which you have testified studies alternatives to placing waste in waters of the U.S. and requires fills to be minimized when they cannot be avoided, permitted this mine to have 27 valley fills that would, in total, bury 6.3 miles of streams? In the careful permitting process you described in your testimony, how is it that the existence of alternative sites for waste disposal was not discovered earlier?

Response. The Corps original authorization to the Martin County Coal Company, the original project proponent, was based on jurisdiction/impact information that proved to be inaccurate. Subsequent negotiations with Beechfork Processing, Inc., the new project proponent, resulted in reduced and/or mitigated impacts to the aquatic environment, in recognition of additional information on jurisdiction and aquatic resource impacts. The NWP 21 Beechfork verification letter was modified to reduce the permanent impacts to aquatic resources to two valley fills. When Beechfork's original verification letter was modified in October of 2001, the company looked for land to purchase that they did not own at the time to provide a practicable site for waste disposal. The Beech Fork letter to the Corps of Engineers Huntington District dated June 3, 2002, does not suggest that they expect to "mine the entire site without any new valley fills in waters of the United States" as this question states. Instead, that letter states in paragraph 2 that "Using old mining area, and the fact that twenty-three of the twenty-seven drainages in the existing permitted area already hold fill from either prior highway construction or the old mountain top removal operation, Beech Fork has confidence that it may be able to mine the entire reserve by placing fills with a constructive purpose in waters of the United States." (Emphasis added)

Question 24b. According to John Morgan, a mining engineer who submitted an affidavit on behalf of the plaintiffs in the current lawsuit, potential alternative sites for placing waste include previously mined areas that were not returned to their ap-

proximate original contour, previously disturbed areas such as old refuse impoundments, side hill fills, and more distant disposal locations; in addition, companies can redesign the fill configuration and change their mining equipment to reduce fill impacts. To what extent has the Corps of Engineers studied these alternatives, either on a case-by-case basis or regionally? If these alternatives were maximized at every potential valley fill site, to what extent could dumping coal mining waste in waters be avoided or minimized? Please provide the Committee with all studies prepared by or for the Corps analyzing these alternatives.

Response. The Army Corps of Engineers Standard Operating Procedures for the Regulatory Program (October 15, 1999) outlines the appropriate nature and extent of information and review that is necessary on a project specific basis for determining compliance with the Section 404(b)(1) Guidelines' alternatives analysis. For activities covered by a Nationwide permit, the Corps requires, as a condition to the use of a Nationwide authorization, that the applicant take all practicable steps to ensure that potential impacts are avoided and minimized. In addition, the agencies are coordinating in the context of the development of the programmatic mountaintop mining EIS to use the SMCRA permit review process to ensure that environmental impacts associated with valley fills are avoided and minimized. The agencies recognize that considerable mining expertise is available in State SMCRA programs upon which the Corps can better rely to examine effective opportunities for avoiding and minimizing mining related environmental impacts. These kinds of programmatic improvements will continue to help us to strengthen the Section 404 review of proposed mining projects and ensure more effective environmental protection.

The Beechfork situation was somewhat unusual in that there was a site immediately adjacent to the active site that the company could acquire. If other proposed mines have this same opportunity, then the mine company would be required to evaluate this upland alternative and to use it as an alternative to placing overburden in waters of the U.S. unless the company demonstrated that it was not practicable within our definition of "available in terms of cost, logistics and technology"

Question 24c. The company states in its letter "If it has the right, Beech Fork would like to operate as originally authorized. If it is determined that Judge Haden's order only applies prospectively and not to Beech Fork's original authorization, or should Judge Haden's decision be reversed on appeal, Beech Fork intends to operate as initially planned to operate pursuant to its original authorization." How can the Corps allow the company to operate as initially planned—burying over six miles of streams—after the company has admitted that it has alternatives to dumping its wastes in the waters of the U.S.? Would the Corps allow Beech Fork to operate under its initial approval in the wake of this new information?

Response. As these questions correctly recognize, the Beech Fork permit and the Corps review of that project are issues that go to the heart of ongoing litigation in the Federal District Court of the Southern District of West Virginia. We respectfully defer these questions until that litigation is resolved. We would emphasize, however, that efforts to avoid and minimize the placement of coal mining materials in waters of the U.S. have improved in recent years, and we expect those improvements to continue.

The Beech Fork letter to the Corps of Engineers Huntington District dated June 3, 2002, does not suggest that they expect to "mine the entire site without any new valley fills in waters of the United States" as this question states. Instead, that letter states in paragraph 2 that "Using old mining area, and the fact that twenty-three of the twenty-seven drainages in the existing permitted area already hold fill from either prior highway construction or the old mountain top removal operation, Beech Fork has confidence that it may be able to mine the entire reserve by *placing fills with a constructive purpose in waters of the United States.*" (Emphasis added) Beechfork is in the process of redesigning it's entire project to reduce impacts to the aquatic resource. We have not yet seen their new plan, however, we must be satisfied that their aquatic resource impacts have been reduced to the fullest extent practicable and those adverse impacts which remain must be fully mitigated.

Question 25a. I understand that the EPA, together with the Office of Surface Mining (OSM), the Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the West Virginia Department of Environmental Protection had spent or committed to spend about $4.5 million preparing an Environmental Impact Statement on the environmental, social, and economic impacts of mountaintop removal mining. I also understand that in January 2001 Preliminary Draft EIS and extensive technical studies included an inventory of valley fills, and analyses of the impacts of valley fills on streams, wildlife, land use and the economy. I further understand that the findings of this study included adverse impacts on significant amount of stream

lengths, aquatic life, stream chemistry. The summary of technical studies found "no scientific basis could be established for arriving at an environmentally 'acceptable' amount of stream loss.

How does the EPA reconcile this statement with the May 3 rule, which essentially puts many more stream lengths at risk?

Response. The EIS agencies are in agreement that the status of the preliminary draft EIS and technical studies are, as the title suggests, both "draft" and "preliminary" and, as such, there is considerably more work that is necessary before we would be comfortable reaching conclusions about the nature and extent of environmental impacts that can be correctly attributed to surface coal mining practices in Appalachia. The quote from the study summary used in this question refers to the selection of a "minimal impact" threshold under NWP 21 as a potential alternative to the 250 acre figure used currently and the technical challenge of selecting a single, scientifically supportable number that is appropriate for that threshold. It is not a broad reference to the environmental acceptability of placing mining materials in streams. The agencies are eager to complete this EIS and to implement improvements to our programs to address environmental and social concerns that are identified. Until this public process is more complete, however, we are not in a position to reach final conclusions on what changes to implement.

The relationship of the definition of "fill material" rulemaking and the EIS is an important one and we appreciate the opportunity to clarify this question. The decision to prepare this EIS is a provision of the 1998 Settlement Agreement in *Bragg* v. *Robertson* that was accepted by the court and settled plaintiffs' claims against the Corps. One of those claims was that the Corps lacked the authority to regulate coal mining waste under CWA Section 404 as "fill material" and that these discharges should instead be regulated under CWA section 402. In settling this issue, the plaintiffs and court explicitly recognized that the agencies would continue to regulate, as they had for many years, discharges of coal waste as "fill material" under Section 404. This recognition would, in turn, be a fundamental basis for the evaluation conducted under the EIS. As such, the EIS has been prepared on the basis that discharges of excess spoil and similar mining materials in waters of the U.S. will continue to be subject to review by the Corps under the Section 404 permit program.

Question 25b. Please explain the status of this Environmental Impact Statement when is it going to be finalized—and the role of its technical studies in the recent rule change. When was this impact statement supposed to be finished?

Response. The decision to prepare this programmatic EIS was incorporated as a provision of the 1998 settlement agreement in *Bragg* v. *Robertson*. In that settlement, the government indicated its goal to complete the EIS within 2 years. That goal has not been met for several reasons. First, the EIS has proved to be a complex undertaking, entailing a comprehensive evaluation of both environmental and economic effects and procedures, policies and regulations that covers coal mining operations over the whole of Appalachia. Second, as envisioned in the Settlement Agreement, the review has focused on the practice of mountaintop removal coal mining and the placement of excess spoil from these operations in waters of the United States. In his recent decision in *Kentuckians for the Commonwealth* v. *Rivenburgh*, Federal District court Judge Charles Haden enjoined the Corps from issuing Clean Water Act permits for discharges of excess spoil and other mining waste in waters of the U.S., in most circumstances, raising questions about the relevance of this focus. Prior to the Haden ruling, the agencies indicated that a draft EIS would be released for public review and comment by late this summer. We are currently evaluating the appropriate focus of the EIS in light of the *Rivenburgh* decision, prior to releasing it for public comment.

STATEMENT OF JOAN MULHERN, SENIOR LEGISLATIVE COUNSEL, EARTHJUSTICE LEGAL DEFENSE FUND

Chairman Lieberman, Senator Voinovich and members of the Subcommittee, thank you for holding this hearing today to review one of the most significant and destructive changes to Clean Water Act protections in decades. My name is Joan Mulhern. I am Senior Legislative Counsel for Earthjustice Legal Defense Fund, a national non-profit law firm founded in 1971 as the Sierra Club Legal Defense Fund. Earthjustice represents, without charge, hundreds of public interest clients,

large and small, in order to reduce water and air pollution, prevent toxic contamination, safeguard public lands, and preserve endangered species and wildlife habitat.[1]

Present for today's hearing are many representatives of groups from Appalachia and individuals who live in the coalfields and who are among the people that will be most directly hurt by the Bush administration's change to the longstanding Clean Water Act rules that are the subject of this hearing. While I am not testifying on their behalf, I hope my comments today will help convey the seriousness of the Bush administration's weakening of Clean Water Act rules and the real impacts it will have not only on our nation's waters but also on many people's lives.

The Bush administration's change to Clean Water Act rules is intended to allow wastes especially mountaintop removal coal mining waste, but also hardrock mining waste, construction and demolition debris, and other industrial wastes to bury and fill streams, wetlands, lakes, rivers, ponds and other water bodies around the country.[2] *This new rule eliminates a 25-year prohibition on the issuance of § 404 permits for waste disposal.*

Earthjustice, along with 17 of the nation's largest environmental and conservation organizations,[3] many State and local groups, tens of thousands of individuals across the country and dozens of Members of Congress strongly oppose this rule change. The rule change is indefensible as a matter of law and public policy, and is directly contrary to the intent of Congress when it passed the Clean Water Act three decades ago. Our nation's streams, lakes, wetlands, ponds, rivers, and coastal waters should not be used as waste dumps.

USING THE NATION'S WATERS AS WASTE DUMPS VIOLATES THE VERY PURPOSE OF THE CLEAN WATER ACT

Elimination of the waste exclusion from the longstanding definition of "fill material" is intended to give the Corps new authority to allow the disposal of refuse directly into the nation's waters.

It will give the Corps authority to permit any industry, governmental agency, or individual to bury rivers, streams, lakes, and wetlands all across the country under tons of mining waste, waste from other excavation activities, mining tailings, construction and demolition debris, plastic waste or almost any other sort of solid waste.[4] In short, it will allow the Corps to issue permits for the disposal of virtually any waste in any waters of the United States, opening up waters all across the country to significant degradation, and possible obliteration as waste dumps. This directly violates the central purpose of the Clean Water Act.

The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). State water quality standards under the Act must "protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter." *Id.*, § 1313(c)(2)(A). To achieve this purpose, the Clean Water Act established a regulatory regime that was intended to achieve the national goal of eliminating the discharge of pollutants into the navigable waters by 1985. *Id.* § 1251(a)(1).

As Congress made clear in 1972, the Clean Water Act establishes that there is no "inherent right to use the nation's waterways for the purpose of disposing of wastes.[5] Indeed, Congress passed the Clean Water Act to ensure that pollution would continue only where technological limitations prevented its elimination. In 1983, EPA reissued its antidegradation regulation, which mandates that all existing stream uses be protected.[6] In doing so, EPA rejected proposals to allow exceptions to this principle "as being totally inconsistent with the spirit and intent of both the Clean Water Act and the underlying philosophy of the antidegradation policy.[7] EPA

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[1] Earthjustice does not represent parties in the recent mountaintop removal cases; those groups and individuals are represented by the Appalachian Center for the Economy and the Environment, Trial Lawyers for Public Justice and private attorneys. Earthjustice submitted an amicus brief in the *Bragg* case on Clean Water Act issues and prepared comments on the proposed revisions to the definition of fill on behalf of several national environmental groups.

[2] Final Revisions to the Clean Water Act Regulatory Definition of "Fill Material" and "Discharge of Fill Material", 67 Fed. Reg. 31129 (May 9, 2002).

[3] *See* Letter to President George W. Bush from 18 national environmental organizations, March 8, 2002.

[4] The only exception in the final rule is for "trash or garbage." 67 Fed. Reg. at 31142. But the preamble to the rule asserts, in specific circumstances, "certain types of material that might otherwise be considered as trash or garbage may be appropriate for use in a particular project to create a structure . . . in waters of the U.S. In such situations, this material would be regulated as fill material." *Id.* at 31134.

[5] S. Rep. No. 92–414, at 2 (1972), *reprinted* in 1972 U.S.C.C.A.N. 3668.

[6] 48 Fed. Reg. 51400 (Nov. 8, 1983); 40 C.F.R. § 131.12(a).

[7] *Id.* at 51408–09.

also stated "[a] basic policy of the standards program throughout its history has been that the designation of a water body for the purposes of waste transport or waste assimilation is unacceptable.." [8]

The language, history and purpose of the Clean Water Act and its implementing regulations fully support a prohibition on dumping masses of solid waste in waterways as "fill." [9]

Now, almost 30 years after the Clean Water Act was passed and 17 years after the zero discharge goal was to have been met, the Bush administration is attempting to greatly expand the legal authority of Corps of Engineers so that it may issue § 404 permits for waste disposal activities that will obliterate more waterways. By eliminating the waste exclusion provision in the definition of "fill material," the Corps would be authorized to issue § 404 permits to allow the nation's lakes, rivers, streams, and wetlands to be used as waste dumps.

A WEST VIRGINIA FEDERAL DISTRICT COURT HAS FOUND THAT THE BUSH ADMINISTRATION'S "WASTE IN WATERS" RULE VIOLATES THE CLEAN WATER ACT AND IS BEYOND THE AGENCIES' AUTHORITY

On May 8, 2002, Federal district court judge Charles Haden III ruled that the Corps' existing definition of "fill material" expressly prohibits that agency from issuing Clean Water Act § 404 permits for fills comprised of waste.[10] The court also found that the Federal agencies' rewrite of the rules to eliminate this express prohibition was beyond the Corps' and EPA's authority under the Clean Water Act:

> "The Court holds that § 404 of the Clean Water Act does not allow filling the waters of the United States solely for waste disposal. Agency rulemaking or permit approval that holds otherwise is *ultra vires*, beyond agency authority conferred by the Clean Water Act. Only the U.S. Congress can rewrite the Act to allow fills with no purpose or use but the deposit of waste." [11]

The court then enjoined the Corps from issuing any new § 404 permits that have no primary purpose or use but the disposal of waste and stated: "In particular, issuance of mountaintop removal overburden valley fill permits solely for waste disposal under § 404 is ENJOINED." [12]

The court ruled:

> "To approve disposal of waste other than dredged spoil, in particular mountaintop removal overburden, in waters of the United States under § 404 dredge and fill regulations rewrites the Clean Water Act. Such rewriting exceeds the authority of administrative agencies and requires an act of Congress." [13]
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> "To read the Act otherwise presumes Congress intended the Clean Water Act to protect the nation's waterways and the integrity of its waters with one major exception: *the Army Corps was to be given authority to allow the waters of the United States to be filled with pollutants and thus destroyed, even if the sole purpose were disposal of waste.* This obviously absurd exception would turn the "Clean Water" Act on its head and use it to authorize polluting and destroying the nation's waters for no reason but cheap waste disposal." [14]
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> "The agencies' new final rules address political, economic and environmental concerns to effect fundamental changes in the Clean Water Act for the benefit of one industry. However important to the energy requirements of the economy and to employment in the region, amendments to the Act should be considered and accomplished in the sunlight of open congressional debate and resolution,

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[8] *Id.*; see 40 C.F.R. § 131.10(a).

[9] When it adopted the Clean Water Act, Congress intended that even the dumping of dredged spoil into waters of the United States should end as soon as possible. See 118 Cong. Rec. 33699 (1972), 1 Legis. Hist. 177–78 ("the Committee expects the Administrator and the Secretary to move expeditiously to end the process of dumping dredged spoil in water"). This obviously would require potential dischargers to transport spoil dredged from a waterbody away from the water to a dry land disposal site. Surely Congress could not have intended that waste materials obtained from dry land should be *transported to waters* for disposal.

[10] That ruling was issued in response to a challenge by a citizen group, *Kentuckians For The Commonwealth*, to the Corps' approval under a § 404 nationwide permit of a mountaintop removal operation in Martin County, Kentucky that proposed to create 27 valley fills and bury 6.3 miles of streams. *Kentuckians For The Commonwealth* v. *Rivenburgh*, S.D.W.V.No. 2:01–770 (May 8, 2002).

[11] *Id.* at 1–2.

[12] *Id.* at 42 (emphasis in original).

[13] *Id.* at 5.

[14] *Id.* at 42 (emphasis added).

not within the murk of administrative after-the-fact ratification of questionable regulatory practices." [15]

Earthjustice agrees with Judge Haden's interpretation of the Clean Water Act, as his analysis and conclusion are strongly grounded in the history, letter and purpose of the Act. Because of this decision, the Corps is currently enjoined from issuing any new § 404 permits for fills comprised of waste material.[16]

THE BUSH ADMINISTRATION'S ARGUMENTS IN DEFENSE OF THIS RULE CHANGE ARE WITHOUT MERIT

One of the administration's frequently repeated justifications for changing the definition of fill material to allow waste to be dumped into waterways is that considering only the "effect" of a fill, not its "purpose" will result in more effective regulation.[17] It argues that the "primary purpose" test and the "waste exclusion" in the rules adopted in 1977 are confusing, subjective and have led to inconsistent treatment of similar discharges.[18] The preamble to the final rule states: "There is no environmental basis for contending that the sufficiency of the permitting process to protect waters of the U.S. depends on the purpose of the discharge." [19] In sum, it argues that the purpose of a discharge into waters is always irrelevant.[20] But when it comes to waste disposal, that conclusion is wrong on several counts.

First, that conclusion ignores the goal of the Clean Water Act. The purpose of a discharge of pollutants into waters matters very much in the context of the Act, which Congress enacted with a purpose that of protecting the nation's precious water resources. As stated above, the very first sentence of the law declares this purpose clearly and concisely: "It is the objective of this chapter to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *No activity could be more inconsistent with the purpose of protecting the integrity of waters than burying them forever under piles of waste.*

Second, the conclusion that purpose is always irrelevant ignores the fact that waste disposal is an activity that is entirely different in kind from those that fill waters for a constructive purpose. It is one thing to fill a stream or wetland because, after ensuring there are no non-water dependant alternatives, a constructive use needs to be made of a certain area to build a road or other facility; it is something else altogether to allow waters to be filled with waste just because that is the cheapest means of disposal. Using the nation's waters for cheap waste disposal is exactly what the Clean Water Act is supposed to prevent.

Third, the administration's conclusion ignores the undeniable fact that allowing our waters to be used for waste dumps will significantly increase the number of waters destroyed under the § 404 program. By allowing coal mining companies, hardrock mineral mining interests, construction and demolition outfits and others to dump their wastes into waters, burying them, the inevitable effect will be that *more* streams, wetlands, rivers, ponds, lakes and coastal areas will be filled. As Judge Haden succinctly put it in his recent decision, "As a child could explain, the effect of filling things is that they get full." [21] Allowing destruction of more streams, rivers and wetlands is flatly inconsistent with the Clean Water Act's goal of ending the discharge of pollutants into our country's waterways.

The administration's assertion that it makes no difference whether industries are allowed to fill waters for constructive purposes only or for any reason whatsoever—

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[15] *Id.* at 44.

[16] In discussing the intended or likely environmental impacts of the Bush administration's rule change in this testimony, it is with the caveat that these harms can only occur if the court's decision in the *Kentuckians For The Commonwealth* is stayed or narrowed, which we hope will not happen. In any case, because we believe that the Clean Water Act and its regulations forbid the Corps from permitting mountaintop removal valley fills and other waste dumps as "fill," if the Corps does issue any new permits allowing waste disposal as fill, such permits would be illegal and vulnerable to legal challenge. The Bush administration is currently seeking a stay of the court's decision and arguing that the scope of the injunction be narrowed to only cover the Martin County mine that was the immediate subject of the litigation. The plaintiff in the case, *Kentuckians For The Commonwealth*, is opposing these motions.

[17] *See, e.g.,* 67 Fed. Reg. at 31131 ("The agencies believe that an effects-based definition is, as a general matter, the most effective approach for identifying discharges that are regulated as "fill material" under section 404"). See also id. at 3132–31133.

[18] *Id.*

[19] *Id.* at 31134.

[20] Comments prepared by Earthjustice and supported by several national environmental groups supported the agencies' proposal to reconcile the agencies differing definitions, while disagreeing with the claim that those definitions were confusing, and supported dropping the "primary purpose" test as a general matter, *as long as the language that explicitly excludes waste materials as "fill" was retained.*

[21] *Kentuckians For The Commonwealth* at 39–40.

including using our waters as waste dumps—demonstrates this administration's disregard for the Clean Water Act as well as for the natural resources and communities the law was enacted to protect.

The Corps and EPA also contend that the rule change is justified because it will allow the Corps' regulations to conform to its practices.[22] This appears to be a reference to the fact that the Corps has been violating the law for years by allowing mountaintop removal coal mining "valley fills" to bury streams and wetlands. (Perhaps the Corps has also been permitting other waste disposal operations to destroy waters; if so, it does not identify those practices in the proposed rule.) In short, instead of requiring the Corps to conform its permitting activities to the law, the Bush administration is trying to change the law to accommodate the Corps' unlawful and destructive practices undertaken on behalf of the coal companies. As Judge Haden explains in his order:

> "[F]or the past 20 years, particularly in the Huntington Corps District, § 404 permits have been issued for mountaintop removal overburden disposal in valley fills that have obliterated and destroyed almost a thousand miles of streams, by the Corps' own account. The valley fills are used solely to dispose of the waste rock and dirt that overlies the coal. Past § 404 permit approvals were issued in express disregard of the Corps' own regulations and the CWA. As such, they were illegal. When the illegitimate practices were revealed by court decisions in this district, the agencies undertook to change not their behavior, but the rules that did not support their permit process."[23]

In fact, several Corps' officials deposed in the earlier mountaintop removal case, *Bragg* v. *Robertson*,[24] acknowledged that the agency did not have legal authority to issue permits for valley fills because their own regulations prohibited the use of waste as fill; one, when asked why the Corps did issue such approvals without legal authority said that they "just sort of oozed into that."[25]

NO REVIEW OF THE NATIONWIDE ENVIRONMENTAL EFFECTS OF ALLOWING WASTE DUMPS IN WATERS WAS CONDUCTED BY THE CORPS OR EPA BEFORE FINALIZING THE RULE

The EPA and Corps concluded that elimination of the "waste exclusion" would have no environmental effect because they already allow waste dumps in waters. This conclusion has absolutely no basis in law or fact and demonstrates a callous disregard for the environment.

By illegally issuing permits for mountaintop removal coal mining valley fills—5,858 of them since 1985 by the administration's own count—the Corps has allowed the complete destruction of well over 1000 miles of streams in Kentucky and West Virginia, perhaps much more. To claim that changing the law to allow *the continuation* of such permitting practices will have no significant effect on the environment is absurd on its face.

It is equally unreasonable to conclude that expanding this permitting practice to allow waters to be buried under hardrock mining tailings, other excavation wastes, construction and demolition debris, plastic waste and other refuse will not have a significant effect on the environment. Presumably the Corps is not already issuing § 404 permits to *all of the industries* that will be eligible to receive waste dump permits under the new rule; if they are allowing these industries to dump their wastes in waters, then the extent of the Corps' illegal permitting activities is greater than has been previously documented.

In short, their conclusion that these waste disposal activities, whether previously permitted (illegally) or not, will not cause any significant environmental harm is not supported by fact—or logic. Indeed, all evidence is to the contrary.

Allowing industries to bury and obliterate waterways with waste, a previously prohibited activity, will have severe adverse effects on water quality, water supplies, fish and wildlife habitat, flood control and floodplain management, as well as other health, safety, environmental and economic consequences for the communities where such waste fills are allowed. Whatever the number of waters the Corps has already allowed industries to bury with their waste, previously unaffected streams, wetlands, lakes, rivers, ponds and coastal waters will be filled and destroyed in the wake of this rule change.

Nonetheless, the Corps and EPA completely failed to analyze the environmental consequences of eliminating the waste exclusion from the definition of fill material.

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[22] 67 Fed. Reg. at 31130.
[23] *Id.* at 42–43.
[24] 72 F.Supp. 2d 642 (S.D. W. VA 1999), *rev'd*, 248 F. 3d 275 (4th Cir. 2001).
[25] Deposition of Rodney Woods, Nov. 30, 1998, p. 23 (taken in *Bragg* v. *Robertson*).

The Bush administration conducted no studies or analyses whatsoever to measure these impacts.

Worse, the administration even went so far as to ignore data currently in its possession regarding the known and devastating environmental impacts of mountaintop removal coal mining. The administration's utter disregard for the harm that would be caused by this rule change violates the National Environmental Policy Act of 1969 ("NEPA")[26] as well as the agencies' general obligation to protect the environment.

NEPA is the basic national charter for protection of the environment. The law requires agencies of the Federal Government to prepare an environmental impact statement ("EIS") for all "major Federal actions significantly affecting the quality of the human environment."[27] Federal actions include "*new or revised agency rules, regulations, plans, policies, or procedures.*"[28] NEPA requires that the environmental impacts of a major Federal action must be evaluated before the agency decides whether or how to proceed.

The Corps has not complied with these basic principles of NEPA. It did not prepare an environmental impact statement for this rule as required by law, despite its nationwide effect and the obvious harm that is caused when wastes bury waters.

Instead, the agencies prepared an Environmental Assessment (EA) concluding—without reference to anything other than its own unsubstantiated assertions—that the rule change does not constitute a major Federal action significantly affecting the quality of the human environment.[29] Not a single study or fact about the environmental effects of this rule is cited to support this conclusion.

In fact, at the time that the Corps and EPA first proposed to change the definition of fill material to eliminate the waste exclusion in the spring of 2000, *the Corps admitted that it did not possess even one document that supported its initial determination that no environmental impact statement needed to be prepared.*[30] This initial finding of "no significant effect on the quality of the human environment" is nonetheless cited in the EA as supporting the final decision not to do an EIS.[31] We can only assume that the Corps *still* does not have any evidence whatsoever to support their claim that no significant harm will come of this rule change.

The Bush administration's assertions about "no significant harm" are flatly contradicted by the information collected by this administration that is not even mentioned in its discussion of the environmental effects of this rule change. The preliminary findings of an environmental impact statement (EIS) on mountaintop removal that is currently being prepared by the EPA and other agencies show the environmental destruction caused by mountaintop removal coal mining and its waste disposal practices is enormous.

As of February 2002, the EPA, together with the Office of Surface Mining (OSM), the Corps, the U.S. Fish and Wildlife Service, and the West Virginia Department of Environmental Protection, had spent or committed to spend about $4.5 million preparing an EIS on the environmental, social, and economic impacts of mountaintop removal mining.[32] In support of the EIS, EPA prepared a January 2001 Preliminary Draft EIS (PDEIS) and extensive technical studies, including an inventory of valley fills, and analyses of the impacts of valley fills on streams, wildlife, land use, and the economy.[33]

The studies conducted by EPA for the mountaintop mining EIS have confirmed and amplified the scope of the known harm from valley fills. A March 2002 slide show presentation[34] to senior EPA officials in the agency's Washington, DC. headquarters summarizes the findings from these studies:

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[26] 42 U.S.C. § 4321 *et seq.*

[27] 42 U.S.C. § 4332(2)(C).

[28] 40 C.F.R. § 1508.18(a) (emphasis added).

[29] "Environmental Assessment (EA) and Finding of No Significant Impact for the Fill Rule," (May 9, 2002). Notably, the Corps did not complete and sign the EA until 6 days after they sent the rule to the Federal Register for publication. However, in a memo explaining this mistake, Dominic Izzo, Principal Deputy Secretary of the Army (Civil Works) assured readers that this did not indicate that the Corps treated the EA as an afterthought.

[30] Letter to Melissa A. Samet, Earthjustice Legal Defense Fund, from Richard L. Frenette, Counsel, U.S. Army Corps of Engineers (July 5, 2000) ("no documents were located" that satisfied a Freedom of Information Act (FOIA) request for all documents upon which the Corps based its determination that an environmental impact statement was not necessary).

[31] EA at 7.

[32] Email from William Hoffman (EPARegion 3) to Gregory Peck (EPA DC) February 13, 2002.

[33] EPA recently disclosed this PDEIS and most of the studies to the public in response to a FOIA request from *Kentuckians For The Commonwealth*.

[34] Mountaintop Mining EIS Presentation, EPA Office of Water, Office of Federal Activities, and Office of General Counsel, March 5, 2002.

• One percent of all streams in the study area (560 out of 55,000 miles) have already been eliminated by valley fills.[35]

• Macroinvertebrate indices indicate that stream segments located downstream of valley fills are being impaired (aquatic life use).

• Stream chemistry monitoring efforts show significant increases in conductivity, hardness, sulfate, and selenium concentrations downstream of [Mountaintop Mining/Valley Fill] operations.[36]

• The Appalachian Highlands is characterized by some of the best forest habitat in the world.

• Current reclamation practices are converting these forests to grassland, which may significantly impact neotropical migrant bird populations and other sensitive species if left unchanged.

Similar findings are contained in a draft summary of the EIS' technical studies, which finds that "[n]o scientific basis could be established for arriving at an environmentally 'acceptable' amount of stream loss" . . . it is "difficult if not impossible to reconstruct free flowing streams on or adjacent to mined sites" . . . there is "no evidence that native hardwood forests . . . will eventually recolonize large mountaintop mine sites using current reclamation methods" . . . "[p]opulations of forest birds will be detrimentally impacted by the loss and fragmentation of mature forest habitat" . . . and that "[l]arge-scale surface coal mining will result in the conversion of large portions of one of the most heavily forested areas of the country, also considered one of the most biologically diverse, to grassland habitat."[37]

Although the EPA and Corps had this information in hand well before they finalized the rule change on May 3, none of this data is even mentioned in the preamble to the rule or the extremely cursory Environmental Assessment that accompanied it.

Further, the impacts of the "waste in waters" rule will be felt far beyond the coalfields of Appalachia, where the Bush administration wishes to be able to continue issuing § 404 permits for the disposal of coal mining wastes with impunity.

It is clear that the proposed rule change will have significant environmental consequences, both from mountaintop removal and other waste disposal activities. The proposed rule change would give the Corps new authority to allow the disposal of refuse directly into any river, stream, lake, wetland or coastal area in the country. These effects required preparation of an environmental impact statement before the rule change was ever proposed.

THE CORPS' WILLINGNESS TO GRANT VIRTUALLY EVERY PERMIT REQUEST DRAMATICALLY INCREASES THE ALREADY STAGGERING IMPACTS OF THE RULE CHANGE

The potential impacts of the rule change are staggering, particularly in light of the Corps' willingness to routinely grant virtually every permit request submitted to it for any project to fill waterways. For example, according to testimony submitted to this committee in March 2000, in one 3 year period, the Corps denied only 3 out of every 1000 of all § 404 permit requests:

> [T]he Corps received an average of 74,500 Section 404 permit requests per year from fiscal year 1996 to fiscal year 1999. Of those requests, 84.4 percent were authorized through a general permit. Only 6.7 percent of all permit applications were subject to the more detailed individual permit evaluation, through which impacts are avoided and compensated. Because of our effectiveness in avoiding and mitigating impacts, only 3 tenths of a percent of all Section 404 requests were denied. Finally, it should be noted that thousands of additional actions re-

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[35] Other studies, cited below, indicate that this 1 percent figure is likely to be a gross underestimation of the stream miles filled in the study area. These inventories rely heavily on topographical maps that often do not map ephemeral headwater streams, despite their ecological importance. Also, the 1 percent figure contains the entire study area; in watersheds where mining activity is occurring or has occurred, up to 30 percent of the headwaters have been filled.

[36] EPA's stream chemistry study found that "The selenium data clearly show 'hot spots' with higher concentrations of selenium in each of the five watersheds that were studied] and located downstream of 'Filled' sites ONLY. There are 66 violations of the stream water quality criteria identified and each is at a Filled site. No other category of site had violations of selenium!" Email from Gary Bryant (EPA WV) to William Hoffman (EPA Region 3), March 27, 2002 (capitalization and exclamation point in original). Selenium, "a metalloid that is released to water from both natural and anthropogenic sources, can be highly toxic to aquatic life at relatively low concentrations." See www.epa.gov/ost/selenium/factsh.html.

[37] *See* MTM/VF EIS Steering Committee, "Problems Identified/Confirmed/Inferred by Technical Studies," August 15, 2002 working draft.

quiring authorization by Section 404 were allowed to proceed under the authority of general permits that do not require any notification to the Corps.[38]

The Bush administration provides no evidence at all to suggest that the vast majority of permit requests for waste disposal activities will not also be routinely granted by the Corps. In fact, the evidence is to the contrary: if the Corps' track record of granting approval for mountaintop removal valley fills is any indication of how the Corps will treat other applications for 404 permits for waste disposal, there is a great deal to be concerned about.[39]

THE ADVERSE IMPACTS ON MINING COMMUNITIES ARE ENORMOUS AND UNNECESSARY

As the court notes in *Kentuckians For The Commonwealth*, the Bush administration's change to Clean Water Act regulations to allow waste disposal in waters was written to benefit one industry—the coal mining industry.[40] In particular, the elimination of the decades-old language prohibiting the use of waste to fill waters was intended to accommodate the enormously destructive mining practice known as mountaintop removal.

Mountaintop rremoval is conducted throughout the Appalachian region, but is especially concentrated in southern West Virginia and eastern Kentucky. In mountaintop removal operations, mine operators use explosives and enormous machines to rip hundreds of feet off the top of mountains to expose and remove the coal seams that lay underneath. In the process, millions of tons of waste (that was formerly the mountaintop) are generated.

The current solution preferred by many mining operators for disposing of this waste rock and dirt is to dump it into nearby valleys; this dumping creates "valley fills." Typically, there are networks of streams in the valleys that are filled with the excess mining waste. As a result of the valley fills, these streams and wetlands, and the aquatic and wildlife habitat they support, are destroyed by virtue of being buried by hundreds of millions of tons of rocks and dirt that was once part of the mountaintop.

Environmental Harm

Mountaintop removal is destroying irreplaceable forests and streams. In March 1998, the U.S. Fish and Wildlife Service (FWS) estimated that nearly 500 miles of streams had been lost in only six West Virginia watersheds due to Mountaintop Removal valley fills.[41] This estimate did not include five other major coal mining counties in West Virginia. West Virginia's forests are among the most productive and diverse temperate hardwood forests in the world. According to the US Fish and Wildlife Service, the forests are hotspots for migratory birds.[42] The size of proposed mountaintop removal operations has grown significantly. Mining complexes often create holes of more than 10 square miles in the forest canopy. For instance, Arch's Mountaintop Removal complex in Blair, West Virginia would have destroyed more than 12 square miles of forests and streams. At least two other Arch operations in West Virginia now cover more than 20 square miles each.[43] Such holes in the forest canopy have significant adverse impacts on bird migration.

It is nearly impossible to overstate the destructive effects of mountaintop removal on the surrounding environment. Mountains and forests become barren moonscapes. Waters and aquatic life are buried under tons of rubble. In an order in the *Bragg* case, issued March 3, 1999,[44] Judge Haden, Chief Judge of the District Court for Southern District of West Virginia, described the view of mountaintop removal sites seen from the air, and assessed the potential damage posed by the mine.

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[38] Testimony of Michael Davis, Deputy Assistant Secretary of the Army for Civil Works, Before the U.S. Senate Committee on Environment and Public Works, Subcommittee on Air Quality, Wetlands, Private Property and Nuclear Safety (March 28, 2000).

[39] Even if one were to assume that the Corps would be more selective about issuing *individual permits* for waste disposal activities than they are when issuing permits for other fills, the majority of activities that are currently approved under the § 404 program occur under authority of *general permits* and require no individual approval from the Corps. If the same holds true when wastes are added to the list of acceptable filling practices, many waste disposal activities may occur under general permits without the need for Corps' approval.

[40] *Kentuckians For The Commonwealth* at 44.

[41] U.S. Fish & Wildlife Service, "Permitted Stream Losses Due to Valley Filling in Kentucky, Pennsylvania, Virginia, and West Virginia: A Partial Inventory" 6 (1998).

[42] U.S. Fish & Wildlife Service, "A Survey of Aquatic Life and Terrestrial Wildlife Habitats on the Proposed Spruce No. 1 Surface Mine in Logan County, West Virginia" 21 (1998).

[43] Hobet 21 and Samples.

[44] *Bragg* v. *Robertson*, 54 F. Supp.2d 635, 646 (S.D.W.V. 1999); also see photos: "Valley Fills at Mountaintop Removal Mines in Kentucky and West Virginia—Aerial Views", attached.

"The Court's helicopter flyover of all mountaintop removal sites in southern West Virginia revealed the extent and permanence of environmental degradation this type of mining produces. On February 26, the ground was covered with light snow, and mined sites were visible from miles away. The sites stood out among the natural wooded ridges as huge white plateaus, and the valley fills appeared as massive, artificially landscaped stair steps. Some mine sites were 20 years old, yet tree growth was stunted or non-existent. Compared to the thick hardwoods of surrounding undisturbed hills, the mine sites appeared stark and barren and enormously different from the original topography.

"If the forest canopy of Pigeonroost Hollow is leveled, exposing the stream to extreme temperatures, and aquatic life is destroyed, these harms cannot be undone. If the forest wildlife are driven away by the blasting, the noise, and the lack of safe nesting and eating areas, they cannot be coaxed back. If the mountaintop is removed, even [the mine company's] engineers will affirm that it cannot be reclaimed to its exact original contour. Destruction of the unique topography of southern West Virginia, and of Pigeonroost Hollow in particular, cannot be regarded as anything but permanent and irreversible."

Judge Haden expanded upon this assessment in his opinion issued on October 20, 1999:

"When valley fills are permitted in intermittent and perennial streams, they destroy those stream segments. The normal flow and gradient of the stream is now buried under millions of cubic yards of excess spoil waste material, an extremely adverse effect. If there are fish, they cannot migrate. If there is any life form that cannot acclimate to life deep in a rubble pile, it is eliminated. No effect on related environmental values is more adverse than obliteration. Under a valley fill, the water quantity of the stream becomes zero. Because there is no stream, there is no water quality." [45]

EPA's draft cumulative impact study on mountaintop removal mining states that, if left unconstrained, mining will fill another 500 miles of streams and destroy 350 square miles of forests in Appalachia.[46]

Harm to Communities

Not only do these massive valley fills destroy the watersheds in Appalachia, uncontrolled mountaintop removal operations destroy Appalachian coalfield communities.

The environmental and social impacts resulting from mountaintop removal surface mining extend well beyond the streams that are actually filled. The quantity and quality of waters in the vicinity of these operations are often adversely affected and significant portions of the State's forests, mountains and streams are destroyed. The communities below these massive operations are often devastated. The people are effectively forced from their homes by blasting (which often cracks the walls and foundations of their homes), dust, noise, flyrock, the threat of flooding, fear that the valley fills above their homes are unstable, and the degradation of stream and well water. Life near mountaintop removal operations becomes so unbearable that generations-old communities are forced to move away.

A 1997 article in U.S. News and World Report states that rather than fight constant complaints from homeowners, Arch Coal "has bought more than half of the 231 houses in Blair through a subsidiary. Vacated and quickly stripped, at least two dozen have been burned down" by arsonists.[47] In Blair, West Virginia, the elementary school and the town's only grocery stores have closed.

Many people, including some coalfield residents who have lost homes and loved ones in the floods of 2001 and 2002, believe flooding in the region is made worse by mountaintop removal mining. It is a reasonable conclusion. When mountaintop removal coal mining strips a landscape bare of all trees, and valley fills bury headwaters with tons of dirt and rock, storm water will come gushing down more quickly into the communities nestled in the valley. Preliminary Federal studies indicate that rain runoff at valley fill sites vary, but the studies indicate that runoff can surge anywhere from 3 percent to 42 percent, ultimately blending with the larger flood pattern.[48] In the most recent floods, nearly a dozen people lost their lives and

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[45] *Bragg*, 72 F. Supp.2d at 661–62.

[46] Gannett Fleming, "Landscape Scale Cumulative Impact Study of Future Mountaintop Mining Operations," March 2002, pp. ii, iv.

[47] Penny Loeb, U.S. News & World Report, "Shear Madness," (August 7, 1997).

[48] *Charleston Gazette*, "Flood Causes Get Serious With Studies," May 8, 2002; Ken Ward, "Forests' Return Could Take Centuries Due to Mining," *Charleston Gazette*, May 3, 2002 (discussing the draft EIS studies obtained by *Gazette* by FOIA); *see also* photos: "Valley Fill on the Head-

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four West Virginia counties were declared Federal disaster areas.[49] In McDowell County alone, 6 people died, close to 200 homes were destroyed, and more than 2,000 others were damaged by flooding.[50]

Economic Impacts

Recently, the Bush administration filed a motion for a stay pending appeal of West Virginia district court's May 8 Order, which enjoined the Corps from issuing any further § 404 permits that have no primary purpose or use but the disposal of waste. In its brief, the administration argues at length that this injunction will have "devastating" economic effects. But the administration's allegations of impending economic doom are supported only by broad and conclusory affidavits by government officials, with no supporting expert analysis or studies.

The Bush administration's and coal mining companies' claims about significant economic harm are flawed in at least four fundamental respects. First, *the administration is again ignoring the results of its own studies that it commissioned in preparation of the EIS on mountaintop mining and valley fills.* Second, according to these government studies, most mines do not require valley fills. Third, engineering analysis shows that there are alternatives to putting waste in valley fills. Fourth, according to these government studies, significant restrictions on the size of valley fills will not have significant economic impacts.

The Government Is Ignoring Its Own Studies Showing Prohibition on Mining Waste Valley Fills in Waters of the U.S. Would Not Cause Serious Economic Harm

As stated above, the EPA and other Federal and state agencies are preparing an EIS to study the environmental, social, and economic impacts of mountaintop removal mining.[51] The PDEIS and studies directly contradict the claims of economic harm made by the Bush administration and others who insist that weakening Clean Water Act rules is an economic necessity.

As part of the EIS effort, EPA contracted with Hill & Associates (H&A), an economic modeling firm, to model the economic impacts of the various alternatives for restricting the size of valley fills. In a December 2001 final report to EPA, H&A concluded that even the most severe restriction on valley fills studied in the report—one that barred fills covering watersheds more than 35 acres—would raise the price of coal by only $1 per ton and raise the cost of electricity by a few cents per megawatt-hour.[52] In the March 2002 slide show presentation to senior EPA officials in its Washington Headquarters, EPA Region 3 officials characterized these effects as "a minimal impact on the price of coal" and "virtually NO impact on electricity prices."[53] The presentation revealed that significant restrictions on valley fill size would not significantly affect coal supplies, coal prices, or electricity prices:

> "Sufficient coal reserves appear to exist under the 250, 150, 75, and 35 acre restriction scenarios necessary to meet demand during the 10 year study period . . ."
>
> "Restricting valley fills to 250, 150, 75, or 35 acre watersheds will increase the price of coal by only $1/ton under each respective restriction scenario."
>
> "Restricting valley fills to 250, 150, 75, or 35 acre watersheds will increase the price of electricity by only a few cents/MWHr under each respective restriction scenario."[54]

Another EPA draft study, dated April 23, 2002, concludes that, even under the 35-acre watershed restriction, annual average impacts to total statewide employment in Kentucky and West Virginia are no more than 0.3 percent of total year 2000 employment. In addition, there are no "notable differences in [wholesale elec-

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waters of White Oak Creek in Raleigh Co.", and "July 2001, floods devastated Bulgar Hollow in Raleigh Co., W. Va.", attached.

[49] Anderson, Mason. "Appalachian Flood Victims Assess Damages," *DisasterRelief.org*, May 7, 2002.

[50] Francis X Clines, "100-Year Flood, for the Second Straight Year," *New York Times*, May 9, 2002.

[51] *See* 64 Fed. Reg. 5800 (Feb. 5, 1999) (notice on the EIS).

[52] Hill & Associates, "Economic Impact of Mountain Top Mining and Valley Fills, Environmental Impact Statement," for U.S. EPA, December 2001. The H&A study assumed that valley fill restrictions would apply immediately to all existing mines, while the court's order only applies to future permits. The study therefore overstates the economic impacts of prohibiting any future § 404 permits to dump waste into waters. On the other hand, the study evaluated a restriction on valley fills of no more than 35 acres, while a ban on the discharge of coal waste in any waters of the U.S. may be more restrictive in some watersheds. The study may therefore understate the economic impacts of enforcing the law in this respect.

[53] Mountaintop Mining EIS Presentation, EPA Office of Water, Office of Federal Activities, and Office of General Counsel, March 5, 2002 (emphasis in original).

[54] *Id.*

tricity] prices or generation levels among the alternative [restrictions] . . . due to the competitive nature of the energy markets."[55]

These studies indicate that severe restrictions on the size of valley fills, and even a prohibition of valley fills in waters of the US, would not cause serious economic harm, as the Bush administration claims.

Most Mines Do Not Require Valley Fills

Almost two-thirds of coal mined in Appalachia comes from underground mines. While underground mines do create waste rock and dirt, the amount generated is considerably less compared to mountaintop removal mining. Both in the short and long term, alternatives to dumping these wastes into streams exist and are already utilized by many coal mining companies.[56]

The mountaintop removal PDEIS contains an extensive inventory of the valley fills in the four-state region of Kentucky, West Virginia, Tennessee and Virginia where surface coal mining is concentrated. Over 90 percent of the 5,585 valley fills approved between 1985 and 1999 are in Kentucky and West Virginia.[57] During that time, only 1,271 out of 6,234 mining permits in Kentucky (20 percent), and 305 out of 2,527 mining permits in West Virginia (12 percent) were issued with valley fills.[58] Thus, historically, most surface mining operations do not use valley fills, and a prohibition on fills in waters would not affect those mines. The same principle applies to pending permit applications, which are the only ones that would be affected by the Court's prospective order. According to WVDEP, only 59 of the 123 pending applications for mining permits in West Virginia, and only 11 out of 157 applications for incidental boundary revisions and permit applications, contemplate filling waters of the United States.[59]

Furthermore, even for the coal mines that do apply for fills, a ban on new valley fills would not shut down all of those mines in the short term. The PDEIS states "[a]n industry practice is to permit more surface area for disturbance than is likely to be affected by the operations planned. This allows the mining operation to respond more quickly to changing market conditions."[60] Thus, there is surplus capacity that has already been permitted, and that would not be affected by a prospective ban on new valley fills in waters of the US. That was apparently the situation in 1999, when no valley fills were approved by West Virginia,[61] yet statewide coal production was virtually the same in 1999 and 2000. Thus, the lack of fills does not necessarily have an immediate impact on coal production.

There Are Alternatives to Dumping Coal Mining Waste into Streams

Coal mining waste should not be dumped in streams, and it does not have to be dumped into streams. Mining companies choose to dump their wastes in waters when it is the cheapest alternative, and regulatory prohibitions are not enforced.[62] Coal companies seek to optimize maximum coal recovery at the least cost.[63] But there are alternatives.

The impact of valley fill restrictions varies from mine to mine, and requires a site-specific engineering analysis.[64] Broad brush statements that the coal companies have no choice but to dump their wastes in streams are incorrect. Potential alternative sites for placing waste include previously mined areas that were not returned to their approximate original contour, previously disturbed areas such as old refuse impoundments, side hill fills, and more distant disposal locations; in addition, companies can redesign the fill configuration and change their mining equipment to reduce fill impacts.[65] Underground mines generate much less waste rock and dirt than surface mines, and there are available alternatives for placement of that waste

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[55] Gannett Fleming, *Draft Economic Consequences Study for MTM/VF EIS*, April 23, 2002.

[56] *See* Declaration of John S L Morgan, (May 18, 2002). Mr. Morgan has a degree in mining engineering from the Royal School of Mines and is President of Morgan Worldwide Consultants, a company specializing in providing technical support to the mining industry worldwide. Mr. Morgan participates on the West Virginia Department of Environmental Protection Quality Control advisory panel tasked with evaluating and improving quality control related to permitting,

[57] January 2001 Preliminary Draft EIS (PDEIS) at III.K–21.

[58] *Id.* at K–22, K–28.

[59] See http://www.dep.state.wv.us/Docs/1449NR-CrumResponse.pdf.

[60] PDEIS at III.K–13.

[61] *Id.* at III.K–28.

[62] Morgan Declaration.

[63] *Id.*

[64] *Id.*

[65] *Id.*

as well.[66] These alternatives to placing mining waste in streams should be used instead of dumping waste in waterways.

Clean Water Act regulations require consideration of these alternatives. Where a proposed project to fill waters "does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic purpose (*i.e.* is not 'water dependent'), *practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise.*"[67] Regardless of the definition of fill material, the Corps is not authorized to issue a § 404 permit "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem."[68] Since surface coal mining is not "water dependent" and alternatives to filling streams exist, granting of § 404 permits for the disposal of waste in streams, as the Bush rule purports to do, is illegal for this reason as well.

Post-Mining Land Uses

Some proponents of mountaintop removal coal mining claim that it is needed to create more flat land for development purposes. While there may be a few examples here and there of airports or factories being built on mountaintop removal sites, it is extremely unlikely that any significant percentage of mountaintop removal sites, including the valley fills, will ever support development. As noted above, EPA's draft cumulative impact study on mountaintop removal mining states that, if left unconstrained, mountaintop removal mining will destroy 350 square miles of forested land;[69] This is in addition to the hundreds of square miles that have already been flattened. According to one estimate, less than 1 percent of the mined land is reused for any development purpose.[70]

The Bush administration's studies conclude that, in fact, post-mining land uses are not occurring as envisioned. *Remarkably, the Office of Surface Mining (OSM) appears to want to address this problem by deleting actions to ensure that post-mining land uses do occur from further consideration in the EIS:*

Post Mining Land Uses (PLMU) studies suggest that, in general, post-mining development is not occurring as envisioned when variance are requested from the requirements to return the land to a condition capable of supporting its prior use. Actions to ensure that PMLU development occurs as envisioned have been developed, but OSM recommends deleting these actions from further consideration in the EIS.[71]

UNDER THE BUSH ADMINISTRATION'S RULE, MANY OTHER WASTES WILL BURY WATERS

There is probably no region of the country that will be more adversely effected by this "waste in waters" rule change than the coal mining communities of Appalachia. But the Bush administration's rule change undoubtedly will have significant nationwide effects. While the "waste exclusion" in the Corps' clean water regulations was removed from the rules primarily for the coal mining companies, *the final rule would give the Corps discretion to permit any industry, governmental agency, or individual to bury rivers, streams, lakes, and wetlands all across the country under tons of mining waste, waste from other excavation activities, mining tailings, construction and demolition debris, plastic waste or almost any other sort of solid waste.*[72]

According to the final rule, examples of wastes now eligible for § 404 permits include, but are not limited to "*rock, sand, soil, clay, plastics, construction debris, wood chips, [and] overburden from mining or other excavation activities.*"[73] In addition, another part of the new definition makes clear that "*placement of overburden, slurry, or tailings or similar mining-related materials*" are also to be permitted.[74] As the new definition states, this is not an exhaustive list. There are many other

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[66] *Id.*

[67] 40 C.F.R. § 230.10(a)(3) (emphasis added).

[68] *Id.*, § 230.10(d).

[69] Gannett Fleming study, pp. iv.

[70] Phone conversation with Jim Burger, Professor of Forestry, Virginia Tech, (June 3, 2002). Professor Burger studies post-mining land uses in Appalachia, including reforestation and development.

[71] Mountaintop Mining EIS Presentation.

[72] As noted earlier, the only exception in the final rule is for "trash or garbage." 67 Fed. Reg. at 31142. But the preamble to the rule asserts, in specific circumstances, "certain types of material that might otherwise be considered as trash or garbage may be appropriate for use in a particular project to create a structure . . . in waters of the U.S. In such situations, this material would be regulated as fill material." *Id.* at 31134.

[73] 67 Fed. Reg. at 31142 (emphasis added).

[74] *Id.* (emphasis added).

types of industrial wastes that the Corps could also try to permit to be dumped into waters. Even wastes that may be "chemically contaminated" would not be ruled out under this proposal; in fact, the administration argues that the provisions of § 404 regulations and its related guidelines are adequate to address such cases.[75]

The list of waste that would be considered "fill material" in the proposed rule, published in the Federal Register on April 20, 2000, was also not exhaustive, but the examples were far more limited: "rock, sand and earth" and "placement of coal mining overburden."[76]

Below is a review of some of the wastes that are included in the new "waste in waters" rule.

Coal mining slurry

Coal slurry, a cement-like substance generated during coal processing, is another waste material that would expressly be allowed to be dumped into waters under the Bush rule. As with valley fills, the Corps has been permitting coal companies to dump their slurry waste into impoundments created in streams for years.

Slurry spills destroy homes, contaminate drinking water and kill wildlife; uncertainty over the long-term health and environmental effects associated with major spills leaves residents fearing the worst.[77] During the devastating floods that hit West Virginia in May of 2002, a coal slurry impoundment in McDowell County—an area particularly hard-hit by floods—spewed blackwater slurry at a 5,000-gallon-a-minute-rate.[78] In October of 2000, an impoundment in eastern Kentucky spilled 250 million gallons of waste, adversely affecting at least 100 miles of streams creeks, and rivers.[79] Perhaps the most devastating coal slurry spill is the famous "Buffalo Creek Disaster" of 1972, where the collapse of a Pittston Coal dam in West Virginia killed 125 people and left 4,000 homeless.[80]

Coal slurry impoundments present a significant risk to downstream waters, communities, and wildlife. Its explicit inclusion in the definition of materials deemed suitable to use as "fill" in waters will continue this harm unnecessarily, particularly when the National Academy of Sciences concluded in an October 2001 study that there are alternatives to coal slurry impoundments and called for a "broad study of ways to reduce or *eliminate* the need" for the impoundments.[81] There are numerous alternatives available for the disposal of coal slurry other than dumping that waste into streams.[82]

Hardrock mining tailings and other wastes

As noted in the 1999 National Research Council report, *Hardrock Mining on Federal Lands*, modern open-pit hardrock mining generates vast amounts of waste rock/overburden, tailings and beneficiation/processing wastes.[83] Often, these facilities are located directly in riverine valleys, the so-called "valley fills." As noted by the Council's report, "Obviously, if a valley is filled, the vegetation in the valley will be destroyed. Once filled, the riparian vegetation that requires the conditions found at the bottom of the valley cannot be restored."[84]

A 1992 Congressional Office of Technology Assessment report estimated that the mineral mining industry generated about *1.7 billion tons* of extraction and beneficiation wastes in 1987 but cannot provide a comparable estimate for mineral

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[75] 67 Fed. Reg. at 31133 ("We recognize that, some fill material may exhibit characteristics, such as chemical contamination, which may be of environmental concern in certain circumstances").

[76] 65 Fed. Reg. 21299.

[77] Alan Maimon, "Coal Slurry Spill Still Taints E. Kentucky, Residents Say," Kentucky Courier-Journal October 8, 2001.

[78] AP, "W. Va. Seizes waste site in effort to control spill," The Herald-Dispatch, May 8, 2002.

[79] Geraldine Sealey, "Coal Slurry Spill Hits Rivers Worst Regional Disaster in Years," ABCnews.com, October 23, 2000.

[80] Ken Ward, "Alternatives to coal slurry ponds exist, study says," Sunday Gazette-Mail, October 14, 2001.

[81] *Id.* (emphasis added).

[82] *See* Morgan Declaration ("Alternative disposal methods include the placement of fine refuse material in incised ponds that can be located on the bench of surface mined areas. In addition coarse refuse can also be placed in previously mined areas. Underground disposal of both coarse and fine refuse is technologically feasible and underground injection of fine refuse is currently conducted in West Virginia. Some of the backfilling methods used in the hard rock mining industry could be applicable to the underground disposal of coal waste and warrant consideration.").

[83] National Academy of Sciences, "*Hardrock Mining on Federal Lands,*" (1999).

[84] *Id.* at App. B 163.

processing wastes.[85] This estimate does not even include the tonnage of waste rock and dirt overburden generated at hardrock mining sites. According to the EPA's most recently released Toxics Release Inventory, in 2000 alone, the metal mining industry release 3,315,896,409 (3.3 billion) pounds of toxics to land.

The threat to western stream and wetlands that the new "waste in waters" rule poses is obviously considerable, as these hardrock mining wastes are explicitly included in the new definition of fill.

Construction and demolition debris

Waste is generated every time a building, road, or bridge is constructed, remodeled, or demolished. Known as construction and demolition (C&D) debris, this waste often contains bulky, heavy materials, including concrete, wood, asphalt (from roads and roofing shingles), gypsum (the main component of drywall), metals, bricks, and plastics. C&D debris also includes salvaged building components such as doors, windows, and plumbing fixtures.[86]

The EPA estimates that *136 million tons of building-related C&D debris* was generated in the United States in 1996.[87] The majority of this waste comes from building demolition and renovation, and the rest comes from new construction.[88] This figure does not include debris from road, bridge or land-clearing projects, which comprise a large (but in this report, unquantified) portion of the C&D waste stream.[89]

Currently, an estimated 30 to 40 percent of C&D "is managed onsite, at [municipal solid waste] landfills, and unpermitted sites."[90] *Even a small fraction of this waste, if disposed of in wetlands, streams, ponds, or rivers, could have a significant negative effect on waters of the Nation.*

Other Wastes

Other wastes specifically referenced in the final rule as being eligible for the new Corps waste dumping permits include overburden from other excavation activities, wood chips, and plastic. None of these categories is further defined, and each seems like it could encompass millions—if not billions—of tons of material nationwide. *All* waste rock and dirt from any type of excavation operation must be quite an enormous amount of waste. If the Corps allows excavation operations to now dump that wastes into streams or wetlands instead of moving it to a dry upland site, it is likely that thousands of acres of wetlands and miles of stream will be destroyed as a result. No explanation is provided in the final rule for including these categories of waste in the new definition of fill material. And as with all of the categories of waste fill, no environmental assessment of the effects of dumping excavation waste, waste wood chips, or plastic waste in waterways was conducted.

Garbage

The only waste not permitted to be used as fill material in waters of the U.S. under the Bush administration's "waste in waters" rule, at least not as a general matter, is trash or garbage. It is worth noting that the agencies' rationale for this single exclusion should also make waste rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, slurry, or tailings and similar mining-related materials ineligible to be used as fill—if the criteria enumerated by the agencies were fairly applied.

> "The agencies have added an exclusion for trash or garbage to the definition of "fill material" for several reasons. First, the preamble to the proposed rule and many of the comments recognized that trash or garbage, such as debris, junk cars, used tires, discarded kitchen appliances, and similar materials, are not appropriately used, as a general matter, for fill material in waters of the U.S. In particular, we agree that the discharge of trash or garbage *often results in adverse environmental impacts to waters of the U.S. by creating physical obstructions that alter the natural hydrology of waters and may cause physical hazards as well as other environmental effects*. We also agree that *these impacts are generally avoidable* because there are alternative clean and safe forms of fill material that can be used to accomplish project objectives and because there are

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[85] U.S. Congress, Office of Technology Assessment, *Managing Industrial Solid Wastes From Manufacturing, Mining, Oil and Gas Production, and Utility Coal Combustion—Background Paper*, (February 1992).

[86] http://www.epa.gov/OSWRCRA/non-hw/debris/about.htm

[87] Franklin Associates (for the U.S. Environmental Protection Agency), *Characterization of Building-Related Construction and Demolition Debris in the United States*, (June 1998).

[88] *Id.* at 8.

[89] *Id.*

[90] *Id.* at 3.

widely available landfills and other approved facilities for disposal of trash or garbage."[91]

The discharge of waste rock, sand, soil, clay, plastics, construction and demolition debris, wood chips, overburden from mining or other excavation activities, slurry, or tailings and similar mining-related materials *also* results in adverse environmental impacts to waters of the U.S. by creating physical obstructions that alter the natural hydrology of waters and may cause physical hazards as well as other environmental effects, and their disposal in waters is also generally if not always avoidable.

As the court rightly observed in *Kentuckians For The Commonwealth*:

> *"The obvious perversity of this proposal forced the agencies to suggest baseless distinctions among wastes: "trash" and "garbage" are out; plastic, construction debris and wood chips are in.* The final rule for "discharge of fill material" highlights that the rule change was designed simply for the benefit of the mining industry and its employees. Only one type of waste is added to the otherwise constructive list: "overburden, slurry, or tailings or similar mining-related" waste are now permissible fill in the nation's waters."[92]

THE NATIONAL MINING ASSOCIATION GETS ITS WAY

Finally, there were two provisions of the proposed rule that somewhat limited the use of § 404 fill permits for waste materials other than coal mining overburden. While neither of these two provisions were adequate substitutes for the broad-based waste exclusion in the existing regulations that was proposed for deletion, both of these provisions weighed against the permitting of processed or contaminated waste materials under § 404.

Both provisions were removed from the Bush administration's final rule at the request of the National Mining Association and its member groups, including both coal mining and hardrock mineral mining interests that wanted the final rule written to their specifications.[93] In the final rule, the Bush administration gave them exactly what they asked for.

"Unsuitable Fill"

First, the preamble to the April 2000 draft rule suggested that the final rule would contain a definition of "unsuitable fill material" and asked for public comments on this proposal. The proposal stated that the Corps could include within its regulations a definition for "unsuitable fill material" that would read generally as follows:

> The term "unsuitable fill material" means any material proposed to be discharged into waters of the United States that would fall under the definition of "fill material," but which the District Engineer determines to have physical or chemical characteristics that would make the material unsuitable for a proposed discharge into waters of the United States, so that there is no reasonable possibility that a section 404 permit can be granted for the proposed discharge of that particular material. *For example the District Engineer may determine that fill material is unsuitable because of the potential for the leaching of contaminants from the fill material into groundwaters or surface waters,* or because the proposed fill material is too light or unstable to serve reliably for its intended purpose (e.g., bank stabilization or erosion control). In most circumstances, heterogeneous solid waste, discarded appliances, and automobile or truck bodies would qualify as unsuitable fill material. *In addition, material containing toxic pollutants in toxic amounts (see section 307 of the Clean Water Act) is unsuitable fill material.*[94]

In its comments to the proposed rule, NMA argued that the inclusion in the rule of a definition of unsuitable fill material "could lead to the denial of permits that presently receive authorizations, and it would vest the District Engineer ("DE") with

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[91] 67 Fed. Reg. at 31134 (emphasis added.).

[92] *Kentuckians For The Commonwealth* at 43 (emphasis added).

[93] *See* Memorandum from John Lishman, Wetlands and Aquatic Resources Regulatory Branch, Office of Water, U.S. EPA, "April 6, 2001, Meeting with National Mining Association Representatives on Proposed Revisions to the Clean Water Act Regulatory Definitions of "Fill Material" and "Discharge of Fill Material," (April 12, 2001). This memo recounts for the rulemaking record a meeting between NMA representatives and EPA officials in which NMA objected to two provisions in the April 2000 proposal that would have limited the use of § 404 fill permits for certain categories of waste, while reiterating their overall support for the rule.

[94] 65 Fed. Reg. at 21296–21297.

unfettered discretion to reject §404 applications."[95] Phelps Dodge, the country's largest copper mining company, complained "the agencies are proposing to add a new definition to its 404 permitting regulation for 'unsuitable fill material'. . . . *Examples of unsuitable fill materials include materials that have the potential for the leaching of contaminants to groundwater or surface water or materials that contain toxic pollutants in toxic amounts.* Phelps Dodge opposes the adoption of the proposed definition of unsuitable fill material . . . The vast majority of fill materials, including rock and dirt, has the potential to leach contaminants."[96]

Apparently agreeing with the mining companies that no waste (other than trash or garbage) generated by any industry is unsuitable for dumping into waters of the United States, the Bush administration dropped the "unsuitable waste" category from the final rule.

Discharges with Effluent Limitations

Second, the definition of fill in the April 2000 proposal contained an exception not included in the final rule: "The term fill material does not include discharges covered by proposed or final effluent limitations guidelines and standards under sections 301, 304 or section 306 of the Clean Water Act (see generally, 40 CFR part 401), or discharges covered by an NPDES permit issued under section 402 of the Clean Water Act."[97]

At that time, the EPA and Corps argued that the proposed "effects-based" definition of fill material required this clarification "*because, read literally, it could subject to regulation under CWA section 404 certain pollutants that have been, are being, and should be regulated by the technology and water quality based standards used in the section 402 program.*"[98] Examples given were industrial waste or sewage that contain suspended solids which ultimately will settle to the bottom following discharge and could raise the bottom elevation of the water, potentially making them eligible for a §404 fill permit (and thus possibly exempt from the §402 permitting requirement).[99] Therefore, the agencies reasoned, "where such pollutants are covered by proposed or final effluent limitations guidelines and standards under section 301, 304, or 306 of the CWA or the discharge is covered by a . . . permit issued under section 402 of the CWA, the proposed rule would exclude the discharge from the definition of fill."[100]

The Bush administration's rationale for deleting this language from the final rule states:

> Several of the comments raised concerns that the exclusion included in the proposed definition for discharges covered by proposed or existing effluent limitation guidelines or standards or NPDES permits was vague and would result in uncertainty with respect to the regulation of certain discharges. Other comments stated that it was inappropriate for rule language to allow reliance on proposed effluent limitation guidelines or standards before they are promulgated as a final rule. In addition, including the language in the actual rule could raise questions as to whether the reference to effluent guidelines was meant to refer only to those in existence at the time today's rule was promulgated or whether the reference was prospective.[101]

Again, these were the concerns of the NMA and other mining companies. In their comments, the NMA said they saw "a potential ambiguity arising . . . whereby discharged material that has the effect of replacing portions of waters of the U.S., or substantially raising the bottom elevation for such waters, could conceivably result in attempts to be excluded from §404 coverage simply due to the presence of constituents in the material that would be literally pollutants for which [effluent limits] exist if such constituents were discharged in waste water (i.e., mine drainage or process water) subject to §402 permitting requirements."[102]

In other words, as long as they dump enough tailings or other waste "constituents" into a waterway so that the waterway is filled, mining companies and others

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[95] National Mining Association, *Re: Proposed Changes to the Definition of Fill Material*, (July 17, 2000) at 2.

[96] Phelps Dodge Corporation Comments on Proposed Revisions to the Clean Water Act Regulatory Definitions of "Fill Material" and "Discharge of Fill Material," at 5.

[97] 65 Fed. Reg. at 21299.

[98] 65 Fed. Reg. 21295 (emphasis added).

[99] *Id.*

[100] *Id.*

[101] 67 Fed. Reg. at 31135. The agencies do go on to say "although we have removed the language in question from the rule itself, we emphasize that today's rule generally is intended to maintain our existing approach to regulating pollutants under either section 402 or 404 of the CWA." *Id.*

[102] NMA comments at 7 (emphasis in original).

should be able to apply for a § 404 "fill" permit from the Corps for the part of the waste discharge that would bury the water—even if the waste to be discharged has an effluent limitation and would otherwise be regulated under § 402 of the law. This seems to create a potential loophole—most likely an illegal one—that could give companies the incentive to dump more waste into waters instead of less. But, again, the mining companies got their way with the Bush administration.

CONCLUSION

If it ever goes into effect, which Earthjustice hopes will never be the case, the "waste in waters" rule change would give the Corps discretion to permit any industry, governmental agency, or individual to bury rivers, streams, wetlands and other waters all across the country under tons of coal and hardrock mining waste, construction or demolition debris, tires, coal ash or almost any other sort of solid waste. *It short, the Bush administration's rule would allow the Corps to issue permits for the disposal of virtually any waste in any waters of the United States.*

This is likely the worst thing to happen to the Clean Water Act and the future of our nation's waterways since the law was passed 30 years ago.

What is most startling about the Bush administration's new rule is that it was finalized without any review whatsoever of the environmental and societal harm that eliminating the 25-year old prohibition on using waste as fill materials will have as our nation's wetlands, streams, lakes, ponds, rivers and coastal areas are obliterated under piles of industrial wastes.

The administration ignored the information prepared by and for its own agencies in order to allow the destruction of mountaintop removal to continue. It gave in to all of the demands of the mining industry to open up the rule to allow virtually any kind of mining waste, including those contaminated with toxins, to be dumped in waterways. It conducted no environmental review of any kind about the potential, likely or *known* harm that this rule change will allow. In a word, what this administration has done is unconscionable.

Appalachia is already treated as the country's sacrifice zone in pursuit of a backward-looking national energy policy too reliant on extracting non-renewable, polluting sources of power like coal from the Earth. Now, the Bush administration has added to this sacrifice the integrity of the nation's waters from coast to coast and everywhere in between.

Because Judge Haden has enjoined the Corps from issuing any Clean Water Act permits for the purpose of waste disposal, there may not be an immediate need for Congress to act to overturn the administration's actions. But as the legal battles on this rulemaking continue, as they undoubtedly will for some time, it could make sense for Congress to step in and settle the matter once again by reconfirming that allowing waste dumps to bury waters is wholly inconsistent with the letter and the purpose of the law.

In any event, Members of Congress who support the goal of protecting the integrity of the nation's waters as we near the 30th anniversary of the Clean Water Act, should take a stand publicly against the Bush administration's "waste in waters" rule change.

Thank you again, Mr. Chairman, for the opportunity to testify on this important issue.

RESPONSES BY JOAN MULHERN TO ADDITIONAL QUESTIONS FROM SENATOR LIEBERMAN

Question 1. In testimony of EPA and the Corps, they described the revised definition of fill material as "consistent with the current practice of the agencies." According to the final rule, examples of wastes now eligible for § 404 permits include, but are not limited to "rock, sand, soil, clay, plastics, construction debris, wood chips, [and] overburden from mining or other excavation activities" in addition to "placement of overburden, slurry, or tailings or similar mining-related materials" are also to be permitted. What is your view of the claim that the revised definition is "consistent with the current practice of the agencies"? What is your view of the examples of wastes cited by the agencies as now eligible for permits?

Response. The claim by the EPA and Corps that the new definition of fill is "consistent with the current regulatory practice" is partly but not wholly true. To any extent that it is true, it is not a valid excuse for the administration's decision to change in the definition of fill in an attempt to make the rules conform to the agencies' past illegal practices.

There is no exception to the Clean Water Act that gives polluters the right to continue to break the law just because it has been the practice of Federal regulators

to allow them to do so. Neither do the past practices of the agencies give them the legal authority to create new exceptions to the Clean Water Act through regulatory revisions. Only Congress has the ability to amend the Clean Water Act.

Earthjustice's view regarding all of the wastes listed in the May 3rd rule as now eligible "fill" for Clean Water Act δ 404 permits is that there are no circumstances under which these kinds of wastes should be allowed to be placed into waters of the US for disposal. The inevitable and intentional effect of this rule change, if it is ever allowed to go into effect, will be to allow any industry to seek approval from the Corps to dump almost any kind of industrial waste into waterways—just as long as they dump enough waste to "fill" the water or at least raise the bottom elevation of the waterway. The fate of every wetland, stream, lake, river, pond and coastal water in the country is thereby placed at risk by the Bush administration's actions.

It is true that the Corps and EPA have looked the other way for many years while coal mining companies have dumped millions of tons of waste rock, dirt and other materials generated by mountaintop removal into Appalachian streams, obliterating those waters.

According to most estimates, over one thousand miles of streams in Kentucky and West Virginia have been destroyed forever by this violation of the Clean Water Act. As Senator Lieberman noted in his opening statement at the hearing, Corps officials have admitted under oath that they had no legal authority to permit this destruction but they routinely did so anyway, explaining that they just "oozed" into this lawless practice.

As for all of the other wastes that the new rule would allow to be dumped into waters of the United States—rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from other excavation activities, slurry, and tailings or similar mining-related materials—the Corps and EPA have provided *no* analysis whatsoever to substantiate their claim that allowing these wastes to be dumped into wetlands, streams, lakes, rivers and other waters protected by the Act is "consistent with the current regulatory practice of the agencies." Both before and after the hearing, Earthjustice asked EPA to provide examples of where such waste dumping has been permitted. So far, we have not been provided with any documents to substantiate the agency's assertion that permitting such waste disposal is routine or has occurred at all under the Corps' § 404 regulatory practice.

The Bush administration contends that elimination of the "waste exclusion" will have no environmental effect because the agencies already allow waste dumps in waters. As noted above, it is not clear whether or to what extent this assertion is even true when it comes to wastes other than mountaintop removal waste. In any case, the claim that changing the rules to allow the *continuation* of waste dumping practices will cause no *additional* harm is absurd on its face. Whatever the number of waters the Corps may have already allowed industries to bury with their wastes, pristine streams, wetlands, lakes, rivers, ponds and coastal waters across the country will be filled and destroyed in the wake of this rule change. Obliterating waters has a very negative effect on the environment.

The rule change to allow industrial wastes, including coal mining waste, to be dumped into waters is simply indefensible. It is directly contrary to the intent of Congress when it passed the Clean Water Act in 1972. The central purpose of the Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." No activity is more inconsistent with the goal of protecting the integrity of waters than allowing them to be buried forever under piles of industrial waste. It was precisely for the purpose of ending the use of our country's waterways as waste dumps to the exclusion of other uses that the Clean Water Act was adopted in the first place.

Question 2. Please describe alternatives to the agencies allowing wastes to be placed in waters.

Response. There are always alternatives to placing wastes in waterways for disposal. Disposal of solid waste materials is not a "water dependent" activity. There is never any technological reason why such wastes should ever be placed into streams, wetlands, lakes, rivers or other waters—it can always be taken somewhere else. Ecologically, again there is never any justification for burying waters with waste, as the nation's waters are irreplaceable resources that protect communities from flooding, provide drinking water and recreational opportunities, sustain local economies and provide habitat and food for a wide variety of species. It is inexcusable, as well as illegal, to allow these resources to be forever destroyed by waste dumping.

Alternatives to placing wastes in waterways include (1) not generating the waste (or such large amounts of waste) in the first place; and (2) disposing of any wastes that are generated in a dry upland area instead in a waterway.

The EPA and Corps have not provided even a superficial justification for allowing construction and demolition debris, hardrock mining waste, or other wastes to be placed in waters. No rationale whatsoever is offered for including these wastes in the new "waste dump in waters" rule.

For mountaintop removal mining wastes, the Bush administration and the coal mining companies claim that there are no alternatives, but again, provide no real analysis. In fact, there are alternatives. The first is to mine in a way that does not generate as much waste as completely blowing off the tops of mountains does. This is not the only way to mine coal, although some companies argue it is the cheapest. But the majority of existing mining permits in West Virginia and Kentucky have been issued without any valley fills.

Even for coal mining operations that do seek approval to bury streams, alternatives are likely to be available. These alternatives include placing waste on previously mined areas that were not returned to their original contour or other previously disturbed areas such as old refuse impoundments; using side hill fills; and taking waste to other more distant disposal locations. In addition, coal companies can redesign the configuration of their operations and change their mining equipment to reduce fill impacts. According to mining engineer John Morgan, an expert witness in the ongoing litigation, the impact of valley fill restrictions would vary from mine to mine and requires site-specific engineering analyses, so broad brush statements that the coal companies have no choice but to dump their wastes in streams are likely to be incorrect at many sites.

One recent example dramatically illustrates not only that alternatives are readily available, but also that the Corps will not require them nor will the coal companies utilize such alternatives unless forced to do so.

On June 3rd, the company that now owns the very mine that is the subject of the *Kentuckians For The Commonwealth* lawsuit wrote to the Corps to say that *they can mine their entire site without filling any waters of the US protected by the Clean Water Act.* Originally, this mine sought and received approval from the Corps to create 27 valley fills that would bury 6.3 miles of streams—an extremely large mountaintop removal operation. In fact, this operation was so potentially devastating to the environment that the EPA threatened to use its authority under the Clean Water Act, seldom invoked, to veto the permit. But the Corps persisted in its plan to approve the 27 valley fills, and under the Bush administration, the previously threatened veto evaporated and the Corps granted the approval for the project.

Less than a month after Judge Haden's decision enjoining the "waste dump" rule, Beech Fork mining company, the current owner of the site, wrote to the Corps to announce they determined they could mine the coal on their site—all of it—without creating any valley fills in waters of the US. The company's letter stated that they had bought an old mine site adjacent to theirs that "provides substantial acreage for spoil disposal out of the waters of the United States." So this company that was proposing over two dozen valley fills—for which the Corps presumably determined that no alternatives existed—suddenly found a way to mine the entire site without the massive stream destruction originally proposed and approved.

Underscoring the fact that this debate is not so much about the absence of alternatives as it is finding the cheapest waste disposal option available, Beech Fork went on to say in its letter that "[I]f it is determined that Judge Haden's order only applies prospectively and not to Beech Fork's original authorization, or should Judge Haden's decision be reversed on appeal, Beech Fork intends to operate as initially planned to operate pursuant to its original authorization." (Letter attached.)

Clearly, the Corps and EPA have never required coal mining companies to fully explore alternatives to dumping waste in streams. Because the agencies have not enforced the Clean Water Act, coal companies have found no reason to look elsewhere than the nearest valley and stream to dump their wastes. When citizens went to court themselves to enforce the Act, the Bush administration moved quickly to change the rules in an attempt to allow the companies to keep dumping their wastes in waterways rather than changing their practices, finding alternatives, and obeying the law.

Question 3. Most of the testimony at the hearing revolved around mountaintop removal and subsequent placement of mine overburden into waters. Do you see the implications of this rule confined to specific regions and practices, or are there national implications for water quality? Please explain what implications, if any, you see on a regional and/or national basis?

Response. While no other region of the country is likely to suffer the detrimental effects of this rule change as severely as the coal field communities of Appalachia, the destruction of wetlands, streams, rivers, lakes and other waters will occur nationwide. Section 404 of the Clean Water Act, which authorizes the Corps to permit

certain activities that "fill" waters, applies to all waters of the United States covered by the Act. Changing the definition of "fill" material to delete the waste exclusion, as the administration has done, places every water in the country in jeopardy. In other words, any industry that generates waste—other than traditional garbage—can now seek a permit from the Corps to allow them to dump their waste into any waterway anywhere, a practice prohibited by the Corps' own regulations for the last quarter century.

Expanding the §404 permitting jurisdiction to allow waters to be buried under hardrock mining tailings, other excavation wastes, construction and demolition debris, plastic waste and other refuse will have a significant destructive effect on the environment nationwide. Permitting industries to bury and obliterate waterways with waste will have severe adverse effects on water quality, water supplies, fish and wildlife habitat, flood control and floodplain management, as well as other health, safety, environmental and economic consequences for the communities wherever such waste fills are allowed.

The Bush administration's new definition of "fill" says that waters can be used as waste dumps, so in the water is where a lot of these wastes will end up. Given the quantity of industrial waste generated in the country each year, the prospects for our nation's waterways are frightening. The enormous volumes of just two of the several categories of waste explicitly listed as "fill" in the new rule—construction debris and hardrock mining waste—reveal how damaging this rule change will be, if its implementation is not blocked by the courts or overturned by Congress.

The EPA estimates that *136 million tons* of building-related construction and demolition debris (C&D) was generated in the United States in 1996, and this is just one category of C&D waste. A 1992 Congressional Office of Technology Assessment report estimated that the hardrock mineral mining industry generated about *1.7 billion tons* of extraction and related wastes in 1987, and this does not include mineral processing and other related hardrock mining wastes.

When companies are allowed to fill waters with waste, water quality is not only harmed, the waterway is obliterated. As Judge Haden explained in his opinion in the Bragg case in October 20, 1999:

> When valley fills are permitted in intermittent and perennial streams, they destroy those stream segments. The normal flow and gradient of the stream is now buried under millions of cubic yards of excess spoil waste material, an extremely adverse effect. If there are fish, they cannot migrate. If there is any life form that cannot acclimate to life deep in a rubble pile, it is eliminated. No effect on related environmental values is more adverse than obliteration. Under a valley fill, the water quantity of the stream becomes zero. Because there is no stream, there is no water quality.

The same effect—obliteration—will occur in other waters, including ephemeral streams, which are vitally important to downstream water quality, wetlands, and river segments when they buried under piles of mining tailings or construction debris or excavation wastes. While the destruction of waters is unlikely to occur elsewhere on the scale that it does in Appalachia, it is undeniable that the effect of "filling" waters with waste is that the waters are destroyed.

Nonetheless, the Corps and EPA completely failed to analyze the regional or nationwide environmental consequences of eliminating the waste exclusion from the definition of fill material. The Bush administration conducted no studies or analyses whatsoever to measure these impacts. Given the enormous quantities of these wastes generated every year across the country, we can only conclude that the nationwide effect of the rule change on the nation's waters will be significant.

Question 4. Please describe your views of the EPA's and the Corps responsiveness to public comments following the April 2000 proposed fill rule definition change and public involvement in the changes to the rule announced on May 3, 2002.

Response. Under the Clinton administration, the agencies were very responsive to the public's comment and concerns. In finalizing the change in the definition of fill, the Bush administration agencies were responsive to only one set of comments—those of the mining industry.

The overwhelming majority of comments filed on the proposed rule—over 17,000—strongly opposed deleting the waste exclusion from the definition of "fill" material. Fewer than a dozen comments—all from coal or hardrock mineral mining companies plus one from the asphalt manufacturers' association—supported the proposal to eliminate the waste exclusion to allow waste dumping in waters.

The Clinton administration did not finalize the proposal to eliminate the waste exclusion from the rule, consistent with the comments of the overwhelming majority of commenters. In contrast, Bush administration completely ignored the public com-

ments; not only did it finalize this destructive rule change, it did so exactly to the specifications of the mining industry.

The response to public comments summarized in the preamble to the final rule and contained in a separate "responsiveness" document are not responsive at all to the vast majority of comments—those opposed to the rule change. Both documents are replete with unresponsive, conclusory, and unsubstantiated statements that repeat the same assertions over and over without providing any factual information or environmental analysis to support the administration's oft-repeated claims that this rule simply conforms to past practice and will not harm the environment.

Not only did the Bush administration ignore the concerns of the public to heed the desires of the mining industry to get rid of the waste exclusion generally, *but the only changes made in the final rule were changes the National Mining Association and its allies asked the agencies to make.*

Unfortunately, both of the NMA changes eliminated provisions that were in the proposed rule that would have excluded at least some categories of waste from being eligible as "fill." That is, under the Clinton administration, there were two provisions in the proposed rule that would have kept at least some modest limits on dumping certain industrial waste into waterways under § 404. While neither of these two provisions were adequate substitutes for the broad-based waste exclusion that was proposed for deletion, both would have restricted the permitting of processed or contaminated waste materials under § 404.

Both provisions were removed from the Bush administration's final rule at the request of the National Mining Association and its member groups, including both coal mining and hardrock mineral mining interests that wanted the final rule written to their specifications. In the final rule, the Bush administration gave them exactly what they asked for.

First, the preamble to the April 2000 proposed rule suggested that the final rule would contain a definition of "unsuitable fill material." The proposal stated that the Corps could include within its regulations a definition for "unsuitable fill material" that would read generally as follows:

> The term "unsuitable fill material" means any material proposed to be discharged into waters of the United States that would fall under the definition of "fill material," but which the District Engineer determines to *have physical or chemical characteristics that would make the material unsuitable for a proposed discharge into waters of the United States,* so that there is no reasonable possibility that a section 404 permit can be granted for the proposed discharge of that particular material. *For example the District Engineer may determine that fill material is unsuitable because of the potential for the leaching of contaminants from the fill material into ground waters or surface waters.* . . . In most circumstances, heterogeneous solid waste, discarded appliances, and automobile or truck bodies would qualify as unsuitable fill material. *In addition, material containing toxic pollutants in toxic amounts (see section 307 of the Clean Water Act) is unsuitable fill material.* 65 Fed. Reg. at 21296–21297 (emphasis added).

In its comments on the rule, the mining association argued that having a category of "unsuitable fill material" could lead to the denial of some permits—obviously not the outcome they desired. So the unsuitable category was dropped in the final rule.

Second, the definition of fill in the April 2000 proposal contained an exception for discharges covered by proposed or final effluent limitations guidelines and standards of the Clean Water Act and discharges already covered by a permit issued under § 402 of the Act. At the time, the EPA and Corps argued that the proposed "effects-based" definition of fill material *required* this clarification *"because, read literally, it could subject to regulation under CWA section 404 certain pollutants that have been, are being, and should be regulated by the technology and water quality based standards used in the section 402 program."*

But the NMA did not like this proposal either, again because it might limit mining companies' ability to get "fill" permits for some waste discharges. So despite the agencies' earlier concerns, the Bush administration dropped this language from the final rule as well.

In the final rule, the Bush administration took the position, in accordance with NMA's instructions, that no waste (other than trash or garbage) generated by any industry is unsuitable for dumping into waters of the United States, even if it is toxic. Both the "unsuitable waste" category and the effluent limitation language were gone from the final rule. The mining companies completely got their way; theirs were the only comments to which the Bush administration rule change was responsive.

AMERICAN RIVERS, DEFENDERS OF WILDLIFE, EARTHJUSTICE, ENDANGERED SPECIES COALITION, FRIENDS OF THE EARTH, MINERAL POLICY CENTER, LEAGUE OF CONSERVATION VOTERS, NATIONAL AUDUBON SOCIETY, NATIONAL PARKS CONSERVATION ASSOCIATION, NATIONAL WILDLIFE FEDERATION, NATURAL RESOURCES DEFENSE COUNCIL, PHYSICIANS FOR SOCIAL RESPONSIBILITY, SCENIC AMERICA, SIERRA CLUB, THE COAST ALLIANCE, TROUT UNLIMITED, U.S. PUBLIC INTEREST RESEARCH GROUP, WORLD WILDLIFE FUND,
MARCH 8, 2002.

Hon. GEORGE W. BUSH,
President of the United States,
The White House,
1600 Pennsylvania Avenue, NW.,
Washington, DC.

DEAR MR. PRESIDENT: Our organizations are deeply concerned that your Administration is poised to change an important Clean Water Act regulation in order to authorize the Army Corps of Engineers to permit coal mining companies and other industries to bury waters of the United States with waste materials. The proposal would eliminate from existing regulations a long-standing prohibition against using waste materials to fill streams, rivers, lakes and wetlands. Dropping the waste exclusion from the law would threaten bodies of water across the country and is flatly inconsistent with the goals of the Clean Water Act. We urge you to direct the Army Corps and the Environmental Protection Agency not to bury waters with waste dumps by changing clean water regulations.

This rule change is primarily an effort to legalize the destructive practice known as mountaintop removal coal mining, in which the tops of mountains are literally blown apart to reach seams of coal and the millions of tons of waste generated are dumped into nearby streams. Just in West Virginia alone, over 1000 miles of streams have been destroyed or targeted for destruction by this form of mining. The extreme environmental consequences of this rulemaking would not end with mountaintop removal coal mining; the rule change would also sanction other waste disposal practices in waters of the United States, including the dumping of hardrock mining waste and other industrial wastes.

At issue is the Army Corps' definition of "fill," which determines the scope of the agency's jurisdiction to issue permits pursuant to section 404 of the Clean Water Act. Under the current definition, "fill" means any material "used for the primary purpose of replacing portions of the waters of the United States with dry land or which changes the bottom elevation of a water body; *except that the term does not include any pollutant discharge composed of waste.*" The proposed new definition would say that any material that has the effect of replacing portions of waters with dry land or changing the bottom elevation of a water body is permissible for use as "fill" material. While there are some environmental gains from changing from the "primary purpose" to an "effects" test, the proposed rule is nonetheless completely unacceptable because it would open up waters across the Nation for filling with wastes by deleting the waste exclusion in the existing rule.

Unifying EPA and Army Corps definitions of "fill" makes sense, and other changes to the definition could resolve some ambiguity in the current regulatory scheme, but the proposed rule change goes far beyond those legitimate goals. The rule would result in an unconscionable weakening of the Clean Water Act by allowing the Corps to permit waters to be turned into waste dumps—the very thing the Act was adopted to prevent.

Changing the definition of "fill" was proposed by the Clinton administration in April 2000. During the notice and comment period, over 17,000 members of the public, over 20 national environmental groups and dozens of Members of Congress objected to the plan to strip the waste exclusion from the definition, while only a handful of mining companies and industry trade groups offered support for the new rule. As a result, the previous Administration never finalized the change. We ask you to reconsider this proposal as well. Instead of moving forward with this change, you should ensure that the Corps cannot permit disposal of millions of tons of industrial wastes into our waterways or take any similar action that would so dramatically compromise our clean water laws.

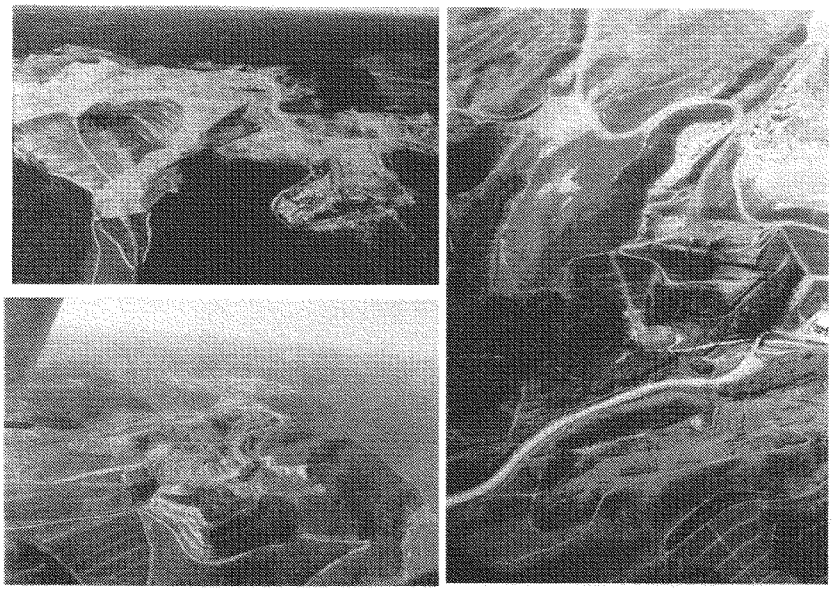
In sum, we oppose any changes to Clean Water Act rules that would allow waters of the United States to be buried and forever destroyed by coal mining waste, hardrock mining waste, and other industrial wastes. We respectfully ask you to uphold the integrity of the Clean Water Act, which was passed 30 years ago with the goal of protecting the integrity of the nation's waterways and the health of the coun-

try's communities. Our organizations stand ready to work with you to achieve this goal.

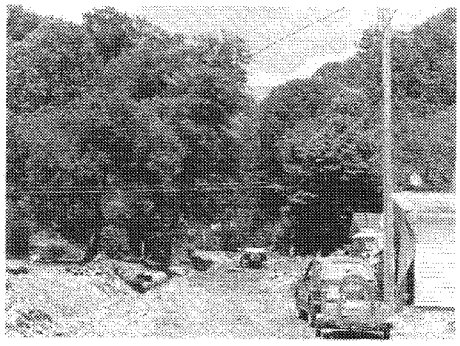
Sincerely,

Mark Van Putten, President and CEO, National Wildlife Federation; Thomas C. Kiernan, President, National Parks Conservation Association; Brooks Yeager, Vice President, Global Threats, World Wildlife Fund; John Flicker, President, National Audubon Society; Rodger Schlickeisen, President, Defenders of Wildlife; Rebecca R. Wodder, President, American Rivers; Meg Maguire, President, Scenic America; Jackie Savitz, Executive Director, The Coast Alliance; Robert K. Musil, PhD, MPH, Executive Director and CEO, Physicians for Social Responsibility; Deb Callahan, President, League of Conservation Voters; Carl Pope, Executive Director, Sierra Club; Vawter Parker, Executive Director, Earthjustice; John Adams, President, Natural Resources Defense Council; Stephen D'Esposito, President, Mineral Policy Center; Brent Blackwelder, President, Friends of the Earth; Gene Karpinski, Executive Director, United States Public Interest Research Group; Brock Evans, Executive Director, Endangered Species Coalition; and Charles Gauvin, President and CEO, Trout Unlimited.

Valley Fills
at Mountaintop Removal Mines in Kentucky and West Virginia
Aerial Views

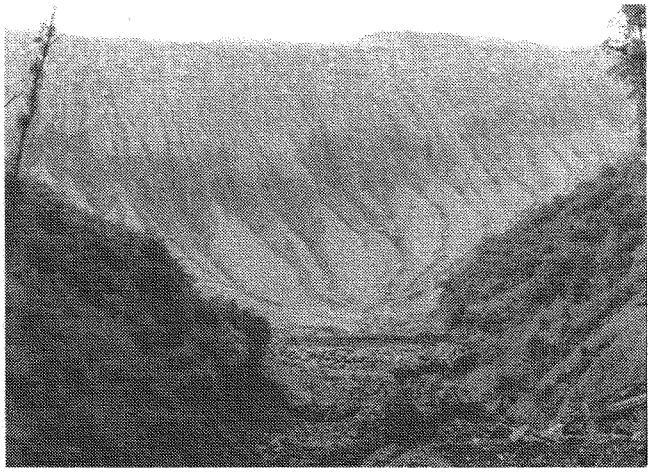


In July 2001, floods devastated Bulgar Hollow in Raleigh Co., W Va., which is just downstream from an AEI Resources, Inc. mountaintop removal / valley fill mine.

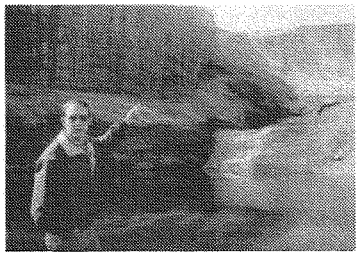


The valley fill is visible in the central background.

Photos by Vivian Stockman (OVEC www.ohvec.org)



Valley Fill on the Headwaters of White Oak Creek in Raleigh Co., W.Va. at a CC Coal Mountaintop Removal Mine, owned by AEI Resources, Inc. (Addington brothers of Ky.) Photos by Robert Gates bob_gates@wvwise.org



(Right) Joe Barnett of Artie, W.Va. lives below the White Oak Creek valley fill. During the July 2001 floods, the sediment pond below the valley fill filled with mud, and raging runoff waters dug a channel into the pond's dam. **During heavy rains in 1997, a boy and a woman on their way to church drowned in a similar flash flood from this valley fill.**

(Left) Barnett shows Julia Bonds and Freda Williams where the coal company proposes to begin another mountaintop removal / valley fill mine. Addington's flattened mountain and filled-in valley can be seen behind Barnett's house.

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA
AT CHARLESTON

PATRICIA BRAGG, et al.,

Plaintiffs,

vs. CIVIL ACTION
NO. 2:98-636

COLONEL DANA ROBERTSON, et al.,

Defendants, and

HOBET MINING, INC., CATENARY COAL COMPANY and MINGO-LOGAN COAL COMPANY, (Permittee Intervenors), WEST VIRGINIA COAL ASSOCIATION and WEST VIRGINIA MINING & RECLAMATION ASSOCIATION,

Defendants/Intervenors.

The deposition of RODNEY L. WOODS, taken upon oral examination, pursuant to notice and pursuant to the Federal Rules of Civil Procedure, before Johnny J. Jackson, Registered Diplomate Reporter and Notary Public in and for the State of West Virginia, Monday, November 30th, 1998, at the U.S. Courthouse, Potter Stewart Courthouse Building, 100 East 5th Street, 2nd Floor, Cincinnati, Ohio.

JOHNNY JACKSON & ASSOCIATES, INC.
606 Virginia Street, East
Charleston, WV 25301

(304) 346-0340

APPEARANCES

LAW OFFICES OF SUZANNE M. WEISE (Suzanne M. Weise and Patrick C. McGinley appearing), 737 South Hills Drive, Morgantown, West Virginia 26505, (304) 292-3822, Counsel on behalf of the Plaintiffs

MOUNTAIN STATE JUSTICE, INC. (Joseph Lovett appearing), 922 Quarrier Street, Suite 525, Charleston, West Virginia 25301, (304) 344-3144, Counsel on behalf of the Plaintiffs.

U.S. DEPARTMENT OF JUSTICE, ENVIRONMENT & NATURAL RESOURCES DIVISION (Steven E. Rusak appearing), 601 D Street, N.W., Suite 8000, Washington, D.C. 20004, (202) 514-9275.

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF LEGAL SERVICES (Thomas L. Clarke appearing), 1356 Hansford Street, Charleston, West Virginia (304) 558-8188.

JACKSON & KELLY (James R. Snyder appearing), 1600 Laidley Tower, P. O. Box 553, Charleston, West Virginia 25322, (304) 340-1298, Counsel on behalf of the West Virginia Coal Association and the West Virginia Mining & Reclamation Association.

PLAINTIFF'S EXHIBIT 17

I N D E X

DEPONENT - RODNEY L. WOODS

RODNEY L. WOODS, DEPONENT, SWORN

EXAMINATION

BY MR. LOVETT:

Q. Would you state your name for the record, please?

A. Rodney L. Woods.

Q. Could you describe your education?

A. I'm a civil engineer. I graduated from West Virginia Institute of Technology. I have some master's hours from Virginia Polytechnic Institute State University in environmental studies.

Q. And your work experience, please?

A. I have worked 29 and a half years for the Army Corps of Engineers at several locations.

Q. Could you be a little more specific, just say since 1980 tell me your positions and how long you held them and what your responsibilities were?

A. In 1980 I was head of a small office in Grand Junction, Colorado, that implemented the Clean Water Act Section 404 permit program in western Colorado and the corners of several other states out there.

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I came to Cincinnati in late 1982 and have basically been the division office representative for the Corps in the regulatory programs. There was a time period there where I had a supervisor, in the regulatory program, for several years, four or five years, I don't remember.

Now, as near as a title as we can describe, I'm the regulatory program manager for the division, which includes seven districts.

Q. Who do you report to?

A. Right now I report to Paul Robinson. He's the chief of engineering and technical services for the Great Lakes and Ohio River Division of the U.S. Army Corps of Engineers.

Q. He is the only person above you in Cincinnati then, in this district?

A. No. General Van Winkle, and there is an interim supervise or a position that no one is in right now.

Q. Could you describe your job responsibilities?

A. My job responsibilities are generally to try to manage the regulatory program across the

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seven districts and interact with our headquarters office in Washington on issues that come up to my level, usually covering some large area or large impact or new regulation.

Do you want me to be more specific?

Q. For instance, what kind of day-to-day things do you do in supervising district offices like the one in Huntington?

A. They don't directly work for me. But it is my responsibility to try to determine, one of the big things I do is try to determine what is going on in districts and how they handle certain specific items and try to get those items applied in the regulation or in policy across the board in different districts the same way.

I collect the numbers to find out what is being done in the districts. I try to apply the budget according to the workload over those seven districts.

And I try to test the new regulations that come out through the disiricts and get the feedback on how they should be changed and try to help in the writing of new regulations, new policies, those things.

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Q. Did you say that the Huntington district does not report to you?

A. They do report to me, but not directly in a supervisory way. The Corps doesn't work quite that way. I do deal directly with them. They do report information to me. They report policy problems to me, and I try to work with them in seeing that things work in a similar way. I don't direct them specifically to do certain things. I usually recommend across the board. I research the problems, and I do my best to persuade the different districts to do everything in a similar kind of way.

Does that answer your question?

Q. Do you have the authority to overrule their decisions?

A. Technically not without going through my supervisory chain and having them direct it. My General can direct the district. He is a general. The leader of the district is a colonel.

I can write policy statements, and if the General approves them they become directives to the districts. I don't know do that very

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often.

Q. What is your relationship with the Corps headquarters?

A. Similar in a reverse way, where they are the headquarters and I'm the duty officer. And my counterparts in other divisions, we work very similar but not exactly the same, and we treat our districts in somewhat similar ways but not exactly the same.

Q. When you prepare one of the policy statements you just mentioned, would that guide the West Virginia district office's determinations?

A. Yes. It would.

Q. Have you prepared any such directive for 404 issuance of valley-fill permits?

A. No. Not written. I mean, I usually try not to order people around with the General. I try to persuade them that this is the right way to do it in the interpretation of the regulation.

Q. Are you familiar with the Corps' role in permitting valley fills associated with surface coal mining?

A. Yes, generally speaking.

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protected area here making recommendations on a permitting decision that hasn't yet occurred.

MR. LOVETT: I'm not asking about what will happen in the future. I'm only asking about recommendations that he may have made about whether or not the permit should issue.

MR. RUSAK: I think that squarely falls within the deliberative process privilege.

MR. LOVETT: Let me try it a different way.

BY MR. LOVETT:

Q. Did you discuss with anyone in the district office, the Huntington office, whether or not valley fills, whether or not that valley fill should be authorized -- well, that's the same thing.

MR. LOVETT: I don't think that is a deliberative privilege issue because we are just asking for the Corps' position to this point. I'm I'm not asking what the Corps' position will ultimately be. Mr. Woods may not know that. I just want to know what recommendations he has made on this particular permit.

MR. RUSAK: Which has not yet been

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A. I told you on the telephone --

Q. Before the lawsuit was filed.

A. Which was after, after the question had begun to rise up from the districts, I told you that I felt that the way the regulation read the Corps did not technically regulate valley fills, or that it wasn't really our job to do that.

Q. Before March 1998, though, is it fair to say that the Corps was authorizing valley fills?

A. I did not know that in March. I mean, I don't know the date exactly, but I probably didn't know that then, whether they were or not. But I probably assumed they weren't.

Q. Because you don't know whether or not they were issuing them, then you wouldn't know whether they were individual or nationwide permits?

A. Now, wait a minute.

MR. RUSAK: I'm going to object.

A. That's not really true. That's not an accurate statement.

Q. I asked you if before March of 1998

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issued.

MR. LOVETT: Which has not yet been issued.

MR. RUSAK: I see that as squarely within the deliberative process privilege. I mean, the privilege protects candid, frank recommendations between superiors and subordinates. The decision hasn't been issued, and I think it is squarely privileged, Joe.

(Discussion off the record.)

BY MR. LOVETT:

Q. Prior to March 1998, does the Corps have a policy or position concerning whether valley fills associated with surface mining may be permitted under Section 404 of the Clean Water Act?

A. I don't recall anything written down. The question hadn't been specifically asked such that we had to make some kind of a policy statement. It was my general feeling, and I told you on the telephone -- I don't know, when was that?

Q. I don't even know. Sometime in the summer.

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the Corps was authorizing valley-fill activities under 404.

A. You are telling me they were?

Q. No, I am asking you if they were.

A. At some time it has come to my knowledge that they may well have been doing that either indirectly or by default or it may have effectively been done in the Huntington district.

Q. But you did not know it at the time, you found that out later?

A. Yes. One reason I didn't know is the question had never been specifically asked. Although it was my general knowledge and experience with that subject and related type items that I would have said, no, we don't regulate it, and I would have probably made a recommendation on not the same type, on another type of project that we didn't, in another district.

Q. The reason I'm using March of 1998 is because we learned in the previous deposition that that was when the Huntington district's policy changed from issuing the 404 permits to not issuing them.

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So before March of 1998, when the Corps was granting 404 permits for valley fills, did it have any written policy or analysis explaining why the placement of mining spoil qualified as fill material in the Corps' definition as a fill material.

A. Do you want to try that again?

Q. Before March of 1998, did the Corps have any written policy or analysis explaining why the placement of mining spoil qualified as fill material under the Corps' definition of fill material?

A. Probably the opposite, if I understood your question.

Q. Are you aware of any document that analyzes this issue before March of 1998?

MR. RUSAK: I have got a question. Are you asking him for any kind of predecisional documents or a final policy statement?

MR. LOVETT: Either.

MR. RUSAK: Prior to March of 1998?

MR. LOVETT: Generated before March of 1998.

A. My recommendation after that, or to

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and memorandums with EPA. I am sure it is stuff you already have, or reasonably sure.

Q. In March of 1998, or thereabouts, did the Corps' policy or position in West Virginia change concerning whether or not valley fills associated with surface coal mining could be authorized under 404?

A. I presume it did.

Q. Do you have knowledge of a change?

A. Indirect.

Q. How did you come upon that?

A. Just talking with the district people.

Q. Who did you talk with?

A. Rick Buckley.

Q. How did it change?

A. I suppose they quit specifically saying that they were regulating, quote/unquote, valley fills under NW 21.

I'm not sure that they necessarily specifically intended to regulate the valley fill itself along the way. Maybe it just sort of, I don't know, maybe they just sort of oozed into that. I don't know. I can't say for sure.

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make any changes --

MR. RUSAK: I just want to stop here for a second. You can't get into deliberative process areas here. He is asking you if there was documents, not what your recommendations were.

I mean, is that right?

MR. LOVETT: That's the question, that's right.

MR. RUSAK: You should just answer his question.

A. There are some sorts of documents or reasons to deliberate and come up with the decision or the call that I made. Yeah.

Q. What would the time frame have been for those documents, just roughly?

A. Clear on back through the eighties, on back through the eighties.

Q. About this issue of 404 permits for valley fills?

A. It may have not been directly related that way. It may have been related to garbage dumps, disposal of coal waste maybe, but not necessarily the discussion about valley fills, but those kinds of things over -- and our regulations

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Q. Why did that policy change in March?

A. Because the question was asked.

Q. Could you recount your decisions with Mr. Buckley about that, just generally the information contained in the descriptions?

MR. RUSAK: Do you want to stop?

MR. LOVETT: Yes.

MR. RUSAK: It is unclear to me what you are asking.

MR. LOVETT: I'm asking about in March of 1998 there was a decision made in Huntington to change the policy such that valley fills would no longer be authorized under Section 404. I just wanted to know if he had discussions with Mr. Buckley about that policy change.

MR. RUSAK: If he had discussions but not what the substance was?

MR. LOVETT: And what the substance was. This is back in March.

MR. RUSAK: I think we are getting into deliberative process again.

MR. LOVETT: As I understand it, we are allowed to discover information about the Corps' effective policy. The effective policy in

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March of 1998 was that no valley-fills permits would be authorized. So I want to know about that effective policy, not about what is going to happen in the future. I want to know about what happened in March or before March to help this change along.

And that goes to the Corps' policy in March of 1998, not to the Corps' future policy.

MR. RUSAK: But the underlying discussion between a subordinate and a superior in the process of developing it would be privileged. The rationale for the decision and the decision itself he can testify to, but the substance of the discussions, I mean, that is clearly privileged, Joe.

MR. LOVETT: What did Judge Hogg mean when he said interpretive memorandum, which I wish I had that order with me.

Will you object if I ask what rationale did Mr. Buckley give you for no longer authorizing those activities?

Is that acceptable?

This doesn't go to the future; it just goes to March of 1998.

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MR. RUSAK: I think we are talking about privileged stuff as well. The substance of the discussions is privileged.

(Discussion off the record.)

BY MR. LOVETT:

Q. What was the basis for the decision in March of 1998 to discontinue authorizing valley-fill activities?

A. Our definition of fill in our old memorandum of agreement with EPA that said they would regulate waste, and we were somewhat, although there was a lot of argument from outside the Corps about that, EPA attorneys, the Fourth Circuit case in West Virginia, there was considerable argument that said something totally different than everybody else said. But it seemed to us, the Corps, that we were probably on firm ground not regulating it, and it was based on the MOA and the definition, too.

Q. Was this the first time that you had analyzed this issue in any detailed and rigorous way?

A. Yes.

Q. What materials did you review?

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A. The things that I have already described. I also talked with my folks in Louisville who I assume found out we are not regulating those specific fills.

Q. Who else did you consult with?

A. I consulted with folks in OSM in Lexington and Charleston and Washington, the EPA in Philadelphia. I discussed it with my attorney here, Terry Kelley, and the folks I deal with in headquarters, John Studt and Kirk Stark.

Q. Can you tell me who at EPA and OSM and the other agencies you've were talking to?

A. Dan Sweeney, Tom Maslany, Rich Pipino wanted to jump?

Stefania Shamut, If I pronounced that right.

There could have been others, I don't know, lesser -- there are plenty.

Q. Were you satisfied at the time decision was made in March to withhold issuance or withhold approval that it was the correct one?

A. Yes.

Q. Were you satisfied that it reflected a full consideration on the issue?

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A. What do you mean?

Q. Were you satisfied that you had the opportunity to consider the issue carefully and talk to the right people and read the right documents?

A. As best I could.

Q. What role did John Studt play?

A. In the beginning I fed him a lot of information, and then he did some review and he talked to some of the folks in Huntington. He has talked with EPA and people higher up in the chain of command in the Corps, and maybe even over in the Secretary's office, high-up folks with EPA.

Q. How involved was the West Virginia office?

A. They were involved -- West Virginia, which office?

Q. The Huntington office.

A. Three-way calls, then, myself, John Studt.

Q. Was anyone else at national headquarters involved in the decision?

MR. RUSAK: Objection, vague.

Q. The decision to withhold approval?

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

0 9 MAY 2002

REPLY TO
ATTENTION OF

CECW-OR

MEMORANDUM FOR RECORD

SUBJECT: Environmental Assessment and Finding of No Significant Impact for the Final Rule: Revisions to the Clean Water Act Regulatory Definitions of "Fill Material" and "Discharge of Fill Material"

1. This Environmental Assessment (EA) addresses the factors considered by the Corps of Engineers (Corps) during the public process associated with revising the definitions of the terms "fill material" and "discharge of fill material." This document contains a discussion of the environmental considerations necessary to comply with the National Environmental Policy Act (NEPA), including an alternatives analysis, and a general assessment of individual and cumulative impacts.

2. Proposed Rule / Final Rule

a. The proposed rule, which was published in the Federal Register on April 20, 2000, intended to revise the U.S. Army Corps of Engineers (Corps) regulations at 33 CFR §323.2 to adopt the following definitions:

(e)(1) Except as specified in paragraph (e)(2) of this section, the term fill material means material (including but not limited to rock, sand, and earth) that has the effect of:

(i) Replacing any portion of a water of the United States with dry land; or

(ii) Changing the bottom elevation of any portion of a water of the United States.

(2) The term fill material does not include discharges covered by proposed or final effluent limitations guidelines and standards under sections 301, 304 or section 306 of the Clean Water Act (see generally, 40 CFR part 401), or discharges covered by an NPDES permit issued under section 402 of the Clean Water Act.

(f)(1) The term "discharge of fill material" means the addition of fill material into waters of the United States. The term generally includes, without limitation, the following activities: Placement of fill that is necessary for the construction of any structure in a water of the United States; the building of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and sub-aqueous utility lines; placement of fill material for

CECW-OR
SUBJECT: Environmental Assessment and Finding of No Significant Impact for the Final Rule: Revisions to the Clean Water Act Regulatory Definitions of "Fill Material" and "Discharge of Fill Material"

construction or maintenance of liners, berms, and other infrastructure associated with solid waste landfills; placement of coal mining overburden; and artificial reefs. The term does not include plowing, cultivating, seeding and harvesting for the production of food, fiber, and forest products (See §323.4 for the definition of these terms).

b. As was also indicated in the April 20, 2000, Federal Register Notice, the U.S. Environmental Protection Agency (EPA) proposed to revise its regulations at 40 CFR §232.2 to adopt these same definitions. As a result of concerns identified through public comment on the proposed rule, and through continuing interagency consultation, the Corps and the EPA have further amended these definitions, to read as follows:

(e)(1) Except as specified in paragraph (e)(3) of this section, the term fill material means material placed in waters of the United States where the material has the effect of:
(i) Replacing any portion of a water of the United States with dry land; or
(ii) Changing the bottom elevation of any portion of a water of the United States.
(2) Examples of such fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States.
(3) The term fill material does not include trash or garbage.

2. Specific Changes Adopted in the Final Rule

a. In the final rule, paragraph (e)(2), we have clarified the kinds of materials that would qualify as 'fill materials' by eliminating the previously proposed references to discharges that are regulated under sections of the Clean Water Act other than section 404, and instead we have provided descriptions of categories of materials that would normally qualify as 'fill material, '*i.e " Examples of such fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States.*

b. We have also specified that the term *'fill material'* does not include trash or garbage

c. We have amended paragraph (f) of the existing Corps regulations at 323.2 by adding the words *"or infrastructure"* after the words *"for the construction of any structure"*; adding the word *", infrastructure,"* after the words *"building of any structure"*; removing the words *"residential, and"* and adding in their place the words *"residential, or"*; and adding the words

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"placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; placement of overburden, slurry, or tailings or similar mining-related materials;" after the words *"utility lines;"*. The revised paragraph at 323.2(f) will now read, *"The term 'discharge of fill material' means the addition of fill material into waters of the United States. The term generally includes, without limitation, the following activities: Placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States; the building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, or other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and sub-aqueous utility lines; placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; placement of overburden, slurry, or tailings or similar mining-related materials; and artificial reefs. The term does not include plowing, cultivating, seeding and harvesting for the production of food, fiber, and forest products (See §323.4 for the definition of these terms)."* The addition of the term *"infrastructure"* in two sentences is intended to clarify that, similar to fills for any structure or impoundment, the placement of fill necessary for the construction of "infrastructure" qualifies as a discharge of fill material. The change from *"residential, and"* to *"residential or"* is intended to avoid the implication that no discharge of fill material would occur unless the fills for recreational, industrial, commercial, residential projects are combined with fills for other uses. Finally, the *"placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; placement of overburden, slurry, or tailings or similar mining-related materials;"* clarifies that these activities qualify as discharges of fill material.

3. Purpose & Need for the Final Rule

a. The purpose of adopting this final rule is to reconcile the long-standing disparity between the Corps and the EPA definitions of the term "fill material," both of which definitions were used in the administration of the Clean Water Act. The Corps definition employed a 'primary purpose' criterion as the basis for discriminating between discharges proposed primarily for construction-related purposes, and discharges proposed primarily to dispose of waste. The Corps believed that construction-related discharges in waters of the United States were properly regulated under section 404 of the Clean Water Act, while disposal-related discharges should properly be

regulated under section 402. The EPA definition of "fill material" employed an effect-based criterion that included as fill material any pollutant that replaces portions of the waters of the United States with dry land or that changes the bottom elevation of a water body for any purpose.

b. The 'primary purpose' basis of the Corps definition of "fill material" resulted in unintended consequences in the Corps' administration of the Clean Water Act section 404 regulatory program. The Corps has long held the view that discharges in waters of the United States for the construction of liners, berms, and infrastructure associated with solid waste landfills are 'discharges of fill material' that are regulated under section 404 of the Act. The Corps did not believe that the subsequent deposition of refuse in the landfill was regulated under section 404 because the refuse being deposited did not meet the 'primary purpose' test in its definition of "fill material." Litigation over the Corps denial of a section 404 permit for the construction of berms, liners and roads associated with the construction of a solid waste landfill resulted in a decision by the Ninth Circuit Court of Appeals that indicated, in part, that the gravel, soil, and synthetic liner did not meet the Corps definition of "fill material." In the Court's view, the primary purpose of the discharge of the gravel and soil was the installation of a leak detection and collection system. Despite the Corps' long term practice of regulating the discharge of such traditional fill materials under Section 404 of the Clean Water Act in similar circumstances, the Court reasoned that the primary purpose of this discharge was not to change the bottom elevation of a waterbody, or to replace an aquatic area with dry land. This ruling highlighted a vulnerability of the Corps definition of "fill material," which ultimately depends on a subjective determination, and on the context in which the discharge is considered. With all due respect to the Court's opinion, the Corps continues to believe that the Clean Water Act was intended to apply to such discharges, and that it was inherent subjectivity of the Corps definition of "fill material" that resulted in the exemption from Clean Water Act authority in this case. In light of the circumstances surrounding 'valley fills,' and of the possible implications of the Ninth Circuit Court of Appeals ruling in the landfill case, the Final Rule adopts an effect-based definition that clearly specifies that the placement of overburden , slurry, tailings or similar mining-related materials is included in the definition of "discharge of fill material," and that the placement of fill material in waters of the United States for the construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills is also included in this definition.

4. Review Process: The analysis in this document, and the coordination that was undertaken prior to the adoption of this final rule, fulfill the requirements of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, and other acts promulgated to protect the quality of the environment. The final rule's preamble, and its administrative record

document the various governmental agencies and non-governmental entities and persons who were consulted, and whose views were considered, prior to adoption of this final rule. The final rule, its preamble, and its administrative record are hereby incorporated by reference into this environmental assessment and FONSI.

5. Public Comment and Response: For a summary of the public comments received in response to the April 20, 2000, Federal Register notice, refer to the preamble in the Federal Register notice announcing the adoption of the final rule. The substantive comments received in response to the April 20, 2000, Federal Register notice were used to improve this rule, as necessary.

6. Individual and Cumulative Impacts

a. General Evaluation Criteria: This document contains a general assessment of the effects of the adoption of this final rule, and alternatives, on public interest and environmental factors that would likely occur as a result of the use of various definitions of the terms "fill material" and "discharge of fill material" in the administration of Clean Water Act authorities. As such, this assessment is speculative or predictive in general terms.

b. NEPA Alternatives: This evaluation includes an analysis of alternatives based on the requirements of NEPA, which mandates a more expansive review than the Clean Water Act Section 404(b)(1) Guidelines. The alternatives discussed below are based on an analysis of the potential impacts to the Corps, Federal and state resource agencies, general public, and prospective permittees.

(1) No Action Alternative: The no action alternative would leave in place the current disparate Corps of Engineers and EPA definitions of the term "fill material." If adopted, the no action alternative would invite further judicial interpretations that are not consistent with the current practice of either agency and, we believe, that are not consistent with the intent of the Clean Water Act. For the reasons explained fully in the Federal Register notice of the agencies' final rule, which Federal Register notice in its entirety is hereby incorporated by reference, the Corps has decided not to select the no action alternative.

(2) April 20, 2000, Proposal:

(i) The proposed rule that was published in the Federal Register on April 20, 2000, defined "fill material" as any material that has the effect of replacing any portion of a water of the United

States with dry land, or of changing the bottom elevation of any portion of a water of the United States, other than those discharges that are covered by proposed or final effluent limitations guidelines and standards under sections 301, 304, or 306 of the Clean Water Act, or those discharges covered by an NPDES permit issued under section 402 of the Act. Under this proposed rule, virtually all materials, other than those specifically excluded in the proposed rule, would qualify as "fill material." Since neither the Corps nor the EPA intended this proposed rule to imply that materials such as trash, industry process wastes, garbage, and similar materials were suitable materials for placement in waters of the United States as fill, the preamble to the proposed rule alluded to a prospective administrative protocol under which Corps District Engineers could refuse to process a permit application if it was determined that the material proposed for discharge into waters of the U.S. was unsuitable as fill. Further deliberations on this prospective protocol, conducted after the publication of the proposed rule and in consideration of the numerous public comments on this point, led the Corps to conclude that, without specific criteria for determining what constituted such 'unsuitable' materials, there was the potential for inconsistent decisions among Corps Districts, which would result in confusion for the regulated public.

(ii) For these reasons and those explained more fully in the Federal Register notice of the agencies' final rule, and in light of public comments, we have not selected the April 20, 2000, proposed rule as the selected alternative for the final rule. In order to address these concerns in the final rule, which is discussed below, we have abandoned the 'unsuitable fill' protocol that was outlined in the preamble to the April 20, 2000, proposed rule but included an exclusion from the definition of fill for trash and garbage.

(3) Current Final Rule:

(i) Like the April 20, 2000, proposed rule, the current final rule defines "fill material" as any material that has the effect of replacing any portion of a water of the United States with dry land, or of changing the bottom elevation of any portion of a water of the United States. However, the final rule specifies that the term fill material does not include trash or garbage. This approach maintains the scheme envisioned in the Clean Water Act, indicating that "fill material" is regulated under section 404 as a limited subset of a broader range of pollutants that are intended to be regulated under the Act. This approach also allows the Corps of Engineers to continue to regulate, as fill, those materials that are typically used for construction in waters of the United States, while it allows the EPA to continue to regulate the discharge of all other pollutants.
(ii) In addition to the placement of *coal mining overburden* that was specified in the April 20,

2000, proposed rule, the final rule includes the placement of overburden, slurry, tailings, or similar mining-related materials as activities that qualify as discharges of fill material. Since the placement in waters of the U.S. of by-products from varied mining operations often result in changes in the bottom elevation of such waters or in the replacement of aquatic areas with dry land, the Corps and EPA have agreed that such placement could readily qualify as the discharge of fill material. However, any post-placement effluent discharge from these 'fills,' into waters of the U.S. will remain subject to separate authorization under section 402.

(iii) Under the final rule, the Corps will regulate mining-related discharges that have the effect of fill material, in accordance with the final rule. However, the Corps scope of analysis in these cases will be limited to the effects of theses regulated discharges on aquatic resources. It will not be expanded to include the consideration of the terrestrial (*i.e.*, upland) and/or social impacts of mountaintop removal mining activities that are not directly subject to Corps authority under the Clean Water Act, as these activities are appropriately regulated under the authority of the Surface Mining Control and Reclamation Act.

c. Impact Analysis: The analysis of individual and cumulative impacts normally considers the expected effects of the action under consideration on various factors such as conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and considerations of property ownership. As was indicated in the preamble to the April 20, 2000, proposed rule, the Corps made a preliminary determination that the proposed rule did not constitute a major Federal action significantly affecting the quality of the human environment and, therefore, that the preparation of an Environmental Impact Statement was not required. Among the reasons for this conclusion is the fact that the Corps prepares appropriate NEPA documents for all of its permit decisions. The implementation of the procedures prescribed in the final regulation would not authorize anyone (e.g., any landowner or permit applicant) to perform any work involving regulated activities in waters of the U.S. without first seeking and obtaining an appropriate permit authorization from the Corps. In addition, this final regulation merely revises and clarifies the Corps' and EPA's respective definitions of the terms "fill material" and "discharge of fill material" to allow more objective determinations. Since the adoption of this final rule merely clarifies which sections of the Clean Water Act apply to which activities, is generally consistent with current agency practice, and does not itself authorize any activity, no actual individual or cumulative impacts to the human environment will occur, and none of the aforementioned factors will be affected solely by

promulgation of this rule. Ultimately, actual impacts will result from the application of section 404 of the CWA by Corps Districts to specific projects to be covered by a section 404 permit. These specific permit actions remain subject to the applicable requirements of all federal law, including the requirements of NEPA.

7. Public Interest Determination: The Corps has determined, based on information in this document, that the adoption of this final rule is not contrary to the public interest.

8. Finding of No Significant Impact (FONSI): Based on information in this EA document, which is incorporated by reference in this FONSI, the Corps has determined that the adoption of this final rule will have no significant impact on the quality of the human environment. Therefore, the preparation of an environmental impact statement is not required. This final rule reconciles the disparate Corps and EPA definitions of the term "fill material" by adopting an effect-based definition, and by excluding materials such as trash and garbage. The adoption of this rule will minimize the confusion that was previously caused by the differing Corps and EPA definitions of "fill material", and it will eliminate situations in which activities that are clearly subject to Clean Water Act authority are not regulated as intended by the Act because of the disparate definitions. The adoption of this rule simply clarifies agency roles and responsibilities under the Clean Water Act in a manner generally consistent with current agency practice. As such, it facilitates the proper regulation of prospective discharges into waters of the United States, as intended by the Act. Since the adoption of this rule will result in no significant effect on the quality of the human environment, the preparation and coordination of an Environmental Impact Statement is not required. Project-specific impacts resulting from the issuance of Corps permits involving the revised Corps definition of "fill material" will remain subject to all applicable NEPA requirements. Since the adoption of this rule will result in no adverse individual or cumulative effects on the environment or the public, and since it will minimize or eliminate the risks and inequities presented by the former disparate Corps and EPA definitions, the adoption of this rule is warranted.

Dominic Izzo
Principal Deputy Assistant Secretary of the Army
(Civil Works)

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

09 MAY 2002

REPLY TO
ATTENTION OF

Memorandum For Record

SUBJECT: Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the Final Rule Changing the Definitions of "Fill" and "Discharge of Fill Material"

1 On May 3, 2002, I signed the subject Final Rule, and sent it to the Federal Register for publication. When I signed the Final Rule on May 3, it was with the understanding that an official of the Corps of Engineers (i.e., the Executive Director of Civil Works) had already signed the subject EA and FONSI document. I was familiar with, and entirely in agreement with and comfortable with, the substantive content and conclusions of the subject EA and FONSI. Consequently, when I signed the subject Final Rule on May 3, 2002, it was my belief that all substantive and procedural requirements of the National Environmental Policy Act (NEPA) and the other Federal environmental laws had been complied with prior to my signing the Final Rule.

2 However, it has now come to my attention that the subject EA and FONSI document had not been signed prior to May 3, 2002, primarily because that draft document was still being corrected to remedy typographical errors and similar minor editorial errors. Consequently, to remove any doubt concerning technical and procedural compliance with NEPA, I am today myself signing the corrected EA/FONSI document, and I am also today re-signing the Final Rule. I am doing these things to ensure that the Administrative Record for the Final Rule reflects the fact that I was, and am, fully satisfied that the Final Rule has been, and is being, promulgated in full compliance with NEPA, and that the Department of the Army need not prepare an Environmental Impact Statement (EIS) under NEPA prior to finalizing and implementing the subject Final Rule.

Dominic Izzo
Principal Deputy Assistant Secretary of the Army
(Civil Works)

U.S. Fish & Wildlife Service

Permitted Stream Losses Due to Valley Filling in Kentucky, Pennsylvania, Virginia, and West Virginia: A Partial Inventory

September 1998

Prepared by:

Kentucky/Tennessee, Pennsylvania, Southwestern Virginia, and West Virginia Ecological Services Field Offices

ABSTRACT

Valley filling is a waste disposal practice used in the Appalachian coal fields that results in the burial of streams and terrestrial wildlife habitat. In response to the increasing number and size of valley fills, and the consequent potential for cumulative aquatic and terrestrial impacts, the U.S. Fish and Wildlife Service conducted an inventory of valley fill permits issued in four States to determine the number of miles of streams affected by this practice. Measurements were made of USGS-designated intermittent and perennial streams, with the addition of ephemeral streams for West Virginia. Stream totals for Kentucky, Virginia, and West Virginia included stream lengths between the valley fill toe and the downstream end of instream siltation ponds. Stream impacts authorized in Kentucky from April 1986 through July 1995 exceeded 354.8 miles. This total includes discharges of overburden and refuse into 180.6 and 21.4 miles of streams, respectively, with 152.9 stream miles affected between valley fills and instream siltation basins. In Pennsylvania, coal slurry impoundments and refuse disposal resulted in the loss of 12 stream miles from 1977 to the present. Between 1977 and early 1998, 61.1 miles of streams were affected in Virginia. Within West Virginia's five-county Logan mining region, 469.3 miles were lost between 1986 and mid-1998, including 123.5 miles and 345.8 miles of streams filled by refuse and overburden, respectively. The total number of stream miles affected by valley filling and associated instream treatment structures in these States is at least 897.2 miles. Since some mining regions of West Virginia and Kentucky were not evaluated in this study, the actual loss figure is expected to be higher.

PREFACE

Pursuant to the Fish and Wildlife Coordination Act (FWCA), the U.S. Fish and Wildlife Service has the lead role for the Department of the Interior in reviewing federally-permitted or funded land and water development projects, evaluating their potential impacts on fish and wildlife resources, and providing recommendations to the authorizing agencies on ways to eliminate or minimize adverse environmental impacts. Service review may result in a recommendation that a project proceed as proposed; that the project proceed with major or minor modifications to protect fish and wildlife; or, in some cases, that the potential environmental impacts are so severe that the project not be allowed. In addition, the FWCA (Section 665) authorizes ". . . the Secretary of the Interior, through the Fish and Wildlife Service, to make such investigations as he deems necessary to determine the effects of domestic sewage, mine, petroleum, and industrial wastes, erosion, silt and other polluting substances on wildlife, and to make reports to Congress concerning such investigations and of recommendations for alleviating dangerous and undesirable effects of such pollution." "Wildlife resources," as defined in the FWCA (Section 666(b)), include ". . . birds, fishes, mammals, and all classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent."

PERMITTED STREAM LOSSES DUE TO VALLEY FILLING IN KENTUCKY, PENNSYLVANIA, VIRGINIA, AND WEST VIRGINIA: A PARTIAL INVENTORY

INTRODUCTION

The term "valley fill," as used in this report, is a general term encompassing various waste disposal practices used by the coal industry. Valley fills result from multiple-seam mining (mountaintop removal, area mining, steep slope mining, and traditional contour mining), where as much as hundreds of vertical feet of soil and rock are removed from a mountain to access coal seams and placed in the adjacent valleys. Valley fills also result from coal processing operations. Whether coal is mined by surface or underground mining methods, most coal must be cleaned to remove impurities. The resulting waste, consisting of coarse refuse (rock and soil), and slurry (a mixture of coal fines and water remaining after the coal is washed), is often disposed of in valleys.

Disposal of coal mining waste material (overburden and coal processing waste) into stream valleys has occurred in the Appalachian coal fields for decades. Traditionally, the wastes were placed in the extreme headwaters of streams, affecting only ephemeral stream sections, and were referred to as "head of hollow" fills. The volume of these fills was generally less than 250,000 cubic yards each. In the mid 1980's, the size and number of mountaintop removal operations began to increase, especially in southern West Virginia. In 1990, the coal industry began to introduce large draglines to the eastern coal fields, increasing the scale and rate of mountaintop removal and steep slope mining. These new mining techniques result in tremendous volumes of overburden waste material and a consequent increase in the size of valley filling, extending into intermittent and perennial stream reaches. Today, the volume of a single stream fill can be as much as 250,000,000 cubic yards, with stream burials up to 2 miles long. As individual valley fills have increased in size, the number of valley fills has also increased in response to a steadily-improving market for coal, and coal production and use levels that have reached unprecedented highs (Energy Information Administration, 1995). In addition to aquatic habitat losses, terrestrial wildlife habitat losses have accelerated; surface disturbance once quantified in permit applications by numbers of acres today can be quantified in terms of square miles. The fills have resulted in the replacement of thousands of acres of deciduous hardwood forest by the herbaceous plant communities favored in most mine reclamation plans.

With increased coal production has also come an increased need for disposal areas for coal processing wastes. These coal slurry and refuse valley fills not only result in direct losses of fish and wildlife habitat, but may pose additional risks to the environment: In October 1996, the structural failure of a slurry impoundment in Virginia smothered all forms of aquatic life in 10 miles of streams, and degraded an additional 35 miles. The aquatic life affected included federally listed threatened and endangered mussels and fish, and their designated critical habitats.

In 1996, Fish and Wildlife Service biologists responsible for reviewing coal mining permits in Kentucky, Pennsylvania, Virginia, and West Virginia[1] began a coordinated assessment of impacts to fish and wildlife resources caused by valley filling. As a necessary first step in determining the scale of terrestrial and aquatic impacts in a cumulative sense, it was agreed that an inventory of valley fills should be conducted within each State. The goal would be to determine the number of miles of streams, acres of wetlands, and acres of terrestrial wildlife habitat lost due to valley filling from the date of initial implementation of the federal Surface Mining Control and Reclamation Act (SMCRA) in each State, through the present.

The data proved difficult to obtain. We found that permit information for valley fills is tracked differently in each State (sometimes differently between different regions of the same State); that no State is tracking cumulative losses to aquatic or terrestrial resources; and that, in some cases, the only way to obtain the data was to examine hundreds of individual permit files. The process was extremely labor-intensive and time-consuming.

The following report summarizes each office's inventory effort. As a result of the lack of readily-available information, the scope of the inventory was scaled back according to the time and manpower constraints of each Service office. Lost stream miles was the only parameter consistently measured by each office.

MATERIALS AND METHODS

General

Federal regulations implementing SMCRA require that the State regulatory agency provide an assessment of the probable cumulative hydrologic impacts (CHIA) of proposed mining operations upon surface and ground-water systems in each cumulative impact area. As an aid in the development of a CHIA, the regulatory agency in some instances tracks mining permits on 7.5-minute series, U.S. Geological Survey (USGS) topographic maps. In some cases, we were able to make use of State CHIA maps in measuring valley fill impacts. Because completion of mining at each mine site may require several years, during which mining plans may be altered, the total number of fills may be more or less than the number found on the CHIA maps during this study.

Stream measurement techniques varied somewhat among Service offices. However, USGS "blue line" stream designations for perennial or intermittent streams (solid blue line = perennial; dashed blue line = intermittent) were the primary basis for measurements. This method was used only for consistency and to ensure that our methods could be replicated, not because the Service considers USGS blue line designations to be indicators of the biological significance of the

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[1]Service "Ecological Services" offices in Cookeville, Tennessee (responsible for Kentucky); State College, Pennsylvania; Abingdon, Virginia; and Elkins, West Virginia.

aquatic resource present. The stream classification designations found on USGS maps are subjective and not based on biological or hydrological data. The preponderance of information used for the classification is gathered during brief field investigations, and comes from testimony of individuals who live near the streams. The USGS does not support the use of their stream classifications for final delineations of resource protection areas (USGS, 1997). Furthermore, future revisions to topographic maps will make no distinctions regarding stream classification.

Kentucky

The Kentucky Department for Surface Mining Reclamation and Enforcement provided Kentucky CHIA maps to the Service's Cookeville Office. The assessment involved 116 quadrangles, encompassing the southeastern portion of Kentucky where most of the State's mining activity is occurring. The watersheds affected include the Upper Cumberland, Big Sandy, Kentucky, and Licking Rivers. The permits examined were issued during the nine-year period between April 1986 and July 1995.

A ruler was used to measure affected stream sections, and these measurements were converted to miles using the map scale. Intermittent and perennial stream lengths, as designated by USGS solid and dotted blue lines, were recorded separately. In addition, stream segments that were directly affected by settling of sediment within stream channels and the placement of siltation structures were quantified (i.e., the distance between the toe of the valley fill slope and the toe of the downstream sediment pond). Aquatic habitat in stream reaches between the valley fill and the sediment pond is typically so impaired that we consider the entire distance incapable of supporting aquatic life.

Unfortunately, several CHIA maps covering important coal-producing areas of Kentucky were not available during this study.

Pennsylvania

A listing of permits authorizing valley fills that were issued by the Pennsylvania Department of Environmental Protection between 1977 and 1997 was obtained from the Pennsylvania Fish and Boat Commission. Valley fill locations were transferred to USGS topographic quadrangles. Total miles of streams were measured using a planimeter on USGS blue line, perennial, and intermittent streams. No attempt was made to separate perennial and intermittent stream miles.

Virginia

In Virginia, CHIA maps were not available for valley fills. Service staff obtained a listing of mining permits from the Virginia Division of Mined Land Reclamation and screened the list for various types of valley fill (mountaintop removal, slurry impoundments, refuse fills). Individual permits authorizing valley fills between 1977 and early 1998 were then examined, and valley fill locations were transferred to the corresponding USGS topographic quadrangle. The length of

intermittent and perennial streams (USGS blue lines) was recorded. In cases where treatment ponds were located downstream of the fill, the measured stream impact included the distance to the downstream toe of the impoundment.

West Virginia

Complete copies of CHIA topographic maps were made available to the Service by the Logan Regional Office of the West Virginia Division of Environmental Protection (WVDEP), Office of Mining and Reclamation. The Logan Region was the only one involved in this study; it includes the coal-producing counties of Logan, Lincoln, Boone, Wayne, and Mingo in southwestern West Virginia. The stream systems partially or wholly included in the Logan Region include the Little Coal, Guyandotte, Tug Fork, Big Coal, Twelve Pole, Mud, and Kanawha. Mining information on the CHIA topographic maps included hand-drawn boundaries of individual mining permits (with mining company name and permit number), locations of the lower-most point of each completed or anticipated valley fill, and type of valley fill (refuse vs. overburden fills). The maps included permits from 1986 to mid-1998.

Stream lengths that have been filled or approved for filling were measured, in feet, using a hand-held Swiss map-measuring wheel. Separate lengths were recorded for ephemeral streams in addition to USGS blue line stream categories. In most cases, the measurement of perennial and intermittent streams began at the lower-most point of the fill and proceeded upstream to the termination of the solid or dashed blue line. In cases where treatment ponds were shown, measurements included the distance to the toe of the pond. The upper-most point of buried ephemeral streams was determined by the apparent significance of the drainage, based on its specific topographic characteristics, and usually did not extend to the top of the drainage. Stream lengths were recorded separately for refuse fills and overburden fills.

RESULTS AND DISCUSSION

Kentucky

Mountaintop removal mining is important in Kentucky. However, among surface mining methods and in the eastern Kentucky coal fields, contour strip mining, in conjunction with auger-type mining, is most common. In 1996, Kentucky had more active surface mines than any other state (544), comprised primarily of contour strip mining and auger mining operations. The average size of Kentucky's surface mines in 1996 was 343 acres (Cole et al., 1997). Because of the large number and acreage of surface mines in some coal-producing areas, cumulative impacts to aquatic resources are a significant concern.

Table 1 summarizes the measured stream losses for Kentucky. Stream impacts that were authorized by the State during the nine-year study period of April 1986 through July 1995 were

Table 1. Stream miles approved for filling and the placement of siltation structures in the Eastern Kentucky Coal Field, April 1986 through July 1995.

	Miles of Stream Lost						
	Overburden Fills		Refuse Fills		Hollow Fills to Silt Structures		
Watershed	Int*	Per**	Int	Per	Int	Per	Total
Cumberland	16.6	22.1	0.1	2.5	10.1	18.6	*70.0*
Big Sandy	25.2	30.2	*5.9*	*2.2*	*17.5*	*25.2*	*106.2*
Kentucky	30.5	31.4	4.1	4.9	22.7	25.8	*119.4*
Licking	3.6	21.0	0.6	1.0	3.7	29.3	*59.2*
Total	*75.9*	*104.7*	*10.7*	*10.6*	*54.0*	*98.9*	
Total by activity	*180.6*		*21.3*		*152.9*		*354.8*

*intermittent
**perennial

in excess of 354.8 miles. These losses included the placement of overburden within 180.6 miles of streams. Refuse fills accounted for 21.4 miles of this total, and 152.9 miles were stream sections located between valley fills and in-stream siltation structures. This tally of lost stream miles is conservative: 130 quadrangles in the eastern Kentucky coal fields, where mining occurs to a lesser extent than in the area covered by the 116 quadrangles used in this study, were not examined. In addition, several CHIA maps that included important coal-producing areas were not available during our study; we estimate that these few CHIA maps would have added several miles of impacts to the totals.

Although some stream habitat in Kentucky which has been degraded by sedimentation impacts related to valley fills has recovered to a limited degree, many stream systems continue to be degraded by chronic pollution (i.e., mining is ongoing, sedimentation structures are still in the streams, or logging or haul road construction is causing sedimentation problems). This degradation affects invertebrate abundance and diversity, nutrient cycling, energy sources for biotic communities, and other factors that are essential components of healthy stream systems. In Kentucky, the potential effects of this degradation may also extend to a number of species recently listed under the federal Endangered Species Act as threatened or endangered, such as the blackside dace, little-wing pearly mussel, Cumberland bean pearly mussel, and Indiana bat, which depend on good to excellent water quality to survive and recover.

Notwithstanding the added effects of valley filling, mining continues to be a primary source of pollution in eastern Kentucky. Steps to remove each of the multiple-source pollution inputs will be important for the future of a large number of watersheds in the region.

Pennsylvania

Due to the nature of its coal deposits, there are no mountaintop-removal type valley fills in Pennsylvania. All Pennsylvania valley fills are coal slurry or coal refuse disposal sites related to coal processing facilities. Prior to 1995, valley fills for even this type of disposal were only infrequently allowed due to a provision in the State's Coal Refuse Disposal Control Act which prohibited the disposal of coal waste within 100 feet of streams. Nevertheless, we identified 39 existing valley fill sites. These projects have resulted in the loss of 12 miles of perennial and intermittent streams.

Virginia

In Virginia, we estimated that 61.1 miles of perennial and intermittent streams have been lost to valley filling within the southwestern coal fields from late 1977 to early 1998, and we noted an increase in the number of valley fill permits through the early 1990s. At this time, no effort has been made to differentiate between perennial and intermittent stream miles, or separate the impact data by watersheds. The mileage figure is conservative, as several permit packages were not available for review at the time of our study; nonetheless, those additional permits are not expected to add significant mileage to the total.

Much of the valley fill activity in Virginia is occurring in sensitive watersheds, such as the upper Tennessee River basin, where 22 federally listed threatened or endangered species of mussels and fish occur. In addition to the risks to these species associated with catastrophic failures of coal waste disposal sites, there is the potential for significant cumulative effects on these species due to an increasing number of valley fills.

West Virginia

Table 2 summarizes measured stream losses. We estimate that a total of 469.3 miles of perennial, intermittent, and ephemeral streams have been lost to valley filling in the Logan Region from 1986 to mid-1998. Refuse fills accounted for 123.5 miles of these losses, and overburden fills resulted in the loss of 345.8 miles.

Watersheds listed in Table 2 are primarily within the WVDEP Logan Region. The Kanawha River watershed is partially included in the Logan Region, but most of that area is included in the adjacent Oak Hill Region. There appears to be significant mountaintop removal and valley filling activity in the Oak Hill region, particularly within the Kanawha drainage, but CHIA maps for the Oak Hill Region are not available. Valley filling also occurs in the Welch and Philippi Regions, and the extent of stream loss in those Regions should be determined.

Table 2. Stream miles filled or approved for filling by valley fills in the West Virginia DEP Logan Region, 1986 to mid-1998.

	Miles of Stream Lost						
	Overburden Valley Fills			Refuse Valley Fills			
	Ephem	Intermit	Peren	Ephem	Intermit	Peren	*Total*
Watershed							
Little Coal	15.4	92.2	5.5	7.2	42.7	12.3	*175.3*
Guyandotte	20.8	65.0	1.1	2.9	17.4	1.8	*109.0*
Tug Fork	23.8	30.4	0.5	2.7	10.1	2.2	*69.7*
Big Coal	8.0	28.3	0.3	1.7	7.3	1.2	*46.8*
Twelve Pole	9.4	16.9	--	1.6	11.0	1.4	*40.3*
Mud	6.1	19.2	2.9	--	--	--	*28.2*
Total	*83.5*	*252.0*	*10.3*	*16.1*	*88.5*	*18.9*	
Total by fill type		*345.8*			*123.5*		*469.3*

The Mud River watershed data illustrate the intensity of valley filling that can occur in single watersheds. The Mud River drains approximately 250 square miles. Within the upper 23-square mile reach of the drainage (that portion shown on the Mud topographic quadrangle map), approximately 29 percent of the intermittent and perennial stream lengths have been filled or approved for filling. Within the 16.5-square mile portion of the Mud River drainage upstream of and including Connelly Branch, 39 percent of the intermittent and perennial stream lengths have been filled or approved for filling.

There are numerous aquatic and terrestrial federally listed species and/or species of special concern within the watersheds affected by mountaintop removal, steep slope mining, and valley filling. West Virginia has also been identified as one of the largest areas of contiguous forest in the Northeast, as a core area for many of the southern-affinity species of neotropical migrant birds, and is considered a "hot spot" for bird species of high concern in the Northeast United States (Rosenberg and Wells, 1995). Consequently, the loss of these streams and their associated forests may have ecosystem-wide implications.

In West Virginia, intermittent and perennial streams are considered "waters of the State" and subject to Clean Water Act jurisdiction. West Virginia Water Quality Standards define intermittent streams as "...streams which have no flow during sustained periods of no precipitation and which do not support aquatic life whose life history requires residence in flowing waters for a continuous period of at least six (6) months" (WV Environmental Quality Board, 1997). In the mine permitting process in West Virginia, it has been assumed that stream portions with watershed areas of less than 250 acres are ephemeral and not subject to these

standards. Stream surveys in 1998 in the Pigeonroost Branch watershed in southern West Virginia (USFWS, 1998) identified stream segments in watersheds less than 110 acres that supported aquatic life whose life history requires residence in flowing waters for a continuous period of at least six months. A review of the many variations on the definition of "intermittent stream" in federal regulations and in the regulations of other States within the eastern coal fields further suggests the need for additional biological and hydrologic information to assess the characteristics of these waters.

Another important issue that deserves attention in the mined areas of southern West Virginia is the extent to which acid and metal discharges are being created during the mining process. It is generally accepted that acid mine drainage only exists in the northern regions of West Virginia; however, data collected by the WVDEP indicate that acid mine drainage and metal discharge problems do occur in southern West Virginia (WVDEP, 1995). Impacts of acid and metal drainages should be included as part of any assessment of impacts of mountaintop removal and valley filling.

SUMMARY AND RECOMMENDATIONS FOR FURTHER STUDY

As summarized in Table 3, stream impacts authorized by the States of Kentucky, Pennsylvania, Virginia, and West Virginia are documented as being in excess of 897.2 miles. We believe these data to be highly conservative, especially because significant valley filling activities in three additional West Virginia mining districts were not included in this study.

There is a potential for a significant cumulative effect on aquatic and terrestrial habitats. The loss of perennial, intermittent, and ephemeral streams and their surrounding forests due to valley filling may have ecosystem implications, particularly when considered together with other mining-related impacts in the Appalachian coal fields region. Moreover, the quantity and quality of water in a large stream system is a function of the watershed in which it originates. Productivity in small streams may be economically insignificant; however, these streams are the

Table 3. Summary of stream miles approved for filling and the placement of siltation structures in portions of Kentucky, Pennsylvania, Virginia and West Virginia.

Kentucky	354.8
Pennsylvania	12.0
Virginia	61.1
West Virginia	469.3
TOTAL	897.2

basis for downstream water quality, hydrologic patterns, and biological production (Perry and Golden, 1997). The presence of dozens of federally listed threatened and endangered species in watersheds affected by valley filling is of special concern to the Fish and Wildlife Service. Additional data need to be gathered to better assess these effects. Such data should include:

1) Stream loss measurements for all mining regions of West Virginia, and for the entire eastern Kentucky coal field.

2) Identification of all valley fills that discharge or have treated discharges of acid mine drainage and/or metals. Any studies planned to assess the environmental impacts of valley fills should include sites with water quality problems.

3) Consideration of both terrestrial and aquatic habitat effects.

We further recommend that neither USGS topographic map stream classification categories nor arbitrary watershed size classifications be used to designate stream segments subject to Clean Water Act protection. Reliable biological and hydrologic information should be the basis for making such determinations.

W.V. DEP

Preliminary Valley Fill Inventory

In the spring of 1998 The Office of Mining and Reclamation conducted a file and field survey in an attempt to quantify the number and length of mining associated fills either proposed or in existence.

The following tables contain the preliminary results of those surveys.

The tables are sorted by county. In those cases where the fill lies across a county line a separate category containing both counties has been generated, i.e. "Boone/Logan". The fill lengths in these special categories are not included in the individual county totals but are included in the statewide totals.

The lengths reported in the various columns reflect a measurement taken from a USGS topographic map.

The column titled "LINEAR FEET FROM THE RIDGELINE TO THE TOE OF THE FILL" contains a figure depicting the distance from the toe of the fill to the ridgeline. In the case of completed fills this is the length of the fill as completed. In the case of fills under construction or permitted but not yet started, this figure depicts the configuration as designed and may not be representative of the finished fill.

The column titled "LINEAR FEET FROM THE RIDGELINE TO THE LOWEST DRAINAGE STRUCTURE" contains a figure depicting the distance from the ridgeline to the outlet of the furthest downstream drainage or sediment control structure associated with that fill.

Coal Refuse disposal areas and impoundment's were reported separately and are totaled separately.

The column titled "PERMIT NUMBER" fulfills two purposes. It allows us to determine which Surface Coal Mining Permit the fill was constructed under as well as approximately when the fill was constructed. The last two digits of the permit number denote the year the permit was applied for and therefore set an approximate but not exact timeframe for construction. In some cases there is no entry in this column: This occurs when the fill is very old and the permit under which it was constructed has been released for some time. In those cases an attempt was made to identify the permit but we were not always successful.

The reported lengths **do not** reflect lengths of streams filled in. In doing this survey we had to make some arbitrary decisions inorder to achieve consistency in the lengths reported. Rather than to have +/- 70 individuals deciding where the upper reaches of the streams ended, we simply picked the ridgeline as depicted on the maps as the upper boundary. In doing so the figures are somewhat inflated but do give us meaningful gross numbers for planning purposes.

A project is underway in cooperation with O.S.M. to use satellite imagery and digitized maps to generate a report on estimated stream loss. This project will take some time to complete and is expected to provide more definitive data. O.M.R. expects that the data from the joint project to compare favorably with the data presented here taking into consideration some differences from the upper reaches of the stream to the ridgeline.

		DURABLE ROCK AND VALLEY FILL ONLY							REFUSE IMPOUNDMENTS ON	
PERMIT NUMBER	STATUS	COMPANY NAME	INSPECTOR NAME	COUNTY	VALLEY FILL # IF KNOWN	LINEAR FEET FROM RIDGE TO TOE OF FILL	LINEAR FEET FROM RIDGE LINE TO LOWEST DRAINAGE STRUCTURE	DRAINAGE RECEIVING STREAM	LINEAR FEET IMPOUNDMENT (DAM CONTROL)	LINEAR FEI REFUSE PIL
S400307	N	U S. STEEL MINING CO	J. QUESENBERRY	WYOMING	3	800	900	SULPHUR BRANCH		
S400307	N	U S. STEEL MINING CO	J. QUESENBERRY	WYOMING	4	900	1,000	SULPHUR BRANCH		
S400307	N	U S. STEEL MINING CO.	J. QUESENBERRY	WYOMING	5	1,900	2,800	SMITH BRANCH		
				WYOMING Total		152,050	221,275		34700	483
N000383	N	SPENCER RESOURCES INC.	STEVE SIZEMORE	WYOMING/ RALEIGH				LAUREL FORK		5,6
U401094	A	WYOMING POCAHONTAS LAND	STEVE SIZEMORE	WYOMING/ RALEIGH	1	670	2,420	FRANKS FORK		
U402795	D	WYOMING POCAHONTAS LAND	STEVE SIZEMORE	WYOMING/ RALEIGH	2	1,630	2,480	FRANKS FORK		
S401396	A	WYOMING POCAHONTAS LAND	STEVE SIZEMORE	WYOMING/ RALEIGH	1	3,230	3,430	FRANKS FORK		
S401396	A	WYOMING POCAHONTAS LAND	STEVE SIZEMORE	WYOMING/ RALEIGH	2A	1,140	3,100	BOBS FORK		
S401396	A	WYOMING POCAHONTAS LAND	STEVE SIZEMORE	WYOMING/ RALEIGH	2	2,480	3,100	BOBS FORK		
S401396	N	WYOMING POCAHONTAS LAND	STEVE SIZEMORE	WYOMING/ RALEIGH	3A	1,180	3,310	LEWIS FORK		
S401396	N	WYOMING POCAHONTAS LAND	STEVE SIZEMORE	WYOMING/ RALEIGH	3	2,570	3,310	LEWIS FORK		
				WYOMING/ RALEIGH Total	9	13,200	21,150		0	580
				Grand Total	5548	4,150,366	5,694,081		463953	68869

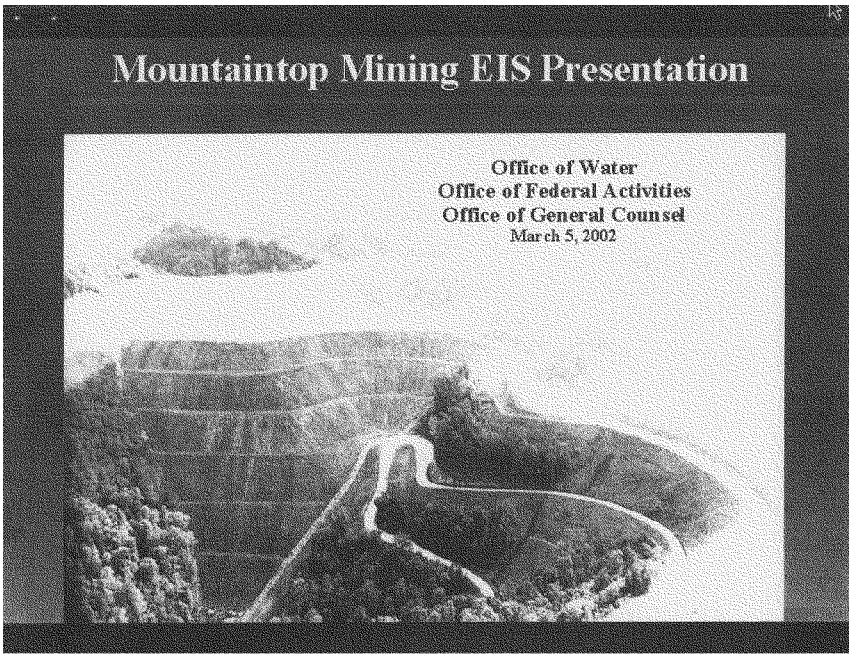
7

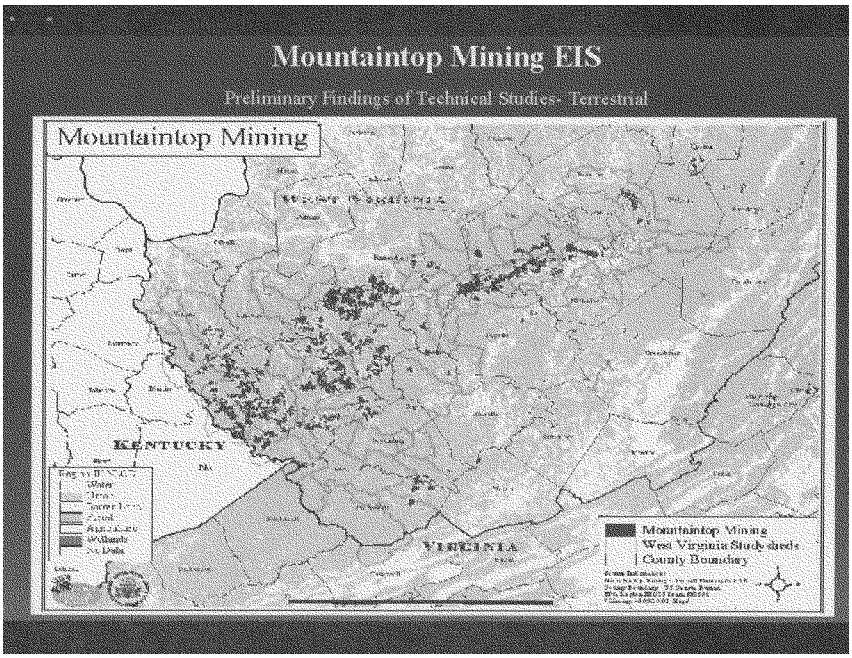
7.86 miles

10.78 miles

87.87

120.49


Mountaintop Mining EIS Presentation
Office of Water
Office of Federal Activities
Office of General Counsel
March 5, 2002


Mountaintop Mining EIS
Preliminary Findings of Technical Studies- Terrestrial
Mountaintop Mining
KENTUCKY
VIRGINIA
Mountaintop Mining
West Virginia Study Area
County Boundary

Mountaintop Mining EIS

Preliminary Findings of Technical Studies- Aquatic

- One percent of all streams in the study area (560 out of 55,000 miles) have already been eliminated by valley fills.
- Macroinvertebrate indices indicate that stream segments located downstream of valley fills are being impaired (aquatic life use).
- Stream chemistry monitoring efforts show significant increases in conductivity, hardness, sulfate, and selenium concentrations downstream of MTM/VF operations.
- Because it is difficult to intercept groundwater flow, it is difficult to reconstruct free flowing streams at MTM sites.

Mountaintop Mining EIS

Preliminary Findings of Technical Studies- Terrestrial

- The Appalachian Highlands is characterized by some of the best forest habitat in the world.
- Current reclamation practices are converting these forests to grassland, which may significantly impact neotropical migrant bird populations and other sensitive species if left unchanged.
- Mining companies can do more to minimize terrestrial impacts. Reclamation techniques have been developed over the past two years to promote reforestation, and the WV Legislature passed legislation in 2000 promoting the use of these reclamation techniques under the commercial forestry post mining land use category.

Mountaintop Mining EIS

Preliminary Findings of Technical Studies- Economics of Restricting Valley Fills

- Sufficient coal reserves appear to exist under the 250, 150, 75, and 35 acre restriction scenarios necessary to meet demand during the 10 year study period
- Limiting VFs to the ephemeral stream segment is likely to cause significant or total loss of the coal resource when that segment falls in a watershed less than 35 acres.
- Restricting valley fills to 250, 150, 75, or 35 acre watersheds will increase the price of coal by only $1/ton under each respective restriction scenario.
- Restricting valley fills to 250, 150, 75, or 35 acre watersheds will increase the price of electricity by only a few cents/MWHr under each respective restriction scenario.

Mountaintop Mining EIS

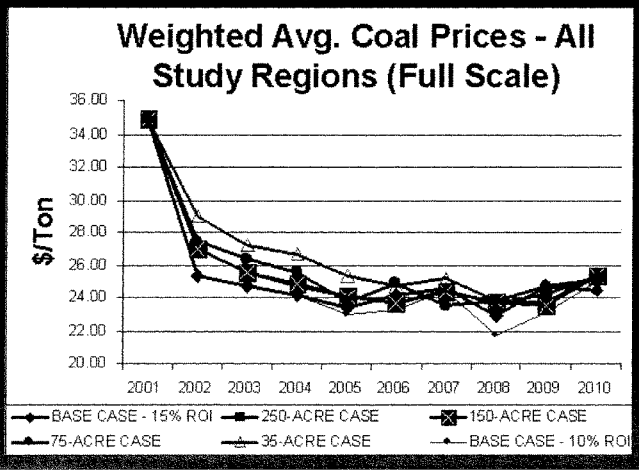
Preliminary Findings of Technical Studies- Economics

Out of 5858 fills permitted since 1985, the majority have been proposed in watersheds draining less than 250 acres:

	< 75 acres	75 -250 acres	> 250 acres
WV	59%	34%	7%
KY	81%	14%	5%
VA	70%	26%	4%
TE	79%	19%	2%

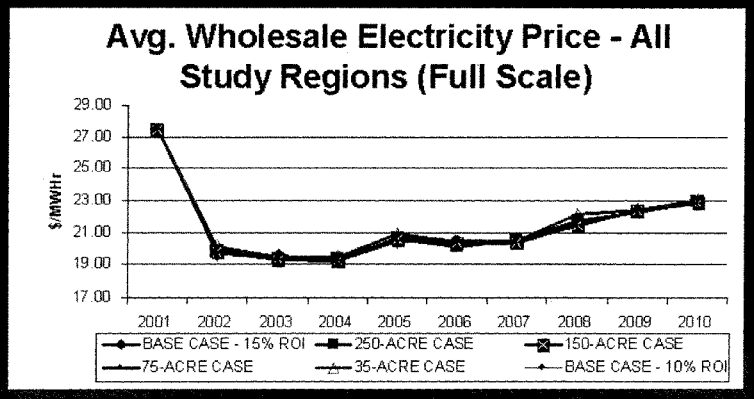
Mountaintop Mining EIS

Preliminary Findings of Technical Studies- Economics of Restricting Valley Fills



Mountaintop Mining EIS

Preliminary Findings of Technical Studies- Economics of Restricting Valley Fills



Mountaintop Mining EIS

Current Issues

- To accommodate the proposed revisions to the stream buffer rule, OSM is recommending that Alternative B (project-by-project reviews, no set restrictions) be designated as the preferred alternative in the draft EIS.
- Cumulative terrestrial impacts from MTM/VF activities are considered to be significant, and have a high level of public interest. Actions to promote reforestation involve private property rights and are difficult to implement. As a result, OSM and COE are reluctant to impose regulatory requirements to minimize terrestrial impacts.
- Post Mining Land Use (PMLU) studies suggest that, in general, post-mining development is not occurring as envisioned when variances are requested from the requirements to return the land to a condition capable of supporting its prior use. Actions to ensure that PMLU development occurs as envisioned have been developed, but OSM recommends deleting these actions from further consideration in the EIS.

Environmental Impact Statement
Mountaintop/Valley Fill Mining in Central Appalachia

Economic Consequences Report

Submitted by
Gannett Fleming, Inc.

To
U.S. Environmental Protection Agency
Region 3
Contract 68-W7-0045
DO 4002, Task 2

March 2002

V.13. Economic Consequences

V.13.a. Baseline Economic Conditions

The production of coal has a net positive effect on the state economy and on the local economies in the producing coalfield. Directly, coal mining produces wage income for the thousands of mine employees. Indirectly, coal mining produces income for persons engaged in selling products and services to the coal operators and to coal workers. Coal production is a source of tax revenue to the states and to the coalfield county governments. Coal fuels many power plants in the region that sell electricity in the producing state and beyond. Mountaintop/valley fill mining is not the only mining occurring in the study area states, but nonetheless plays an important role in the coalfield economies of eastern Kentucky and southern West Virginia. As for Virginia, coal mining is a very important economic force in some communities in the southwestern portion of the state, but mountaintop/valley mining is only a small portion of mining in these areas. A two-phase study of the impacts of valley fill restrictions on economic conditions in West Virginia was commissioned for this EIS and completed in late 2001. The remainder of this section summarizes findings from other studies dealing with projections of economic conditions in various portions of the EIS study area.

Central Appalachia Baseline Coal Economy Projections from EIA and University of Kentucky

Trends presented in the affected environment discussion of Section III.P point to a continuing decline in coal mining employment in the study area due to the projected combination of little to no growth in eastern coal sales combined with continued improvements in labor productivity.

The most recent EIA baseline scenario forecast for central Appalachia (the coal production region that encompasses the study area exclusive of Tennessee) projects a modest (4.8 percent) decline in coal production, combined with a considerable (14.2 percent) fall in prices over the period 1997 to 2010. The two decreases combine for an 18.3 percent decrease in coal sales and a projected loss of 7,700 coal mining jobs (Univ. of Kentucky Center for Business and Economic Research 2000, p.115).

This direct employment loss is estimated as corresponding to a 2.4 percent decline in employment in the central Appalachian region. The associated earnings loss is estimated as accounting for a 3.4 percent decline in earnings in the region (Univ. of Kentucky Center for Business and Economic Research 2000, p.117). The University of Kentucky study applied economic multipliers to the direct employment changes to estimate a 6.5 percent decrease in all jobs (directly and indirectly related to coal mining) and a 6.1 percent decrease in total earnings (Univ. of Kentucky Center for Business and Economic Research 2000, p.120).

Marshall University Study for the West Virginia Senate Finance Committee

A study commissioned by the West Virginia Senate Finance Committee and conducted by Marshall University's Center for Business and Economic Research found a similar result for a nine-county study area in southern West Virginia. The Marshall University study examined

economic impacts of three different coal production scenarios for a one-year period (2000). Their baseline forecast projects a one percent decline (1,646) in total private sector employment resulting from an approximately seven percent decline in coal production. Their county-by-county analysis projected greatly varying results among counties, with some projected to actually gain employment, and others to lose as much as 7.8 percent of total employment as a result of a decrease in mining jobs and associated multiplier jobs (Marshall University CBER 2000).

The Marshall University study and the University of Kentucky study reported above focus on the coal-mining economic impacts. The losses projected in these studies are the jobs and earnings that would be subtracted from these economies due to coal mining losses. These studies do not project actual total employment and earnings changes, *net of other economic changes*. Indeed, there are other economic forces at work that are projected to bring new economic base jobs and associated multiplier employment. The direct and multiplier losses reported in these studies indicate the extent to which the mining losses place a drag on the subject economies. That is, they measure (very roughly) how many more jobs the economy would have gained, had the mining jobs not been lost. The West Virginia statewide economic outlook described below illustrates a projection of a net overall positive change in the statewide economy, despite considerable losses in coal mining.

Statewide Overall Economic Forecasts

A 10-year forecast in the *West Virginia Economic Outlook* (WVU BBER 2000) calls for a continuation of the recent trend of slower growth in the state. The forecast calls for West Virginians to be better off (in terms of real per capita personal income) in 2010 than they are now. But "slow" is an important modifier, because the forecast also suggests that state growth will fall short of that expected for the nation. This slowed relative growth implies a widening per capita personal income gap with the nation in coming years.

The long-term outlook for job growth calls for modest annual gains through 2010, with state job growth falling well short of national growth. All net job gains are expected to come in the service-producing sectors, with goods-producing jobs continuing their downward slide. Mining jobs (especially coal mining) are expected to drop at a swift pace. (WVU BBER 2000)

Job growth in construction is expected to be slower during the next 10 years than it was during the 1990s. The outlook also calls for manufacturing jobs to decline, although at a slower pace than during the previous 10-year period. This slowdown in manufacturing job losses is primarily due to job gains in durable manufacturing (especially lumber and wood products and transportation equipment). Nondurable manufacturing jobs decline during the forecast, as job losses in chemical products and apparel overwhelm gains in printing and publishing and food products. (WVU BBER 2000)

A large factor in the overall job growth slowdown during the forecast is the deceleration in job growth in services. This sector is expected to remain the fastest growing industry in the state (in terms of generating jobs), but that growth is likely to be slower than it has been. The slowdown is expected to permeate all services sectors, including business services, health care services,

social services, and membership organizations. The forecast calls for business services (which has produced very strong job gains this decade) to continue to lead the pack in services job growth during the next 10 years. Further, travel-related services are likely to continue to grow in the state. (WVU BBER 2000)

The forecast calls for the state's population to register moderate losses during the forecast, as slow job and income growth are insufficient to stem outmigration. Finally, the forecast calls for the unemployment rate to stabilize in the 5.5-6.0 percent range. (WVU BBER 2000)

Donald T. Iannone Associates Study of Economic Development Potential for U.S. EPA

A limited-scope study of potential economic development opportunities in the study area coalfields was conducted for this EIS. The study evaluated the EIS study area in terms of the following five sets of broad factors that shape a region's economic competitiveness.

1. Existing economic base - Industries and businesses currently located in the area and their future growth potential.

2. Area development resource availability & quality - Workforce, transportation access, sites, infrastructure & public services, etc.

3. State and local development and tax policies - Tax costs, environmental regulations, employment regulations, land use & zoning, etc.

4. Economic development plans and strategies to target and guide growth - development organizations, strategies & plans, incentives & tools, etc.

5. Attitudes toward growth and development by local leaders and citizens - supportive versus unsupportive

The study's findings as to the general economic development competitiveness of the typical coalfield county is summarized in the matrix below.

Table V..13-1
General Coalfield County Competitiveness Matrix

Competitiveness Factor	Kentucky	Virginia	West Va.	Tennessee
1. Economic base growth potential	Weak	Weak	Very Weak	Weak
2. Development resource quality	Fair to Poor	Fair to Poor	Fair to Poor	Fair to Poor
3. Government policies:				
▪ State	Excellent	Excellent	Fair to	Good
▪ Local	Fair to Good	Good	Good Fair to Good	Fair to Good
4. Economic development strategy	Very Good	Excellent	Good	Good
▪ State	Good	Good-Excel.	Fair-Good	Fair-Good
▪ Local				
5. Growth attitudes	Supportive	Supportive	Supportive	Supportive

In general, the economic bases found in coalfield counties tend to have low growth strength because of the limited technology base and low level of diversity exhibited by existing industries. That is not to say that many of these counties' economic bases are incapable of some future growth. Rather, this assessment points to the need for future attention to new business recruitment and increasing the number of new value-added business startups in these counties.

Development resource availability and quality are very limited in most of the coalfield counties. Interstate and other four-lane highway access is a major limitation in many of the counties. Other public utilities are limited in scope in many counties.

Development policies tend to be stronger at the state level in all four states. Many local areas (counties) have given limited formal attention to improving their business climates.

Economic development efforts tend to vary in quality across the four states. State efforts are once again more positive than local programs because of very limited funding and organizational abilities at the local level. This points to the need to rely on state development agencies for assistance in the short term and work on long term capacity

building at the local level in all states. Kentucky and Virginia have the best coordination of state and local economic development activities.

Local leadership and citizen attitudes toward future growth are generally supportive in all cases. Environmental protection, natural resource conservation, and cleaner industry are priorities in all four states. There is a positive attitude toward growth that can replace dirty industry of the past, including coal-mining operations.

The study concluded that the fastest growing industries (as exhibited recently in other rural areas) with growth potential for the central Appalachian coalfield economies include tourism, retail trade, health care services, and back-office and call centers. Furniture products and owner-operator manufacturing are also potentially fast-growing. The coalfield communities also have competitive conditions for the relatively slow-growth agricultural services and stone, glass, and clay products sectors and in the moderately fast-growth owner-operated manufacturing sector.

V.13.b Economic Conditions Under Alternatives A and B

V.13.b.1) Baseline Production and Employment Projection Methods

Study Method Overview

The information in sections V.13.b and V.13.c on economic consequences of the alternatives is derived primarily from a two-phase study conducted for this EIS by Resource Technologies Corporation ("RTC") and Forrest Hill and Associates ("Hill and Associates"). The study developed ten-year projections of surface and underground production of steam coal and associated mine employment for ten sub-state regions under five valley fill drainage basin restriction scenarios. Other study output includes coal prices, mine capacity expenditures, and electricity generation and prices. The study regions consist of four in eastern Kentucky, all of the Virginia coalfields as one region, and five regions in West Virginia. The composition of the West Virginia regions is as follows:

NORTH REGION
Barbour
Brooke
Cabell
Calhoun
Doddridge
Gilmer
Hancock
Harrison
Jackson
Lewis
Marion
Marshall
Mason
Monongahela
Ohio
Pleasants
Preston
Putnam
Ritchie
Roan
Taylor
Tyler
Upshur
Wetzel
Wirt
Wood

EAST REGION
Berkeley
Grant
Greenbriar
Hampshire
Hardy
Jefferson
Mercer
Mineral
Monroe
Morgan
Pendleton
Pocahontas
Randolph
Summers
Tucker

CENTRAL REGION
Braxton
Clay
Fayette
Kanawha
Nicholas
Webster

SOUTH REGION
McDowell
Raleigh
Wyoming

SOUTHWEST REGION
Boone
Lincoln
Logan
Mingo
Wayne

The five drainage basin restriction scenarios evaluated in the Hill and Associates study are as follows:

1) unconstrained
2) 250 acre restriction
3) 150 acre restriction
4) 75 acre restriction
5) 35 acre restriction

No other regulatory changes were evaluated in this study. Anticipated air quality rule changes were applied uniformly to these scenarios. The unconstrained scenario is therefore taken to represent both alternative A (pre-settlement regulatory conditions) and alternative B (a number of regulatory changes but no drainage basin restriction). Due to the additional advanced study and mitigation requirements of Alternative B, there may be slightly less coal production and employment than under alternative A, but the study results do not allow a quantification of this expected small distinction. Hill and Associates also evaluated an alternative with a lower required rate of return (10% versus 15%) on coal mine capacity investment decisions. Although not implemented with this use in mind, this differentiation was proposed as a possible method for accounting for differences between alternatives A and B. However, due to its method of implementation (most especially its very large magnitude) and the fact that it confounds the comparisons of scenarios through time, the lower rate of return scenario was deemed inappropriate for use in evaluating economic consequences of the alternatives.

The 250 and 150 acre restriction scenarios were taken to bracket the economic consequences of Alternative C, while the 75 and 35 acre restriction scenarios were taken to bracket the economic consequences of Alternative D. The methods for making projections under the four restricted scenarios are summarized in section V.13.C.1. The remainder of this section will deal with the projections under the baseline scenarios (alternatives A and B).

The Hill and Associates Modeling System

Hill and Associates used its proprietary database of coal mine operations and costs, its integrated Coal Forecasting System and National Power Model, data produced in phase 1 of the study by RTC, and its professional expertise in coal and energy markets. The following paragraphs summarize the Hill and Associates methods that apply to alternatives A and B. The study

methods applicable to the drainage basin restriction scenarios are described in section V.13.C. More detailed discussion of the RTC and Hill and Associates study methods is available in their reports, which are attached in the appendix to this EIS.

At the heart of the H&A study is a system combining two models: the Utility Fuel Economics Model (UFEM) and the National Power Model (NPM). The UFEM determines, for each utility coal-fired plant in the nation, the plant's profit-maximizing fuel choices and air quality compliance method. The utilities are modeled as choosing among more than 100 sub-types of coal as well as other energy sources such as natural gas. Twenty-six of the coal types are produced in the EIS study area. The NPM determines the optimal dispatch of all electric generating plants (both coal and non-coal) on the electric grid. All U.S. plants are considered simultaneously in competition with each other both for their coal supply and for their competitive dispatch on the electric grid. For each specific region's coal, all of the individual plants' fuel demands for that particular coal are summed, resulting in a total of demand for that coal.

Inside the UFEM model are supply "curves" for each coal type, relating coal production capacity to mining costs. These curves are constructed using mine-by-mine estimates of cash operating costs for all currently operating mines in the country. The cash operating costs include the following components: labor, materials and supplies, trucking to the preparation plant or load-out, preparation costs (including loading), Black Lung/Reclamation taxes, mine overhead charge, division overhead charge, pension contribution, property tax, severance tax, and royalties. The supply curve identifies, for each cash operating cost, the total amount that could be supplied in that year by mines whose costs are at or below that cost. A mine is modeled as producing in any given year when the coal price is equal to or greater than its cash cost per ton.

The addition or departure of productive capacity is modeled as a decision based on the preceding year's price. If the price is such that a prospective mine (or mine expansion) would yield a rate of return greater than the criterion rate (15% in this case), then that capacity is added to the supply curve in the next analysis year (subject to certain plausibility constraints for the rate of addition of new capacity). If a mine is not achieving its required rate of return, then it is modeled as closing in the subsequent year.

The H&A price results are short-term market clearing prices for new business at the margin; they do not include prices under pre-existing long-term contracts. Thus, price and quantity results cannot be combined to yield revenue or output forecasts.

Employment projections for each region are calculated as the sum of employment at each mine in the region. Employment at each mine is determined as production at that mine (a model output) multiplied by a pre-established employment/output ratio for that type of mining.

Application Issues

The Hill and Associates database and models apply only to steam coal production, that is, coal used by steam electric generating plants. Thus their estimates exclude industrial and metallurgical coal, the production of which is relatively significant in at least one of the study regions (southern West Virginia). Also, Hill and Associates' employment projections apply only to mine workers at these steam coal mines. Economic impact analysis conventionally considers "direct" economic impacts as all employees in industries classified by state employment reporting agencies as "coal mining". This employment would include office personnel, metallurgical coal miners, coal processing and transport workers, and employees in firms classified as coal mining services.

This EIS uses the simplifying assumption that all coal employment is impacted proportionately to the narrow category measured by the Hill and Associates study. Accordingly, the 2001 Hill and Associates employment projections for each region are calibrated to match coal mining employment totals for each region as compiled from state labor market information agencies. The expansion factor calculated for 2001 was then applied to the subsequent years' projections. Most expansion factors are in the range of 1.5 to 1.7. Year 2000 employment data were used for Kentucky and Virginia due to the unavailability of year 2001 data from these states. Coal production projections were used *as is*; the results evaluated in this EIS are limited to proportions, not absolute numbers.

V.13.b.2) Alternatives A and B: West Virginia and Its Regions

West Virginia State-wide

The Hill and Associates study forecast for the unconstrained scenario (EIS alternatives A and B) indicates a generally downward trend in coal production and employment in West Virginia. This trend is driven in the most part by a decline in surface coal mining that becomes noteworthy in 2006. A drop in underground mining in 2009 reinforces this decline. Year 2010 surface production and employment are estimated as 40 and 37 percent lower than their respective study estimates for 2001. Year 2010 underground production and employment are estimated as 6 and 5 percent lower than their respective study estimates for 2001. Overall, mine employment in 2010 would be 15 percent lower than in 2001, corresponding to a 1.6 percent average annual decline. By way of comparison, it is interesting to note that reported statewide mine employment in 2001 was nearly 47 percent lower than in 1990, which would be equivalent to a 5.5 percent average annual decrease.

Hill and Associates attribute this declining trend chiefly to a combination of the depletion of reserves and competition with western coal. (Western coal production is discussed in Chapter III.)

Figure V.13.b.2 depicts the production and employment paths for West Virginia that are described above. It also depicts the path in average price for West Virginia coal and production and employment paths for each of the five study regions in West Virginia.

After the "correction" in prices from unprecedent levels in 2001, price changes are fairly modest. A dip in year 2008 corresponds to scheduled implementation of new air quality rules for steam electric plants.

West Virginia Study Regions

A look at production and employment for each of the regions (the graphs on the left side of figure V.13.b.2) indicates which regions are the main contributors to the totals and trends shown for West Virginia. Also, the employment graph for the regions includes reported 1990 employment levels, to serve as a context in which to view the forecast trends. Production data for 1990 were not shown because the Hill and Associates data are for steam coal production, while a breakout of steam and metallurgical coal tonnages are not available.

Coal production in the eastern region is minimal throughout the study period. Production and employment are comparatively high and are projected to experience an overall increase in northern West Virginia, where production is overwhelmingly in underground mines.

Production and employment in the southern region, in which surface mining predominates, are projected to continue their downward trend, with production and employment at minimal levels already by year 2004. Coal employment has fallen by nearly one half in this region from 1990 to 2001, in a period when total employment increased by 11 percent. Coal employment comprised six percent of total employment in 2001.

Production in the central region, where surface mining is also predominant, is also on a pronounced downward path. The region begins the study period ranked a close third in production and employment and ends as a distant third behind southwestern and northern West Virginia. This decline is not as critical as in the regions to its south—coal employment comprised slightly over two percent of total employment in 2001. To appreciate the region's relatively low level of dependence on coal employment, note that total employment was nearly 15 percent higher in 2001 than in 1990, despite the fact that coal employment was 25 percent lower over this period.

The southwestern region is expected to undergo an overall declining trend in production, driven by declines in surface mining. Underground mining is projected to fluctuate, without showing any clear trends up or down. Therefore, underground mining would increase its share of production and employment in the region. Its share of production is projected as increasing from 55 percent in 2001 to 67 percent in 2010. The proportional shift into underground mining dampens the effect of the total production declines on total employment. While production in 2010 is forecast as 24 percent lower than in 2001, employment is forecast to be 12 percent lower. By way of comparison, reported coal mining employment in this region was 37 percent lower in 2001 than in 1990.

The economic implications of the trends described above would be felt most strongly in the southwestern study region. Coal mining's economic role is by far the largest in this region, comprising over 12 percent of employment in 2001 (WVBEP) and nearly 31 percent of 1999 earnings (U.S. BEA). Despite coal employment declines in all study regions from 1990 to 2001, the southwestern region was the only one to experience a decline in total employment over the period 1990 to 2001 (a 4.3 percent decline). The projected 15 percent drop in employment noted above for this region (comparing 2001 to 2010) corresponds to 1.6 percent of total employment in 2001.

V.13.b.3) Alternatives A and B: The Study Area

Coal production and employment are projected to continue a declining trend in each of the sub-state regions comprising the Hill and Associates study area. Figure V.13.b.3 depicts coal production and employment paths for each state and the study area.

On a percentage basis, the declines are most notable in eastern Kentucky, where coal employment is projected as 35 percent lower in 2010 than in 2001. This difference corresponds to 1.7 percent of total year 2000 employment. Eastern Kentucky's coal employment declines are notable in both types of mining, as indicated in the table below.

Table V.13.b.3 Employment, Study Area and States

	Eastern Kentucky	*Southeastern Virginia*	*West Virginia*	*All Study Area*
Current proportions:	%	%	%	%
Underground	68	76	68	69
Surface	32	24	32	31
All Coal	100	100	100	100
Coal/All employment	5	8	2	3
% Diff., 2001-2010:				
Underground	-30.	-20	-5	-16
Surface	-47	-13	-37	-39
All Coal	-35	-19	-15	-23
As % of "current" Employment	1.7	1.5	0.3	0.7
% Difference, 1990-"present"	-50	-49	-46	-48
% of study area decline	57	9	33	

*Kentucky and Virginia "current" values are from 2000, and West Virginia's are for 2001.

In Virginia, the changes are not as stark on either an absolute or relative basis. In fact, years 2002 to 2004 are projected to have higher production and employment than 2001. In 2010, coal mining employment is projected to be 19 percent lower than in 2001. By way of comparison, coal employment was 49 percent lower in 2000 than in 1990. The projected decrease between 2001 and 2010 corresponds to less 1.5 percent of total year 2000 employment in this region.

The largest contributor to total production and employment levels is West Virginia. However, the declines in eastern Kentucky outpace those in West Virginia, making that region's changes the driving force in the overall decline in the economic impact study area. As indicated in the table above, eastern Kentucky contributes 57 percent of the employment decrease that is

measured between 2001 and 2010, compared to 33 percent for West Virginia and just 9 percent for Virginia. (Percentages total below 100 due to rounding.)

The major declines in study area coal production occur in 2006 and 2009. In 2010, coal employment in the study area is projected to be 23 percent lower than in 2001. When looked at from the point of view of this large, somewhat diversified region, these declines do not appear cause for great alarm. The 23% coal employment difference amounts to less than one percent of current year employment. It is in certain regions where the changes would be felt most acutely.

V.13.c. Economic Comparison of the Alternatives

V.13.c.1) Study Methods

RTC used its geologic database to estimate recoverable coal reserves for each potential mountaintop removal site in West Virginia. RTC then applied topographic data in a geographic information system to estimate how much these mineable reserves would be reduced for each of the four different valley fill drainage basin restriction scenarios. The RTC analysis considered only geologic and topographic data; that is, how much overburden would need to be placed as valley fill and how much fill space was available for each potential mine site for each restriction scenario.

RTC calculated the percentage reduction in mineable reserves for each restriction case on a county by county basis. Table V.13.c.1 displays the reduction percentages calculated for each affected West Virginia county. For West Virginia, Hill and Associates then adjusted the reserves and production figures in their own detailed supply database by the appropriate county reduction percentage. The effect of such an operation amounts to a shifting inward (back towards the "y" axis) of the supply curve for each affected coal type. This shift tends to result in a higher market-clearing price, which then signals the addition of new mine capacity, thus shifting the coal supply curve back out somewhat for the subsequent analysis year.

Hill and Associates used the simplifying assumption that the reductions would be applied uniformly to each mine in their database. In reality, they anticipate that some mines would close while others may be barely affected; the assumption is that the aggregate effect at the regional level of these different responses is reasonably well represented by this simplified application of the county reduction percentages.

RTC did not have the requisite detailed mapping capability to produce mineable reserve reduction estimates for Kentucky and Virginia In lieu of these estimates, Hill and Associates used an "analogous county" method to model reductions in these states . This method identifies, for each study area county in Kentucky and Virginia, a county in West Virginia that is comparable in terms of topography. RTC's reserve reduction results for the analogous West Virginia county are then applied to this county. It is recognized that surface mining in these states does have some differences that are overlooked by this analogous county method. For example, much of the mining in Virginia is on pre-SMCRA strip-mined areas, with existing

Table V.13.c.1 West Virginia Mineable Reserve Reductions (percent).

County	Drainage Basin Acreage Restriction			
	250	150	75	35
Central				
Braxton	0	0	0	0
Clay	0	0	0	40
Fayette	0	0	0	88
Kanawha	9	9	59	88
Nicholas	1	2	20	61
Webster	0	0	0	20
East				
Greenbriar	0	0	0	0
Mercer	0	0	0	0
Pocahontas	0	0	0	0
Randolph	0	0	0	0
Summers	0	0	0	0
North				
Barbour	0	0	0	0
Upshur	0	0	0	0
South				
McDowell	0	0	15	64
Raleigh	62	62	62	82
Wyoming	37	34	37	93
Southwest				
Boone	1	8	30	72
Lincoln	87	87	89	93
Logan	23	45	73	91
Mingo	21	22	50	78
Wayne	67	67	67	75

Source: Resource Technologies Corporation, 2001.

V.13.c.2) Alternatives Comparisons – Southwestern Region of West Virginia

Coal Production

Figure V.13.c.2 depicts coal production and employment results for the southwestern region of West Virginia. As noted under the discussion of Alternative A, the southwestern region is the largest coal producer and employer and far exceeds the other West Virginia regions in the use of mountaintop/valley fill mining methods. The top left chart in this figure depicts the modeled time path of steam coal production for all study cases/alternatives. A general downward trend is evident for all alternatives except the lower bound of Alternative D, where the ephemeral/intermittent boundary is assumed as represented by a 35 acre drainage basin limitation. The 35-acre restriction is modeled to produce a very near term and rapid decrease in production, with some recovery in the latter half of the modeling period. [footnote: As noted above in the discussion of methods, the study modeled the drainage basin restrictions as taking effect immediately, even on mines that already have valley fill permits. The modeled early year impacts would therefore tend to exaggerate the actual impacts should existing permits be grandfathered.]

The production line graph displays a variety of peaks, troughs, and crossover points among the study cases, making a comparison of alternatives somewhat problematic. In general, the line for alternatives A and B lies above the other alternatives and the lower bound of alternative D lies well below the other alternatives. However, the latter years are less distinct, and the 75, 150 and 250 acre cases are difficult to distinguish at all.

The cumulative production chart on the upper right of figure V.13.c.2 helps to illustrate the distinctions among the cases/alternatives. Modeled production in each of the years 2002 through 2010 was summed (2001 was disregarded because it is the same for all cases). For total (surface and underground) production, the chart indicates that the upper and lower bounds of alternative C are similar to one another and are moderately (11 and 11.7 percent) below production under alternatives A and B. Of course surface production is considerably more severely impacted than underground. For the 150 acre case, cumulative surface production is reduced by 27.1 percent while underground is reduced by 1.3%.

The results for Alternative D are more distinct. For the upper bound (75 acre restriction), total production is reduced by 16.5 percent compared to Alternatives A and B. This reduction is composed of a 43% reduction in surface mined coal partially offset by a 1.5 percent increase in

underground mined coal. For the lower bound (35 acre restriction), total production is reduced by 24.5 percent compared to Alternatives A and B. This reduction is composed of a more than three-fourths reduction in surface mined coal partially offset by an 11.5% increase in underground mined coal.

Coal Employment

The bottom charts on figure V.13.c.2 display employment information analogous to the production results presented in the upper charts. Employment in each type of mining is calculated as directly proportional to production in that mining type. Consequently, the employment line graphs have essentially the same shape as the production line graphs. However, because the restricted cases have a higher proportion of the more labor-intensive underground coal production, the employment effects shown in the cumulative bar chart on the lower right are somewhat smaller than the production effects displayed in the production bar chart lying directly above it. For example, the employment reductions for the upper and lower bounds of Alternative C are 9.6 and 9.1 percent, respectively, compared to production reductions of 11.0 and 11.7 percent. Note that the employment impact is slightly greater for the less restricted case; this result is due to the fact that labor intensive underground mining is actually lowest under the 250 acre case.

For the upper bound of alternative D, coal mining-related employment is reduced by 11.7 percent (over 4,000 person-years) compared to alternatives A and D. For the lower bound (35 acres) of alternative D, coal mining related employment is reduced by 14.5 percent (over 5,000 person-years).

Coal Employment and Earnings Impacts

The results presented above are in somewhat raw form. This section will expand on the results and place them in the context of the southwest region's economy.

Direct Employment Impacts

Compared to alternatives A and B, the valley fill limitation alternatives are projected to decrease coal employment by from 9 to 14% (538 to 862 jobs) on an annual average basis. While these decreases are considerable, it is also interesting to place them in the perspective of the 37%

decrease in coal mining employment in this region from 1990 to 2001 as well as the fluctuations in coal mining employment under alternatives A and B. Coal mining employment projections for these alternatives range from 11 percent greater than 2001 to 12% lower, with production forecast to be greater than 2001 levels in only two years out of the nine year period.

The direct employment impact range noted above amounts to 1.0 to 1.7% of total year 2001 employment in the region, where coal mining comprised 12% of all employment in that year.

Direct Earnings Impacts

The earnings losses corresponding to the coal employment losses presented above are estimated by multiplying the annual average job impacts by an average earnings per mining employee, using the most recent available U.S. Bureau of Economic Analysis data (1999). Due to the relatively higher earnings in mining compared to other sectors, the impacts are larger when measured in terms of earnings rather than employment. For alternative C, the reduction in earnings compared to alternatives A and B is estimated to amount to 2.3 to 2.5 percent of total 1999 earnings in the region. For alternative D, the reduction is estimated as amounting to 3.0 to 3.8% of total 1999 earnings in the region. Note that total income is much larger than earnings, due largely to the exclusion of transfer payments (e.g., social security) and pensions from earnings. Therefore, the direct impact as a percent of total income in a region would be considerably lower.

Multiplier Employment Impacts

The direct employment reductions would also impact the regional economy through a multiplier effect. Purchases by mining operations and by mine employees would be reduced, thus leading to a reduction in employment and earnings at businesses that sell to mine operators and to miners. Sales reductions at these enterprises may in turn lead to reduced earnings and employment, leading to another round of reductions, and so on. These multiplier impacts in a region are greater, the greater the proportion of purchased goods and services that are produced within the region. Spending leakages outside the region reduce the multiplier impact.

Estimating multiplier impacts for this EIS is more complex than is typically the case because the alternatives impact such a large geographic area. Employment and earnings reductions are not occurring in the southwestern region in isolation. Direct employment impacts are projected to

occur concurrently in other regions in the central Appalachian coalfields. Due to economic linkages among the regions, these concurrent reductions act together on the overall study area economy. It is mainly due to this consideration that this EIS will refrain from asserting a specific multiplier and multiplier effect for this or any region. In lieu of a specific multiplier, this EIS will use proxies for an upper and lower bound for multiplier values. As a lower bound for the southwest region, 1999 IMPLAN multipliers from MIG for each county in the region were reviewed. The largest county multiplier, 1.29, is selected for a lower bound. The 1.29 means that, for every coal mining job reduced, another 1.29 jobs are lost elsewhere in the region's economy.

As an extreme upper bound, the multiplier value of 1.614 for the entire study area will be used. This multiplier was purchased from the U.S. Bureau of Economic Analysis's RIMS II program. While appropriate for estimating multiplier impacts at the study area level, this multiplier was also selected to serve as a conservative (i.e., worst-case) upper bound for estimating multiplier impacts at the sub-state regional level. Using this inflated multiplier helps to compensate for our inability to directly measure the feedback effects on the southwest region of direct employment reductions in other economically linked regions.

Adding consideration of a multiplier effect therefore more than doubles the estimated employment impacts of the alternatives. The direct plus multiplier impacts on employment of alternative C would range from 1,232 to 1,487 jobs per year, annual average. These reductions correspond to 2.4 to 2.9 percent of total year 2001 employment in the region. For alternative D, the direct and multiplier impacts would range from 1,592 to 2,253 jobs, annual average, corresponding to 3.1 to 4.4 percent of total year 2001 employment.

Users should note that these impacts are not predictions of absolute reductions in the region's economy compared to a base year. Jobs will not literally fall by as much as 2,253. Overall employment may actually grow, even with alternative C or D. An alternative's impact estimate is intended as a measure of how much less that growth would be with the alternative compared to under a no action, base case scenario.

Multiplier Earnings Impacts

Multiplier earnings impacts are estimated by applying an average earnings per non-mining job to the estimated hypothetical multiplier employment impacts. The total (direct and multiplier)

V.13.c.3) Alternatives Comparison – West *Virginia* and Its Component Regions

A table and two figures have been prepared to illustrate the trends and relative impacts of the alternatives in the five West Virginia study regions. Figure V.13.c.3--a presents a collection of line graphs of coal production for each region and each study case. Figure V.13.c.3-b presents bar charts for each region, comparing cumulative nine-year totals of coal employment across alternatives. Table V.13.c.3 presents the differences from alternatives A and B in cumulative totals of production and employment, expressed numerically and as a percentage difference.

The northern and eastern regions are barely affected by the alternatives because mountaintop/valley fill mining is rarely utilized in these regions. Accordingly, they will not be discussed any further in this section.

Southern Region

In the southern region, impacts of some of the alternatives show up as large on a percentage basis in table V.13.c.3. However, the absolute numbers are quite small, and the impacts are overwhelmed by the declining trend over time for all alternatives (clearly visible in the line graph in figure V.13.c.3-a). Moreover, while not depicted in the figures and table, with coal mining at six percent of total regional employment in 2001, the impacts do not translate into very large proportions of total employment. The employment decrease ranges from an average annual loss of 197 to 274 jobs, which corresponds to 0.4 to 0.6 percent of total year 2001 employment. The associated earnings losses correspond to 0.8 to 1.1 percent of total year 1999 earnings.

The unexpected pattern of impacts for the southern region displayed in table V.13.c.4 (namely, an increase in the 75-acre restriction case over the unconstrained case) can be understood by reviewing the mineable reserve reductions presented at the beginning of this section. The RTC study concluded that the reduction in mineable reserves is relatively constant across the 250, 150, and 75 acre restriction scenarios. In other regions, there is a considerable decrease in mineable reserves moving from 150 to 75 acres. This decrease in other regions has market effects—namely, price increases—that encourage capacity investment and therefore increase production in the southern region.

Central Region

In the central region, coal production is shown as markedly decreasing under all scenarios, with all scenarios but the 35 acre restriction tracking fairly closely to one another. Similar to the southern region, the overall declining trend overwhelms the differences in the alternatives. For example, coal employment under alternatives A and B in 2010 is 44 percent below its 2001 level, while coal employment under the lower bound of alternative D (35 acre restriction) is 69 percent below its 2001 level.

Comparing alternatives on an annual average basis, employment under alternative C is at most one percent lower than under alternatives A and B. Due to the small proportion (5 percent) of coal mining employment in total regional employment, this decrease amounts to less than five one-hundredths of one percent of total year 2001 employment. For alternative D, the upper bound (75 acre scenario) impact is similarly mild. A five percent annual average reduction in coal employment compared to alternatives A and B is projected, amounting to one-tenth of one percent of total year 2001 employment. The reduction jumps to 25 percent for the upper bound of alternative D (35 acre scenario), corresponding to four-tenths of one percent of total year 2001 employment.

West Virginia

In summary, the economic impacts of the alternatives in West Virginia are focused on the southwestern region. Figure V.13.c.3 depicts the comparison among the regions quite clearly. For the 250, 150, and 75 acre cases, the employment declines in the southwest region are driving the employment declines shown in the West Virginia state-wide chart. For the 35-acre case, the declines in the central region also become notable, and further contribute to the decreases shown for the state.

Because the impacts in at most two regions are driving the state-wide impacts, the relative impacts are much more muted at the state level. For example, the decrease in annual average employment under Alternative C ranges between 5 and 6 percent of base levels. This decrease corresponds to less than one tenth of one percent of total year 2001 employment in the state. The decrease in annual average employment under alternative D ranges between 6 and 11 percent, corresponding to 0.1 to 0.2 percent of total year employment in the state.

Using the study area multiplier of 1.614 (see Section V.13.c.2 for discussion of use of multipliers), the direct and multiplier impact of these changes would range from 0.3 to 0.6 of total year 2001 employment and from 0.4 to 0.7 percent of total year 1999 earnings.

V.13.c.4 Alternatives Comparison – Study Area and its Component States

A table and two figures have been prepared to illustrate the trends and relative impacts of the alternatives in the three state regions comprising the economic impact study area. Figure V.13.c.3–a presents a collection of line graphs of coal production for each state region and each study case. Figure V.13.c.3-b presents bar charts for each state region, comparing cumulative nine-year totals of coal employment across alternatives. Table V.13.c.3 presents the differences from alternatives A and B in cumulative totals of production and employment, expressed numerically and as a percentage difference.

Figure V.13.c.4-a illustrates the overall declining trend in coal production in all states, most notably in Kentucky. The figure also illustrates that the alternatives lie relatively close to one another in eastern Kentucky and Virginia while showing more variation in West Virginia. The net result at the state level is a noteworthy declining trend, with variations across alternatives that appear somewhat modest in comparison to the temporal trends.

A view of the cumulative coal employment bar charts in figure V.13.c.4-b reveal that impacts of the alternatives are barely discernible in Virginia and most pronounced in West Virginia. The impacts in West Virginia are largest on an absolute and relative scale, and are the primary driver of the impacts shown in the study area chart.

Table V.13.c.4 reveals that employment in Virginia is projected to actually be higher under alternatives C and D than under alternatives A and B. In eastern Kentucky, the coal employment impacts under alternative C range from 2.8 to 3.5 percent, amounting to approximately 0.1 percent of total year 2000 employment in the region. The coal employment impacts under alternative D range from 4.7 to 7.3 percent, amounting to approximately 0.2 to 0.3 percent of total year 2000 employment. It should be repeated that the mineable reserve reductions for Kentucky and Virginia were not calculated with the detailed mapping information that was applied for West Virginia. (See Section V.13.c.1 for a discussion of the methods.)

For the study area in the aggregate, employment under alternative C is projected as 4 percent lower than under alternatives A and B on an annual average basis, corresponding to 0.1 percent of total current employment in the study area. Using the study area RIMS II multiplier of 1.614, the direct and multiplier impacts would amount to 0.3 percent of total current employment and 0.4 percent of total year 1999 earnings.

Employment under alternative D is projected as ranging from 5 to 9 percent lower than under alternatives A and B, corresponding to 0.1 to 0.2 percent of total current year employment. Using the study area RIMS II multiplier of 1.614, The direct and multiplier impacts would amount to 0.3 to 0.6 percent of current employment and 0.4 to 0.7 percent of total year 1999 earnings.

The Hill and Associates study also include projections of average wholesale electricity prices and generation levels at public utilities. Consistent with their expectations, the models did not project notable differences in prices or generation levels among the alternatives. This result is expected due to the competitive nature of the energy markets.

V.13.d Summary and Conclusions

V.13.d.1) Comparison of RTC/Hill and Associates Study to other Impact Studies

Mine Technology Study Summary.

A special technical study was undertaken for this EIS to evaluate the impact of the ephemeral stream valley fill limitation on mining in West Virginia. The complete "Mining Technology Team Report" entitled the "Mountaintop EIS Technical Report (2000)" is presented as Appendix N to this EIS. An engineering team consisting of representatives from OSM, the WVDEP, the coal industry, and the Plaintiffs in the *Bragg v. Robinson* litigation completed the evaluation. The team selected mines from pending applications in the five main mining regions in West Virginia. The geographic and geologic differences throughout West Virginia delineated the five main mining regions. The end result was a selection of ten mines representing various mining methods taking place in different geographic and geologic settings. An applicant for a coal refuse fill permit also participated in the study.

Each of the eleven participating permit applicants was provided a backfill template that would approximate the results that may be expected under "AOC Plus." Each participant was asked to revise their original application, using the backfill template, limiting valley fills to the ephemeral stream, and using every available hollow as a disposal site. The applicants provided estimates of the amount of coal that could be extracted under their permit as originally submitted ("scenario 1") and under the conditions just described ("scenario 2"). The applicants were asked to consider all mining methods, including mountaintop removal, area mining, contour mining, augering, and underground mining.

Each applicant developed the plans for these evaluations independently. The team reviewed the evaluations to assure that all possible fill sites were analyzed, that the evaluations represented the maximum technically feasible coal recovery, that the evaluations met the backfill requirements, and that the applicants had limited the fills to the ephemeral zone. The participating applicants also provided economic information. The economic information was neither evaluated nor used by the team in reaching its conclusions.

The resulting valley fill and coal production information is presented in Table V.13.d. In nearly every valley reviewed, the lower end of the ephemeral stream was very high in the valley,

resulting in very small fills or no room for any fill. Even when using every fill site, there was a major reduction in the total amount of excess spoil that could be placed in these fills. The reduction in available fill volume resulted in a significant reduction in coal resources that could be recovered. Eight of the ten surface mines would be able to recover less than 20 percent of the coal originally planned for production. Five of these eight operations would not be able to recover any coal at all. When aggregated, the average reduction across these ten surface mines is 78 percent.

When economic feasibility is also factored, the reduction is expected to be even greater. For all but two of the ten mines, the participating permit applicants stated that coal recovery would not be economically viable at prevailing coal prices. If this is true, then surface coal production from the ten mines would decrease by 86 percent under prevailing prices and costs.

In addition to the ten mines, a coal refuse fill was evaluated. The proposed fill would store coarse and fine refuse from the processing of reserves mined at two large deep mines and possibly a small contour strip mine. The coal output from the processing facility would total 110 million tons as proposed. The applicants attempted to design a fill complex under scenario 2, but found that it would not be technically feasible. The refuse fill could not be constructed and, therefore, the coal mine complex would not be feasible; coal production would be zero.

Unlike the RTC/Hill and Associates Study, the mine technology study does not take into account number of possible market responses that may dampen. For example, there may be an increase in coal prices that leads some previously marginal coal reserves to be mineable, either in the West Virginia's southern or northern coalfields, or elsewhere in central Appalachia.

Marshall University Study of the Haden Decision for the West Virginia Legislature

The state legislature commissioned this study to evaluate the near-term fiscal implications of Judge Haden's ruling limiting the use of valley fills. The Marshall study used empirical data to estimate coefficients in a reduced-form equation describing the equilibrium quantity of coal supply and demand. Their equation is a partial equilibrium one; that is, price is assumed as fixed for West Virginia coal producers. The equilibrium equation has a parameter estimate for number of surface mines. They estimate impacts of the Haden decision by eliminating the mines that would require valley fills("restrictive" case) or gradually reducing the number ("phase-in" case) in the equations.

The Marshall approach is different from the study for this EIS in many ways. It is a short-term, econometric, and partial equilibrium study in contrast to the 10-year, energy market simulation modeling system applied by Hill and Associates. Each mine using a valley fill is assumed to cease production. RTC estimates mineable reserve reductions using actual geologic and topographic data for four different levels of restrictiveness on use of valley fills. Finally, the Marshall study models underground and surface coal supply as related; underground mining economics are modeled as adversely affected by the elimination of surface mines that use valley fills. The RTC/Hill and Associates study does not directly link underground mining to the restriction scenarios. The combined effect of these study differences is a drastically larger projected reductions of coal production, employment, earnings, and related tax reductions.

V.13.d.2) Summary of Economic Consequences

A two-phase study of the possible economic impacts of valley fill restrictions produced most of the information used in this EIS. The largest impacts, on an absolute and relative basis, were found to be concentrated in the southwestern study region of West Virginia. Cumulative nine year employment totals under alternative C are projected to be nine to ten percent below levels under alternatives A and B. Under alternative D the employment totals are projected to be 12 to 14 percent below levels under alternatives A and B.

Although the prominence of the mining sector has declined greatly in past years in this region, it remains the single largest economic sector, with 12 percent of 2001 employment and 30 percent of 1999 earnings. Because of this prominence the alternative C employment impacts directly translate into over one percent of total year 2001 employment. The alternative D impacts translate into 1.4 to 1.7 percent of total year 2001 employment. On an earnings basis, the alternative C impacts amount to 2.3 to 2.5 percent of year 1999 earnings while the alternative D impacts amount to 3.0 to 3.8 percent of year 1999 earnings. Besides the direct employment losses, the region would feel impacts in the form of multplier employment and earnings losses and coal-related tax revenue losses.

At the state level, West Virginia would see a decline in employment of 5 to 11 percent, on a cumulative nine-year basis, compared to alternatives A and B. On an annual average basis, this decline amounts to just 0.1 to 0.2 percent of current total employment and 0.2 to 0.4 percent of current total earnings.

DECLARATION OF JOHN S L MORGAN

I, John S L Morgan, affirm and state as follows:

1. I have a degree in mining engineering from the Royal School of Mines and am currently employed as the President of Morgan Worldwide Consultants. The company specializes in providing technical support to the mining industry worldwide. A copy of my current resume is attached.

2. My experience includes participation in the West Virginia Department of Environmental Protection Quality Control advisory panel that is tasked to evaluate and improve quality control related to permitting. This panel has met regularly during the last two years and has reviewed numerous pending surface mine permit applications.

3. In addition, I participated in the development of the current policy utilized by the West Virginia Department of Environmental Protection for the determination of the compliance of surface mining applications with approximate original contour (AOC).

4. The effect of the injunction on the issuance of 404 permits for waste disposal by the US Corps of Engineers will have varying effects on the mining industry both in the short term and in the long term and each impact must be evaluated separately, as must the different effect on surface mining and underground mining. For the purpose of this discussion short term is defined as a one-year period. The impact on each of these four categories is very different.

Underground Mining – Short term

5. The short term impact on underground operations will be minimal as these operations only require 404 permits for either the disposal of excess spoil associated with the face up areas for the mine portal, or for the development of coal waste disposal facilities. As with surface mining operations there is little potential for immediate closure of operations or decreases in production and any generalization of immediate significant impacts are not supportable. The reasons for this opinion are:

   - Of the 131 Pending SMA Applications in West Virginia as of January 30, 2002 only the following seven applications were for coal refuse impoundments. The schedule also includes the initial application date for each application indicating that most have been pending for a significant period of time:

• O500799	CC Coal	03/01/99
• O503299	Bandmill Coal	12/29/99
• O301499	Power Mountain Coal	07/08/99
• O301700	Vandalia Resources	05/23/00
• O401000	Keppler Processing	11/06/00
• O502601	Loadout LLC	11/30/01
• O300102	Kanawha Energy	01/07/02

     The age of some of these permit applications indicates the long lead-time projected by mining companies when permitting waste disposal facilities.
   - Coal waste disposal facilities are long-term structures that are designed for the life of the reserves associated with a preparation plant. Therefore, existing preparation plants will have adequate capacity disposal facilities and will not be affected in the short term.

- The majority of coal waste disposal facilities consist of an embankment constructed of coarse refuse, which creates an impoundment into which fine refuse, or coal slurry, is placed. The failure of a portion of the basin at the Martin County Coal facility in Martin County, Kentucky on October 11, 2000 releasing over 300 million gallons of slurry material has placed an effective "hold" on any new coal waste facility until new guidelines are developed by the Mine Safety and Health Administration (MSHA) the Office of Surface Mining (OSM) and the State Agencies. This effective "hold" has not had any negative effects on the production of underground or surface mined coal. It is important to note that the Martin County preparation plant has continued to operate using alternate disposal locations since the closure of its associated impoundment.
- Not all underground operations require space for excess spoil disposal associated with the portal development. This is demonstrated by the limited number of pending underground mining permits that include fills. The April 2002 WVDEP report to Congress, defining the permit status at the end of March 2002, identifies eight underground mine permits pending WVDEP action six permits pending CoE action. Of these 14 permits, five proposed to fill in watersheds less than 35 acres. It is also apparent that some of these underground mine permits are not critical to the applicant company as 64% of the permits have been pending for more than one and a haslf years; one was submitted in 1997, five were submitted in 1999 submittals and three in 2000.

Applicant	Permit #	# of Fills	Watershed area of largest fill	WVDEP Permit Status	CoE Permit Status
Kanawha Energy Co	U301899	3	1542.00	Pending	
Marfork Coal Co	U300299	1	254.00	Pending	
Coastal Coal WV LLC	U202100	3	60.20	Pending	
Kanawha Energy Co	U302300	5	81.40	Pending	
Deep Water Resources	U301201	2	22.00	Pending	
Mingo Logan Coal Co	U400701	1	2.00	Pending	
Coastal Coal WV LLC	U200401	1	63.00	Pending	
Deep Water Resources	U300801	2	22.00	Pending	
Coastal Coal WV LLC	U200900	1	31.00	Issued	Pending
Huff Creek Energy	U400299	1	110.00	Issued	Pending
Bluestone Coal Corp	U400999	1	149.00	Issued	Pending
Riverside Energy Inc	U401697	1	100.00	Issued	Pending
Bluestone Coal Corp.	U401799	1	246.00	Issued	Pending
Laurel Creek Co. Coal	U500601	1	1.50	Issued	Pending

Data: April 2002 WVDEP Report to Congress

- As with the surface mines there are a significant number of underground mines in West Virginia that are on "inactive" status that have the potential to be brought into production. These underground permits have permitted face up areas and permitted fills.

Underground Mining – Long term

6. Underground mining requires fill space for the excess spoil developed during the portal development for a mine ands also for the disposal of waste separated from the run of mine coal during he coal cleaning process.

7. The quantity of spoil developed for a mine face up is an order of magnitude lower than the quantities of material developed by surface mining operations. However there are numerous instances where underground mines are developed from the highwalls exposed by a surface mine. For a new underground mine the space required for the portal consists of the mine entries, space for ventilation

fans, limited staging area for mine supplies and equipment plus conveyor for the produced coal. The actual size of this area can be optimized during the design process. As an example a face up developed on a contour bench to provide a 4-acre working area would produce approximately 667,000 cubic yards of material. The easiest option is to place the material into the valley adjacent to the excavation but due to the limited quantities of excavated material and the value of reserves within the underground mine, the additional cost of transporting this material to other locations is not economically unfeasible and could add less than 15cents a ton, for a 5 million ton reserve. In addition, if the availability and location of fill volume becomes a design constraint it is possible that the location of mine face ups will be changed in order to optimize the placement of fill.

8. Due to the limited quantities of excess material other alternatives exist for the disposal of fill including the use of permanent stream diversions that are currently used by the industry to create additional area for preparation plants mine entries and rail access. An example of a stream diversion is the Fork Creek development in West Virginia.

9. The disposal of coal refuse, which is the coarse and fine material produced from the separation of coal from its impurities in a coal preparation plant, is an integral requirement of a coal preparation facility. A preparation plant is normally developed for a single large capacity mine or to serve a number of mines with the coal transported by truck or conveyor. Historically coal refuse is disposed of in the valleys with the coarse refuse forming a dam. However, this is only the norm in steep slope areas in Appalachia. In other regions of the United States and Internationally refuse is disposed of in above ground piles. This is the approach used in Northern West Virginia.

10. There are numerous alternatives available for the disposal of coal waste. These were discussed in Chapter 7 of the recently issued National Research Council document titled Coal Waste Impoundments – Risks Responses and Alternatives. The conclusion of the Committee on Coal Waste Impoundments stated that "*...although there are alternatives to disposing of coal waste in impoundments, no specific alternative can be recommended in all cases*". This statement clearly indicates that there are alternatives that should be evaluated in the permitting of any new coal waste disposal facility and that if disposal in waters of the United States is a constraint then other alternatives must be evaluated. It is impossible to make a categorical statement about the future disposal locations until this site-specific analysis is conducted.

11. Alternative disposal methods include the placement of fine refuse material in incised ponds that can be located on the bench of surface mined areas. In addition coarse refuse can also be placed in previously mined areas. Underground disposal of both coarse and fine refuse is technologically feasible and underground injection of fine refuse is currently conducted in West Virginia. Some of the backfilling methods used in the hard rock mining industry could be applicable to the underground disposal of coal waste and warrant consideration.

12. The permitting of new coal waste impoundments will be totally different in the future as a result of recent impoundment failures such as the Martin County incident. The additional levels of analysis required combined with siting restrictions is going to push the industry to evaluate alternatives.

13. If new impoundments become difficult to permit the value of existing structure and existing authorizations increases. Therefore it is likely that the industry will evaluate all of the existing permitted facilities or previously abandoned structures to determine their ability to accept more waste material thus optimizing the amount of material placed in waters that are already impacted

14. If the availability of waste disposal locations is a constraint, the location of a new preparation plant will need to include the detailed review of various waste disposal approaches. It is possible that some

of the large rolling areas left by previous mining in Appalachia could have secondary value as the location for coal waste disposal. Other options not currently considered by the industry include the transport of run of mine coal to remote centralized coal preparation facilities where waste disposal is not constrained. This approach would incur the extra cost of transporting the "reject" material but this could be offset by the more economical waste disposal.

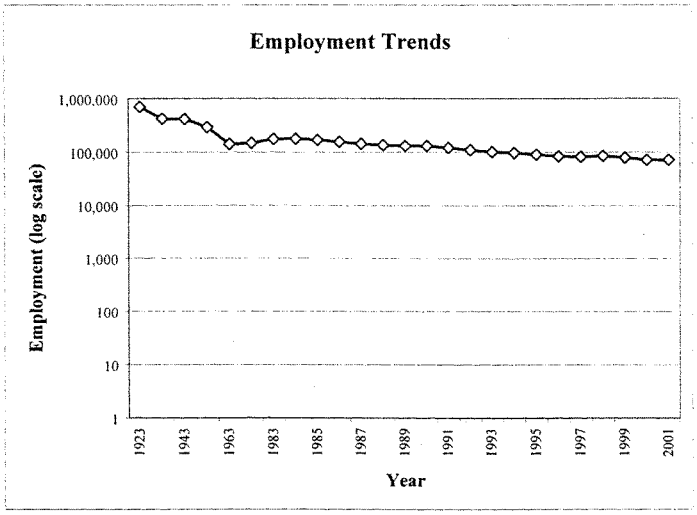
15. There are alternatives to waste disposal for new coal preparation plants but the addition on a constraint to waste disposal will require new approaches and creative thinking.

Surface Mining – Short Term

16. The short-term impact on the surface mining industry due to the issuance of no additional coal mining waste fill permits is not likely to be significant. The actual effect can only be determined by a detailed analysis of each operating mine, as the effect is dependent on key issues such as remaining reserves on the permit and remaining volume in currently approved fills plus an evaluation of permit revisions to place additional fill in mined areas or on top of existing fills. The available information indicates that there will be minimal short-term effects on overall coal production in the region or coal mine employment. The reasons for this opinion are:

    - There were no fill permits issued in West Virginia in 1999 due to uncertainties relating to ongoing litigation. However, the total coal production in West Virginia was 169,206,834 tons in 1999 and 169,370,602 tons in 2000, a difference of only 163,768 tons. The slight increase in surface mined tons from 1999 to 2000 (from 55,107,444 tons to 59,975,456 tons) was matched with a decrease in underground mined tons indicating a close relationship and interchangeability of surface and underground mined coal into the market. This production data indicate that the lack of fills does not have an immediate effect on total coal production.
    - The mining industry has a "*practice to permit more surface area for disturbance than is likely to be affected by the operations planned*" (EIS Preliminary Draft Page III.K-14). This over-permitting provides flexibility to permitted operations to have additional excess spoil disposal areas permitted than are required for the actual area mined. This fact is corroborated by the EIS Preliminary Draft that indicates a significant number of fills are not completed to their permitted limits.
    - Operations have the ability of reducing the mining ratio, thereby extending the life of remaining fills. For example a million ton per annum mining operation mining at a ratio of 15:1 and a swell factor of 25% produces excess spoil of about 3.75 million cubic yards; by reducing the ratio to 12:1 the excess spoil would be 3 million cubic yards, this approach would increase the fixed life of the fills by 25%. The reduction in ratio would also decrease mining costs.
    - There are a number of "inactive status " permits that have approved fills that are not producing due to short-term market conditions. These approved permits and fills have the potential to come into production.
    - Recent media reports indicate that major coal companies have reduced production in response to market conditions. The Coal Age Editorial (April 2002) states "*During March, or near the end of the first quarter, depending on ones perspective, many coal companies – Arch Coal, Coastal, CONSOL Energy, Massey Energy, Peabody Energy and Pittston announced production cut backs in face of weak demand. Together they plan to reduce current production levels by more than 20 million tons.*" This decrease in production slows the depletion rate of existing operations and thereby increases the life of the excess spoil disposal areas.

- On April 30, 2002 Massey Energy Company issued a press release reporting its first quarter results /and stated that "*Consistent with our plan to reduce production for 2002, we continued the process of right-sizing our organization," related Blankenship. Total membership decreased from over 5,000 at December 31, 2001 to less than 4,700 at the end of March, along with a reduction of approximately 400 independent contractors. During the quarter, the Company idled 15 continuous miner sections largely in West Virginia.*" The decrease in industry employment is more significantly affected by the continuing market right-sizing rather than short term impacts associated with a cessation of fill permits. In fact, mining employment continues to decrease due to increased industry efficiency, as indicated on the following graph (*Source: National Mining Association*). The graph indicates that the US coal mining industry shed 59,754 jobs in the period 1990 to 2000 and can be expected to shed additional jobs in 2002 and following years. It should also be noted that the 2001 coal production of 1,121,300,000 tons was the highest recorded.



- Due to the production cut backs the industry has the permitted capacity to produce additional coal and rehire laid off miners. The reintroduction of production from permitted and developed mines could offset any decreases in production from any mines affected by the injunction.
- Permits for surface mining operations provide for multi year life ranging from 5 to 10 years. In addition, it is standard industry practice to obtain permits in advance of the exhaustion of current mining permits. The combination of these issues indicates that the majority of operations will have adequate valley fill capacity to allow continuing short-term operation.
- Not all of the pending surface mining permits currently pending with WVDEP require fills. Review conducted recently as part of the WVDEP QA/QC process identified two permits that have no fills these are:
  - SMA 128-78 Hobet Mining Inc. Surface Mine #21 Amendment #1
  - SMA 5027-98 Independence Coal Co Twilight III

These and other similar permits that use existing operations or previously uncompleted valley fills for excess spoil disposal can be issued without the need for any 404 authorization.

- Review of the affidavit of Mr. Matthew Crum indicates that of the 281 permitting actions pending before WVDEP only 70 of the applications require filling waters of the United States. Mr. Crum does not indicate whether revisions to the mine plan for any of these 70 operations could avoid placement of fill in waters. Furthermore Mr. Crum does not outline any evaluation conducted by WVDEP to determine what alternatives are available to avoid the placement of fill in waters. Each application should be evaluated to determine what alternatives are available before any categorical statement about their status is made.
- Review of the affidavit of Commissioner Campbell of the Kentucky Department for Surface Mining Reclamation and Enforcement indicates that there are 526 pending applications in Kentucky, yet Commissioner Campbell fails to identify how many of these require placement of filling waters of the United States. If the same characteristics apply in Kentucky as in West Virginia it is possible that only 130 of these could require the filling of waters. In addition, the Commissioner has not conducted any analysis to see how these permits could be revised to avoid placement of fill in waters.

Surface Mining – Long Term

17. The design of surface mining operations is a constant effort in optimization of coal recovery and mining cost. It is important to note that a coal resource is only classified as a reserve if it is economic to mine. There is a significant difference in the reserves at a 20:1 mining ratio than reserves at a 12:1 ratio. In addition, the mining cost for a 12:1 operation is less than a 20:1 operation. If the volume and location of excess spoil disposal becomes part of the optimization process in mine planning the mine plan and mining approach will be different from an unconstrained approach. It is the overall economics of the mining operation that is the key factor.

    No generalization regarding the impact of the prohibition of fills in waters of the US can be made without detailed analysis of each potential coal resource project.

18. If there are constraints on the options for excess spoil disposal, the mine design should evaluate methods to minimize the production of excess spoil and to review alternative spoil disposal options. Options that could be considered include:

    - Placement of excess spoil on adjacent previously mined areas that were not returned to their "approximate original contour" (AOC). This approach was included in the pending Independence Twilight permit application
    - Placement of spoil on top of previously disturbed areas such as old refuse impoundments. This creative use of abandoned refuse disposal areas is being undertaken at operating mines in West Virginia such as Independence Coal and Callisto Coal
    - Requesting an AOC variance to increase the height of valley fills, subject to stability issues. This approach was recently included in a recent permit application from Fola Coal
    - Using creative fill configurations such as side hill fills
    - Designing the fill configuration so that impacts to streams is avoided
    - Changing the mining ratio to decrease the total volume of excess spoil and to optimize the available fill volume
    - Changing the mine equipment selection so that initial excavation (requiring excess spoil storage) volumes are minimized
    - Evaluating alternative haulage methods to transport excess spoil to non-adjacent disposal locations. The long distance transport of waste is conducted at lignite mines in Germany

Conclusion

19. In addition to the evaluation of alternative waste fill configuration for the initially selected mining approach it is important to evaluate other approaches to the recovery of the mineral resource. For instance a property could be mined by; mountaintop mining, point removal and contour mining, contour mining and highwall mining or underground mining. Each mining approach has a different coal recovery and different mining costs. Any evaluation should evaluate the overall economics of each approach if fill volume is a constraint.

20. The availability of alternatives to the placement of fill in waters is site specific, and the selection of suitable alternatives will tax the ingenuity and creativity of the mining engineers involved on the mine design. However, any generalizations about reserve sterilization is not defensible and site specific analysis focused on "***how to make it work***" rather than "***how to prove it can't work***" is required.

I declare under penalty of perjury that the forgoing is true and correct.

Executed this 18th day of May, 2002 by:

_____

John S L Morgan

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 2 2001

OFFICE OF WATER

MEMORANDUM

SUBJECT: April 6, 2001, Meeting with National Mining Association Representatives on Proposed Revisions to the Clean Water Act Regulatory Definitions of "Fill Material" and "Discharge of Fill Material"

FROM: John Lishman
Wetlands and Aquatic Resources Regulatory Branch

TO: Rulemaking Record for Revisions to Regulatory Definitions of "Fill Material" and "Discharge of Fill Material"

Overview

At the request of Karen Bennett, National Mining Association's (NMA) Director of Water and Waste Policy, a meeting was held with EPA staff on April 6, 2001, from 11AM to 11:45AM to discuss the fill material rulemaking. No decisions or commitments were made or consensus reached on how to address issues raised. No written material was submitted. NMA participants were Karen Bennet and Harold Quinn (NMA General Counsel). EPA participants were Greg Peck (Deputy Administrator's office), John Goodin (Chief, Wetlands and Aquatic Resources Regulatory Branch (WARRB)), and John Lishman (WARRB staff).

Summary of discussions

The meeting took the form of NMA recapping the comments they had submitted on the April 2000 proposal. NMA indicated that they were supportive of seeing a final rule move forward with a single definition of fill material between the two agencies using an "effects based" definition along the general lines of the proposal. NMA did focus on two concerns they had raised in their comment letter on the April 2000 proposal.

First, they reiterated concern with proposal language that would exclude from "fill material" discharges covered by proposed or final effluent guidelines or NPDES permits. Their concern was that this phrase resulted in ambiguities in which discharged material that has the effect of fill might be argued to be nonetheless excluded from § 404 coverage because it contained some constituent addressed in an effluent guideline. They expressed a desire to see the language in question deleted, or at a minimum, further preambular discussion of the issue to avoid this perceived ambiguity.

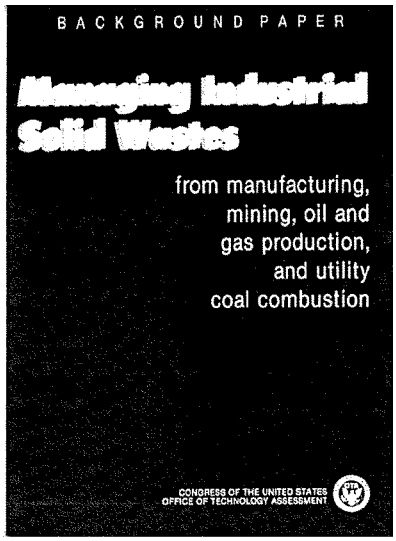
Second, they expressed opposition to adding a definition of "unsuitable fill material" as had been discussed in the April 2000 proposal's preamble (65 FR 21296 - 21297). They opposed such an approach because they believed such a determination should be made on a case-by-case basis as part of the decision on a permit application where all relevant factors could be considered, that a refusal to process applications on the basis of "unsuitable fill" raised procedural and due process issues, and that it was inappropriate to leave the determination of unsuitability to the discretion of the District Engineer as the preamble language had indicated.

Following this discussion, NMA inquired about the status of the April 2000 proposal, in response to which the government representatives indicated the comments had been organized and indexed and that discussion would take place with the new Administration's appointees on the fill material issue. NMA reiterated they were interested in seeing a rule move forward, and the meeting concluded.

Managing Industrial Solid Wastes From Manufacturing, Mining, Oil and Gas Production, and Utility Coal Combustion

March 1992

OTA-BP-O-82
NTIS order #PB92-157619
GPO stock #052-003-01273-1



Chapter 2

Mining Wastes

INTRODUCTION

The "hard rock" mining industry produces metals (e.g., copper, gold, iron, lead, magnesium, silver, zinc) and nonfuel minerals (e.g., asbestos, gypsum, lime, phosphate rock, sulfur).[1] The number of production facilities in operation varies somewhat from year to year, mostly because of small operations beginning or ceasing. As of 1987, there were 276 metal and 279 industrial mineral mines, with an annual production value of almost $16 billion (106).

Mining wastes result from the extraction, beneficiation, and further processing of metal and industrial mineral ores.[2] Waste categories include:

- waste rock—material moved to gain access to the ore or mineral, including overburden (material overlying the area to be mined) but excluding topsoil and other soil materials that are reused in reclamation);
- tailings—residuals (usually generated in a slurry form) from beneficiation processes;
- mine water—groundwater or precipitation that infiltrates mines during extraction; and
- processing wastes-residuals from processing after beneficiation, such as smelting and electrolytic refining operations.

The first three are known as extraction and beneficiation (E&B) wastes. The Departments of the Interior and Agriculture (101) disagree on whether mine water is subject to the provisions of the Resource Conservation and Recovery Act (RCRA).[3]

The 1980 Bevill amendment to RCRA (see ch. 1) temporarily excluded mining wastes from regulation as hazardous waste until the U.S. Environmental Protection Agency (EPA) assessed the wastes in a Report to Congress and followed that with a regulatory determination. Through a lengthy series of rulemakings and court decisions, EPA has subsequently treated E&B wastes and processing wastes separately.

EPA addressed E&B wastes in a 1985 Report to Congress (termed the "1985 Report" in this chapter; ref. 111). The 1985 Report included dump and heap leaching piles (i.e., materials resulting from using chemicals to leach out metals) as waste.[4] In 1986, EPA agreed that this designation was incorrect; that is, active leaching operations are production processes (as long as the materials do not escape from the leaching pad) and leach liquor treated to recover metals is a production materials The significance of this is that EPA does not have authority under RCRA to regulate production processes. When leaching operations cease, the spent leach piles are considered E&B wastes. Leaching operations are thus unique in that cessation of the process changes the material's regulatory status.

In July 1986, EPA determined that Subtitle C regulation of E&B wastes was not warranted.[5] EPA declared its intention to develop a State-implemented

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[1]Hard rock mining is distinguished from surface coal mining, which is regulated by the Department of the Interior and the States under the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

[2]Beneficiation processes separate commodity metals or mineral from interbedded nonmineral material and unrecoverable or unwanted mineral matter. They include crushing, grinding, washing, dissolution, crystallization, filtration, sorting, sizing, drying, sintering, pelletizing, briquetting, calcining to remove water and/or carbon dioxide, roasting in preparation for leaching, gravity concentration, magnetic separation, electrostatic separation, flotation, ion exchange, solvent extraction electrowinning, precipitation, amalgation, and heap, dump, vat, tank, and in situ leaching (40 CFR 261.4(b)(7)).

[3]The Bureau of Land Management (BLM) also notes that in some cases it is not managed as a "waste" at all; for example, some mine water is potable and subject to State water rights (S. Lamson, BLM, review comments, Aug. 9, 1991).

[4]In heap leaching, which is used primarily in gold and silver mining, the material to be treated is placed in a pile on an impermeable padover the ground. The leaching chemical solution for gold and silver is commonly sodium cyanide. In dump leaching, which is used primarily for low-grade copper ore, the material to be treated is placed on unlined foundations (i.e., directly on the ground). The leaching chemical solution typically is sulfuric acid but sometimes is water. In contrast to heap and dump leaching, vat leaching takes place in fabricated vessels (i.e., internal containment of the solution). Wiley fill leaching is similar to heap leaching, except that it typically takes place in a hilly terrain where flat space for a heap pad is not available; the impermeable pad is constructed in a valley or other natural depression.

[5]51 *Federal Register* 24496, July 3, 1986.

[6]51 *Federal Register* 24496, July 3, 1986. This determination was upheld in 1988 by the D.C. Circuit Court of Appeals (*Environmental Defense Fund v. U.S. Environmental Protection Agency*, 852 F.2nd 1309 (D.C. Cir. 1988)).

program for these wastes under Subtitle D but noted that it might still consider using Subtitle C if necessary. EPA issued a staff draft approach to a Subtitle D program ("Strawman I") in 1988 and, after receiving comments, issued a second draft approach (" Strawman II") in May 1990 (see "Current Regulatory Pathways" below).

Mineral processing wastes are subject to a separate rulemaking process, except for the six types already listed as hazardous wastes.[7] In January 1990, EPA eliminated all but 20 "high-volume, low-hazard" processing wastes from the Bevill exclusion, making the remainder subject to Subtitle C regulation if they exhibit one or more hazardous characteristics or if they are listed as hazardous wastes.[8] EPA addressed the 20 remaining processing wastes in another Report to Congress in July 1990 (termed the "1990 Report" in this chapter; ref. 127). On May 20, 1991, EPA finalized a regulatory determination that retained the Bevill exclusion for all 20 wastes and proposed regulating 18 of them under Subtitle D.[9] EPA concluded that the other two wastes (phosphogypsum and phosphoric acid process wastewater) had significant risks associated with current management practices and had caused environmental damage. However, EPA determined that the wastes were not amenable to Subtitle C regulation and decided instead to explore their regulation under the Toxic Substances Control Act TSCA; see "Current Regulatory Pathways" below).

Although this background paper focuses on RCRA and EPA, many mining operations (especially in the western United States) are on Federal lands managed under other statutes and by other agencies. Federal land management agencies, particularly the Bureau of Land Management (BLM), have developed surface management regulations for mining operations and guidelines or policies on cyanide management for any mining facility that uses cyanide, including for heap leaching. BLM's rules have been developed in response to requirements of the Federal Land Policy and Management Act of 1976. In addition, most States with mining operations have regulatory programs that address mining operations, wastes, and environmental conditions typical of each State. Some of these programs were developed under the Federal Clean Water Act and Clean Air Act, primacy for which has generally been delegated to the States. Other programs, particularly for Subtitle D wastes, were developed under specific State environmental statutes. Thus, the relationships among Federal and State programs are of critical importance in any evaluation of how RCRA should apply to mining wastes.

WASTE GENERATION

Extraction and Beneficiation Wastes

Ore production and waste generation vary yearly in response to market and other conditions, particularly for copper, gold, and silver mining. Given this, the following data simply illustrate the general nature of mining waste generation; they do not indicate long-term trends or current generation rates.

EPA's 1985 Report (111) included data on six metallic ores (copper, gold, iron, lead, silver, and zinc ores), uranium overburden, and two nonmetals (asbestos and phosphate rock).[10] It estimated that these mining segments produced 2.2 and 1.4 billion tons of E&B wastes in 1980 and 1982, respectively.[11] About 90 percent of the waste was waste rock and tailings (two-thirds waste rock, one-third tailings); 49 percent of the waste rock and tailings came from copper mining, 24 percent from iron ore,

[7] The six wastes are (40 CFR 261.32; also see 53 *Federal Register* 35412, Sept. 13, 1988) acid plant blowdown slurry/sludge from primary copper production (K064); surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities (K065); sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production (K066); spent potliners from primary aluminum reduction (K088); emission control dust or sludge from ferrochromiumsilicon production (K090); and emission control dust or sludge from ferrochromium production (K091). A 1990 court decision upheld the listing of K088 but remanded K064, K065, K066, and, in some respects, K090 and K091, to EPA for further explanation of the need for listing (Amen"can *Mining Congress v. United States Environmental Protection Agency*, 907 F.2nd 1179, D.C. Cir. 1990). EPA expects to issue the required explanation in 1992 (R. Hill, EPA, personal communication, Apr. 29, 1991).

[8] 55 *Federal Register 2322*, Jan. 23, 1990.

[9] 56 *Federal Register 27300*, June 13, 1991.

[10] The report did not cover: 1) wastes from clay, sand and gravel, and stone* g, because EPA judged that these were less likely to pose hazards than other wastes; 2) uranium mill tailings, which are regulated by the Nuclear Regulatory Commission under the Uranium Mill Tailings Radiation Control Act of 1978, with assistance from EPA; and 3) surface coal mining and beneficiation wastes, which are regulated by the Department of the Interior under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), with concurrence from EPA. It also did not include detailed information on E&B wastes from other metal and nonmetal mining sectors.

[11] The Department of the Interior considered th,&@ in the 1985 Report to be inadequate but did not provide alternative estimates (101).

Photo credit: Jenifer Robison

Open pit Copper mine in Arizona.

16 percent from phosphate rock, and the remainder from other operations.

The estimates of total E&B wastes are somewhat misleading because the remaining 10 percent was from dump and heap leach operations (98 percent from copper mining, small amounts from gold and silver production). However, as noted above, leach piles are not considered wastes while they are used in production. Thus EPA's **estimates** of total E&B waste and the relative proportion of waste rock and tailings should be slightly lower and higher, respectively. Because spent leach piles are considered wastes, however, the amount by which the estimates would differ is unclear.

Table 2-1—Estimated Amounts of Extraction and Beneficiation Wastes Generated in 1987 (thousand short tons)

Industry segment[a]	Waste rock (mine waste)	Tailings[b]
Metals		
Bauxite	W[c]	524
Copper	504,000	*223,650*
Gold		
Lode	197,000	76,190
Placer	10,400	16,532
Ironore	40,400	123,400
Lead	2,870	5,510
Silver	20,100	—
Zinc	W	5,011
Others	57,200	—
Minerals		
Asbestos	610	5
Phosphate	289,000	119,100
TOTAL	1,121,580	569,498

[a]The Bureau of Mines database did not include information on the amounts of waste generated for the beryllium, magnesium, manganiferrous, molybdenum, nickel, and tungsten segments.
[b]Calculated by OTA as the difference between the amount of crude ore and the amount of marketable product.
[c]W – data not reported for reasons of confidentiality.

SOURCE: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook, Vol. 1, Metals and Minerals* (Washington, DC: 1988).

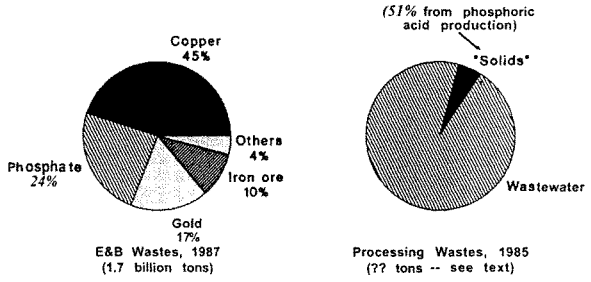
The U.S. Bureau of Mines (BOM) also collects data on waste rock, crude ore, and marketable products; the difference between crude ore and products provides a rough estimate of the amount of tailings. The Office of Technology Assessment (OTA) used BOM data to estimate that the nonuranium mining industry generated 1.7 billion tons in 1987, about two-thirds waste rock and one-third tailings (see table 2-1 and figure 2-1).[12] Copper accounted for 45 percent, phosphate 24 percent, gold 17 percent, and iron ore 10 percent. Although EPA and BOM data are not strictly comparable in scope and years of coverage, EPA's 1985 Report included the industry segments that generated 98 percent by weight of the nonuranium E&B wastes in 1987, according to BOM data.[13]

These estimates exclude mine water, for which no figures were given because amounts vary greatly and are difficult to estimate. However, the amount of mine water may be quite high at some sites, and effective management of acid mine drainage is a challenge at many active and inactive sites (1 11). As noted above, though, the U.S. Department of the

[12]Wastes from clay and stone mining totaled another 138 million tons. BOM data do not cover uranium mining, which has decreased significantly (western Governors' Association, review comments, Jan. 23, 1991).

[13]In 1987, waste rock and tailings for the six metals covered in the 1985 Report amounted to slightly more than 1.6 billion tons. Waste rock and tailings from metals and minerals not covered in the report (excluding clays, sand and gravel, stone) totaled 83 million and 15 million tons, respectively.

Figure 2-I—Amounts of Mining Wastes



SOURCES: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook, Vol. 1, Metals and Minerals* (Washington, DC: 1988); U.S. Environmental Protection Agency, *Report to Congress on Special Wastes From Mineral Processing*, EPA/530-SW-90-070C (Washington, DC: July 1990).

Interior (DOI) does not consider mine water an E&B waste.

Mineral Processing Wastes

Processing ore to obtain marketable products leaves behind waste residues, mostly in slurry form, that must be managed. EPA's 1990 Report covered the 20 mineral processing wastes that met EPA's high-volume, low-hazard criteria and therefore remained exempt under the Bevill exclusion from Subtitle C regulation, pending further study and rulemaking.[14]

The 20 Bevill wastes are generated by 91 facilities in 29 States. For these 20 wastes, about 103 million tons of solid waste (including slurry) is generated annually, primarily consisting of phosphogypsum from phosphoric acid production (51 percent), iron slag (20 percent), and steel slag (14 percent) (see table 2-2 and figure 2-1).[15] EPA also estimated that 2.0 billion tons of process wastewater is generated annually, 99 percent from phosphoric acid production. However, most of the phosphoric acid wastewater stream is recycled, either immediately or after being used to transport phosphogypsum or for process cooling. The 1.9-billion-ton estimate for phosphoric acid wastewater thus counts water that is used several times, but the amount of new wastewater generated is unclear.[16] According to the BOM, wastewater from phosphoric acid production generally is recycled every three to four days and fresh water inputs are typically less than 5 percent[17]; even so, inputs can still amount to millions of gallons per day at individual plants.

Mineral processing wastes that do not meet the high-volume, low-hazard criteria are no longer exempt from Subtitle C regulation; depending on their nature, they can be either hazardous or nonhazardous. EPA has not collated data on nonexempt mineral processing wastes, but various Federal Register notices contain information on more than 70 such wastes, with total waste generation of around 7.4 million tons (however, data on solids/

[14] The high-volume criterion is 45,000 metric tons (49,500 short tons) per year per facility for each nonliquid wastestream and 1 million metric tons (1.1 million short tons) per year per facility for each liquid wastestream (*54 Federal Register* 36592, Sept. 1, 1989). The low hazard criterion has two parts. For toxicity, if samples of a waste from ten or more facilities fail EPA's Synthetic Precipitation leaching Procedure, then the waste is withdrawn from the Bevill exclusion, unless evidence indicates that test results are anomalous. For corrosivity, liquid wastes with a pH less than 1.0 or greater than 13.5 are not considered "low hazard."

[15] These estimates may include some wastes that are processed for metals recovery or recycled in other applications (T.B. Larsen, Cyprus Miami Mining, personal communication Apr. 2, 1991).

[16] J.P. Stone, BOM, personal communication Apr. 12, 1991.

[17] T. Ary, BOM, review comments, July 19, 1991.

[18] 54 *Federal Register* 15316, Apr. 17, 1989; 54 *Federal Register* 36592, Sept. 1, 1989; 54 *Federal Register* 39298, Sept. 25, 1989; 55 *Federal Register* 2322, Jan. 23, 1990. EPA also reclassified 12 wastestreams as beneficiation wastes and 6 wastestreams as other nonprocessing wastes.

Table 2-2—The 20 High-Volume Mineral Processing Wastes Conditionally Exempted From Subtitle C Pending Final Rulemaking (amount of waste generated in thousand tons)

Waste	Solids and slurries	Liquids	Comments[a]
Red and brown muds from bauxite refining	3,080		
Treated residue from roasting/leaching of chrome ore	112		
Gasifier ash from coal gasification	270		
Process wastewater from coal gasification		5,313	
Calcium sulfate wastewater treatment plant sludge f from primary copper processing	154		Potential C by Audubon et al.
Slag from primary copper processing	2,750		Potential C by Audubon et al.
Slag tailings from primary copper processing	1,650		
Slag from elemental phosphorus production	2,860		Potential C by Audubon et al.
Fluorogypsum from hydrofluoric acid production	983		
Process wastewater from hydrofluoric acid production		14,960	Potential C by Audubon et al.
Air pollution control dust/sludge from iron blast furnaces	1,320		Potential C by Audubon et al.
Iron blast furnace slag	20,680		Not considered a waste by DOI
Slag from primary lead processing	516		Potential C by Audubon et al.
Process wastewater from magnesium processing		2,712	
Phosphogypsum from phosphoric acid production	52,360		Potential C by Audubon et al.
Process wastewater from phosphoric acid production		1,947,000	Potential C by Audubon et al.
Air pollution control dust/sludge from basic oxygen furnaces and open hearth furnaces from carbon steel production	1,540		Potential C by Audubon et al.
Basic oxygen furnace and open hearth furnace slag from carbon steel production	14,520		Not considered a waste by DOI
Chloride process waste solids from titanium tetrachloride production	455		Potential C by Audubon et al.
Slag from primary zinc processing	173		Potential C by Audubon et al.

[a]The names on this list, based on EPA rulemakings and EPA's 1990 Report, should not be considered exact; the names of individual Waste streams sometimes change between rulemakings, and it is not always clear from first glance whether the changes are simply nominal in character or represent actual additions or deletions in the waste stream being considered.
[b]"Potential C by Audubon et al." refers to wastes that the National Audubon Society, Environmental Defense Fund, and Mineral Policy Center considered potential candidates for regulation under Subtitle C as hazardous; "Not considered a waste by DOI" refers to materials that the Department of Interior suggests should not be considered wastes at all.

SOURCES: National Audubon Society, Environmental Defense Fund, and Mineral Policy Center, "Comments of the National Audubon Society, the Environmental Defense Fund, and the Mineral Policy Center on the Environmental Protection Agency's Report to Congress on Special Wastes From Mineral Processing," Washington, DC, Oct. 19, 1990; U.S. Department of the Interior, "Comments in Response to the Environmental Protection Agency Report to Congress on Special Wastes From Mineral Processing Released July 1990," Washington, DC, Oct. 19, 1990; U.S. Environmental Protection Agency, *Report to Congress on Special Wastes From Mineral Processing*, EPA/530-SW-90-070C (Washington, DC: July 1990); 54 *Federal Register 15316* (Apr. 17, 1989); 54 *Federal Register 36592* (Sept. 1, 1989); 54 *Federal Register 39298* (Sept. 25, 1989); 55 *Federal Register* 2322 (Jan. 23, 1990).

slurries versus wastewater are difficult to distinguish in the notices) .18

The DOI (102) and the American Mining Congress (AMC) (4) object to the EPA classification of some mineral processing materials. DOI asserts that iron blast furnace slag and basic oxygen and open hearth furnace slags should not be considered wastes because they are byproducts that are processed and sold as such. The AMC believes that materials such as elemental phosphorus slag and copper slag are not wastes when beneficially reused or reprocessed, and that EPA's definition of Bevill processing wastes discourages recycling. EPA agrees that although some materials such as iron slag are largely sold for eventual off-site use, seldom (if ever) is 100 percent of the material sold, and unsold materials are typically stored on the ground (e.g., in waste piles) .19 In addition, the sold materials are usually destined for use as road aggregate, filler, etc. The Agency's current position is that these on-the-ground uses constitute disposal and that the materials therefore are solid wastes. EPA, however, is reevaluating its current definition of solid waste and intends to publish an Advance Notice of Proposed Rulemaking to solicit comments on revising the definition and the impacts of such revisions on recycling and reuse.

CURRENT MANAGEMENT METHODS

Extraction and Beneficiation Wastes

EPA's 1985 Report estimated that 56 percent of waste rock was disposed in on-site piles and 61 percent of tailings was disposed in on-site surface

[19]U.S. EPA, Office of Solid Waste, review comments, Aug. 22,1991.

CHARACTERIZATION OF BUILDING-RELATED CONSTRUCTION AND DEMOLITION DEBRIS IN THE UNITED STATES

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CHARACTERIZATION OF BUILDING-RELATED CONSTRUCTION AND DEMOLITION DEBRIS IN THE UNITED STATES

Executive Summary

INTRODUCTION

The purpose of this report is to characterize the quantity and composition of building-related construction and demolition (C&D) debris generated in the United States, and to summarize the waste management practices for this waste stream. C&D debris is produced when new structures are built and when existing structures are renovated or demolished. Structures include all residential and nonresidential buildings as well as public works projects, such as streets and highways, bridges, piers, and dams. Many state definitions of C&D debris also include trees, stumps, earth, and rock from the clearing of construction sites.

The focus of this report is on building-related wastes, including construction, demolition, and renovation of residential and nonresidential buildings. Road and bridge debris, land clearing debris, etc. are not covered in detail in this report. They are, however, discussed briefly.

METHODOLOGY

The methodology used for this study combines national Census Bureau data on construction industry activities with point source waste assessment data (i.e., waste sampling and weighing at a variety of construction and demolition sites) to estimate the amount of building-related C&D debris produced nationally.

It is important to recognize that this is a first attempt to use this methodology. It is expected that as the trend towards better characterization of C&D sites continues and more communities record their C&D debris quantities and compositions, the national estimates as developed in this report can be tested and modified accordingly. Currently, the limited point source waste assessment data may be a source of considerable uncertainty in the analysis.

Since the method developed here makes use of readily available Census Bureau data on national C&D activity, (e.g., construction and demolition permits and construction value) the methodology should be well suited for periodic updating. Waste assessment results should change very slowly over time because construction materials used and building construction practices remain relatively constant from year to year. Composition of waste from demolished buildings, which have been built over a range of years, should change even more slowly.

DEFINITIONS
(For purposes of this report, following is a working set of definitions)

Construction and Demolition (C&D) Debris is waste material that is produced in the process of construction, renovation, or demolition of structures. Structures include buildings of all types (both residential and nonresidential) as well as roads and bridges. Components of C&D debris typically include concrete, asphalt, wood, metals, gypsum wallboard, and roofing. Land clearing debris, such as stumps, rocks, and dirt, are also included in some state definitions of C&D debris.

Generation of C&D debris, as used in this report, refers to the weight of materials and products as they enter the waste management system from the construction, renovation, or demolition of structures, and before materials recovery or combustion takes place. Source reduction activities (e.g., on-site usage of waste wood mulch or the on-site use of drywall as a soil amendment) take place *ahead* of generation, i.e., they reduce the amount of waste generated.

Recovery of materials, as estimated in this report, includes the removal of products or materials from the waste stream for the purpose of **recycling** the materials in the manufacture of new products.

Source reduction activities reduce the amount or toxicity of wastes before they enter the waste management system. **Reuse** is a source reduction activity involving the recovery or reapplication of a product or material in a manner that retains its original form and identity. Reuse of products such as light fixtures, doors, or used brick is considered source reduction, not recycling.

Discards include the C&D debris remaining after recovery for recycling (including composting). These discards would presumably be combusted or landfilled, although some debris is littered, stored or disposed on-site, or burned on-site.

REPORT HIGHLIGHTS

Building-Related C&D Debris Generation Estimates

- An estimated 136 million tons of building-related C&D debris were generated in 1996 (Table ES-1).
- The estimated per capita generation rate in 1996 was 2.8 pounds per person per day.
- Forty-three percent of the waste (58 million tons per year) is generated from residential sources and 57 percent (78 million tons per year) is from nonresidential sources.
- Building demolitions account for 48 percent of the waste stream, or 65 million tons per year; renovations account for 44 percent, or 60 million tons per year; and 8 percent, or 11 million tons per year, is generated at construction sites.

Table ES-1

SUMMARY OF ESTIMATED BUILDING-RELATED C&D DEBRIS GENERATION, 1996*
(Roadway, Bridge, and Land Clearing Debris not included)
(Thousand Tons)

Source	Residential		Nonresidential		Totals	
	Thou tons	Percent	Thou tons	Percent	Thou tons	Percent
Construction	6,560	11	4,270	6	10,830	8
Renovation	31,900	55	28,000	36	59,900	44
Demolition	19,700	34	45,100	58	64,800	48
Totals	58,160	100	77,370	100	135,530	100
Percent	43		57		100	

* C&D debris managed on-site should, in theory, be deducted from generation. Quantities managed on-site are unknown.

Source: Franklin Associates

Composition of C&D Debris from Buildings

The composition of C&D debris is highly variable and depends critically on the type of activity where sampling is done. Whereas wood is typically the largest component of waste material generated at construction and renovation sites, concrete is commonly the largest component of building demolition debris.

Road, Bridge, and Land Clearing Debris

Road, bridge, and land clearing wastes represent a major portion of total C&D debris, and some of the materials produced are managed by the same processors and landfills that manage building-related wastes. A methodology was not developed in the scope of this project to estimate these wastes. Point source waste assessment data were not available for these projects.

Management Practices for C&D Debris

- The most common management practice for C&D debris is landfilling, including C&D landfills, MSW landfills, and unpermitted sites. An estimated 35 to 45 percent was discarded in C&D landfills in 1996. An estimated 30 to 40 percent of C&D debris is managed on-site, at MSW landfills, or at unpermitted landfills.

- A 1994 survey done for the EPA identified about 1,900 active C&D landfills in the United States.

- An estimated 20 - 30 percent of building-related C&D debris was recovered for processing and recycling in 1996. The materials most frequently recovered and recycled are concrete, asphalt, metals, and wood.

- There is an trend toward increasing recovery of C&D debris in the United States. ***C&D Recycling*** estimates there are about 3,500 operating facilities that process C&D debris materials in the United States.

- Recent deconstruction demonstration projects show that high diversion rates may be achieved. Deconstruction minimizes contamination of demolition debris; however, it is labor intensive, and generally requires more time than traditional demolition.

- Metals have the highest recycling rates among the materials recovered from C&D sites. The Steel Recycling Institute estimates that the recycling rate for C&D steel is about 85 percent (18.2 million tons out of 21.4 million tons generated). These numbers include not only scrap steel from buildings but also from roads and bridges.

- We estimate there are about 500 wood processing facilities in the United States that derive wood from C&D debris. The leading states for these wood processing plants are North Carolina, Oregon, and California.

Peer Review and Data Sources

This first edition report underwent extensive internal and external peer review of methodology and data sources. Major contributors of data sources and peer review include the National Association of Home Builders Research Center; Gershman, Brickner & Bratton, Inc.; EPA Region 5, and the U.S. Department of Commerce, Bureau of the Census.

As part of an ongoing effort to better characterize non-hazardous wastes subject to regulation under Subtitle D of RCRA, USEPA encourages public comment on this report, including additional methodological considerations and data sources.

STATEMENT OF MICHAEL CALLAGHAN, CABINET SECRETARY, WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Thank you, Mr. Chairman, and members of the subcommittee, for this opportunity to come before you to speak on an important issue for Westirginia and southern Appalachia.

My name is Michael Callaghan. I am the Cabinet Secretary for the West Virginia Department of Environmental Protection. I am here today to speak with you about the policy and practice of using valley fills in coal mining operations in West Virginia and southern Appalachia. While most of my testimony relates to impacts on the coal industry, the fill rule has significant implications in many areas that impact the economy throughout the country.

I am a fifth generation West Virginian who grew up in the southern coalfields. As a citizen and an avid fisherman and outdoorsman, I appreciate both the benefits and the burdens brought upon West Virginia by more than one hundred years of coal mining. West Virginians have been debating both the costs and benefits of the mining industry for many years. Health, safety, employment and environmental issues are implicated by mining practices.

Mountaintop removal mining is, as the name suggests, a mining method in which soil and rock are removed from the tops of mountains to expose a seam of coal. The excess soil and rock, known as spoil, is commonly placed in nearby valleys and hollows, thereby creating large sloped areas called valley fills. Mountaintop removal is the most economical way to mine coal in steep slope terrain, such as southern West Virginia, but it has the consequence of filling miles of mountain streams with rock and dirt. Other forms of mining such as underground mining and contour mining, also make use of valley fills, but to a lesser degree.

The demand for low sulphur coal has been steadily increasing over the last decade, and the southern Appalachian coal fields, which includes West Virginia, are a critical source of low sulphur coal. In West Virginia in 2000, 169 million tons were mined through surface and underground operations. That increased to 175 million tons in 2001 and tonnage is expected to top 180 million in 2002.

The state of West Virginia issues mining permits through a federally approved program and has primacy of its program through the Department of the Interior. That is, the Surface Mine Control and Reclamation Act (SMCRA) and its regulations dictate most aspects of the permitting process implemented by the state, including the permitting of valley fills. In West Virginia, among numerous other requirements, every permit for a mining operation which proposes filling a stream must include detailed provisions for minimizing the amount of excess spoil material, a storm water runoff analysis to prevent flooding and detailed engineering requirements to ensure structural stability. In other words, our state has a regulatory structure to analyze the impact of valley fills prior to the issuance of a state permit.

In addition to state approval, before any waters of the United States can be filled, the mining company must obtain a Section 404 permit under the Clean Water Act from the U.S. Army Corps of Engineers. The Corps has interpreted the Clean Water Act to authorize construction of valley fills.

Over the last 20 years, the state of West Virginia and Federal oversight agencies, which include the Environmental Protection Agency, the Army Corps of Engineers and the Office of Surface Mining, issued permits that authorized the construction of more than 4,000 valley fills in West Virginia. Those fills have ranged in size from a few hundred yards to over 2 miles in length and affected approximately 750 miles of our streams, creeks and drainageways.

To better assess the practice of mountaintop mining, the Federal oversight agencies and the state of West Virginia have been working for 3 years on an environmental impact statement to address mountaintop mining and valley fills. The parties are far from reaching a conclusion on the measurable, long term impact of mountaintop mining and valley fills upon the environment and the economy.

One conclusion about mountaintop mining and valley fills that is certain though is that the use of these practices has enabled the mining industry to flourish and has put thousands of West Virginians to work. In fact, under challenging market conditions, production in West Virginia has steadily increased. In numerous communities in southern West Virginia, the coal mining industry has, for many years, formed the backbone of the economy. The industry draws its work force from the local population and many additional jobs are sustained through businesses that support mining, such as transportation, equipment sales and maintenance.

However, over the past several years, we have seen a decline in mining-related employment as increasingly large scale technology and automation facilitate the mining of larger tracts of land with fewer people. We anticipate that this trend will

increase over the next 15 years as the most accessible reserves of coal are mined out and additional automation becomes available to the mining industry.

Market factors such as western coal competition, depletion of reserves, economies of scale and industry mergers will likely lead to a decline of employment in the mining industry in Appalachia. This will leave this region, especially West Virginia, with an economic void.

Ironically, valley fills and mountaintop removal sites can serve as effective development tools for filling the gap left by the mining industry. That is, when properly planned, mountaintop mining sites have proven ideal locations for industrial, commercial, residential and recreational development. The flat topography of mountaintop removal sites in areas typically devoid of prime building locations has already proven beneficial to several businesses, including a large wood products factory, a world-class golf course, a multi-faceted recreational park and residential development.

My department is working closely with the state economic development office to more fully utilize former surface mining sites. And in the coal mining counties, individuals like Mike Whitt of the Mingo County Economic Development Authority have risen as leaders in the field, working closely with coal mining companies, state and local officials and prospective businesses, to successfully maximize the use of former surface mining sites as opportunities for growth. These efforts must be increased in the future to reinvorgate the economy of southern West Virginia.

Unfortunately, former mining sites historically have been underutilized as economic development tools. Of the several hundred surface mining sites with valley fills, less than two dozen have been used for economic or community development. State and Federal law has not compelled mine operators to implement a beneficial post mining land use unless the company is seeking a variance from requirements to return a site to its approximate original contour. In such instances, the permit applicant must demonstrate that the post mining land use will be equal to or better than the premining use of the site.

Currently, there are 69 applications pending with my agency that contemplate filling waters of the United States. Of those applications, only seven seek a variance and propose post-mining land uses that are equal to or better than pre-mining land uses.

Prior to leading DEP, I was a Federal prosecutor with experience prosecuting environmental violations. When I assumed office a little more than a year ago, one of my first acts was to appoint an environmental prosecutor from the Department of Justice in Washington to take control of our mining regulatory program. Our agency is now focused upon the strict application of the law as it applies to our mining permits. We have restructured our mining program to be more efficient and responsive to the public. Additionally, we are making the best use of emergency Federal funding with a state match to upgrade our staff and to improve our technical ability.

Please know that I am fully committed to the enforcement of the existing laws and regulations to demonstrate steady progress in improving oversight of the coal industry in West Virginia. While the industry is welcome to mine coal in the Mountain State, we intend to do our job as regulators and enforce the law.

While I have addressed the limited role of the fill rule as it impacts mining in southern Appalachia, the rule has far reaching effects in other regions of the country and other sectors of the economy. The consistency in definitions of the fill rule between the Environmental Protection Agency and the Army Corps of Engineers is important to mining operations in West Virginia, but it is very important to other sectors throughout the country as well. I thank you for this opportunity today and look forward to your questions.

STATEMENT OF KEVIN RICHARDSON, PRESIDENT AND FOUNDER OF THE JUST WITHIN REACH FOUNDATION

Mr. Chairman, Honorable Committee members, guests . . . I'm here today to talk about the systematic destruction of one of the most beautiful, productive and historic regions of our country—my home state of Kentucky, the mountains of West Virginia and Tennessee, and the other areas of Appalachia where the practice of mountaintop coal mining has taken over.

In the midst of their giant lakes of coal sludge that sometimes burst without warning, their constant dynamiting that shakes homes from their foundations, their transformation of forested mountain ranges into flat, gravel-covered moonscapes, and their contamination of well water and aquifers, coal companies engage in the practice of "valley fill"—our reason for being here today.

For years, the Corps of Engineers has routinely issued permits to coal companies in the Southeast and Appalachia, allowing them to fill valleys and waterways with "overburden" from their mountaintop-removal coal extraction operations. Overburden, along with coal sludge, are the byproducts of extracting and washing coal, before shipping it to electric generating plants around the country. EPA officials, residents living in the shadows of the mines and citizen groups have questioned the validity and legality of the Corp's decision to issue such permits—permits for an activity that dumps mining waste into the region's streams, rivers and valleys. Hundreds of millions of tons of industrial mining byproduct are pushed into the valleys surrounding coal extraction sites, to date, burying over 1,500 miles of headwater streams in West Virginia and my home state. Valley fills destroy the spawning grounds that support our recreational fishing industry, they contaminate our drinking water and they trash our thriving tourist industry that relies on the natural beauty of our area.

In April, a Federal District Court judge finally brought some needed attention to this issue by ruling that the Corps' practice of issuing valley fill permits violates Congress' intent in the Clean Water Act and its restrictions on using waterways for industrial waste disposal. The Administration's recent attempt to circumvent the Clean Water Act by rewriting the rules to define coal extraction waste as "fill" is a nice gesture to their friends in the industry. But it clearly exceeds the Administration's legal authority granted under the Act. Such a gesture cannot alter the meaning of the LAW. I urge you to make this clear to the President and his agencies.

The bottom line is that we have an industry that has thrived, not from honest business practices in a free market, but from passing its real costs to the people of Appalachia and the rest of the United States . . . with subsidies in the form of illegal permits from the Corps of Engineers and other agencies that are supposed to protect us. Ending the practice of valley fills and making coal companies manage their industrial waste like any other industry is not about hugging trees and worshipping mountains. It's about making coal compete for our energy dollar on an equal playing field with natural gas, hydroelectric, solar and wind. It's about recognizing that WE own the streams and rivers of this country and that WE own the fish and other resources in those waterways. Destroying the rivers, the fisheries, the forests and the mountains through irresponsible coal extraction, as well as the coal-produced acid rain deposition in your home state, Mr. Chairman, is no different than kicking down the doors of our homes and walking out with an armful of our valuables—theft is theft.

I am not a scientist, but I do know what I've seen on flights over the coalfields. The historic resources that sustained Daniel Boone, the original Cherokees and generations of mountain people are being converted on a mammoth scale into flat, lifeless plateaus. The first time I flew over the area at 5,000 feet, I thought I would see a few scarred peaks. Instead, I saw the entire horizon filled with mountains with their tops blown off, huge lakes of toxic sludge and piles of waste filling every valley around the mines.

I came here today to bring attention to an Administration policy and a Corps of Engineers practice on valley fills that is completely misguided and gives no consideration to the lives of generations to come. When I move back home to raise a family on my farm in Kentucky, I want my kids to be able to fish and swim in the same places I grew up. I ask you, our leaders, to look beyond the political clout of the coal lobby and do what's right for the forgotten Appalachian region.

In closing, I would like to personally invite each of you to take a flight with me over the coalfields and see firsthand how our future is being robbed.

Mr. Chairman, I thank you for your invitation to speak before the committee and your willingness to bring this difficult issue to light.

RESPONSES BY KEVIN RICHARDSON TO ADDITIONAL QUESTIONS FROM SENATOR LIEBERMAN

Question 1. Please describe the activities of the Just Within Reach Foundation relative to the issues discussed in the hearing.

Response. The Just Within Reach Foundation takes an immense interest in the education and well being of the young people and families in Appalachia—families that are affected by the operations and practices of coal extraction companies in the region, At every opportunity, JWR provides educational information and material to those citizens wishing to learn more about these issues. In addition, we serve as a voice for those in the region that do not believe they have a voice when it comes to sharing their concerns.

JWR's mission is to provide environmental education and promote personal responsibility and accountability with regard to the health of the Earth. JWR serves as a resource that empowers people, particularly young people and families, with information and practical examples of environmental issues—knowledge that can be put into action at the local community level. Working together and with the proper tools, young people will be the driving force behind environmental progress, changing unfriendly behaviors into actions and practices that will conserve and preserve. The JWR Foundation believes we can have progress such as industry, jobs and business profits while also protecting resources, wildlife, our health and Earth's beauty. But in order to be motivated to solve environmental problems, we must first understand how those problems impact our daily lives. JWR brings these daily life issues to the forefront and helps point people in the right direction to learn more and inspire them to create an action plan of their own.

Areas and Projects supported by JWR:

- Environmental studies scholarships for college students
- Environmental education hikes, trips and camping excursions
- Sponsoring kids to attend environmental camps
- Educating people on the importance of being involved in political processes
- Clean-up and recycling events throughout the United States
- An educational video and classroom study guide
- An environmental television series for kids and their families
- Water and soil testing in potentially hazardous areas
- Research into alternative and renewable energy sources
- Research into the link between the environment and cancer

We are proud to share that the Just Within Reach Foundation just awarded $12,000 in scholarships for college students studying in the areas of Environmental Science and Marine Studies. Also, this year, JWR assisted the Waterkeeper Alliance in establishing a Kentucky Riverkeeper organization in the state of Kentucky, to monitor the health of the state's rivers and waterways.

Question 2. Please describe the impacts associated with valley fills in the state of Kentucky.

Response. The process of utilizing living valleys as a repository for mountaintop coal extraction waste has severe and devastating impacts on the people, wildlife and natural systems in Eastern Kentucky. These valleys serve as the historic and present day homes to the people of Appalachia and are the headwaters to all of the surface waters in the region. Valley fill wipes out the spawning grounds of Appalachia's fisheries by filling in streams and replacing them with concrete ditches. A vibrant fishing industry is crucial to the thriving tourist economy of Kentucky. Empty, murky streams created by valley fills will not attract tourist dollars.

In addition to their impact on our fisheries, clearing forested valleys and filling them with mining wastes has destroyed the natural drainage systems in Kentucky. Every time the rain falls in Eastern Kentucky, flood waters roll down the denuded hillsides, wiping out homes and farms in the flood zones, sometimes killing residents that aren't able to escape.

STATEMENT OF J. BRUCE WALLACE, PROFESSOR OF ENTOMOLGY, UNIVERSITY OF GEORGIA

Senators, ladies and gentlemen, thank you for the opportunity to offer testimony on changing definitions of fill material as it relates to central and southern Appalachian streams. These changes, as pointed out by Judge Charles Haden, can only be allowed to stand if the U.S. Congress alters the intent of the Clean Water Act and allows fills so that waste, from mining operations can be deposited in headwater streams. Based on more than thirty years of studying Appalachian streams, I strongly urge you not to allow this Act to be altered.

The impacts of coal mining operations are significant and detrimental. We are burying streams and creating potential long-term environmental consequences that will haunt us into the future from both environmental and economic standpoints. Documentation shows at least 900 miles of headwater streams have already been eliminated in the Central and Southern Appalachians between 1986 and 1998 because of mountain-top removal valley-fill (MTR/VF) coal mining practices. Because these data were derived from maps that do not show all headwater streams and spring brooks, I must tell you that this figure is a very low estimate.

The significance of headwater streams is widely accepted by the scientific community as demonstrated by an attached letter signed by 44 senior aquatic scientists and excerpts from a peer-reviewed publication. The message from the scientific com-

munity is clear: (1) headwater streams provide vital ecological goods and services, and (2) they are being destroyed at an extremely high rate by human activities.

Much of the diversity of aquatic biota in the Appalachians is found in the small headwater streams. The degradation and elimination of headwater streams increase extinction vulnerability for aquatic invertebrates, amphibians and fish. Streams draining these forests receive most of their energy inputs from leaves, wood, etc. supplied by the surrounding forest. The organic matter (called detritus) deposited in headwater streams is stored and processed by biota and physical processes into smaller particles and dissolved organic matter. This detritus is transported downstream to serve as food for other microbes and invertebrates (and ultimately fish). Destroying the linkage between headwaters and downstream areas alters the availability of organic matter as fuel for downstream animals. These downstream reaches are often far removed from the headwater source of the detritus input.

One of the fundamental concepts in stream ecology is the longitudinal linkage of upstream to downstream segments. Former streams covered by valley fills no longer serve as a source of input, storage, and conversion of organic matter for export to downstream areas. Recent studies have shown that small streams in the drainage network are the sites of the most active uptake and retention of dissolved nutrients. Elimination of small streams from the drainage network results in increased downstream loading of nutrients and degradation of water resources. We should be most concerned with the valuable ecosystem services that are lost when streams are buried. Uptake of nutrients by vegetation and the transformation of nutrients and chemicals by microbes in soils, riparian zones, and streams is an important mechanism controlling export of nitrogen from watersheds.

Our potable water supplies will be harmed many years into the future because of large increases in concentrations of several chemicals as recently found by the USEPA below valley fills. The large increases in concentrations of chemical elements below valley fills (Table 1), combined with increased discharge will increase downstream pollution. Altered chemistry, and altered temperature regimes, contribute to the elimination of sensitive species of invertebrates (which also serve as food for higher animals such as fish) from downstream areas below valley fills. As shown by USEPA studies in West Virginia and Kentucky, many sensitive species are absent from streams below valley fills. Who pays for this long-term pollution of our waterways? Unfortunately, those of us who live downstream pay the bill.

This deliberation really boils down to short-term economic gain for long-term environmental degradation. However, the question should not be "How can we extract coal resources with the minimum expense and maximum short-term profit for the mining companies?" but rather "How can we extract coal resources in a wise manner, which ensures long-term environmental integrity, productive forests, unburied and unpolluted streams, and long-term productive economies for our children and grandchildren?"

Table 1.—Median values (mg/L) for un-mined sites and valley fill sites for various water quality parameters in West Virginia during the period of October 1999 to February 2001 (Source USEPA).

Parameter	Un-mined sites	Valley Fill	Filled/Un-mined
Sulfate	12.6	524	41.7
Calcium	4.9	104	21.3
Magnesium	4.1	86.7	21.2
Hardness	29.1	617	21.2
Solids, dissolved	50.5	847	16.8
Manganese, total	0.005	0.044	8.8
Conductivity (mhos/cm)	66.4	585	8.8
Selenium	0.0015	0.0117	7.8
Alkalinity	20	149.5	7.5
Potassium	1.58	8.07	5.1
Sodium	1.43	4.46	3.1
Manganese, dissolved	0.005	0.0104	2.1
Chloride	2.5	4.5	1.8

RESPONSES BY J. BRUCE WALLACE TO ADDITIONAL QUESTIONS FROM SENATOR LIEBERMAN

Question 1a. Please describe the specific types of aquatic species that are being eliminated as a result of the valley fills and their ecological importance.

Response. The types of organisms whose habitats are being eliminated include many taxa of aquatic insects as well as other invertebrates, salamanders and some fish.

The streams destroyed or harmed by valley fills associated with mountaintop removal mining range from perennial streams to small headwater springbrooks and headwater seeps and many of these seeps and springbrooks are year round. Much of the biological diversity of aquatic insects found in the Appalachians is found in the small springbrooks and headwater seeps. Headwater streams provide unique habitats for numerous species. Their degradation and elimination from the landscape increase extinction vulnerability for aquatic invertebrate (e.g. Morse et al. 1993, Kirchner et al. 2000), amphibian (Elliott et al., submitted), and fish species (e.g. Etnier 1997). Morse et al. (1997) recognized the southern Appalachian area, extending from Maryland and West Virginia southward to Georgia and Alabama, as an area of outstanding diversity. Many of the aquatic invertebrates such as mayflies, stoneflies, and caddisflies (EPT taxa) occur exclusively in the mountainous and foothill areas. For example, 104 species of caddisflies found in the Eastern Highlands (Cumberland Plateau, Appalachian plateaus, Appalachian Mountains, and Piedmont) do not occur anywhere else in the world. Morse and colleagues consider about 74 species belonging to the EPT taxa to be vulnerable to extirpation in the southern Appalachians because many are known to occur from only one or two small headwater springbrooks or seepage areas. Morse et al. (1997) suspect the number of species potentially subject to extirpation may be considerably higher than the seventy-four they list because many small streams, seeps, and springbrooks have been poorly explored and insufficiently sampled. These areas represent the types of habitats that are being filled or proposed for valley fills.

Studies in other regions suggest that many intermittent and temporary streams may contain a diverse assemblage of aquatic species. For example, in western Oregon, taxa richness of invertebrates (>125 species) in temporary streams exceeded that found in a permanent headwater, ca. 100 species (Dieterich and Anderson 2000). Dieterich and Anderson (2000) found 13 previously undescribed taxa of invertebrates associated with one temporary headwater stream. In several northern Alabama streams, Feminella (1996) could find little difference between the numbers of invertebrate taxa found in permanent streams versus those found in intermittent stream reaches.

Other than the knowledge that small spring brooks and spring seeps can be important sites for biodiversity, including unique and rare species, few attempts have been made to assess what is lost with valley fills. A recent survey conducted in stream habitats destined for valley fills in West Virginia and Kentucky (most of which do not appear as streams on existing USGS 1:24,000 maps) clearly indicates a diverse aquatic fauna extending into drainages with a watershed area of only 100 to 150 acres (Kirchner et al. 2000). The upstream sampling locations started at points of contiguous flow with downstream areas (Kirchner et al. 2000). In fact, some watersheds of less than 50 acres had multiple (>10) taxa, which could be characterized as requiring at least a year or more to complete aquatic stages of their development (Kirchner et al. 2000). Mining operations like that proposed here may be destroying potentially valuable or unique habitats without knowing the consequences of their actions on biodiversity of the region (Kirchner et al. 2000)(also see below).

In addition to these invertebrates there are several salamander species, including: Northern two-lined, dusky, spring, and longtail (aquatic) plus the breeding stages of Plethodons (woodland salamanders) and the Fowler's Toad (Buffo woodhouseii fowleri), which breed in streams (Green and Pauley 1987). The southern Appalachian region has the highest diversity of salamanders in North America (Duellman and Sweet 1999), and many of these are associated with streams (Elliott et al., submitted). Many stream salamanders require first order streams and their accompanying headwater seepages in order to maintain viable populations (Petranka 1998, Elliott et al., submitted). As noted in the introduction, a large portion of stream salamander habitat does not even appear on USGS 1:24,000 maps (Meyer and Wallace 2001, Hansen 2001, Elliott et al., submitted). In fact, these latter authors (Elliott et al.) noted that existing 1:24,000 USGS maps accounted for only 34 percent of stream habitat suitable for salamanders in northern Georgia, as most of the smaller streams and seepages did not appear on the USGS maps. Hence, many more miles of aquatic habitat are being disturbed by the mining operations than measured from the USGS maps.

Question 1b. What is the ecological importance of species being eliminated?

Response. Loss of headwater streams is going to have more than minimal impacts, as well as cumulative and long-term impacts, on downstream reaches with respect to energy sources. Headwater streams draining eastern deciduous forest re-

ceive most of their energy inputs from leaves, wood, etc. supplied by the surrounding forest. The predominance of organic debris dams in headwater streams (e.g. Bilby and Likens 1980) provides sediment and organic matter retention, important habitat structure, and sites for critical metabolic activity (e.g. Steinhart et al. 2000). These important functions are eliminated when headwaters are filled. Organic matter inputs to headwater streams such as those affected by this mine average 345 grams per square meter of streambed area per year (= about 0.7 lb dry weight per square yard per year) in the eastern United States (Webster et al. 1995). This organic detritus, along with accompanying microbes such as fungi and bacteria, provide most of the energy, or food resources, to the stream invertebrates and ultimately to vertebrate populations such as fish and salamanders (Wallace et al. 1997, 1999). One of the fundamental concepts in stream ecology is the longitudinal linkage of upstream to downstream segments (Vannote et al. 1980).

Organic matter from the surrounding forest is also processed into fine particulate organic matter (FPOM), as well as dissolved organic matter (DOM, Meyer et al. 1998) by physical abrasion, microbes, and invertebrates (Wallace et al. 1991). The FPOM and DOM are more easily transported by the water currents to downstream reaches where it serves as food for other *microbes and invertebrates* (and ultimately fish), which are often far removed from the headwater source of the detritus input from the surrounding forest (Vannote et al. 1980). These streams subjected to valley fills will no longer serve as a source of input, storage, and conversion of organic matter for export to downstream areas. Thus, destroying the linkage between headwaters and downstream reaches alters the availability of organic particles to downstream areas where the material serves as fuel for microbiota and invertebrates, which in turn serve as food to fish, and other higher animals. (As an example: based on data from the Coweeta Hydrologic Laboratory in the Appalachians of western North Carolina, the smallest streams [again, not even shown on USGS 1:24,000 maps of the region] export 36 kg of fine particles of organic matter per 100 m (about = 79.4 lbs per 328 feet) each year for each length of headwater stream (Webster et al. 1992). Burying hundreds of miles of small headwater streams would reduce the fine particle export from these headwaters. Furthermore, dissolved organic matter export to downstream reaches, a significant portion of which is derived from organic matter from terrestrial detritus in the streambed (Meyer et al. 1998), would be greatly reduced.

Dissolved organic matter is another source of energy for downstream areas (Kaplan et al. 1980)). Headwater streams should be viewed as important sites of organic matter input (from the surrounding forest), storage, and processing (or transformation to FPOM and DOM), which are important for entire drainage systems. In my opinion, burial of so many headwater streams is akin to trimming the roots of a tree and having the misguided view that this will not impact the tree.

Another consequence of removing headwater reaches from their drainage basins is that these small streams are sites of production of aquatic invertebrates such as insects, which may drift downstream and become important sources of food to downstream predators such as various species of fish. These invertebrates are also sources of food to some headwater fish species, water shrews, and salamanders within the headwater reach. Additionally, emerging aerial adults of aquatic insects are often used as food by terrestrial species such as spiders and birds and they represent an important reciprocal link between streams and terrestrial biota (Gray 1993, Nakano and Murakami 2001, Sanzone 2001, Henschell et al., in press, Power et al., in press).

Question 2. Please describe the alterations in stream chemistry as a result of valley fill—the kinds of chemicals being found, at what levels, and why should we worry about them?

Response. The basic chemical composition of unpolluted streams draining a landscape is largely established in headwater streams (Gibbs 1970, Likens 1999, Johnson et al. 2000). Biotic uptake by vegetation, transformation by microbes in soils, riparian zones, and streams, in the presence of available carbon is an important mechanism controlling export of nitrogen from watersheds (Hedin et al. 1998). Small streams in the network are the sites of the most active uptake and retention of dissolved nutrients (Alexander et al. 2000, Peterson et al. 2001, Attachment #5); hence elimination of small streams from the network results in increased downstream transport of nutrients. Downstream areas, reservoirs, rivers, and ground waters often have species that are sensitive to high nutrient concentrations and increasing conductivity associated with chemicals in the downstream waters. Increased concentration of chemicals, nutrient enrichment, and groundwater contamination are likely consequences of loss of the nutrient retention capacity afforded by headwater

streams. I will address only a few chemical concerns that appear to be causing major difficulties below valley fills.

The following table is from recent EPA data collected for the MTR/VF Environmental Impact Statement currently being prepared. This table shows the concentrations of several chemicals and other physical properties of water below valley fills and compares them with un-mined areas. The last column shows the ratio of filled to un-mined (or times higher concentrations leaving filled sites is to un-mined sites).

Table 1.—Median values (mg/L) for un-mined sites and valley fill sites for various water quality parameters in West Virginia during the period of October 1999 to February 2001 (Source USEPA).

Parameter	Un-mined Sites	Valley Fill	Filled/Un-mined
Sulfate	12.6	524	41.7
Calcium	4.9	104	21.3
Magnesium	4.1	86.7	21.2
Hardness	29.1	617	21.2
Solids, dissolved	50.5	847	16.8
Manganese, total	0.005	0.044	8.8
Conductivity (mhos/cm)	66.4	585	8.8
Selenium	0.0015	0.0117	7.8
Alkalinity	20	149.5	7.5
Potassium	1.58	8.07	5.1

Selenium: is an essential nutrient at low levels of exposure. This inorganic chemical is found naturally in food and soils and is used in electronics, photocopy operations, the manufacture of glass, chemicals, drugs, and as a fungicide and a feed additive. In humans, exposure to high levels of selenium over a long period of time has resulted in a number of adverse health effects, including a loss of feeling and control in the arms and legs. EPA has set the drinking water standard for selenium at 5 μL (versus 11.7 observed below valley fills, Table 1) to protect against the risk of these adverse health effects. Drinking water that meets the EPA standard is associated with little to none of this risk and is considered safe with respect to selenium. (However, see following paragraph.) *The selenium data indicate numerous violations of the West Virginia stream water quality criterion related to MTM/VF mining. During the EPA study of water quality in 1999 to 2001 there were 66 violations of the stream criterion exceeding Selenium water standards. All values above the stream criterion of 5 μg/L were at valley fill sites and many of those are several times greater than the detection limit of 3 μg/L.* The elevated values of selenium appear to be closely related to MTM/VF mining activity.

Selenium is essential for life in very small amounts but is highly toxic in slightly greater amounts (Lemly 1996, page 427). In 1987, the EPA lowered the recommended stream water quality criterion for selenium to 5 μg/L to protect aquatic life. West Virginia has adopted that same limit as their stream criterion. Selenium is strongly bioaccumulated in aquatic habitats (Lemly 1996, page 435). "*Waterborne concentrations in the low-μg/L range can bioaccumulate in the food-chain and result in an elevated dietary selenium intake and the reproductive failure of adult fish with little or no additional symptoms of selenium poisoning in the entire aquatic system. . . . The most widespread human-caused sources of selenium mobilization and introduction into aquatic ecosystems in the U.S. today are the extraction and utilization of coal for generation of electric power and the irrigation of high-selenium soils for agricultural production*" (Lemly 1996, page 437). However, Hamilton and Lemly (1999) have suggested that many effects on biota are documented for selenium levels of 5 μg/L and the more appropriate level should be a water quality criterion of 2 μg/L. Furthermore, Lemly (1999) has suggested that a selenium time bomb is in the making as a result of substantial impacts on fish populations. The effects of selenium on fish populations include the following from Lemly (2002):

- Swelling of gill lamellae
- Elevated lymphocytes
- Reduced hemoglobin (anemia)
- Eye cataracts as well as exopthalmus (popeye)
- Pathological effects on liver
- Reproductive failure
- Spinal deformities

The West Virginia Geologic and Economic Survey has information on selenium posted on their website (http;//www.wvgs.wvnet.edu/www/datastat/te/SeHome.htm). It notes:

> Selenium occurs in coal primarily within host minerals, most within commonly occurring pyrite. . . . An unpublished study at WVGES using SEM found selenium . . . in 12 of 24 coal samples studied, mainly in the upper Kanawha Formation coals. . . . Selenium in West Virginia coals averaged 4.20 ppm. . . . Coals containing the highest selenium contents are in a region of south central WV where Allegheny and upper Kanawha coals containing the most selenium are mined. . . . Selenium is not an environmental problem in moist regions like the Eastern U.S. where concentrations average 0.2 ppm in normal soils.

Summarizing this information, we see that in the region of MTM/VF mining, the coals can contain an average of 4 ppm of selenium, normal soils can average 0.2 ppm, and the allowable limits in the streams are 5 μg/L (0.005 ppm). Disturbing coal and soils during MTM/VF mining could be expected to result in violations of the stream limit for selenium.

A fairly comprehensive review of Selenium is given in the Federal Register of 6 March, 2002 (Vol. 67, No. 44 pages 10101 –10113). Some notes made from this document are as follows:

- The EPA's standard to protect aquatic species is 5 μg/Liter but is being reevaluated as a standard of only 2 μg/Liter is being applied to protect wetland grasslands in the San Joaquin Valley, CA (note 5 μg/L versus over 11 μg/L was the median value below valley fills in WV.
- Selenium is taken up by vegetation.
- Selenium is toxic to small mammals as longevity has been reduced on diets with only μg/g in diets of rats, deleterious effects to the hair, nails, live, blood, heart, nervous system, and reproduction have been documented.
- There is evidence that animals such as insects, that feed on plants absorbing selenium from the environment, accumulate selenium in their bodies and this is biomagnified by larger animals such as shrews, which feed on these insects, have even higher levels of selenium.
- The potential of additional exposure to selenium of beef cattle, dairy cattle, swine and poultry wastes production is apparently increasing.
- Relatively small amounts of selenium have been shown to bioaccumulate in the eggs of waterfowl and resulted in egg deformities.

Sulfate: Although sulfate is largely a benign constituent of most waters, the World Health Organization (WHO) guide is 400 mg/L, which is based on taste. The US EPA has proposed Sulfate levels of 250 mg/L in 1979, subsequently raised to 400 mg/L in 1985, and 500 mg/L in 1994 (FR Vol. 64, no. 28, pp 7027–7037). However, according to National Secondary Drinking Water Regulations 40 CFR CH. 1 (7–1–00 Edition) § 143.3, the recommended level of Sulfate should not exceed 250 mg/L, whereas the median for sulfate concentration in streams below valley fills in WV is 524. Sulfate levels above 250 mg/L are often associated with taste and odor problems. Short-term, consequences (less than 1 week) of elevated Sulfate concentrations did not support osmotic diarrhea in adults as reported previously (but see bullets, below); however, infants have not been tested sufficiently. There is limited data on acclimation to Sulfate, changes in Sulfate metabolism, and problems during growth of human fetuses. In 1999 the EPA assembled a panel of scientists who favored placing a health advisory in areas where Sulfate concentrations in drinking water exceed 500 mg/L or higher (FR Vol. 64, no. 28, pp 7027–7037). Clearly, many streams below valley fills have elevated sulfate concentrations (Table 1). Furthermore, according to Canadian and U.S. livestock industries high concentrations of sulfates can combine with magnesium (also very high below valley fills, Table 1) to form Epsom salt or with sodium salts to cause a laxative effect in poultry and the two should probably be evaluated together. According to US EPA (Drinking Water Advisory: Consumer Acceptability Advice and Health Effects Analysis on Sulfate—External Review Draft EPA-R–02–033, April 2002) the following should be considered:

- Only 5 percent of waters tested across the US exceeded 250 mg/L sulfate, and less than 3 percent of community water supplies had sulfate concentrations that exceeded 250 mg/L (p.5–6).
- In the presence of elevated magnesium (note levels ca. 87 mg/L, below valley fills, Table 1), sulfate may form magnesium sulfate (milk of magnesia), which enhances laxative effect and produces an osmotic-induced diarrhea (p. 12–13).
- Above 250 mg/L sulfate concentrations, water has impaired taste properties (p. 19) and at levels of 320–480 mg/L magnesium sulfate has impaired taste, as well as 180–680 mg/L for calcium sulfate. Note that calcium levels are also elevated below valley fills (Table 1).
- The level of 250 mg/L or less, appears appropriate to insure adequate protection of drinking water with respect to taste (p. 23).

Conductivity and total dissolved solids are two separate measures of similar things. They measure the presence of anions and cations in water. High conductivity is often associated with water hardness and is not a health problem per se. Elevated levels of conductivity can be a nuisance in cases of high calcium and magnesium concentrations where it interferes with cleaning tasks such as laundering and dishwashing. Furthermore, films may be formed on showers, bathtubs, sinks, faucets, as well as inside pipes where water flow can be reduced. High conductivity is often associated with soil disturbance, mining, urban development, and agriculture. Thus, high conductivity is often associated with impaired biological conditions in streams. Higher discharge from valley fills (as a consequence of reduced evapo-transpiration by plants and altered groundwater retention) results in increased chemical loading to downstream areas. Increases in concentrations of several chemicals and conductivity observed for valley fills at many West Virginia sites (EPA—EIS 2000, draft of MTR/VF), combined with the increased discharge observed below fills, will increase downstream loading of chemicals and conductivity. This will result in excess loading of chemicals, and concomitant effects on conductivity, to downstream aquatic communities. The elevated downstream loading of chemicals will likely be detrimental to downstream animals, plants, microbiota, and potable water supplies for many years into the future.

The effects of excessive chemical loading on sensitive taxa is clearly seen in data collected by the EPA in West Virginia and Kentucky (Draft EIS for MTR/VF). Streams draining valley fills have abnormally high conductivity compared to those draining un-mined sites. The high conductivities are probably the main factor contributing to the elimination of most species of mayflies below valley fills and altered community assemblages of stream-dwelling animals. A number of other chemical parameters were impacted by valley fills and in some cases these vary by several orders of magnitude between mined and un-mined sites. For example, sulfate concentrations differed greatly between mined and un-mined sites (Table 1 only has median values), while alkalinity, total calcium, and magnesium differ in the tens of mg/L range. In addition, chloride, total potassium, and sodium differed in the mg/L range. Because of altered chemistry and/or conductivity, a number of species of invertebrates (which also serve as food for higher animals such as fish) are eliminated from downstream areas, which drain valley fills. This is being clearly shown for Kentucky and West Virginia streams by the EPA in the MTR/VF EIS Draft.

Question 3. Please provide any additional information that you think is relevant to the Committee as it evaluates the impacts of fill rule definitions.

Response. *Effects of Valley Fills Discharge and Hydrology.*—In areas below valley fills a higher baseflow is maintained than typical forested headwater streams (Wiley et al. 2001). However, as evident from recent studies, the propensity to flood in downstream areas also increases below valley fills based on preliminary data being obtained in West Virginia. The alteration of stream flow is not surprising as a number of studies from forested catchments at the Coweeta Hydrologic Laboratory in the mountains of western North Carolina clearly show that loss of the hardwood forest results in increased levels of stream discharge because of the absence of evapo-transpiration (Swank and Crossley 1988). In addition to directly harming the biota via altered chemical composition, the potential increase in flooding is very important because floods can be detrimental to fauna and flora, and alter dynamics of both nutrients and organic matter in downstream reaches (see, Allan 1995, Wallace and Webster 1996). Furthermore, recovery by aquatic species from floods in temperate zone streams suggest faunal recovery may take up to a year or more following flooding (Thorup 1970, Hoopes 1974, Molles 1985), or up to 2 years following massive flooding (Minshall et al. 1983).

Consequences of Altered Chemistry and Hydrology.—Higher discharge from valley fills (as a consequence of reduced evapo-transpiration by plants and altered groundwater retention) results in increased chemical loading to downstream areas. Increases in concentrations of several chemicals and conductivity observed for valley fills at many West Virginia sites (Table 1), combined with the increased discharge observed below fills, will increase downstream loading of chemicals and elevate conductivity. This will result in excess loading of chemicals, and concomitant effects on conductivity, to downstream aquatic communities. The elevated downstream loading of chemicals such as selenium may cause many problems to biota (including fish) and potable water supplies for many years into the future.

Stream Sediments.—Organic debris dams in headwater streams, such as those provided by woody debris, (e.g. Bilby and Likens 1980) and other organic matter such as leaves from the surrounding forest, provides sediment retention, important habitat structure, and sites for critical metabolic activity, including denitrification (e.g. Steinhart et al. 2000, Attachment # 7). Loss of headwater streams by burying

them under millions of cubic yards of sediment is going to greatly reduce these sites of high metabolic activity that are important in processes such as nutrient retention and denitrification.

A recent study completed by the U.S.G.S. in West Virginia also indicates increased numbers of fine particles (<2mm in diameter) and smaller median particle sizes below valley fills than unmined sites (Wiley et al. 2001). Substrate particle size is often cited as one of the critical factors for stream invertebrate populations as finer particle sizes are indicative of more instability as well as lower invertebrate biomass (Hynes 1970, Minshall 1984, Allan 1995). Sediments have numerous negative effects on both benthos and fish in streams (Waters 1995).

Terrestrial Considerations.—The Appalachian region is known for having some of the greatest temperate plant biodiversity in the world (Handel 2001). These diverse forests typically support diverse native terrestrial fauna. The revegetation plan calls for grasses as well as planting various tree species to achieve a certain density of stems per hectare without regard to whether these trees exhibit any growth. Recent studies conducted for the terrestrial portion of the MTR/VF EIS from West Virginia clearly show that significant vegetation with respect to stem diameter (a much better measure of growth and success than simply counting the number stems per unit area) is simply not returning to mined areas, even after 25 years post mining (Handel 2001).

According to a summary of Handel's (2001) findings: "Invasion of native species onto mined sites and valley fills was very low and restricted to the first several meters from the adjacent forest edge. Most of the plants found on the mined site were in the smallest (<1" diameter) size class, suggesting that the sites are very stressful to plant growth and survival." Furthermore, soil studies conducted during the study indicate that soil used for mining closure is poor quality and for forest species growth and productivity (Handel 2001). The heavy compaction of artificial slopes also contributes to slow invasion of forest species, and grassy vegetation installed in the reclamation process hinders the ability of native plant species to establish (Handel 2001). As noted by Handel (Attachment 17, page 13):

> "Overall, the forest soils were consistently found to be deeper, moister, and darker in color than the mine soils (Table 11). The mine soil consisted mostly of small rocks, and solid impenetrable rock was hit at generally shallower depths".

Additionally, it is clear that the success standards for trees on disturbed areas are often based simply based on stem densities and height. This sampling scheme (stem counts) gives no indication of success in terms of forest biomass, growth, or productivity. As some trees grow faster than others, especially where local soil factors may differ, diameters should be measured to assess forest growth and productivity. Stem densities and measures such as dbh (diameter at breast height) yield very different results (Elliott et al. 1997). If one really wants information about restoration of the biomass of forests, dbh and calculations of basal areas per acre or hectare are really the appropriate units of measure, and not stem densities as currently being done.

Terrestrial wildlife species, especially birds, are also impacted on fill sites. For example, bird species were higher in shrub/pole habitats, whereas fills (grasslands) had fewer bird species, as well as, reduced bird abundance (EIS—MTR/VF-draft). Furthermore, nest densities were so low for some grassland birds, WVU scientists could not assess whether or not mountaintop mine sites are even able to sustain viable populations of grassland bird species. Snake species increased in grasslands (fills), whereas salamanders decreased on valley fills. It may require a longer time for salamander populations to recover on fills than from forest clear-cutting. Combined with extremely slow ability of forests to regenerate on mined lands, lack of larger plants, suppressed growth and low survivorship of seedlings (Handel 2001), leads to the obvious question: What are the long-term impacts on native wildlife species? These prerequisite studies to answer this question have not been done.

Reduction in Surface Area of Land.—Dr. Ben Stout of Wheeling Jesuit University has pointed out another feature of valley fills, that the state is losing surface area. This is best visualized as taking roofs of houses and flattening them (or from a pointed roof to a flat roof) as the mountainous contour of the countryside is lost. This will have some effect on number of plants (provided they could grow on valley fills—which they cannot in many cases) growing in a given area.

Local and Human Economies Versus that Portrayed by Mining Interests.—Although out of my area of expertise, I consider the following table to be extremely important. We hear time and time again how important mining is to the economy of the region. I obtained the figures from an earlier version of the EIS for MTR/VF (some want to remove these data). If mining is so important why are all of the

coal mining counties lagging behind in per capita income for each state? The natives of these mining counties are wonderful people. However, I get the distinct impression that they are being exploited by outside forces beyond their control.

Per capita income for MTR/VF mining counties versus per capita income for the State for 1980 and 1990.

State	1980			1990		
	Mining counties	Statewide average	Percent of State	Mining counties	Statewide average	Percent of State
Kentucky	$4,466	$5,978	74.7	$7,594	$11,153	68.1
Tennessee	$4,462	$6,213	71.8	$8,200	$12,255	66.9
Virginia	$5,360	$7,478	71.7	$8,997	$15,713	57.3
West Virginia	$5,340	$6,141	87.0	$8,766	$10,520	83.3
(Mingo Co.)	***$5,058***	***$6,141***	***82.3***	$8,328	***$10,520***	***79.2***

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STATEMENT OF MIKE WHITT, EXECUTIVE DIRECTOR, MINGO COUNTY REDEVELOPMENT AUTHORITY OF WILLIAMSON, WV

Chairman Lieberman, Ranking Member Voinovich, and members of the subcommittee, thank you for inviting me to testify. I commend you for your willingness to hear from the Mingo County Redevelopment Authority.

With mining, Mingo County is diversifying the economy. We are creating good paying jobs with benefits for our citizens, and the opportunities for economic development are better than they have been in a long, long time.

Our Mission . . . "The Mingo County Redevelopment Authority is a public organization, established to promote and encourage the economic and civic welfare of Mingo County, and for the development, attraction and retention of business, indus-

tries, and commerce within the county, thus creating employment opportunities and increasing the area's tax base."

Because of mining and development sites created by mining, we have been able to create good jobs in the industries of wood, aquaculture, agriculture and recreation. The Mingo County Board of Education has established a Horticultural Curriculum through the use of our agriculture demonstration project. By growing excellent Arctic Char from mine water, we have created a new industry in southern West Virginia. We anticipate the county school system will add an Aquaculture Curriculum as a result of our fish hatchery, grow-out facilities and proposed fish processing facility. Without mining, these new jobs and economic opportunities would never have been possible in southern West Virginia!

Our challenge is to achieve our mission to create new jobs, improve the quality of life for our citizens, and increase our tax base throughout the next generation for the future of our children and grandchildren. We cannot meet this challenge unless reclaimed mine sites are provided to us for the purpose of creating economic development.

Diversifying the Mingo County economy through support of the mining industry is an important part of our future. Realizing this, the Mingo County Redevelopment Authority brought together a diverse group of citizens to develop the Mingo County Land Use Master Plan (Plan). The Plan was presented to the citizens of Mingo County at a public hearing, where public suggestions were incorporated into the Plan. The Plan has been approved by the Mingo County Commission. For the first time in history, Mingo County has a Plan that provides a road map to achieve economic development opportunities. Any coal company who volunteers up front and before mining commences to use our Plan will be provided with our proposed post mine land use for the property. After mining, the property will be (1) returned in a manner consistent to our Plan; (2) adequately supplied with infrastructure; and (3) used for the economic development purposes as stated in the post mine land use. Prior to our Plan, Mingo County lost many economic development opportunities because most of the property mined was put back to its Approximate Original Contour (AOC), leaving no land suitable for economic development. Our Plan affords opportunities to change that.

Through the leadership of the Mingo County Redevelopment Authority, we have developed an excellent partnership with the private and public sectors. Mike Callaghan, Director of DEP, and Governor Bob Wise have been very instrumental in our efforts to encourage post mine land use development sites for proposed and ongoing surface mine activities. We have listened to Mingo Countians. The Land Use Master Plan is a grass root Plan of what we need to stop the downward economic spiral that we have been faced with. There is one thing that EVERYONE agrees on, and it is the fact that Mingo County must diversify.

We must stop the cycle of schools being closed, good teachers leaving and major industry jobs vanishing. Our county population has dropped from 37,000 in 1980 to 28,000 in 2000. One of our schools has 95 percent of our kids who qualify for the free lunch program . . . as a best-case scenario; we have nearly half our kids on the free lunch program at Williamson High School, which is located within our county seat.

Before 1989 when the Mingo County Redevelopment Authority was formed, local economic development agencies did not exist in any of the southern West Virginia counties. Since our establishment, we have worked hard to form a team relationship between our private and public sectors, and with the dedication of our board of directors we have achieved an excellent display of teamwork within our county. Everyone has come together to help save our county from economic devastation. We cannot wait to diversify our economy after the coal is depleted . . . we must diversify in conjunction with the ongoing and future mining activities, and our efforts must continue.

Here are some of the projects that the Mingo County Redevelopment Authority has accomplished by utilizing opportunities created by the mining industry . . .

- The Mingo County Wood Products Industrial Park (Exhibit A)
  - Located on a reclaimed surface mine site
  - 28 million total project cost
  - Includes a centralized lumber storage area, lumber processing facility, lumber pre-drier, a battery of dry kilns, boiler and silo. The first shell building (82,000 sq. ft.) houses a hardwood flooring manufacturing facility.
  - Presently 90 employees
  - 100 new jobs by the end of 2002 (estimate)
- The Mingo County Agriculture Demonstration Project (Exhibit B)
  - Located on a reclaimed surface mine site

- Enabled the Mingo County Board of Education to provide a Horticultural Curriculum
- Operated and maintained by the students through the new horticultural program

- The Fish Hatchery (Exhibit C)
  - Utilizing underground mine water to hatch and raise Arctic Char fingerlings
  - Created a new industry in southern West Virginia
  - Will provide for an Aquaculture Curriculum to be available to the students through the Mingo County School system
- The Grow-out Facility for Arctic Char (Exhibit C)
  - Utilizing underground mine water to grow Arctic Char fingerlings to market size (2lbs)
  - $3.5 million private investment
  - Pro-fish is the distributor of Arctic Char into the Washington, DC area.
- Twisted Gun Golf Course (Exhibit D)
  - The coal industry has already constructed an 18-hole golf course, with a breathtaking view of the natural surroundings. This project will enhance the recreational opportunities in Mingo County.

Here are some of our potential projects that, in conjunction with ongoing mining, will help diversify and enhance the quality of life for Mingo County citizens . . .

- King Coal Highway/I73–74 (Exhibit E)
  - In cooperation with the Department of Highways and the Department of Environmental Protection, the coal industry plans to construct (to rough grade) 5 miles of the new King Coal Highway/ I73–74, with 2 connectors . . . saving the taxpayers an estimated $90 million dollars
- Airport (Exhibit F)
  - In cooperation with the Mingo County Airport Authority, the coal industry will construct (to rough grade) an area to provide the county with an airport runway of 6,000–10,000 feet, with sufficient acreage for ancillary future development . . . saving the taxpayers approximately $30 million dollars.
- Fish Processing Plant
  - The coal industry has provided site preparation as an in-kind contribution toward the construction of a fish processing facility, which will handle all the fish that is hatched and raised in southern West Virginia

As you can see, the mining industry and our efforts to diversify the economy in southern West Virginia are connected in a substantial manner. However, to continue to advance our plans . . .

- The mining industry *must continue* . . .
- Our partnership with the private/public sectors *must continue* . . .
- Post mining land use creating developable property for future jobs *must continue* . . .
- Our diversification efforts *must continue* . . .

I am not a lawyer and I am not a chemist. I'm just a local citizen who loves my county and its citizens. We care about whether our kids and grandkids will be able to work and provide for their families in Mingo County. We want a county that will allow people who have been forced to move away to come back home. We care about all these issues. We care about our schools and the opportunities provided to our kids. We're working hard to make southern West Virginia economically viable.

We have gone to great strides to achieve a better economy in Mingo County. We want to continue, and we will if the mining continues. The mining is necessary, and the valley fills are needed for the continuation of surface, contour, and underground mining.

Again, without diversification during the mining of coal, there will be no opportunity for diversification after coal mining. We have found a solution to stop our downward plunge and it's not just a "fleeting vision" . . . it's reality! It's attainable! It works! And we want it to continue.

Now you have a better understanding of our situation and can see the importance of diversification during the mining process in southern West Virginia. If there's anything I can do to help ensure that our progress is not hindered, please feel free to contact me. Better yet, I would like to invite each of you to come to Mingo County. I'll personally take you around our county and show you first hand what progressive steps are being taken by Mingo County.

"Some people see things as they are and ask why . . . But I dream of things that never were and ask why not."—John Kennedy

Thank you very much.

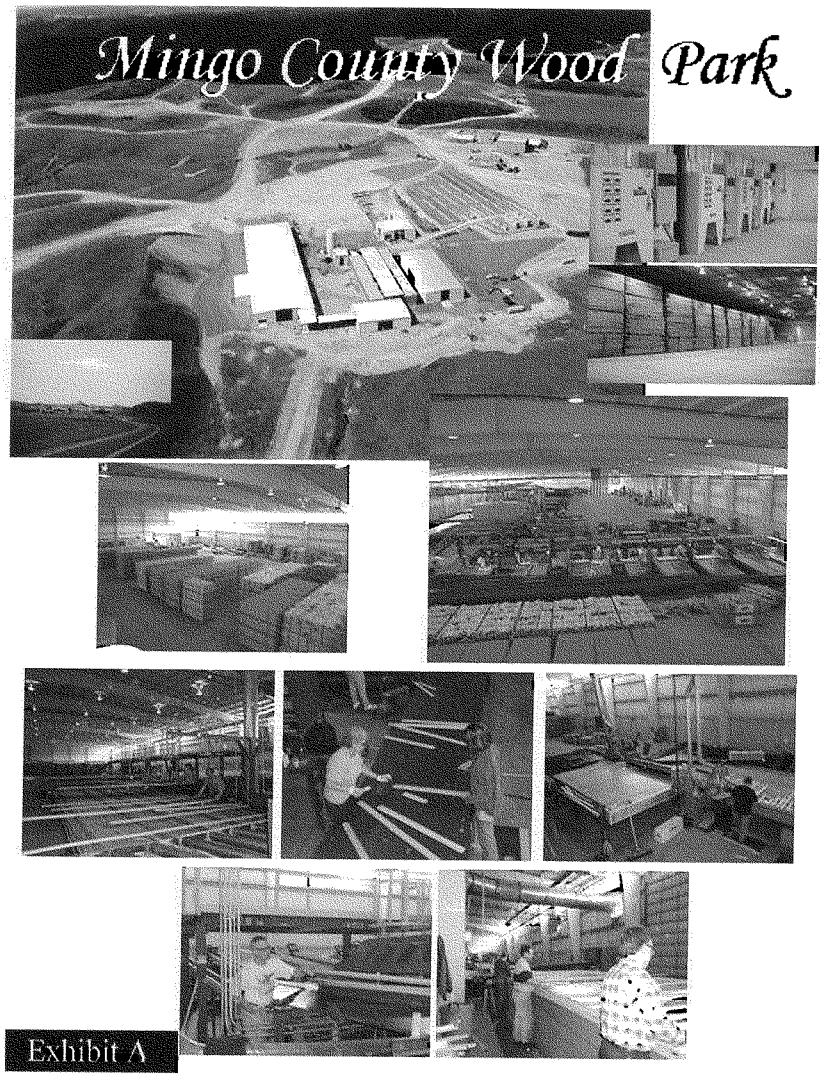

Mingo County Wood Park
Exhibit A

Exhibit B

Mingo County Agriculture Site

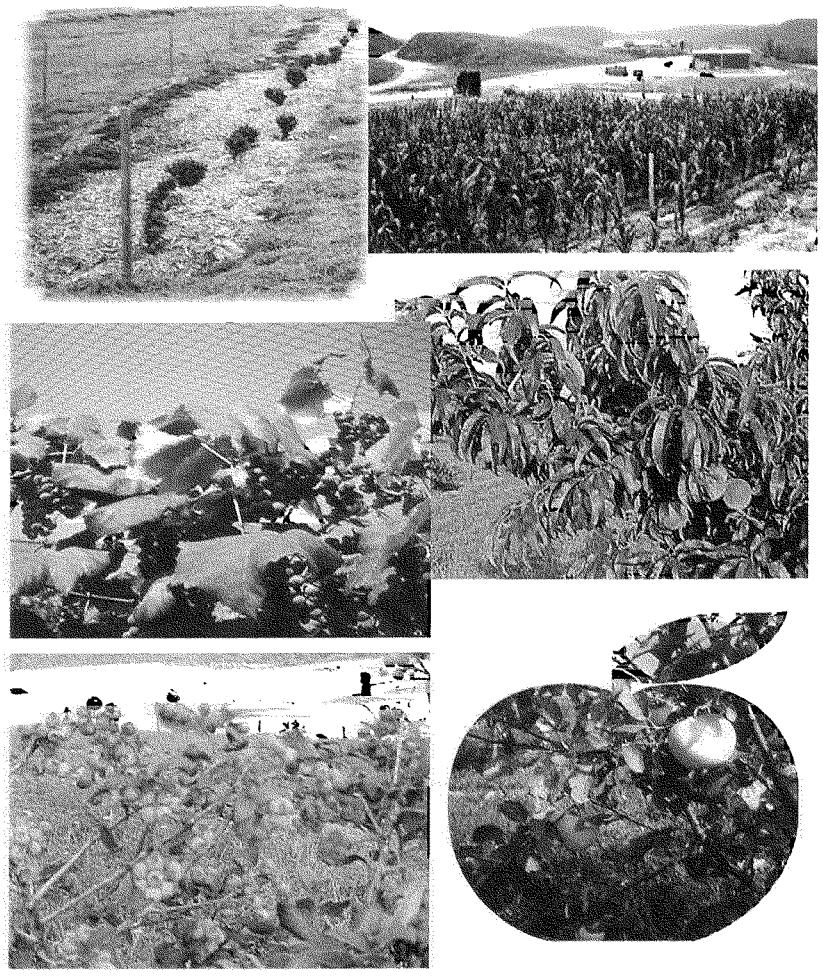
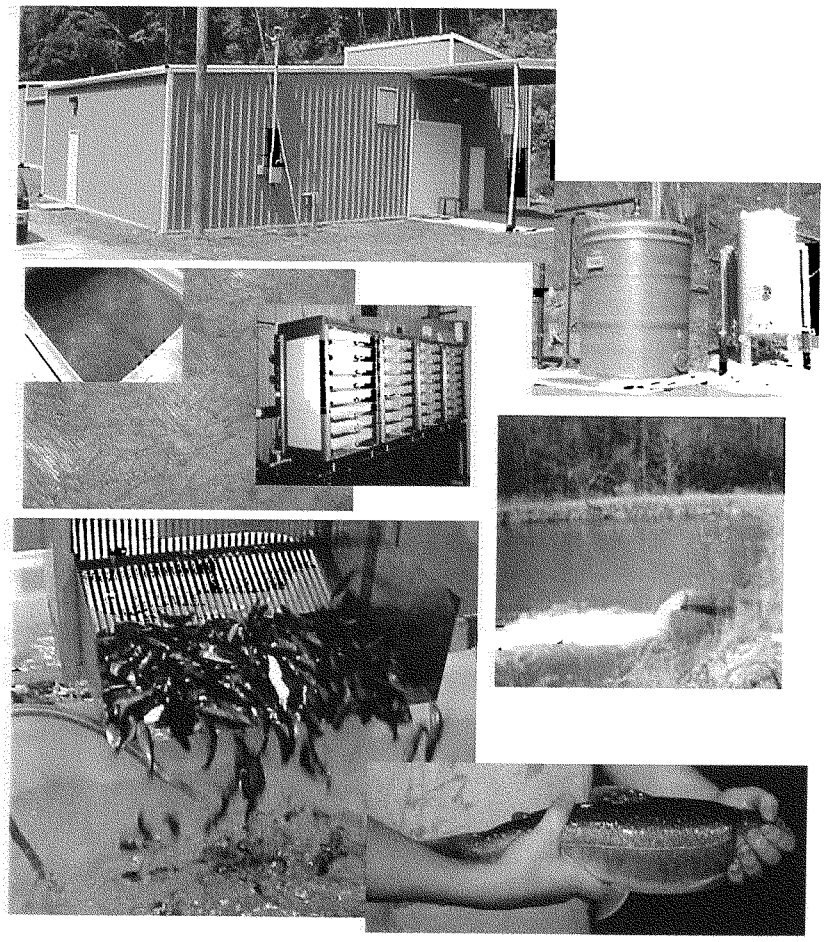


Exhibit C

Mingo County Fish Hatchery



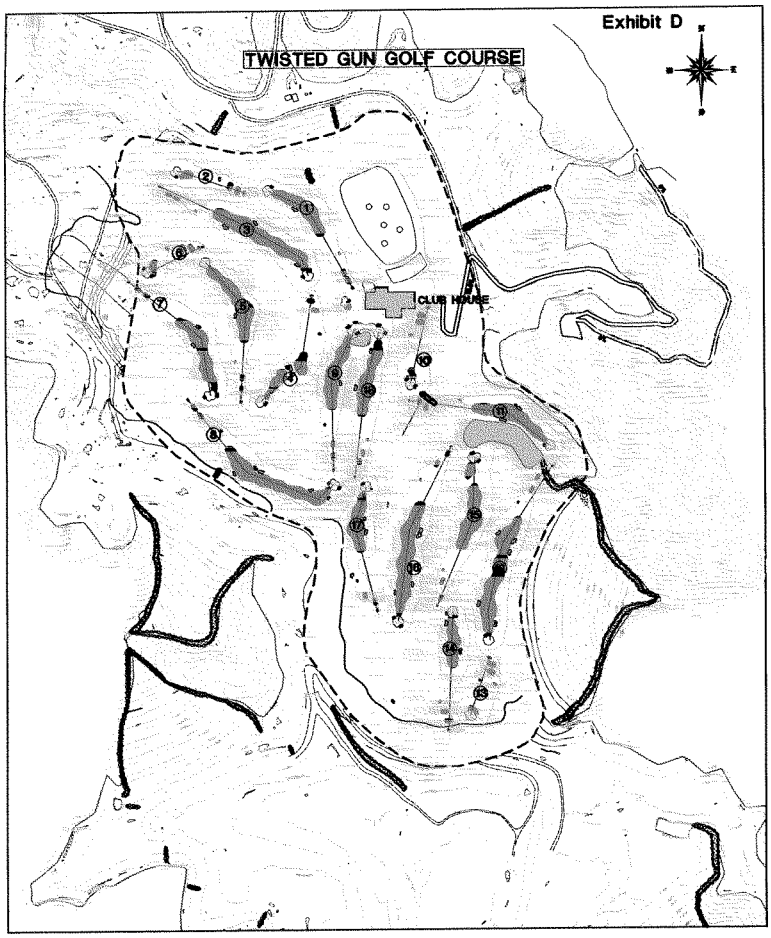
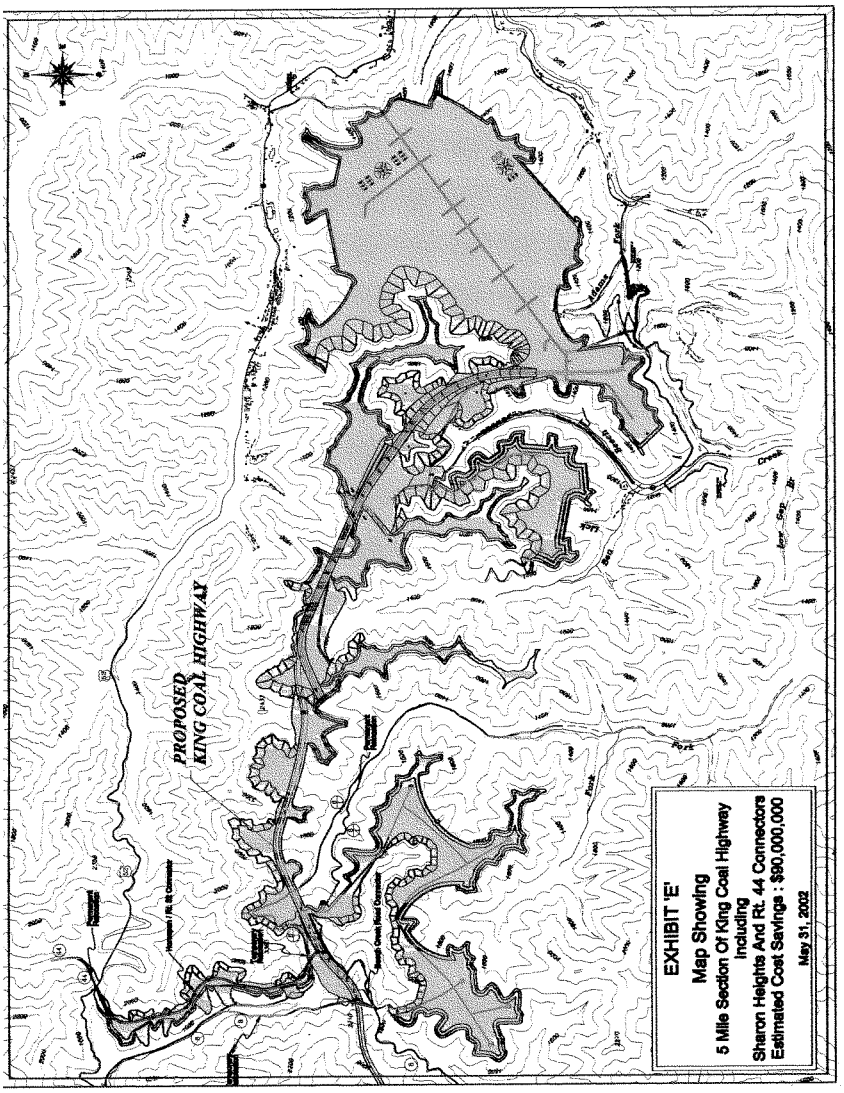
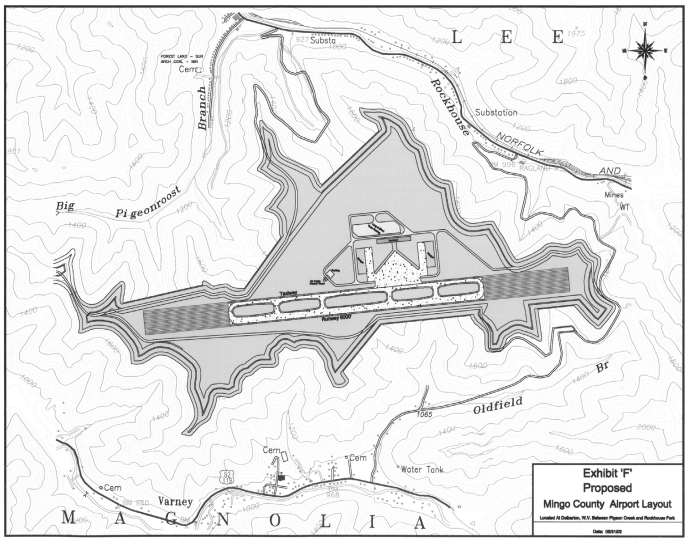


Exhibit D
TWISTED GUN GOLF COURSE
CLUB HOUSE

Exhibit D

Twisted Gun Golf Course


PROPOSED
KING COAL HIGHWAY
EXHIBIT 'E'
Map Showing
5 Mile Section Of King Coal Highway
Including
Sharon Heights And Rt. 44 Connectors
Estimated Cost Savings : : $90,000,000
May 31, 2002


L E E
Substa
Cem
Branch
Rockhouse
Substation
NORFOLK
AND
Mines
WT
Big
Pigeonroost
Oldfield
Br
Cem
Cem
Water Tank
Varney
M A G N O L I A
Exhibit 'F'
Proposed
Mingo County Airport Layout

STATEMENT OF DOYLE COAKLEY, CHAIR, BOARD OF DIRECTORS,
CITIZENS COAL COUNCIL

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to submit this statement for the record on behalf of the Citizens Coal Council.

Citizens Coal Council is a grass roots federation of citizen groups and individuals located throughout the coal-producing regions of America working for social and environmental justice. CCC and its members strive to protect people and their homes, water and communities from damage due to coal mining and combustion and waste disposal by focusing on enforcement of Federal and State laws. Many of our members suffer the direct impact of mountaintop removal coal mining and filling valleys with waste material associated with coal mining and processing.

On March 3, 1999, the U.S. District Court of the Southern District of West Virginia preliminarily enjoined the Army Corps of Engineers (Corps) and the West Virginia Department of Environmental (WVDEP) protection from issuing a permit authorizing mountaintop removal surface mining at a site in Logan County, West Virginia.

That suit charged the Corps and U.S. Environmental Protection Agency with a "pattern and practice" of violating the Federal Clean Water Act (CWA) National Environmental Protection Act (NEPA) and Surface Mine and Reclamation Control Act (SMCRA). Plaintiffs alleged the Corps consistently and without authority issued valley fill permits under Section 404 of the CWA, which prohibits the dumping of waste material into water bodies of the United States. Valley fill material is entirely waste material intended for disposal by the cheapest means possible—shoving it down the mountainside to bury land and streams below.

Plaintiffs also charged that WVDEP routinely issued permits allowing valley fills that are in violation of SMCRA's so-called "buffer zone" requirements prohibiting dumping of waste spoil within 100 feet of a stream.

Judge Charles Haden II issued his ruling October 29, 1999 that overturned decades of illegal mountaintop removal mining in West Virginia by permanently enjoining the WVDEP "from approving any further surface mining permits under current law that would authorize placement of excess spoil in intermittent and perennial streams for the primary purpose of waste disposal".

Judge Haden's decision was appealed by the U.S. Justice Department in April 2000 and was overturned by the Fourth Circuit Court of Appeals in April 2001. The Appeals Court ruled on a jurisdiction issue and did not address the merits of the Haden opinion. Judge Haden was right then and in a subsequent and similar lawsuit he was right again.

Kentuckians For The Commonwealth (KFTC) sued the Corps when it issued an area-wide permit authorizing Martin County Coal Corporation (MCCC) to operate a mountaintop removal coal operation designed to create 27 valley fills and thereby filling 6.3 miles of streams. KFTC claimed that the only purpose of valley fills is to dispose of waste material. The CWA allows only one form of waste disposal and that material is exclusively limited to dredge spoil.

"Fill material" (dredge spoil) is deposited for some beneficial primary purpose (construction work and infrastructure) and not for the purpose of disposal. For the Corps to allow disposal of waste spoil is to rewrite the Clean Water Act. Judge Haden ruled such rewriting of a Federal law exceeds the authority of the Executive Branch and requires an act of Congress. The framers of our Constitution insisted on that separation of powers and the Judge upheld that principle.

Sensing a second defeat of its illegal use of valley fill permits to authorize destruction of Appalachia's valleys and streams, the Bush administration issued a final rule a few days before Judge Haden's second opinion. It was intended to change the definition of "fill material" and silence Judge Haden's pending decision. The Judge would have none of that and issued his opinion in the KFTC case on May 8. It not only struck down the Corps' interpretation of its authority to issue valley fill permits to allow disposal of waste, it also challenged and essentially dismissed the President's final rule issued on May 3.

Judge Haden reads the purpose of the CWA "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." No pollutants can be discharged into waters of the US without a CWA permit. All parties in the KFTC case agreed that overburden from mountaintop removal coal mining is a pollutant under the definition and requires a CWA permit under Section 404.

This Committee debated and reported out the CWA in 1971 and legislative history makes it undeniably clear it did not intend 404 permits to apply to fill discharges solely for waste or pollutant disposal, other than disposal of dredge spoil.

Since 1977 the Corps has defined "fill material" as:

> "Any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of water body. The term does not include any pollutant discharge into the water primarily to dispose of waste, as that activity is regulated under section 402 of the Clean Water Act."

Exactly as designated by this Committee 404 fill is material discharged into water for construction, development or property protection while waste disposal is regulated under section 402.

The EPA definition of "fill material" and "discharge" while not identical to the definition used by the Corps, when considered together, point to the same use and purpose requirement. EPA defines "fill material" as "any 'pollutant' which replaces portions of the water of the United States with dry land or which changes the bottom elevation of a water body for any purpose." And, that is an origin of the controversy between the Corps and EPA's interpretation of the same law used to permit valley fills.

EPA has always said, until its May 3 final rule changing the definition of "fill material" the purpose for discharging 404 fill is the construction or development or use for which the fill is needed and not the purpose for which the material is discharged. *EPA has never considered waste disposal as a proper purpose.*

When mountaintop removal overburden is dumped into valleys and streams to get rid of it that disposal method has the effect of creating dry land or elevating the level of a stream bottom but that was not the purpose of its disposal. Thus, the disposal does not fit the Corps' definition of "fill material".

Longstanding regulatory interpretation by both the Corps and EPA leads to the conclusion that 404 fill permits are issued only for fill material with a constructive primary purpose, not waste disposal.

SMCRA was written with great care and with the assurance that none of its provisions violate any other provision of Federal law. SMCRA could not have allowed the disposal of waste material into streams and water bodies of the United States because that is prohibited by the CWA—plain and simple. In fact, two provisions of SMCRA support the CWA protections for overburden disposal: approximate original contour (AOC) and the 100-foot buffer zone rule.

Under SMCRA, coal mine operators cannot dump the excess spoil that is not needed to achieve AOC unless that disposal will make it possible to achieve "an equal or better or public use" of that land. SMCRA assumes overburden (waste material called "spoil") will be returned to the mountaintop to achieve AOC unless constructive and appropriate post-mining land use and purpose are designated for the valley into which the fill is to be disposed.

Congress was clear about the disposal of overburden to achieve a purpose other than waste disposal. Finally, SMCRA does not allow disposal of overburden waste into streams and that is supported by the 1977 "buffer zone rule" written to enforce the strip mine reclamation law.

Coal companies that routinely "practice" valley fill or head-of-the-hollow fill disposal are breaking the law. State and Federal agencies that permit this type of mining operation are violating the law. This lawlessness and wreckless disregard for the law and the health and safety of citizens must be challenged and stopped.

Mr. Chairman, Judge Haden is determined to make the Bush administration obey the law. He challenged the Administration to resist overturning Federal laws by making rulemakings that ignore the intent of Congress and particularly this Committee.

It does not require a law degree to understand the basics of this issue. Mountaintop removal and valley fills are destroying the environment, private property and quality of life in West Virginia and Central Appalachia. Floods are becoming more frequent and loss of life more prevalent as silt and mud wash down the steep inclines below the mining operations.

Judge Haden is our only line of defense unless you take steps and exert your responsibilities to uphold the Federal Clean Water Act. We urge you to challenge the President's rulemaking on the "fill material" definition.

Furthermore, we urge you and the Committee to travel to Central Appalachia to witness, firsthand, the lawless destruction of our communities and a part of the oldest mountains on the planet.

STATEMENT OF PERRY PLUMART, DIRECTOR OF GOVERNMENT RELATIONS, AUDUBON

Mr. Chairman, on behalf of over one million member and supporters of Audubon, thank you for this opportunity to testify on the affects of the Bush administration's revisions of the Clean Water Act regulatory definitions of "fill material" and "discharge of fill material". Audubon's mission is to conserve and restore natural eco-

systems, focusing on birds, other wildlife, and their habitats in order to preserve the earth's biological diversity. The Bush administration's change to the Clean Water Act definitions would not only allow our nation's waters to be filled with waste, but the revisions would also destroy important bird and wildlife habitats crucial to bird species like the cerulean warbler that have been in significant decline in recent years.

The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *33 U.S.C. §1251(a)*. The elimination of the waste exclusion from the definition of "fill material" would allow the disposal of refuse directly into the nation's waters contrary to the intent of Congress when it passed the Clean Water Act almost thirty years ago. What does this change really mean? This change in the definition of "fill material" would allow waste, debris, and ruble known as "overburden" that comes from blowing off the tops of mountains for coal extraction to be dumped into nearby rivers and streams located in the surrounding valleys. These valley fills wipe out the fish, snakes, turtles, frogs, and other wildlife species that inhabit the rivers and streams that are used for dumping grounds.

The practice of blowing off the tops of mountains for coal also destroys some of our nation's important forest habitat located in the Appalachian region. Not only are many lakes, rivers, and wetlands being buried by waste from mountaintop mining, but huge swaths of the forests that are home to many birds and other wildlife are cut down as well. These mining operations create barren areas, literally moonscapes, in the forest landscape. These sterile areas often exceed 10 square miles. In West Virginia and Kentucky alone, over 1,000 miles of streams have been destroyed along with countless acres of forests. Many birds, fish, and other wildlife depend upon these forests and streams for their survival. Among the many victims of this assault on nature is the cerulean warbler. The places these birds call home are being permanently destroyed. The coal extraction includes the use of powerful explosives obliterating the once lush mountain landscape.

The cerulean warbler is an indicator species for the health of our eastern forests. Over the past 30 years, the cerulean warbler has declined by 70 percent. This is one of the most severe drops among the many declining songbird populations in this country. The reason for the deterioration of the cerulean warbler, particularly in areas like West Virginia and Kentucky, is due primarily to blowing off the tops of mountains for coal causing forest fragmentation.

The cerulean warbler is a Neotropical migratory songbird, which depends upon mature, deciduous forests, often near streams to breed and survive. According to the US Fish and Wildlife Service, the forests found in the West Virginia and Kentucky regions are crucial areas for many migratory birds. While the cerulean warbler is high on Audubon's conservation priority list in areas where mountaintop mining activity occurs, there are other Neotropical migrants of the region, such as the Kentucky Warbler and the Prothonatory Warbler, that are also rapidly declining in population.

The dramatic decrease of the number of cerulean warblers, and other songbirds like it, serves as a clear signal that the forests that these birds call home are in imminent danger. By allowing the Bush administration's regulatory changes to the Clean Water Act to go forward, the destructive process of blowing off the tops of mountains will continue to push birds like the cerulean warbler toward extinction. We need to stop these destructive acts that would deny our children and future generations the pleasure of listening to the unique song of the cerulean warbler.

Mr. Chairman, we look forward to working with you and the other members of your committee to preserve birds, like the cerulean warbler, for future generations. Let's stop the Bush administration's regulatory changes that would permit the practice of mountaintop mining to continue. We need to work to keep the Clean Water Act for the purposes Congress intended. Thank you Mr. Chairman for this opportunity to testify before the Committee on such an important issue. Together, we can prevent the contamination of our nation's waters and safeguard the cerulean warbler from extinction.

west
virginia
highlands
conservancy

MAILING ADDRESS • P. O. Box 306 • Charleston, West Virginia 25321

Publishers of the Highlands Voice and the Monongahela National Forest Hiking Guide

June 1, 2002

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
US SENATE/Environment and Public Works Committee
Washington, DC 20510

RE: Clean Water Act "fill" rule change

Senator Lieberman:

West Virginia Highlands Conservancy (WVHC) is a statewide conservation organization of some 900 members. Since joining WVHC in 1979, I have been active in a variety of Clean Water and Coal Mining issues. As WVHC President from 1988-1994 and Chair of the Mining Committee since that time, I have toured numerous strip mine sites throughout WV and visited many families who live near the mines.

Everyone knows that mining temporarily disrupts life in mining areas. SMCRA and the Clean Water Act were conceived in order to control short term impacts and prevent permanent damage. But the impacts of today's huge mountaintop removal strip mines far surpass the intent and letter of both of those laws. In WV alone, nearly 400 square miles of hardwood forests are gone forever, 1000 miles of valuable headwater streams have been buried and whole communities are destroyed.

I firmly believe the underlying cause of these extreme impacts has been the illegal permitting of fills that use the nearby hollows as huge garbage cans. The deeper into the mountains companies dig the greater the need for disposal area. As much as two miles of stream at a time are buried under tons of rubble. I cry when I see the changes. The more industry wants, the more the rules are bent to accommodate it. The recent "fill" rule change is possibly the most egregious violation of the Clean Water Act to date. It is certainly an affront to the environment and the people the Act is meant to protect.

It is difficult to imagine how things could get any worse for coalfield residents – man and beast alike – but this rule change will open the flood gates for additional permits that are waiting in the wings and things will indeed get much worse. Please uphold the Clean Water Act and the promises made by the Congress when the Act was first passed. The people, land and water of WV are depending on you.

Sincerely,

Cindy Rank, Chair
WVHC Mining Committee

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

June 5, 2002

To Senator Lieberman:

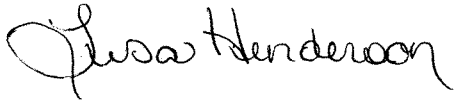
Thank you for the opportunity to voice my opinion to the Congressional hearing on the Bush administration's change to the Clean Water Act's definition of "fill". Please add my comments to the hearing record.

I find it so upsetting that someone only a few hundred miles away could be so blind to the problems of so many people around him. President Bush's family, members of his administration, nor members of his family have probably ever had to sleep in terror with their shoes on at night, every time a few raindrops tap their roofs. A family of six, in Boone County, West Virginia has learned to do this because the strip mine above them threatens their lives with water, mud and other mining debris from the unstable valley fill above their home. The very lives of those people, along with thousands of others, depend on the fact that there are people in this world that will not allow a corporation to literally bury them to shut them up. The people of the coalfields of West Virginia are hoping that the Bush administration, along with the help of this committee, will realize what a terrible tragedy and injustice that will be done to these families if our very own government turns a deaf ear to them. Every time that someone is killed by the mountain of mud and water from one of these fills, the corporations say that is an act of God. God did not build a valley fill above those people, and he sure didn't change the Clean Water Act so that no one could be held responsible.

Entire communities are disappearing around me. I grew up in a beautiful, thriving community. My family, along with others had lived there for generations. A coal company moved into our hollow and made our life a nightmare. My son could no longer walk his dog to the creek for a drink of water, because dead fish began to float in it from the poisons released from a coal slurry dam (the largest one in the Southeastern United States) that was built only a few hundred feet above us. I could not wash clothes in my home any more, because the constant blasting above us turned our water orange. A train track was built so close to our home, my aunt kept getting migraine headaches from the constant high pitched squeals as it was being loaded. Out of a community of around fifty homes, we were the last to leave. We were in fear for our lives. My eleven year old son still cries to go home, and so do I.

Thank you for being our voice Senator Lieberman,

Lisa Henderson
Rock Creek, West Virginia



May 31, 2002

To Senator Lieberman:

Thank you for the opportunity to submit these comments to the Congressional hearing on the Bush administration's change to the Clean Water Act's definition of "fill". Please add my comments to the hearing record.

I believe this rule change was made in order to legalize what are now illegal valley fills at mountaintop removal operations, which are concentrated in West Virginia and Kentucky.

I have seen first hand what this does to the communities and people who live near mountaintop removal sites. This devastates the mountains and streams. As a life long resident of Boone County Coal River area I can say I have seen the changes that occur after mountain top removal. For instance when I was 8 yrs old we had a big flood. It took out the swinging bridge where I lived but the major differences between then and now are:

It rained for a week or more and now with one or two days of rain people are flooded that never were before.

The creeks raise first, then the river as the creeks empty into the river. Now the river raises and only the creeks where ponds and strips are flood.

After a flood then you only saw sand now you see black coal gob after a flood. Along with large rocks and parts of trees from the strip sites.

I invite you to come and do a flyover and see for yourselves how many mountain tops are totally bare and then tell me that the trees wouldn't have slowed down the run off of rain water.

Behind my home is a little creek which has bass and is stocked by DNR with trout every year. Please do not let the Clean Water Act be changed just to accommodate the coal companies. Please leave us with what few clean streams of water we have left in rural West Virginia. My sons fish this creek and have since they have been old enough to fish. My wish for the future is that their children will also have a clean creek to fish and wade.

And last but not least please consider the fact that mountain top removal mining is hurting the jobs and economy of West Virginia. You are probably wondering how that can be? The simple fact is that it takes less men to operate a mountain top removal mines than it takes to operate an underground mines. Another problem is mountain top removal coal is its cheaper to mine than underground coal which puts them at an unfair advantage on the coal market. My husband was laid off from his job in April 2002 and all the mountain top mines are all still working. Yet he was told that the coal market is at a low and they can't sell their coal.

Sincerely,

Patty Sebok

Patty Sebok
St. Rt. 5 Box 217-C
Seth, WV 25181
304 837-3720

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

June 5,2002

Dear Senator Lieberman:

Thank you for the opportunity to submit these comments to the Congressional hearing on the Bush Administration's change to the Clean Water Act's definition of "fill". Please add my comments to the record.

A war is being waged against the innocent men, women and children of Appalachia. This holocaust is directed by the greed of the coal industry, encouraged and accelerated by the Bush Administration. Appalachia's people are crying out for help. We cry not only for ourselves, for everyone in America and for everyone's unborn children and grandchildren. What happens to Appalachia's streams happens to America's streams. Water is the life giver and our most basic of all needs.

I've watched as our streams on Coal River filled with sediment from strip mine waste dumps. For at least 6 generations my family has lived on Coal River. Once jobs were plentiful and we could push the oppression and the rape of God's land to the back of our minds, but as the coal barons replaced men with giant machines of destruction, the veil was lifted. We could see that the Emperor had no clothes.

The industry and their puppets will tell you of jobs. What jobs? Our coalfield communities are dying, many towns already gone. Most of these communities are surrounded by coal mining operations. Coal River has well over 11 active mine permits. Coal production has skyrocketed and employment is down and millions, perhaps billions, of dollars worth of coal leaves our state everyday. They will tell you of taxes and yet the poorest people in America live in the coalfields.

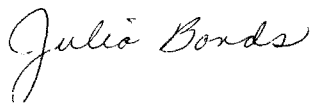
Our homes are damaged from blasting, our air, homes and schools are filled with dust, our water wells destroyed (most coalfield residents still rely upon

wells for water, very few have public water systems), and valley fills erode during rain events to then flood what is left of our homes, sometimes taking our lives. Nothing is on these mountains to soak up and hold the rain back. All this destruction for a quick, easy, and cheap way to dispose of what the coal industry doesn't want or need anymore after they blow up God's mountains.

I dare not think what the future will hold for our children if this rule change is allowed. I wonder of the other industries waiting in the background for their chance to change the Clean Water Act.

Please don't allow this or any other administration to gut the Clean Water Act. Please insist that Judge Haden's ruling stand and the laws be enforced. These laws have not been enforced in the past and in Appalachia our political leaders seem to use the "don't look, don't see" policy.

Thank you,
Julia Bonds
P.O. Box 135
Rock Creek, West Virginia 25174



Box 263
Naoma, W.Va. 25140
June 1, 2002

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

Dear Senator Lieberman:

We are both adamently opposed to the Bush administration's attempt to change the Clean Water Act to his satisfaction by allowing all sorts of wastes to be dumped into the creeks and streams and then classifying this as satisfactory fill material.

This place is filthy enough already. We don't need to make it a cesspool.

Yours truly,

Sylvia Bradford
Charles W Bradford

Box 263
Naoma, W.Va. 25140
June 1, 2002

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

Dear Senator Lieberman:

Thank you so much for allowing my comments to be heard concerning the Bush administration's change to the Clean Water Act and the definition of what can and what cannot be used as fill material in our waterways.

Mountaintop removal has been an unsightly nightmare and a travesty of justice for the people of southern West Virginia. Beautiful mountain peaks and whole mountain ranges are now elevated, desolate plateaus. When the coal companies set off a blast of dynamite, the whole area at the foot of the mountain shakes, and the acrid smell of the explosive and of the shattered sandstone fills the air (and the lungs of nearby residents).

The waste rock and soil is summarily dumped in gigantic valley fills which are so unstable that the rivers are rapidly filling in with silt that has washed down from the treeless, grassless fill.

All life is affected by the greed of the coal industry. Animals are losing their homes and habitats as the coal and timber industries ravage the mountains. People have to accept insult and injury to their way of living as their traditional meanderings into the valleys and creeks and hills are now halted by the coal companies' gates and security guards and "no trespassing" signs.

Now, after all of this, we are expected to allow just any old thing to be dumped into our rivers and streams.

We cannot afford to do much more damage to the Earth. We will have nowhere else to go when the Earth becomes so polluted that it cannot sustain life.

The Clean Water Act did offer us some protection from industry. Please don't let the Bush administration destroy major portions of the Clean Water Act.

Yours truly,

Richard A. Bradford

Edwight, W.Va.
June 1, 2002

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

Dear Senator Lieberman:

I am opposed to the Bush administration's attempt to revise the definition of "fill material" under the Clean Water Act and allow the dumping of all sorts of wastes into our streams. It seems to me that this is an attempt to subvert the intentions of the Clean Water Act.

As I understand the administration's actions, an environmental impact statement will no longer be needed concerning these waste dumps. This seems to be the same mentality that permits the Rio Grande to flow like a cesspool marking part of the border between Texas and Mexico.

Fill material around this area of southern West Virginia is usually associated with the practice of mountaintop removal. Since it is not known what the long-term effects of this strip mining practice will be, maybe a moratorium should be called.

I believe that this misguided effort by the Bush administration should be halted.

Yours truly,

Mickey R. Hamil

May 25, 2002

To Senator Lieberman:

I am shocked and appalled at the unjust decision of our countries Commander and Chief, President George W. Bush. His changes in the Clean Water Act are just totally abominable. The rules of the act where never regulated from the very beginning, and he wants to give them more leeway for the destruction of Southern West Virginia, Kentucky and the whole of our beautiful country. All one has to do is read the papers or watch the news to see just what is happening in these areas.
The flooding in Southern West Virginia and Kentucky are good examples of the rape and destruction of our beautiful country. An idiot can see the adverse effects of irresponsible timber and mining, which work hand in hand. The logging industry goes in and clear-cuts all the trees, and grades roads for the timber removal all over the mountainsides. This causes excessive run off of ground water during hard rain storms, causing trenches in the hillsides as much as six feet deep in places. Then the mining companies take the mountaintops and fill in the existing streams where the water should be. Therefore causing major flooding downstream that had never been there in the past.
I have sat on my porch over the past few years watching as the scenery of the beautiful mountains are destroyed, unable to do anything about it. What with no one doing there jobs right and letting the mining industry do whatever to rape our lands by irresponsible mountaintop removal and disposal.
A lot of money exchanges hands in these illegal and irresponsible operations. But this does not begin to make up for the loss of life, property and ways of life in these areas. I for one would like to move our President and his cohorts to the bottom of one of these mining sites. So they could watch everything they own be washed away in these floodwaters.
Leave Judge Haden alone and work for the lives of the people whom elected you and quit selling us out for the mighty dollar.

William Holstein
9407 Ohio Ave.
Marmet WV 25315

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

May 31, 2002

To Senator Lieberman:

Thank you for the opportunity to submit these comments to the Congressional hearing on the Bush administration's change to the Clean Water Act's definition of "fill". Please add my comments to the hearing record.

I believe this rule change was made in order to legalize what are now illegal valley fills at mountaintop removal operations, which are concentrated in West Virgiia and Kentucky.

I can tell you first hand what a nightmare life near a mountaintop removal operation has been before this rule change. I don't even want to imagine what life will be like if this rule change is not struck down. If the rule change is not struck down, people and the environment we depend on nationwide will suffer.

The blasting off the mountaintops and filling in the streams has already started here. The noise of course is a major problem, jangling my nerves and putting the whole family on edge. Even though, they say they are not that close, our house is showing the effects. We don't want to move--this beautiful land is our home. If we did want to leave, who would want to buy our house. We are poor people and everything we have is in this house. Well,. what's left of it.

It's been so bad before this rule change, even though the Clean Water Act was supposed to prevent all this. Of course, the Clean Water Act was never properly enforced. Now President Bush has made a rule change that will give a green light to more destruction near my home. I understand that the way he made the rule change isn't even legal.

Come take a look at what is happening in southern West Virginia and eastern Kentucky. You will see for yourself that this rule change will be ruinous. We need to enforce the Clean Water Act as it was before the Bush administration illegally changed it. Please don't let him gut the Clean Water Act.

Thank you.

John R. Gallimore
Ruth C Gallimore
P.O. Box 118
122 Gallimore Court
Yatina, WV 25140-0118

Charles Phillips
Central States Organizer
Endangered Species Coalition
Senate Environment and Public Works Committee
Subcommittee on Clean Air, Wetlands and Climate Change
Testimony for the Record: June 6, 2002

The Endangered Species Coalition, a national coalition of over 430 conservation, humane, religious, scientific, and sporting organizations, applauds your subcommittee for bringing the mountaintop removal and valley fill issue into the public forum by holding this hearing to look at the Bush Administration's definition of "fill" and its impacts on the Clean Water Act. The effects of these large-scale operations are dramatic. To date, hundreds of thousands of acres have been impacted by this method of coal extraction. The Surface Mining Control Reclamation Act (SMCRA), the federal mining reclamation law, was written as the result of the 1972 Buffalo Creek disaster in which 127 southern West Virginians lost their lives rock impoundment gave way, sending tons of rock and debris onto the victims. SMCRA was intended to prevent future incidents by requiring, "that only a small area be disturbed at one time." Clearly, mountaintop removal mining does do not comply with this requirement.

In *West Virginia Highland Conservancy et al vs. West Virginia Department of Environmental Protection and the US Army Corps of Engineers*, October 1999, U.S. District Judge Charles Haden ruled that federal agencies are violating the Clean Water Act by allowing waste rock and fill to be dumped into valleys. In reaction to this decision, the Bush Administration has decided to legalize what the courts have ruled to be illegal by changing the definition of "fill" to "any material that can be used to fill in streams or wetlands, excluding trash and garbage." This "fill" includes acid and heavy metal contaminated waste rock from mining operations. Congress has a duty to right this wrong and to protect all of America's citizens, human and other living creatures, from the dangers of irresponsible industrial activities.

The Appalachian Mountains of Pennsylvania, Maryland, West Virginia, Kentucky, and Virginia are part of a very biologically rich region of Eastern North America. The watersheds of the Central Appalachians not only are a source of drinking water for millions of residents living along the Eastern seaboard, but also provide aquatic habitat for sixteen endangered mussels and hundreds of species of fish, crustaceans, and invertebrates living in these streams. Mussels are sensitive to changes in water quality, temperature, and hydrological changes. The practice of mountaintop removal and disposing of the waste rock in valley streams destroys water quality. The streams and groundwater around these operations contain mine acids and heavy metals, water temperature is raised, and without trees on mountaintops and with waste rock in valleys, stream flows are drastically altered, thus causing harm to mussel populations (Williams, John D., et. al, "Conservation Status of Freshwater Mussels of the United States and Canada," *Journal of the American Fisheries Society*, September, 1993).

In addition, the forests and caves of this region are the homes to endangered gray, Indiana, and Virginia big-eared bats and the streams provide the insects that the bats feed upon. Some bats species, such as the endangered Indiana bat, spend the spring and summer months roosting in

forested areas, rearing their young and, hopefully, not being disturbed by humans. In the winter, bats hibernate in caves throughout the region. Blasts from mountaintop mines are estimated to be 100 times stronger than the Oklahoma City blast that leveled the Murrah Federal Building. If this blasting is allowed to occur near where bats are roosting or hibernating, these bats will be in danger of dying from the stress of being disturbed and may have to search for more suitable habitat in less than suitable conditions (Clawson, Richard L., "Report on the Status of Priority 1 Indiana bat Hibernacula," *Journal of Bat Conservation International*, 1995).

The forests are also the home to dozens of Neotropical songbird species that are dependent on intact habitat and healthy insect populations. All songbird populations are in decline due to habitat loss. Warblers are being devastated by mountaintop removal. For example, the Cerulean warbler's population has declined by 70% between 1966 and 1999. Without intact forests, these birds are susceptible to predation from many different animals. The Cerulean warbler is currently a candidate species awaiting protection under the Endangered Species Act. (Sauer, J.R et. al., "The North American Breeding Bird Survey, Results and Analysis 1966-1999," USGS Patuxent Wildlife Research Center, 2000)

Mountaintop removal mining is drastically impacting the face of the Appalachia. For example, in West Virginia alone, over 500 square miles of mountains have been flattened by mountaintop removal and valley fills have buried 1000 miles of West Virginia streams.

We urge the Subcommittee on Clean Air, Wetlands and Climate Change to address the severe impacts that mountaintop removal mining is having on the health and welfare of endangered and threatened species in the Central Appalachian Mountains. As leaders of this great nation, you have an obligation to reverse the ill-conceived decision by the Bush Administration to legalize the dumping of waste rock and fill in mountain streams. Thank you again for addressing this issue in today's hearing on looking at the Administration's definition of "fill" and its impact on the Clean Water Act.

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

May 31, 2002

To Senator Liberman:

Thank you for submitting these comments to the Congressional hearing on the change to the Clean Water Act's definition of "fill." Here are my comments. Please add them to the hearing record.

It is time the rapeing and destruction of this beautiful environment stops. Already I have witnessed a dramatic change in our weather because of mountain top removal and because of the destructive timbering practices taking place here. There is nothing left to hold the water. The water table has been lowered greatly. It will never again be what it was as I was growing up here. Our drinking water, and I am talking about fresh, clean sweet water from hand dug wells and springs, has been all but destroyed since strip mining started. The water runs blood red with iron and other minerals now. It was not this way before. The mountains are now ugly and scarred and cannot ever be made the same again. They cannot hold back the heavy rains that we now get. Hence, the reason for all the flooding. My ancestors walked these mountains from one county to the other to visit family and friends. I have done this myself in years past. Now it is next to impossible because of highwalls, timber waste and mountain top removal. This should not be. These are my mountains and my childrens future mountains. Please stop the valley fills.

If you would only take the time to come and see first hand what I am talking about then I think you would agree that enough is enough. How sad to see the mountains and know what once was. Please don't ignore what the people of this great state want to keep. Of the people, by the people, for the people.

Thank You,

Judy Turner Griffy
1310 Drews Creek
Naoma, W.V. 25140

June 6, 2002

Senator Jeffords and Colleagues:

I am a native West Virginian born and raised in the southern coalfields. I am a retired public school teacher and am currently working as a citizen's advocate in an area surrounded by mountaintop removal mining and valley fills. I am pleased to have the opportunity to submit comments for entry into the Congressional Records. The issue that is the focus of this hearing is one of grave concern for the residents of the southern coalfields of West Virginia and for the rest of the nation.

The southern coalfields of West Virginia are a region of extreme poverty and oppression in the midst of great wealth. We are a "national sacrifice area". We supply the raw material needed to provide the rest of the nation with cheap energy. In return out mountains are decapitated, our streams are polluted and filled with silt, our communities are subjected to constant flooding, and our mountain communities and heritage are rapidly disappearing. Meanwhile, our politicians and regulatory agencies look the other way and even continue to encourage the destructive practice of mountaintop removal mining and valley fills.

Imagine your home at one end of a football field, and blasting, up to one hundred times greater than the blast that leveled the Federal Building in Oklahoma City, taking place at the opposite goal line. Imagine dust covering every surface around you twenty-four hours a day seven days a week. Imagine your only source of water polluted or destroyed. Imagine a once majestic mountain decapitated and the debris dumped into the valleys destroying the streams below. Imagine yearly devastating flooding destroying homes, communities and lives. This is the legacy of mountaintop removal mining. This is the legacy the Bush administration will be remembered for in history.

For generations proud mountaineers have inhabited the hills and hollows of West Virginia. Our roots run deep in the mountain soil – deeper than corporate greed and deeper than betrayal by our political system. Now, families have been forced to leave homes and land that have been in their family for generations – land that they had hoped to leave to their children and their children's children. Our Appalachian heritage so rich in wisdom, beauty and spirituality is endangered. We mourn the loss of our once pristine streams and rivers. We weep for the loss of our majestic mountains, which are the heart, and soul of our culture and the touchstone of our identity.

We have lost too much! This hearing today is our last hope. If President Bush continues with his plan to allow the indiscriminate dumping of waste material into our streams, if he continues to promote valley fills, if he weakens or destroys the Clean Water Act, we are doomed. The Clean Water Act, which was the result of years of hard work and commitment on the part of citizens, activists, environmentalists and legislators, is our only hope for survival. It is our only hope for justice. It must not be weakened or destroyed.

Janice A. Nease, Executive Director
Coal River Mountain Watch
P. O. Box 651
Whitesville, West Virginia 25209

THE SILENCE

By Katheryne J. Hoffman

It must have appeared to the birds in flight that the land was formed by row upon row of moss-covered dragons sleeping side by side, their humps rolling on into infinity.

The people of this land felt the protective embrace of the dragons, sheltering them from the storms and the unwanted influences of an ever-alien outside world. For here, in this place, a man could hunt the squirrel, rabbit, deer, bear, and wild turkey. He could fish the sun-dappled streams for bass and trout. He could till the rich black soil, and relate to his sons the survival lore passed on to him by his father and grandfather.

Now, I am here on my mountain, resting my back against the rough bark of a hemlock tree, restoring my soul. The sunlight filters through the shadows, and I inhale the spicy perfume of sun-warmed pine needles.

I always met my Grandpa here at the end of his workday. I would place my small hand in his big one, and we'd sit under the hemlock. Grandpa was a stern man, but he would always chuckle at the stories of my daily mischief. I knew, like the mountain, that his love would always surround me.

The day Grandpa died, when I went to the hemlock, a huge black crow was there where Grandpa usually sat. It was an omen, and I knew that Grandpa wouldn't be back. The engine pulling the train to the mine that he rode each workday had exploded.

Grandpa was a bee man. He had made me promise if ever something happened to him, that I would tell the bees. It was my task to drape the hives with black crepe. If the bees weren't told of a death, they would leave and go somewhere else. It was a comfort to me to do that; I guess he knew it would be.

Nearby, chipmunks chatter, and clamber like rowdy adolescents over the roots of a giant sycamore. A soft, cool breeze from the hollow touches my face, and I hear the mountain speak.

"Who will take up my cause?" "Who will save me," asked the mountain?

I watched the mist rising toward the top of the hill, and I knew rain would follow soon. "If they destroy my mountain," I thought, "there would not be enough hollows to hold my tears." I rested my hand on the soft ground, comforting the mountain.

The mountain spoke again, wistfully. "If only people would unite on my behalf. I have always been there for them. I must be there for the children. But except for a few letters to the editor, there has been mostly **SILENCE."**

"Perhaps the doctors, lawyers, bankers, or others of the **SILENT** majority will help – those with the real power." But they were busy litigating and doctoring, and buying and selling, and watching Oprah and Jerry Springer. Except for a few, all were **SILENT.**

"I heard the rustle of a deer in the laurel thicket. "I know," the mountain said, "the hunters will surely protect me. They love to walk my shadowy paths in search of game. It is a rite of passage from a mountaineer's earliest beginnings to hunt and to provide and to pass these skills on to his children. Without me there would be no game, for there would be no trees, nor habitat for shelter, nor acorns for food." The mountain was sounding more unsure now. It grieved my

heart. But the hunters were **SILENT.**

"Perhaps the teachers will protest my demise. They bring the children in the fall to gather the leaves from my hair and to study my flora and fauna. They teach my geography and my history. They will gather on the capitol lawn by the hundreds." The mountain sounded more confident. But the teachers were **SILENT.**

I sat beside the sparkling stream, listening to the sound of the water spilling over the rocks, chortling, laughing, and gurgling, like small children at play. "The fishermen will help preserve you," I said. "For the valley fills will cover your hill-fed streams and kill all the silvery, shimmering fish. But the fishermen were **SILENT.**

"The sports fans will save me," said the mountain, hopefully. "They spend vast amounts of money on 'Mountaineer' regalia, and they fill huge stadiums, shouting, 'Go Mountaineers!' They will send the Governor post cards and letters, or perhaps even fill an entire arena, shouting 'Save our Mountains." But the fans were **SILENT!**

"The churches will surely help me," said the mountain. "I was here when Christ walked the Earth, before Columbus came to this land, before the Indians. I am God's handiwork. I know the Almighty did not intend his creation and artistry to be wantonly destroyed for greed and profit. Do they not pray: 'I will lift up mine eyes unto the hills'?" But, except for a few brave efforts and some paper resolutions, many churches were **SILENT!**

I watched the mist settle into the valleys as the moon rose over the mountain. A fox barked over a far ridge; and, as I made my way down through the rustling leaves, I heard the owl call my name.

BY THEIR SILENCE, THE PEOPLE HAD SPOKEN!

Soon, the **SILENCE** was disturbed by the laughter of coal barons and their cronies in smoke-filled rooms, discussing their next blatantly misleading television ads that only they can afford.

The **SILENCE** was broken by the clink of coins as the politicians counted their 30 pieces of silver, washing their hands of any responsibility, kowtowing to an industry which already owns them – body and soul!

On the mountain, the **SILENCE** was shattered by the demonic buzz and whine of chain saws; the groan and crash of huge trees being felled; the frantic flight of birds; and the sounds of frenzied animals crashing through the brush.

Underneath the deafening roar and grown of huge earth-biting machines, deep in my soul, I hear another sound. It is the low, keening moan of someone in great unendurable pain, being dismembered, tree-by-tree, rock-by-rock, shovel-by-shovel and memory-by-memory. I close my ears to the one last great primal scream, heartrending, in its hopelessness and despair, as the mountain's remains are dumped into huge valley fills, smothering forever the sparkling, laughing streams. My heart is broken.

THE SILENCE IS.....COMPLETE!

NOTE: *Katheryne Hoffman is a WVOP member from Victor, WV. We wish to thank her for such a beautiful piece. If you have a point of view you would like to share with us, send it to the WVOP office and we will consider it for print. If you have a different point of view than Katheryne, we welcome that too. WVOP is made up of many people from many walks of life. All members' opinions are important to the organization.*

Sister Anne-Marie Liston, SJC

Phone. (304) 854-2997

June 4, 2002

Senator Joseph Lieberman, Chair

Subcommittee on Clean Air, Wetlands, and Climate Change

Environment and Public Works Committee

United States Senate

Washington, DC 20510

Dear Senator Lieberman,

Thank you for the opportunity to submit these comments to the Congressional hearing on the Bush's administration's change to the Clean Water Act's definition of "fill."

I strongly oppose this change as I believe that it was made simply to validate illegal practices of mountain top removal operations conducted in West Virginia and Kentucky.

I live within the shadow of these operations. I watch the dishes and glassware in my house jump as the explosive blasts shake the walls of my house. I pay outrageous water and sewage bills and cannot drink the water from the faucet as it is so often contaminated by the "accidents" through which coal slurry is dumped into our water source. I live in a town that has one drugstore and has difficulty getting a full-time pharmacist to fill the many prescriptions needed daily. These are prescriptions for lung diseases, diabetes, back injuries, heart disease and innumerable types of cancer. Studies show that our area has a higher than average rate of cancer. Considering the amount of chemical pollution we breathe and drink each day it is not surprising. The people who come for prescriptions are the lucky ones however, they at least, have insurance. Most of our people do not.

Our town was once a prosperous, thriving "coal town." Black gold was its hope and mainstay. Technology took away many jobs, greed and rapaciousness are taking the lives that are left. Living in these mountains has always had its dangers,

especially during spring and summer flood times. The damages of the recent flooding have been compounded tremendously by the impact of the irresponsible logging which clears the way for "removal". When the creek beds and streams are filled with the refuse of the mining operation what happens to the course of the spring rains? Ask any of the people digging their way through feet of smelly, bacteria contaminated mud as it covers the floors of their homes and they will tell you.

On our roads we take our lives into our hands each time we "go to town" to buy groceries or visit a doctor. Overloaded, badly maintained coal trucks speeding along mountain curves are a hazard to everyone, including themselves. Children in our area do not play in front of their homes or walk along the road to their friend's home. It is simply too dangerous. Yet our politicians and our coal companies tell us that they cannot make a decent wage or enough profit unless they increase the amount of coal...yet not a word about improving the roads the coal trucks destroy and taxpayers repair and repair.

The Clean Water Act is simply a small start, Senator, but at least it is a start. The people of this area have been grossly exploited because they had the misfortune of living above coal. The injustices that are taken for granted here because of long years of abuse would not be tolerated in our large cities. But because these people are "rural" and "poor" as compared to the powerful and affluent of the suburbs and cities, and because they are largely unorganized and small in number due to the geography and terrain they are dismissed and forgotten. But these people are not "ignorant hillbillies" of the comic strips. They have a culture and a way of life that would serve any nation proud. And they are not without a righteous anger and a cause to be upheld.

In the last presidential election West Virginia went Republican, a decidedly different event. As a lifelong Democrat I regretted that and I hope that future elections will be different but most of all I hope that those who will be our leaders will be moral men and women who keep their promises and who recognize that all Americans deserve to have a decent life, no matter where they live. I hope you think that way too, Senator, and I hope that you will take the words of Proverbs to heart:

" Refuse no one the good on which he has a claim when it is in your power to do it for him. Say not to your neighbor, Go, and come again, tomorrow I will give, when you can give it now." Give the people of the mountains justice, now.

Sincerely,

Ellen M. Liston

(Sister Anne-Marie Liston, SJC

St. Joseph's Catholic Church

Whitesville, West Virginia 25209)

Mr & Mrs David Hamilton
P O Box 91
Sylvester, WV 25193

Senator Joseph Leiberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington DC 20510

To Senator Lieberman,

Thank you for the opportunity to submit these comments to the congressional hearing on the Bush administration's change to the Clean Water Act's definition "fill." Please add my comments to the hearing record.

I believe this rule was made in order to legalize what are now illegal valley fills at mountainton removal operations, which are concentrated in West Virginia and Kentucky.

The Coal Industry is razing Appalachia "heedless of the people living here". They are blanketing our towns with Coal Dust and Rock Dust, discharging blackwater coal residue into the streams that feed our water supply. Dams taller than the Grand Coulee, holding billions of gallons of coal waste threaten our lives should one break, with no place to go but head to the mountains, providing a coal industry guard isn't there to prevent you from passing.

We have a major dust problem in southern West Virginia, we have flood problems, we have contaminated water problems, all caused by the coal industry and their present way of mining coal, mainly mountain top removal, what laws do we have for the protection of the people, The West Virginia Code §22-3-13(b)(21) says the operator must protect off site areas from damage during surface mining, we have yet to see that law enforced in the Town of Sylvester, West Virginia.

Sincerely,

David Hamilton
Sue Hamilton

Pauline Canterberry
P O Box 304
Whitesville, WV 25209

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

To Senator Lieberman:

Thank you for the opportunity to submit my comments to the Congressional hearing on the Bush administration's change to the Clean Water Act's definition of "Fills". Please add my comments to the hearing record.

I reside in the small Town of Sylvester, in southern West Virginia where the Coal Industries are seeking permits from the U. S. Army Corps of Engineers to dump their wastes into flowing streams and flowing waterways of our Communities, We in this area are already experiencing disaster, devastation, and despair due to the Mountain Top removal method of mining Coal from our mountains, The health hazards of Coal mining dust heretofore contained underground has rose to the surface polluting our airways, eating at our solar system and causing health problems to rise at an alarming rate,

Our atmosphere has become polluted with coal dust which causes carbon dioxide and green gases that thin the solar layertherefore causing more flooding and storms because of the global change. Impoundments holding chemicals and coal waste leak into our water supplys contaminating them, Our mountains have been stripped of vegetation and no longer hold water, underground waters are being reduced dangerously low levels, We have a cancer risk more than 100 times the goal set by the present Clean Air Act.

Many States are already suffering shortages of water, Florida Kentucky, Washington, Oregon, parts of Texas even Chicago which borders a Lake where concrete prohibits water entering the water basin.

Hydrologists are already predicting a severe water shortage within the next ten to fifteen years, Enron even lost millions of dollars trying to deregulate water but found it not as easy to rope in water as it was Power and Gas.

I beg you, please consider the choice you make on this Bill, not only is my little Community at risk, but our entire nation.

Water is a substance that keeps <u>everything</u> alive.

Sincerely,

Pauline Canterberry

Mr & Mrs Harry White
P O Box 152
Sylvester, WV 25193
June 3, 2002

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington DC 20510

To Senator Leiberman,

Thank you for the opportunity to submit my comments to the Congressional hearing on the Bush Administration's change to the Clean Water Act's definition of "Fills", Please add my comments to the hearing record.

Nowhere in the Nation are the effects of "mountain top mining" more obvious, than in the Southern Coal Fields of West Virginia, Fifteen minutes out of Charleston's Yeager Airport, the most diverse and productive forest on earth has gave way to sprawling brown wasters strewn with black piles of slate spoil and dingy pits full of a toxic brew of water, coal dust, mercury, lead, arsenic, copper and chromium. There are 600 such pits in appalachia

On the reclaimed sites, topsoil, roots, and stumps have been dumped into streams, along with "overburden" as the industry calls broken mountains. Down their straight centers rock lined gutters run the new stream. Once a river top gets buried, the rest of the system is not only starved but poisioned. "The runoff from the toes of these valley fills is laden with aluminum, iron, and manganese, "Its nasty nasty stuff." But it makes its way to our streams. In five of thirteen counties checked in West Virginia 470 miles of streams were found obliterated streams.

You can catch only glimpses of mountaintop removal because roads and communities are sealed in valleys and because the industry spares no expense and effort to keep the public away from active mining sites.

So while Mountain-Top removal has went unchecked, we the people who live near the mining areas have watched our Homes and Property become damaged and destroyed from the blasting, Our airways are polluted with Coal Dust and Rock Dust, and our drinking water contaminated. and an alarming rise in respiratory problems among our people.

So even though we in this area live in the midst of great wealth to the industry, and supply the raw materials to fuel the nation. We are being destroyed and devastated by an industry that indifferent to Human Beings.

I'm seeing an anger in this area that is ready to activate, if action is not taken externally.

Sincerely,
Harry White
Jessie White

Mary Miller
Box 124
Sylvester, WV 25193

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

To Senator Lieberman,

Thank you for the opportunity to submit my comments to the Congressional hearing on the Bush Administration's change to the Clean Water Act's definition of "Fill" Please add my comments to the hearing records.

My home is in the small Town of Sylvester, West Virginia. A perfect quaint ideal little Town to live in till the birth of Mountaintop Removal and the greed of the Coal Industry.

The Big Coal River Operations have veilded hundreds of millions of tons of high-grade coal, but leaves this valley with nothing to show for it. Then the rains came, the trees were gone, the valleys scantily built run-off ponds could not hold the discarded trees and boulders showed into the valleys, thus they broke sending a mixture of water, trees and boulters crushing down on the innocent people in the valley, causing millions of dollars in damage.

I wonder how much rainwater one tree holds and slowly releases. Some of that water never makes it to the ground It evaporates before then. People who study this kind of stuff call that "interception." Tree roots soak up a lot of water too. The trees use it, sends it up through the trunk, and it eventually evaporates through the leaves. Thats called "Transpiration." There is no interception or transpiration where the trees have been removed, none at all.

I sincerely hope our U.S. leaders will pay more attention to the distress of mountain families engulped by a massive onslaught.

Sincerely,

Mary D Miller

The Commission on Religion in Appalachia
P.O. Box 52910 • Knoxville, TN 37950 • 865/584-6133 • Fax 865/584-8114

RESOLUTION ON MOUNTAINTOP REMOVAL/VALLEY F1LL STRIP MINING

WHEREAS, Psalms 24:1 firmly reminds us that "The Earth is the Lord's, and the fullness thereof; and the world, and they that dwell therein," and

WHEREAS, "God's covenant is with all living creatures'. (Genesis 9:9) and

WHEREAS, "Christ came to redeem all Creation, (Colossians 1:15-20 and Romans 8:21). and

WHEREAS, we are called to be stewards in right relationship with creation (Genesis 1:26.28), and

WHEREAS. the Commission on Religion in Appalachia (CORA) and its member denominations have affirmed "an economics of stewardship which recognizes that meeting human need and caring for the earth and its resources are the basic essentials in any system which is faithful to the Creator", (Economic Transformation. the Appalachian Challenge, CORA, short version, page 5) and

WHEREAS, the technology for mountain top removal requires fewer miners than the usual traditional methods of coal mining, and

WHEREAS, entire tops of mountains have been removed in the Appalachian areas of the states of West Virginia, Virginia, Kentucky, Pennsylvania, Tennessee, and Ohio, and

WHEREAS, this removal of mountaintops has resulted in severe and unlawful damage to the homes of persons living in the nearby communities, along with damage to wells, the bombarding of their homes with "blast rock", and massive amounts of dust, and

WHEREAS, the millions and millions of tons of earth and rock removed from the tops of mountains are dumped into the valleys next to these mountains totally destroying the springs and the headwaters of streams in these valleys, along with all animal and plant life in them, and

WHEREAS, mountain top removal mining, by destroying home places is also destroying ancestral ground, sacred ground where generations after generations have lived, gone to church, married, made and birthed babies, taken family meals, slept in peace, died and been buried, and

WHEREAS, Environmental Protection Agency staff has stated that the long -term effects of mountain top removal mining is unstudied and unknown and that increasing the acreage of these valley fills prior to studying the long-term effects on the environment is ill-advised, and

WHEREAS, the Appalachian region has a long history of outside corporations profiting from the extraction of the region's resources in such a way that the prosperity is not equitably shared with the residents of the region, and that the environment has been damaged by such outside resources extraction, and that this damage harms the region's current economy and future economic potential, and

WHEREAS, grassroots organizations and regional coalitions working in partnership with CORA and its denominational partners are responding to the increasing use of mountain top/valley fill by coal mining companies, and these organizations are taking action to try to protect the ecological integrity of the region and to publicize the need for economic development which benefits the people of Appalachia, and

WHEREAS, the sanctity and sacredness of all life and the natural environment created by God should not be destroyed in the name of corporate profit,

THEREFORE, BE IT RESOLVED, that the Commission on Religion in Appalachia (CORA) affirm this resolution and urge its member denominations, ecumenical partners, and state Council of Churches to implore the Governors, legislatures and other appropriate agencies in the Appalachian coal-producing states to require that mountain top removal/valley fill mining be stopped and it not be resumed until scientific study of its long-term effects on human life and the natural environment has been accomplished; and

BE IT FURTHER RESOLVED, that the religious leaders' statement on environmental concerns relating to mining and strip mining reclamation and clean-up be circulated widely for endorsement and dissemination and that the statement be sent to the appropriate state and federal regulatory agencies and state governors and legislators.

Adopted by the Commission on Religion in Appalachia
May 22, 1998

Resolution Adopted by 1,752 Delegates at United Methodist Church Annual Conference at Buckhannon, West Virginia, June 12, 1998

WHEREAS, THE MILLIONS AND MILLIONS OF TONS OF EARTH AND ROCK REMOVED FROM THE TOPS OF MOUNTAINS ARE DUMPED INTO THE VALLEYS NEXT TO THESE MOUNTAINS TOTALLY DESTROYING THE SPRINGS AND THE HEADWATERS OF STREAMS IN THESE VALLEYS, ALONG WITH ALL ANIMAL AND PLANT LIFE IN THEM, AND

WHEREAS, MOUNTAIN TOP REMOVAL MINING, BY DESTROYING HOME PLACES IS ALSO DESTROYING ANCESTRAL GROUND, SACRED GROUND WHERE GENERATIONS AFTER GENERATIONS HAVE LIVED, GONE TO CHURCH, MARRIED, MADE AND BIRTHED BABIES, TAKEN FAMILY MEALS, SLEPT IN PEACE, DIED AND BEEN BURIED, AND

WHEREAS, STAFF EMPLOYEES OF THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND DEPARTMENT OF NATURAL RESOURCES TESTIFIED BEFORE THE WEST VIRGINIA LEGISLATURE IN ITS 1998 SESSION THAT THE LONG-TERM EFFECTS OF MOUNTAINTOP REMOVAL MINING IS UNSTUDIED AND UNKNOWN, AND THAT IT SHOULD BE STOPPED UNTIL ITS LONG-TERM EFFECTS ARE KNOWN, AND

WHEREAS, PSALMS 24:1 FIRMLY REMINDS US THAT "THE EARTH IS THE LORD'S, AND THE FULLNESS THEREOF; AND THE WORLD, AND THEY THAT DWELL THEREIN," AND

WHEREAS, THE SANCTITY AND SACREDNESS OF ALL LIFE AND THE NATURAL ENVIRONMENT CREATED BY GOD SHOULD NOT BE DESTROYED IN THE NAME OF CORPORATE PROFIT,

NOW, THEREFORE BE IT RESOLVED, THAT THE ANNUAL CONFERENCE OF THE WEST VIRGINIA UNITED METHODIST CHURCH IMPLORES THE GOVERNOR AND LEGISLATURE TO IMMEDIATELY REQUIRE THAT MOUNTAIN TOP REMOVAL MINING BE STOPPED, AND THAT IT NOT BE RESUMED UNTIL SCIENTIFIC STUDY OF ITS LONG-TERM EFFECT ON HUMAN LIFE AND THE NATURAL ENVIRONMENT HAS BEEN ACCOMPLISHED.

MOUNTAINTOP REMOVAL COAL MINING

WHEREAS, mountaintop removal coal mining is extremely profitable to coal companies who practice it, and

WHEREAS, a large part if its profitability is that fewer miners are required than in the usual traditional methods of coal mining, and

WHEREAS, the entire tops of West Virginia mountains have been removed at Kayford, Kanawha County, at Blair, Boone County, at Sharpless, Logan County, and at Spruce River, Boone County, and

WHEREAS, this removal of mountaintops has resulted in severe damage to homes of persons living in the nearby communities, along with damage to wells, the bombarding of their homes with "blast rock", and massive amounts of dust, and

WHEREAS, the millions and millions of tons of earth and rock removed from the tops of mountains is dumped into the valleys next to these mountains totally destroying the springs and the headwaters of streams in these valleys, along with all animal and plant life in them, and

WHEREAS, mountain top removal mining, by destroying home places, is also destroying ancestral ground, sacred ground where generations after generations have lived, gone to church, married, made and birthed babies, taken family meals, slept in peace, died and been buried, and

WHEREAS, staff employees of the West Virginia Department of Environmental Protection and Department of Natural Resources testified before the West Virginia Legislature in its 1998 session that the long-term effects of mountaintop removal mining is unstudied and unknown, and that it should be stopped until its long-term effects are known, and

WHEREAS, Psalms 24:1 firmly reminds us that "The Earth is the Lord's, and the fullness thereof; and the world, and they that dwell therein," and

WHEREAS, the sanctity and sacredness of all life and the natural environment created by God should not be destroyed in the name of corporate profit, and

WHEREAS, the Diocesan Council of the Episcopal Diocese of West Virginia t its fall meeting assembled concurs with the above clauses of a resolution of the West Virginia United Methodist Church.

NOW THEREFORE BE IT RESOLVED, that the Diocesan Council enjoin the governor of West Virginia to issue no new permits and the legislature rescind all enabling resolutions concerning mountaintop removal mining and that current regulations be enforced, pending a thorough study of mountaintop removal coal mining's long-term effects on human life, the natural environment and the economy.

Diocesan Council, September 12, 1998
Episcopal Diocese of West Virginia

6/5/02

Dear Senators:

My name is Betty Woods. As you consider legislation to outlaw dumping waste into streams, I wanted to let you know what living next to a mountain top removal mine was like. I recently moved from Ary, Kentucky, where Addington Starfire has a 2,000 acre mountain top removal mine. I lived in Ary for seven years. The years I lived there I put up with dust, noise, mud, and blasting.

The dust was often so bad you couldn't see in front of you. It was so loud it drove you nuts. The trucks would be in a convoy going and coming out until up in the night, about 15 or 16 hours a day. Could you imagine living about 100 feet from that road?

The mud on the road was ridiculous. I have sat in my living room and seen trucks pulling out onto the road driving fast and not paying any attention to the cars and trucks coming. The cars would have to screech to a halt, sliding and twisting in the mud. The company would rarely wash the road down.

The worst part of living there is the strong blasting they do to blow off the mountain. The blasting left my and my neighbors' homes cracked and unstable. Our water became undrinkable. A handful of citizens sued the company and won. Which goes to show you what a few people can do when they are riled up. We took it as far as we could. But what about all of the people whose homes and water are damaged who can't get a lawyer? We shouldn't have to sue to protect our basic rights.

Mountain top removal is ruining our heritage. When the company blows the mountain off and fill our streams up, what is left for our kids and grandkids? Nothing. The mountains I used to roam are gone. All I can give my grandkids are memories. Beautiful mountains and clean water to drink would be a much better legacy.

Don't let mountain top removal continue to destroy my home. Please support legislation that will ban mine waste from being dumped into streams, and support a strong and well-funded Office of Surface Mining to protect citizens like me.

Thank you.

Betty Woods
PO Box 821
Bulan, KY 41722

606-435-8334

5/29/02

Dear Senators:

My name is Pauline Stacy. I live below an Addington Star Fire 2,000 acre mountain top removal mine in Ary, Kentucky.

The damage from mountain top removal is terrible, both for people and on the environment. Mountaintop removal fills in the headstreams, causing the creeks to fill up with dirt. When heavy rains come, there is a lot of flooding and people's homes and property are destroyed. Mudslides are also common.

The mines have to blast hard to take the mountains off, and this blasting is not properly regulated. The legal limit in Kentucky is 40,000 pounds but up to 600,00 pounds of blasts are exploded here at Star Fire (with a waiver). My home, my well, my garage, my sidewalk and even pictures inside my house have been damaged. My house shakes so hard from the blasting it feels like an earthquake.

I am on a fixed income. I can't afford to fix my house from the damage the mine has caused.

Getting anything for damages is very hard, and most people just give up. Old federal blasting regulations make proving damage from blasting almost impossible, even when it's obvious. The company keeps their own blasting records and looking at them is difficult and time-consuming. If you go to court, everything is against you because the coal companies have all the power and money.

Even when there is a clear violation of the law, inspectors often won't enforce it because they are afraid of getting sued for issuing any violations. Any time a coal company is issued a serious violation they challenge it in court. We need to have a strong, independent and well-funded Office of Surface Mining that will enforce the law and make sure the state does the same. We need someone to stick up for citizens.

Living around a mountain top removal job is awful, and if you could see one you would know this. I urge you to help the regular citizens who don't have the power and money to stand up to coal companies themselves. Please help see that the surface mining law and the Clean Water Act are upheld and enforced. Don't allow the Clean Water Act to be weakened. We need this badly.

Thank you,

Pauline Stacy
PO Box 194
Ary, KY 41712

APPALACHIAN CITIZENS LAW CENTER, INC.
207 W. COURT ST., SUITE 202
PRESTONSBURG, KENTUCKY 41653-7725
606-886-1442 1-800-919-1442
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AMANDA MOORE
JAMES M. TALBERT-SLAGLE
Staff Attorneys

STEPHEN A. SANDERS
Director

May 30, 2002

Senator Joseph Lieberman
Chair
Subcommittee on Clean Air, Wetlands,
and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

Dear Senator Lieberman:

Thank you for the opportunity to submit these comments to the Senate hearing on the Bush Administration's change to the Clean Water Act's definition of "fill material." Please add my comments to the hearing record.

I am an attorney in the coal fields of Eastern Kentucky. I represent low-income people who have suffered environmental or property damage as a result of mining activities. A number of my clients have been damaged by mountaintop removal mining operations. I am writing to express my opposition to the Bush Administration's recent rule change allowing mountaintop mining waste to be placed in streams.

The Bush Administration's rule change altered more than just the definition of "fill material." The change went to the heart of the Clean Water Act by allowing certain types of waste to be dumped into streams for no other purpose than for disposal. Even aside from the objectionable substance of the rule change, the procedure by which the change was made is problematic. The Bush Administration essentially rewrote the Clean Water Act through the administrative process rather than by introducing legislation into Congress to amend the law. By changing the law administratively, the Bush Administration unconstitutionally tipped the balance of power away from the legislative branch and toward its own executive branch.

The coal industry supports the Bush Administration rule change and argues that it will suffer economic hardship, and consequently will have to leave Appalachia, if it cannot dump mountaintop removal waste into streams. The industry claims that not dumping into streams will increase its costs. Another, more accurate, way of stating the economic effect is that the industry will rightly be forced to absorb and internalize the costs that it currently transfers to the low-income Appalachian communities that are near mountaintop removal operations. As the practice currently stands, those communities bear the costs of mountaintop removal in the form of damaged water supplies, land changes, and floods. Disallowing dumping in streams serves two

important goals: aligning economic costs with the party that generates them and enforcing the Clean Water Act as it was intended.

Regardless of the economic impact, the law must be enforced and the constitutional separation of powers upheld. I ask the Senate not to take action to weaken the Clean Water Act and to ensure that no other branch of government weakens our environmental protections.

Sincerely,

Amanda Moore

Amanda Moore
Staff Attorney

CATHOLIC COMMITTEE OF APPALACHIA
PO BOX 62, WITTENSVILLE, KY 41274 (606)297-8792 ccappal@foothills.net

June 3, 2002

To: Senator Jeffords
Senator Lieberman

Re: Congressional Hearing on Valley Fills

At it's 1998 Annual Meeting, the members of the Catholic Committee of Appalachia passed a resolution calling for the end of mountain top removal and valley fill strip mining. Attached is a copy of that resolution.

The Catholic Committee of Appalachia stands committed to this resolution today! The results of the recent devastating flooding in West Virginia and Eastern Kentucky, although identified as "Acts of God," are directly related to the current mountain top removal and valley fill strip-mining practices. Many poor communities have been destroyed with little or no resources to rebuild. Many of these communities, where flooding to this degree has not been seen in the last 100 years, have experienced several floods within the last few months. Lives have been lost, communities demolished, hope destroyed! It's time we hold those responsible accountable.

For more than 30 years, the Catholic Committee of Appalachia – whose memberships include Bishops, clergy, religious sisters and brothers, and the laity - has been a voice for the powerless and for the sacredness of the earth. Our membership expands the entire Appalachian region and even beyond. Many of our members work in these areas devastated by the floods. We stand as a Church calling for those with legislative power to stop a practice which detrimentally impacts the poor and the land at the benefit of those with wealth.

On behalf of the members of the Catholic Committee of Appalachia, I call for the end of mountain top removal and valley fill strip mining. We will continue to mobilize, in collaboration with other committed groups, to end this violence to our land and people!

It is with gratitude that I submit this letter and attached Resolution. Your interest and concern are illustrated by your call for a hearing. We appreciate the opportunity to share with you our experiences, as people of faith, of devastation and frustration. On behalf of the Catholic Committee of Appalachia, thank you!

Peace and all good,

Sister Robbie Pentecost, OSF
Executive Director

Resolution on Mountain Top Removal/Valley Fill Strip Mining

The following resolution was passed unanimously by CCA members present at the 1998 Annual Meeting: "Voices of Sustainability.

Whereas, Psalms 24:1 firmly reminds us that "The Earth is the Lord's, and the fullness thereof; and the world, and they that dwell therein," and

Whereas, "God's covenant is with all living creatures" (Genesis 9:9) and

Whereas, "Christ came to redeem all Creation (Colossians 1:15-20 and Romans 8:21), and

Whereas, we are called to be stewards in right relationship with creation (Genesis 1:26-28), and

Whereas, the Commission on Religion in Appalachia (CORA) and its member denominations have affirmed "an economics of stewardship which recognizes that meeting human need and caring for the earth and its resources are the basic essentials in any system which is faithful to the Creator", (Economic Transformation, the Appalachian Challenge, CORA, short version, page 5) and

Whereas, mountain top removal coal mining is extremely profitable to the coal companies who practice it, and

Whereas, a large part of its profitability is that fewer miners are required than in the usual traditional methods of coal mining, and

Whereas, entire tops of mountains have been removed in the Appalachian areas of the states of West Virginia, Virginia, Kentucky, Pennsylvania, Tennessee, and Ohio, and

Whereas, this removal of mountaintops has resulted in severe and unlawful damage to the homes of persons living in the nearby communities, along with damage to wells, the bombarding of their homes with flyrock, and massive amounts of dust, and

Whereas, the millions and millions of tons of earth and rock removed from the tops of mountains are dumped into the valleys next to these mountains totally destroying the springs and the head waters of streams in these valleys, along with all animal and plant life in them, and

Whereas, mountain top removal mining, by destroying home places, is also destroying ancestral ground, sacred ground where generations after generations have lived, gone to church, married, made and birthed babies, taken family meals, slept in peace, died and been buried, and

Whereas, Environmental Protection Agency staff has stated that the long-term effects of mountain top removal mining is unstudied and unknown and that increasing the acreage of these valley fills prior to studying the long-term effects on the environment is ill-advised, and

Whereas, the Appalachian region has a long history of outside corporations profiting from the extraction of the region's resources in such a way that the prosperity is not equitably shared with the residents of the region, and that the environment has been damaged by such outside resource extraction, and that this damage harms the region's current economy and future economic potential, and

Whereas, grassroots organizations and regional coalitions working in partnership with the Coalition on Religion in Appalachia (CORA) and its denominational partners are responding to the increasing use of mountain top/valley fill by coal mining companies and these organizations are taking action to try to protect the ecological integrity of the region and to publicize the need for economic development which benefits the people of Appalachia, and

Whereas, the sanctity and sacredness of all life and the natural environment created by God should not be destroyed in the name of corporate profit,

Therefore, be it resolved, that the Catholic Committee of Appalachia (CCA) and its members implore the Governors, legislatures, and other appropriate agencies in the Appalachian coal producing states to require that mountain top removal/valley fill mining be stopped and it not be resumed until scientific study of its long-term effects on human life and the natural environment has been accomplished; and

Implementation: CCA members and the Board of Directors agree that, to the extent they are able, they will contact their respective Governors, legislators, and representatives of mining enforcement and environmental protection by phone, fax, mail or e-mail. CCA members and its Board of Directors will inform these parties of CCA's position on mountain top removal/valley fill strip mining as outlined by the above. The CCA office will be responsible for keeping track of how the resolution is being implemented. Please let the CCA office know who you are contacting. Relay this information to: CCA, PO Box 62, Wittensville, KY 41274 phone (606) 297-8792. e-mail:ccappal@foothills.net.

May 31, 2002

Senator Joseph Lieberman
Chair, Subcommittee on Clean Air, Wetlands, and Climate Change
Environment and Public Works Committee
United States Senate
Washington DC 20510

Dear Senator Lieberman,

Thank you for holding hearings regarding the Bush Administration's efforts to rewrite the Clean Water Act to allow "fill" material to bury mountain streams. I am appalled by the tactics our President is attempting to use to bypass the legislative process. As Judge Haden clearly stated, the intent of the Clean Water Act is to prevent the degradation of streams. Yet nothing could be more degrading to a stream's quality than burying it under tons of rock and earth.

Since moving to West Virginia a short time ago, I have been amazed at the destructiveness of mountaintop removal mining and its effect on the communities nearby. This form of strip mining not only destroys mountains forever, and kills fish and other aquatic species, it also destroys Appalachian communities and makes life miserable for those who attempt to remain in their homes. 15 West Virginians have died in the past year from flooding that was made much worse by mountaintop removal. When you removal all the trees, mosses and vegetation that normally hold water on the mountain, the WV Department of Environmental Protection found that peak water flows are increased by nearly 50 percent! These mountains are now covered by scrub grass that barely grows on compacted soil that is as hard as concrete.

This type of destruction would never be allowed anywhere else in the country. Thank you again for holding hearings and I urge you to make a strong statement condemning the Bush Administration's disregard for the environment and the safety of the people of West Virginia and Eastern Kentucky.

Sincerely,

David Cooper
938 13th Ave. Apt. 2
Huntington WV 25701

Regina M. Hendrix

1637 Quarrier Street
Apartment #3
Charleston, West Virginia 25311

Home Phone (304) 343-5211
Email reginahend@aol com

May 30, 2002

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, D. C. 20510

Dear Senator Lieberman:

I am writing to express my opposition to the Bush administration's proposed change to the Clean Water Act's definition of "fill." I believe this rule change was made in order to legalize what are now illegal valley fills at mountaintop removal (MTR) operations, which are concentrated in West Virginia and Kentucky. Please add my comments to the hearing record.

A little bit of personal background at this point might be helpful to explain why I am so concerned. I was born in Charleston WV in 1936 and grew up in the state. During the '50s I was forced to leave WV for economic reasons and was away from the state for 45 years. During this 45-year economic exile I always wanted to return to live in the hills of WV because I had learned to love our God-given land with its verdant green mountains and wild rivers.

Shortly after my retirement in 1998 I returned to live in Charleston, WV. During the spring of 1999 I was invited to fly over the southern part of WV to look at the MTR sites. I accepted the invitation, anticipating a little sightseeing excursion in the mountains. **Mere words cannot describe the extent of the destruction and defilement of Mother Earth which God has entrusted to our care**. You must view it from the air because the MTR sites are carefully concealed from public view. You cannot enter these sites by road, with one exception, which is Larry Gibson's Stanley Heirs Park on Kayford Mountain. I would like to take you to this park and cemetery for a visit.

During this first overflight I viewed the many ugly gouges left at the sites of the 400,000 acres of mountains which have been blown away and the 1000 miles of streams and ecosystems which have been buried. I viewed the areas where the Cities of Kayford and Blair once stood. Later I had the opportunity to meet and talk with some of our abused and displaced citizens. I came away from this overflight with tears in my eyes and a determination to fight the forces of greed and destruction until Applachia is no longer **America's Energy Sacrifice Zone**.

I invite you to come take a flyover and look at what is happening in southern West Virginia and eastern Kentucky. You will see for yourself that this rule change will be ruinous. If the Clean Water Act had been enforced as originally intended, this massive destruction could never have taken place. Therefore, I'm asking you to do whatever it takes to enforce the Clean Water Act as it was before the Bush administration illegally changed it. Please don't let him gut the CleanWater Act.

Thank you,

Regina M Hendrix

Thurs. May 30, 2002

Dear Senator Lieberman:

I am writing to express my opposition to any change in the Clean Water Act by Executive Order of President Bush, or by Congressional action. Please do not allow the Corps of Engineers to redefine terms like "fill" to allow the dumping of Mountain Top Removal "overburden" into our streams.

This spring, for the second time in a year, W. Va. has experienced disasterous floods, this time causing 15 deaths, hundreds of millions of dollars in damage and 2,500 houses and businesses destroyed or damaged. The water did not come from creeks gradually over-flowing their banks but from water crashing down the mountains and out of the hollows, moving very fast and taking everything in its path. The lack of vegetation from timbering and the filling of natural streams by Mountain Top Removal debry is being cited more and more by residents of coal mining communities like Coalwood or the people of McDowell County in the coal fields as the cause. They point out that in 1977 there were flood waters chest high, but they could wade through them and salvage things from their houses. This time, they noted, there was a swift, deadly under-current. They would have been among the corpses if they had tried to get back to their houses.

The national media has given very little coverage to this most recent flood despite the body count of 15 dead. Their eyes seeemed to be on a draught out west. But that's not unusual. A recent spill into the Big Sandy from a Massey Coal, Mt. Top REmoval site in Martin County, Ky. sent more coal sludge, like slow moving molasses, into the streams and river's waters than the EXXon Valdez disaster, and it got no national media coverage that I am aware of.

Like the Indians were treated during the Trail of Tears, the Coal Companies' attitude seems to be, move these people out of these valleys so that we can do whatever we want without hinderance. They control our legislature, so that a 1998 study by the U.S. Office of Surface Mining and the Corps of Engineers, which found that Mt. Top Removal Mining made flooding more likely and which was due to be released at the end of the Clinton Administration in Dec. of 2001 was never released. At the requst of Governor-elect Bob Wise and of Speaker of the House, Bob Kiss and President of the Senate Earl Ray Tomblin the report was held up. It"s contents were only made public after a Freedom of Information Suit was threatened by the Charleston Gazette. The public paid for this study. It should be a matter of public record. Forests could take centuries to return according to the report in the draft copy the Gazette obtained. Seven hundred and fifty miles of streams have been buried from 1977 to 1999 in W. Va. In short, we are an energy sacrifice zone for the rest of the nation, and people who had lived on their land since the 1700's are expected to move out of the hollows and move on.

I have just finished reading a 1,040 page biography of Lyndon Johnson by Robert Caro called Master of the Senate. I recognize the treatment of the Southern legislators in regard to the blacks. There is this difference in the treatment of West Virginians by the ruling oligarchy of this state. Senator Russell, Senator George and the other Senators and legislators of the Southern States who fought against civil rights legislation, thought they were preserving a "way of life," and did love the South, if not the blacks who lived there. The out-of-state coal, oil and timber corporations that control W. Va. care nothing about its way of life, its people or its mountains and streams. All they care abvout is making money.

I understand from a column by Maureen Dowd in the New York Times, that President Bush, with typical tastelessness and insenitivity, explained to a German reporter his antipathy to Saddam. He was "a dictator who gassed his own people." It didn't seem to register with George W. that the Jews were Germany's own people and were gassed, as the blacks were the South's own people and were lynched. Both ethnic groups were

considered a sub-species to their rulers. In West Virginia, the whole state is a sub-species to the Bush Administration, the Corps of Engineers, the Corporations and the handful at the top of the food chain here. They ask,"why do these people want to live up these hollows, anyway? Besides, W. Va. needs more flat land."

Only the Federal Government can intervene and protect us, just as, in Lyndon Johnson's day, when it came to voting rights for the blacks. We have no recourse in terms of the legislature. Democrats and Republicans, it is bought and paid for by the controlling out-of-state corporate interests. It is an octopus with its tentacles in both parties.

Up and down our highways there are huge billboards that say: "Coal Keeps the Lights On." That's true! Until the flash floods due to coal mining* that turns the lights off and takes the house with them

I enclose a clipping from last July's floods. The headline tells the story: "Second Flood Victim's Body Found." In other words, in West Virginia "cheap energy" is not cheap!

That is why I urge you to save our streams and mountains. Don't let them change the law! Thereby you will save our people and our state!

Elinore Taylor

Elinore Taylor
1 Kennon Lane
Huntington. W. Va. 25705

tel. 304 5223361

* Mt Top Removal Coal Mining
of Timberrity, which is a part of it.

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

Dear Senator Lieberman,

I grew up in West Virginia as the son of a coal miner. My dad went to work in the mines when he was 14 years old. He worked there for most of the following 39 years until he died at age 53. Hardening of the arteries, black lung and stress took their toll. His heart gave out. The mines killed him.

Coal mining continues to take its toll on West Virginians. Lives, homes and infrastructure are being destroyed in southern West Virginia as "fill" from mountain top removal clogs the valleys and run off from the ugly, denuded and desecrated mountains washes away peoples lives.

My dad loved this state and I am confident that if he was alive today his heart would be broken once again by the mining industry. I remember once, when I was very young, my dad got a good job as a mine superintendent at a small mine outside of Buchannon, West Virginia. We had a really nice company house as part of the deal. My mother got really mad when, after only a couple months, we left. The mine owner wanted him to do something that my dad felt was dangerous to the workers and was told to do it or else. He did the right thing and took the or else; he quit.

President Bush's plan to facilitate mountain top removal by changing the rules on valley fill is destroying our beautiful state. Please do the right thing; make them quit.

Respectfully,

David McGee
5064 Guyan River Road
Huntington, WV 25702
304-523-7581

Please add my comments to the Congressional
hearing record on the Bush administration's change to the Clean Water Act's definition of "fill."

June 1, 2002

Senator Joseph Lieberman, Chair
Subcommittee on Clean Air, Wetlands and Climate Change
United States Senate
Washington, D.C. 20510

Dear Senator Lieberman and Committee Members:

Thank you for the opportunity to submit these comments to the Congressional hearing on the Bush administration's change to the Clean Water Act's definition of "fill." Please add my comments to the hearing record.

It appears to me that this change was made in order to legalize what are now illegal valley fills at mountaintop removal operations, which are concentrated in West Virginia and Kentucky.

The only way for anyone to fully grasp what devastation this type of mining has wrought on Appalachia is to come to the area and view it. It is thousands of acres! Mountaintops and forests literally blasted off—this is what the coal companies wish to now call "fill" and push into our valleys covering up many miles of streams. This is an outrage and there are many of us who are sick and tired of money interests being allowed to not only destroy our state, but to be so arrogant as to believe they can continue to either break the law or change the law to their own ends, which is the "bottom line."

The Clean Water Act was enacted to prevent our water ways and aquifers from such contamination and disruption. I understand that energy is critical, but our bottom line is that we CANNOT live without clean water. Can anyone? Can the citizens of this country afford to continue to destroy such a critical natural resource as water?

I beg any of you to come to our area and see for yourselves what this rule change would inflict on our communities. On a broader level, ask yourselves what kind of damage the rule change would mean throughout the country. Any erosion into the letter and spirit of the Clean Water Act would be selling out the citizens of this country.

Thank you,

Dorothy A. Henry

Dorothy A. Henry
94 Cook Drive
Charleston, WV 25314

Post-it® Fax Note 7671	Date 6/4/02	# of pages ▶ 1
To SEN. LIEBERMAN	From	
Co./Dept.	Co.	
Phone #	Phone #	
Fax # 1-202-224-1273	Fax #	

6-1-02

1-202-224-1273

Please add my comments to the Congressional Hearing record on the Bush administration's change to the Clean Water Act's definition of "fill".

I have watched as my state's residents have been flooded off the maps and I have watched as coal companies have buried miles of streams, which has contributed to their distress, with no thought given to the ecological damage caused by their practices. Please do not weaken the Clean Water Act by eliminating laws that govern valley fill activities.

Barbara Hutchison Smith
111 Glass Dr.
Cross Lanes, WV

June 5, 2002

Senator Joseph Lieberman Chair
Subcommitee on Clean Air, Wetlands and Climate Change
Environment and Public Works Committee
United States Senate
Washington, DC 20510

Dear Senator Lieberman:

Thank you for the opportunity to submit these comments to the Congressional hearing on the Bush administration's change to the Clean Water Act's definition of "fill." Please add my comments to the hearing record.

I believe this rule change was made in order to legalize what are now illegal valley fills at mountaintop removal operations, which are concentrated in West Virginia and Kentucky. Beyond the enormous environmental and social costs we pay for this form of mining, and beyond its wrenchingly destructive effects on nearby communities, this rule change constitutes an appalling assault on democracy. Through a democratic process of public debate and negotiation, the American people put these laws in place to defend our communities and our commonwealth of clean air, water, forests, and soils. The Bush administration's effort to overturn this democratically created law through a simple rule change offers an incredibly bald example of the corporate state's assault on the democratic polity: wealth attacking commonwealth.

How can we claim to be leaders of the free world when our administration so blatantly disregards the democratic process, squandering the commonwealth for votes?

I also request that you add to the record the attached letter written by my eleven-year old daughter to President Bush, asking him to stop mountaintop removal. And I request that you include the response she received from President Bush, which ignores her concerns and advises her to keep reading -- the boilerplate message sent to children who try to make their voices heard by the present administration. Perhaps Mr. Bush might enlist some volunteers through the Freedom Corps to engage seriously with such future voters on issues that matter, like clean air and water, and a sustainable energy program.

Sincerely,

Mary Hufford
430 North Kenmore Street
Arlington, VA 22201

President Bush
The White House
1600 Pennsylvania Avenue
Washington D.C.

Dear President Bush,

I am eleven years old and my family vacations to West Virginia every summer. The mountains are disappearing because of Mountain Top Removal. West Virginia is a beautiful place in the United States. I would rather live my life with no electricity at all than no mountains. Fortunately, that is not a choice I have to make. There are cleaner ways to produce electricity than coal. Your Administration could take the lead in developing them.

You said in your speech on December 13,2000, "God Bless America". Well, the environment is part of America. You also said in your speech that you were elected to serve the interests of all Americans, not only those in your own party. I have a friend my age who lives in West Virginia. She goes to school at the foot of a huge coal slurry dam. All the students in her school are afraid that this dam will break like the one that just broke in Kentucky.

Please stop Mountain Top Removal and instead create jobs by developing solar power systems and the Hydrogen fuel cell for the sake of America.

Sincerely,

Katherine Oaks
430 N. Kenmore St.
Arlington VA 22201

THE WHITE HOUSE
WASHINGTON

May 2001

Dear Friend:

Thank you for sharing your thoughts with me.

I am pleased to hear from young people like you who care enough to take the time to write. All of us have God-given talents that we can use to make the world a better place. I hope that you will always use your special talents for the good of those around you.

Remember that reading is one of the best ways to expand your views of the world. Reading helps to increase your knowledge, open your eyes to new experiences, and create big dreams. I hope that you will take time for reading over the summer.

Mrs. Bush joins me in sending you our best wishes.

Sincerely,

George W. Bush