OSM Analysis and Determination of the June 2013 West Virginia 30 CFR Part 733 Petition

Request for Evaluation of the Approved West Virginia Program

December 30, 2013

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OSM ANALYSIS AND DETERMINATION
OF THE JUNE 2013 WEST VIRGINIA 733 PETITION

Introduction:

In a petition to the Director of the Office of Surface Mining Reclamation and Enforcement (OSM), the National Wildlife Federation et al. (Petitioners) requested that OSM review certain aspects of the approved West Virginia surface coal mining regulatory program (WV program) under 30 CFR Part 733 of the Federal regulations. Petitioners believe that the West Virginia Department of Environmental Protection (WVDEP) is inadequately administering portions of its approved program. Petitioners request that OSM either substitute Federal enforcement of the WV program or recommend that the Secretary of the Interior withdraw approval of all or part of the WV program, as detailed in 30 CFR Sections 733.12(f) and (g). In response to the request, OSM initiated the procedure outlined in 30 CFR Part 733. OSM has completed the first step of this procedure and performed a verification of the allegations raised by Petitioners and has reached a determination as to whether an evaluation of the allegations should be made.

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) and its implementing regulations at 30 CFR Section 733.12 provide procedures for requiring a State to correct serious failings of its program. Any interested person may petition the OSM to formally evaluate a State program under the procedures established by 30 CFR Section 733.12(a)(2). To invoke these procedures, Petitioners must set forth a concise statement of facts which they believe establish the need for evaluation. This statement is used by OSM to commence the verification process outlined in 30 CFR Section 733.12(a)(2). The verification process is an initial examination to determine, among other things, the accuracy of the allegations, whether the allegations relate to an existing requirement within the approved program, and if the weight of the evidence sufficiently supports the need to conduct an evaluation pursuant to 30 CFR Section 733.12(a)(2).

At the completion of the verification process, OSM determines whether sufficient evidence exists to warrant evaluation of any part of the State program. The results of any evaluation conducted will aid OSM in determining whether there is reason to believe a State is not effectively implementing, administering, maintaining, or enforcing any part of its approved program. If, after review of the evaluation, OSM has reason to believe a State is not effectively implementing, administering, maintaining, or enforcing any part of its approved program, the procedures set forth in 30 CFR Section 733.12(b) will commence.

The 30 CFR Section 733.12(b) procedures include: notifying a State in writing of the portions of the program OSM believes are not being effectively implemented, administered, maintained, or enforced; describing OSM's rationale for this belief; and specifying a time period for a State to complete any necessary remedial measures. Additionally, a State is given an opportunity to participate in an informal conference and a public hearing is held. Upon exhaustion of these processes, if OSM determines that a State has failed to effectively implement any part of its approved program, 30 CFR Section 733.12(f) or (g) is implemented. Specifically, if a State has not demonstrated its capability and intent to properly administer its program, OSM will either substitute direct Federal enforcement for all or part of the program or recommend to the Secretary of the Interior withdrawal of approval of the program in whole or in part.

Specific to this petition, Petitioners request immediate implementation of the provisions of 30 CFR Section 733.12(f), substitution of Federal enforcement or 30 CFR Section 733.12(g), withdrawing approval of a State program without OSM first performing the requisite verification and evaluation processes mandated by the regulations. OSM cannot contemplate substitution or withdrawal of the WV program without first completing the threshold processes outlined herein. Petitioners' request would effectively preclude WVDEP an opportunity to institute remedial actions and prevent the critical provisions for a public hearing as outlined in 30 CFR Sections 733.12(b)-(d).

OSM has appropriately implemented the 30 CFR Part 733 procedure by first completing the verification process. After review of Petitioners' allegations, West Virginia's response to those allegations, information gathered through OSM's normal oversight process and annual evaluations conducted pursuant to 30 CFR Section 733.12(a)(1),[1] and other information available, OSM determined that 14 of the 19 allegations set forth in the petition do not warrant further evaluation. However, OSM has determined that the remaining five allegations will receive further evaluation pursuant to 30 CFR Section 733.12(a)(2), to determine whether there is reason to believe WVDEP is not effectively implementing, administering, maintaining, or enforcing the approved WV program. These five allegations include:

1. WVDEP's Failure to Address Potential Flooding Impacts in the Permitting Process with Storm Water Runoff Analysis (SWROA);
2. WVDEP Fails to Issue SMCRA Violations Where National Pollutant Discharge Elimination System (NPDES) Violations Exist;
3. WVDEP's Failure to Regulate Selenium Pollution;
4. WVDEP's Failure to Properly Define Impacted Areas in Cumulative Hydrologic Impact Analysis (CHIA) Results in Harm to Watersheds; and
5. WVDEP's Failure to Require Properly Protective Soil Removal and Reclamation Measures for Mining Sites.

A summary of each allegation is provided in the order presented and as titled by Petitioners. A summary of WVDEP's response to those allegations is also included. OSM's verification analysis begins at Roman numeral III, because Petitioners' first two sections provide only an overview of SMCRA.

[1]Annually, the local OSM office, in this case the Charleston Field Office (CHFO), independently publishes a State evaluation report based upon OSM oversight. The CHFO routinely inspects a sample of mine sites each year and reviews specific topics listed in a two-year Oversight Performance Agreement (PA) signed by CHFO and WVDEP.

III. WVDEP's FAILURE TO ADHERE TO SMCRA's PERMITTING PROCESSES

a. WVDEP Violates SMCRA by Issuing and Renewing Mining Permits Where Applicants have Unabated Violations of SMCRA and Other Environmental Laws

Summary of Petitioners' Allegation:

Petitioners allege that WVDEP is improperly administering its surface mining permitting program by failing to ensure permit applications are accurate, complete, and comply with all requisite State and Federal laws prior to permit issuance. Petitioners allege that WVDEP routinely issues SMCRA permits to companies with outstanding SMCRA and Federal Clean Water Act (CWA) violations. To support this claim, Petitioners reference WVDEP's records. Petitioners allege that WVDEP's records evidence that 418 new permits have been issued to companies whose subsidiaries have outstanding SMCRA violations since 1990. Allegedly, of the 418 permits, 102 have been erroneously issued since 2005. Moreover, Petitioners contend that, excluding exploratory permits, 216 new SMCRA permits with outstanding violations have been issued since 1990, and 34 have been issued since 2005. Petitioners allege that WVDEP neglected to consider the applicant violator provisions of SMCRA found at 30 U.S.C. Section 1260, requiring parent companies to be considered. Additionally, Petitioners allege that under the law governing permit renewal, if an applicant is not in compliance, its permit may not be renewed. Petitioners allege WVDEP renews such permits, showing a gross disregard for the law.

Further, Petitioners allege WVDEP routinely issues SMCRA permits to companies with outstanding CWA violations based on alleged failures to comply with NPDES permits. According to Petitioners, since 2006, WVDEP has issued 197 new permits under SMCRA to subsidiary companies with water quality violations. Petitioners also allege that since 2006, 72 permits, not including exploratory permits, have been issued to permittees with outstanding CWA violations. Specifically, Petitioners cite to the Fola Coal Company (Fola), a subsidiary of CONSOL Energy, Inc. (CONSOL) by listing three Fola permits that allegedly had NPDES violations.

Further, Petitioners assert that WVDEP is issuing permits in watersheds listed as West Virginia Section 303(d) impaired waters without completing the total maximum daily load (TMDL) identification process. According to Petitioners, WVDEP's granting of such permits authorizes the additional release of pollutants into an impaired watershed resulting in a *per se* contribution to an existing water quality violation because "absent an established TMDL limit, additional discharges of pollutants already resulting in impairments will necessarily cause or contribut[e] to existing impairments." Petitioners cite to three permits in three separate watersheds where this allegedly occurred between 2008 and 2009.

WVDEP's Response:

According to WVDEP, under its approved program, a permit cannot be issued where information available to the State indicates that any surface mining operation owned or controlled by the

applicant is currently in violation of the State program or other environmental laws or rules. An exception exists when the applicant submits proof that the violation has been corrected or is in the process of being corrected to the satisfaction of the agency with jurisdiction over the violation. This is codified in Section 22-3-18(c) of the West Virginia Surface Coal Mining and Reclamation Act (WVSCMRA). WVDEP officials explain that pursuant to W.Va. CSR Section 38-2-3.32(c), the approved WV program also establishes a presumption that violations are corrected, or in the process of being corrected, to the satisfaction of the agency with jurisdiction over the violation in the absence of a failure to abate Cessation Order. WVDEP believes the permits Petitioners claim are in violation were properly issued pursuant to this presumption.

WVDEP explains that when conducting ownership and control (O&C) review on permit applications, WVDEP reviewers examine both the West Virginia Environmental Resource Information System (ERIS) and the Federal Applicant Violator System (AVS) databases to search for any permit blocks that exist for an individual or entity meeting the O&C requirements for the application. WVDEP also notes that an OSM narrative is provided, which verifies that no individual or entity is ineligible to receive a permit. This verification is valid for five days. Should a final decision on the permit application not be met within this timeframe, another AVS validation is required. In the event a permit block is identified, the applicant is notified and the permit is not issued until the block is resolved.

WVDEP is unable to verify Petitioners' allegation that Fola violated various NPDES permits 2,056 times between January 2006 and May 2011. However, WVDEP explains that Petitioners may have misinterpreted the information within the Discharge Monitoring Reports (DMRs) Fola submitted or the Quarterly Noncompliance Report (QNCR) that WVDEP processes as part of WVDEP's enforcement responsibilities. Overall, WVDEP contends that Petitioners' conclusions are flawed. By way of example, WVDEP notes that relative to the three Fola permits listed in Petitioners' chart on page 24, the permit reviewers would not have been aware of any outlets shown as out of compliance. Those self-reported exceedances would only be received by WVDEP as part of a quarterly report that was not yet available at the time of permit approval.

Regarding Petitioners' assertion that three permits were issued in watersheds listed as West Virginia Section 303(d) impaired waters without completing the requisite TMDL identification process, WVDEP explains that Petitioners' rationale is flawed and specifically notes that the Workman Branch, cited by Petitioners as biologically impaired, has not been listed on the 2008, 2011, or 2012, Section 303(d) lists. WVDEP further explains, the West Virginia water quality standard implicated by a Section 303(d) listing for biologic impairment is a narrative water quality standard that prohibits significant adverse impacts on the chemical, physical, hydrologic or biological components of aquatic ecosystems, as detailed in W.Va. CSR Section 47-2-3.2.i. WVDEP asserts, "[i]n essence, Petitioners are contending that the reasons for permit blocking established by the surface mining laws should be expanded to include mining operations that propose to discharge into [CWA Section] 303(d) listed streams." According to WVDEP, neither the United States Congress nor the West Virginia Legislature has chosen to make Section 303(d) listing the basis for a permit block. The consequence of a Section of 303(d) listing is the preparation of a TMDL, as required by the West Virginia Water Pollution Control Act (WVWPCA) and the CWA. This is done in order to bring the impaired stream into compliance with State water quality standards. Nearly all TMDLs include provisions for permitting that

allows future growth on the impaired stream.

OSM Analysis:

Petitioners imply that all permitting actions are subject to the eligibility criteria established in SMCRA. This is not true. Under its approved program, West Virginia conducts eligibility reviews for new surface mining applications, applications for transfer, assignment or sale of a permit, and applications for operator assignment. As part of its eligibility review process under SMCRA, West Virginia also updates and verifies the accuracy and completeness of its O&C information. This is done by requiring notification of permittee merger and name change and notification of change of owners, officers, directors or partners. These permitting actions are defined in the February 1, 1991, Memorandum of Understanding (MOU) between OSM and West Virginia. This MOU sets forth how both agencies will implement the eligibility requirements at Section 510(c) of SMCRA and Section 22-3-18(c) of WVSCMRA.

Petitioners allege that WVDEP is failing to comply with SMCRA's permitting processes. Petitioners reference the permit and revision approval requirements at Section 510(b) of SMCRA. Petitioners also allege that WVDEP violates SMCRA by issuing and renewing mining permits where applicants have unabated violations of SMCRA and other environmental laws. Contrary to Petitioners' allegations, the eligibility requirements at Section 510(c) of SMCRA are only applicable to new surface mining permit applications. The eligibility requirements at Section 510(c) of SMCRA are inapplicable to permit revision or permit renewal applications. Therefore, under Federal law, such permitting actions are not subject to eligibility reviews prior to issuance by a regulatory authority.

Petitioners also state that, under the law governing permit renewals, a permit may not be renewed if an applicant is out of compliance under both SMCRA and the CWA. Contrary to the allegation, as discussed above, permit renewal applications are not subject to the eligibility requirements at Section 510(c) of SMCRA. Therefore, permit renewals can be issued so long as they comply with the requirements at Section 506(d) of SMCRA, or the State's counterpart at Section 22-3-19(a) of WVSCMRA.

It also appears that when formulating allegations, Petitioners considered and included all self-reported exceedances of the NPDES permit limits by an applicant as a reason to block the issuance of a WVSCMRA permit. OSM reviewers were able to reproduce the same number of outlets reporting exceedances of NPDES standards regarding the Fola site. However, there was no information provided by Petitioners to indicate that these exceedances would be considered a violation, resulting in a permit block. The Interior Board of Land Appeals (IBLA) has acknowledged:

> [T]here is some inconsistency in a regulatory scheme which establishes that an NPDES effluent violation is a violation of a permit and the State and Federal program and at the same time provides that if the violation is self-discovered, it is not a violation until the permittee fails to correct. But this is what the regulatory scheme provides.

W. Va. Highlands Conservancy, et al., at 152 IBLA 158, No. 95-557 (2000). There are no allegations by Petitioners that any permittee is not reporting a violation or is not in the process of

correcting the cause of a violation discovered during the review process; thus there is no evidence that a permit block is required.

Pursuant to the requirements outlined above, OSM has only reviewed the allegation relative to new surface mining permit applications that Petitioners allege were issued by the State with outstanding SMCRA violations. Petitioners did not provide specific examples of the permits they alleged were improperly issued. Section 510(c) of SMCRA prohibits the issuance of new permits to applicants who own or control operations with unabated violations until those violations are corrected or are in the process of being corrected to the satisfaction of the agency with jurisdiction over the violation. By checking the AVS during the review of permit applications, regulatory authorities can determine whether an applicant is permit-eligible.

Using reports and data available from the AVS, OSM reviewed a random sample of newly issued WVDEP permits for the years 2005 through 2011. Our analysis included reviewing evaluation reports just prior to each permit issue date. In each instance, OSM was able to determine that WVDEP used the AVS prior to making permitting decisions and there were no instances where WVDEP issued mining permits to applicants with unabated SMCRA violations. There were a few instances where a listing of violations appeared as part of their review; however, in each instance, all the SMCRA violations listed were part of settlement agreements and were in compliance and being abated to the satisfaction of each agency with jurisdiction over each of the violations.

In order to properly address Petitioners' allegations that WVDEP is approving permits in watersheds listed as impaired waters where the TMDL process has allegedly not been completed, it is necessary to provide an overview of the requirements of Section 303(d) listing and the impact of TMDLs.

The CWA contains several sections requiring reporting on the quality of a State's waters. Section 305(b) requires a comprehensive biennial report. Section 303(d) requires, from time to time, a list of waters for which effluent limitations or other controls are insufficient to meet water quality standards, such as impaired waters. A water body is considered impaired if it violates water quality standards and does not meet its designated uses. Water bodies deemed as impaired are placed on the Section 303(d) list and scheduled for TMDL development.

WVDEP's TMDLs are developed according to the Watershed Management Framework cycle. The framework divides the State into 32 major watersheds and operates on a five-year, five-step process. The watersheds are divided into five hydrologic groups, known as A through E. Each group of watersheds is assessed once every five years. The TMDL process begins in the first year of the cycle with pre-TMDL sampling and public meetings in the affected watersheds. The data is compiled and TMDL development begins in year two of the cycle. In the third year, TMDL development continues and the TMDL is drafted. The TMDL is finalized in the fourth year. In the fifth year of the cycle, TMDL implementation is initiated through the NPDES permitting process and efforts toward limiting non-point source loading commence. Throughout the TMDL development process, there are numerous opportunities for public participation and input.

After the TMDL is developed, it is used in the NPDES permitting process for any activities generating a discharge in the watershed, including mining activities. However, OSM concurs

with WVDEP's response stating that, until the TMDL process is complete, activities in the watershed are not prohibited.

OSM could not find one of the stream segments (Workman's Branch) on any Section 303(d) list of impaired streams. OSM did confirm that the other two stream segments (Seng Creek and Coal Fork) were on the Section 303(d) list of impaired streams and that WVSCMRA permits were issued prior to the development of TMDLs to address the impairment. OSM also understands any NPDES permit issued prior to the development of the TMDL is still subject to be changed to more strict standards once the TMDL is finalized.

Petitioners did not allege that WVDEP failed to consider any available data on the impairment in WVDEP's hydrologic impact assessment findings relative to the WVSCMRA process.

OSM Determination:

Petitioners' allegation that the applicant must be free from violations at the time of permit renewal is incorrect. Further, Petitioners' allegation that a self-reported exceedance of an NPDES permit standard is rationale for permit blocking is incorrect. OSM's sample of newly issued permits indicates WVDEP is following its program by finding that there are no outstanding violations assigned to the applicant or that any such violations are subject to a settlement agreement where the applicant is in compliance with the required schedules for abatement.

WVDEP did issue permits in 2008 and 2009 on impaired streams, while the development of a TMDL for biological assessment was pending. However, Petitioners did not provide evidence that WVDEP did not consider impairment when it issued permits. OSM concurs with WVDEP that mining is not automatically prohibited in an impaired stream in advance of the development of a TMDL.

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

III. WVDEP's FAILURE TO ADHERE TO SMCRA's PERMITTING PROCESSES

b. WVDEP's Failure to Terminate Expired Not-Started Permits

Summary of Petitioners' Allegations:

Petitioners allege that WVDEP routinely allows mining to begin on expired not-started permits by granting extensions that violate SMCRA extension requirements. After the issuance of a permit under SMCRA, a company has three years to commence mining. If the company fails to commence operations within that time frame, Petitioners allege that the permit must be automatically terminated and a new permit is required for mining to commence. Petitioners assert WVDEP unlawfully implemented, then enacted a policy, without approval from OSM, allowing WVDEP to circumvent these rules. Pursuant to what Petitioners allege is an "unlawful policy", WVDEP does not automatically terminate a permit that has not commenced mining

within three years and it also routinely allows mining to begin on such a permit after the statutorily allocated time frame allegedly in violation of the provisions of SMCRA and WVSCMRA.

Petitioners acknowledge that certain conditions do exist which may warrant an extension of a permit. An extension may be granted if commencement was stalled due to, "litigation precluding commencement, or threatening substantial economic loss to the permittee, or by reason of conditions beyond the control and without the fault or negligence of the permittee." W. Va. Code Section 22-3-8(a)(3). Additional extensions are available for leases granted by the Federal Mining Leasing Act and mining activities for use in a synthetic fuel facility or electric generating facility. Not-started permit extensions must be specifically set forth in the permit and notice of the extension must be made public by the regulatory authority.

Petitioners assert WVDEP created its own policy on not-started permits in January 1993. According to WVDEP's policy, permittees should receive notice of the termination of their permit prior to termination and with ample time to submit a renewal request to WVDEP. If this process is not followed before the three year commencement period ends, it must be followed *after* the expiration of the three year period. Petitioners assert WVDEP's policy has illegally allowed certain mining operations to begin after the three-year period has expired, in two respects. First, it grants extensions based on information submitted by companies that fail to fully or accurately meet the standards for such extensions under SMCRA. Second, extensions are routinely unlawfully granted after the date of permit expiration. Petitioners assert this policy contravenes the plain language requirements of both SMCRA and WVSCMRA. Petitioners stress that WVDEP's policy resulting in the failure to properly terminate not-started permits is not just a procedural problem. Permits are meant to capture the current state of an area at that moment.

Further, Petitioners allege that a State policy can only be legally effective if it is submitted to OSM and approved as part of the approved State program. In this instance, WVDEP did not submit this policy to OSM for approval.

Petitioners assert WVDEP's policy has created a large number of permits that should be terminated. According to Petitioners, 143 permits have been issued in West Virginia that are currently expired because more than three years have passed without commencing mining activity and WVDEP has not terminated them. Additionally, on over 100 permits, WVDEP has allowed operators to commence mining activities after the three-year period expired. According to Petitioners, WVDEP has allowed a total of 246 permit violations by failing to terminate permits.

WVDEP's Response:

WVDEP indicates that its current practice regarding not-started permits is supported by the January 1993 policy cited by Petitioners. WVDEP asserts that this policy provides procedures for the extension or termination of permits, defines specifically what conditions must exist for a label of a not-started permit, states the legal authority for WVDEP's decision, and provides review procedures. WVDEP asserts that its intent when issuing this guidance was to "permanently rectify past procedural difficulties" and to "address any permits that may slip

through the cracks." WVDEP also notes that some of the permits listed in Petitioners' Appendix A are not coal mining permits.

WVDEP acknowledged that at the time of its submittal, OSM was considering the correct protocol consistent with 30 U.S.C. Section 1256(b) to address and reconcile the queries arising from the not-started permit provision of SMCRA, asserted that it is finalizing program improvements to its electronic permitting system to identify such permits and send notifications to WVDEP staff and permittees to address this issue of not-started permits in a timely manner.

OSM Analysis:

The documents submitted with the Marfork Request for Informal Review and WVDEP's response to the petition indicate that Petitioners' allegation that some permits have been activated more than three years after issuance is valid. However, OSM has not verified that WVDEP failed to follow the proper procedures relative to all 246 alleged not-started permits, which would place it in violation of 30 U.S.C. Section 1256 and the WV approved program, as Petitioners allege.

Petitioners misstate WVDEP's involvement in attempting to resolve this issue. WVDEP explained its position to OSM on its appeal and has taken steps to ensure that operators receive notifications well in advance of the three year deadline for starting operations.

As acknowledged by WVDEP, the current guidance documents associated with the approved WV program provide for an extension without automatic termination. In certain circumstances, the extension is effective following a notice of termination by WVDEP and subsequent request for extension by the permittee. Thus, WVDEP is essentially arguing that the termination is not automatic, but may be subject to administrative discretion. OSM agrees.

On August 20, 2013, WVDEP's Request for Informal Review regarding the Marfork permit was decided. OSM determined that WVDEP's retroactive extension of Marfork's not-started permit was not arbitrary, capricious, or an abuse of discretion because neither SMCRA nor WVSCMRA unequivocally require the automatic termination of not-started permits as a matter of law. OSM determined WVDEP's January 1993 policy and the interpretation thereof to be rational. Specifically, upon the expiration of the three year commencement period "the permit becomes subject to termination by discretionary administrative action based on a case-by-case determination." The permit does not automatically terminate as a matter of law.

Moreover, although Petitioners generally reference permits in Appendix A of the petition as not conforming to the mandates of SMCRA Section 506(c), 30 CFR Section 773.19, and W. Va. Code Section 22-3-8(a)(3), several inaccuracies in Petitioners' claims have been identified. First, this list does not consider the exceptions to the three-year permit termination provisions provided for within SMCRA and WVSCMRA. Secondly, as noted by WVDEP, some of these permits are not coal mining permits. Finally, the permit numbers provided by Petitioners, overwhelmingly include valid permits based upon OSM's August 20, 2013, Informal Review Determination concluding WVDEP's policy complies with SMCRA and WVSCMRA.

OSM Determination:

Petitioners' allegation regarding Marfork and all other permits that are extended in accordance with WVDEP's "Termination of Not Started Permits that are 3 Years Old," policy–including any permit detailed in Petitioners' Appendix A– are the subject of a recent informal review request by WVDEP following a citizen complaint with similar allegations as those raised by Petitioners. OSM determined that WVDEP did not act inappropriately, arbitrarily, capriciously, nor abuse its discretion regarding its 1993 policy.

Regarding Petitioners' allegation that WVDEP's policy does not follow the approved program and that WVDEP cannot issue a policy without OSM's approval, it should be noted that OSM does not consider or approve guidance documents—unlike State laws and regulations that must be reviewed pursuant to 30 CFR Part 732. Therefore, guidance documents are not routinely submitted to OSM for approval prior to integration into the WV program. However, this does not give WVDEP carte blanche to issue guidance documents contrary to the approved program. Therefore, should OSM determine any guidance document renders the WV program–or any State program–less stringent than SMCRA or less effective than the implementing Federal regulations, OSM is obligated under 30 CFR Part 733 to notify WVDEP of the deficiency and require WVDEP to correct the inconsistency.

WVDEP has provided significant examples of proactive improvements it has made to avoid the risk of Petitioners' allegation recurring in the future. WVDEP is finalizing a feature in its electronic permitting system to provide early warning notices to both WVDEP staff and permittee points of contact when a permit is approaching the three-year termination deadline, thus, reducing the incidence of not-started permits and creating a mechanism for terminating permits where these timely notices are ignored by permittees.

Given the above remedial factors and OSM's determination regarding WVDEP's policy, OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

III. WVDEP's FAILURE TO ADHERE TO SMCRA's PERMITTING PROCESSES

c. Chronic Understaffing, and WVDEP's Failure to Remedy this Problem, Significantly Contributes to Permitting Failures

i. WVDEP's Entire Surface Mining Program is Chronically Understaffed

Summary of Petitioners' Allegation:

Petitioners allege WVDEP's surface mining program is perpetually understaffed. Further, Petitioners cite to this alleged staffing problem as support for their contention that the WV program is inadequately administered. Petitioners allege that at the end of Evaluation Year (EY) 2010 and 2011, WVDEP's regulatory program for surface mining had 33 vacancies. Allegedly, in both years the majority of the vacancies were in the permitting and inspection departments. According to Petitioners, inadequate staffing results in an unreasonable workload for existing

staff. Petitioners allege that each member of WVDEP's staff is responsible for a vast acreage of surface mine sites and the number of full time equivalent (FTE) staff members has declined while the total permitted acreage has steadily increased. Petitioners cite to this as an example of WVDEP's "disregard for the importance of SMCRA."

Petitioners allege OSM has made a substantial effort to provide WVDEP with financial support to allow hiring of additional staff, but WVDEP has failed to remedy the problem. Petitioners cite to OSM's Annual Evaluation Report over multiple years, encouraging WVDEP to make staffing vacancies a priority as further support for their claims.

Petitioners provide a table listing total vacancies, change in total FTE positions, actual FTE staff, and permitted acreage in West Virginia from 2005 through 2011.

WVDEP's Response:

According to WVDEP, the staffing figures cited by Petitioners are outdated. Since OSM's 2011 evaluation, WVDEP has reduced its vacancy rate by 50 percent. As of July 2013, WVDEP had 15.45 FTE vacant positions or a vacancy rate of a mere 5.75 percent. WVDEP believes that this rate is similar or better than the vacancy rate at OSM and other comparable State regulatory authorities.

OSM Analysis:

Petitioners rely solely on past OSM evaluations of the WV program to support their allegation that the program is chronically understaffed. According to Petitioners, except for one year during the seven-year review period, WVDEP's FTE positions declined while permitted acreage increased. The data provided by Petitioners in the table and footnotes are accurate.

However, OSM disagrees that the nine percent increase of total permitted acreage, 322,100 acres in 2005, to 352,274 in 2012, is the best indicator of workload increase. During that same period, the total number of inspectable units dropped around ten percent (2,325 to 2,082) and the number of active permits decreased around 11 percent (1,781 to 1,578). These changes actually indicate a workload decrease for both the inspector and the permit reviewer.

Furthermore, a decline in State staffing is offset by a corresponding decline in State permitting actions and the number of State inspectable units. As noted by Petitioners, the number of State permitting actions per permitting staff in West Virginia has declined by 24 percent since 2002. Given the current coal market, this trend is expected to continue. According to West Virginia University's Bureau of Business and Economic Research in its 2012 Consensus Coal Production and Price Forecast for West Virginia, coal production within the State is expected to decrease from 134.6 million tons in 2011 to 96 million tons by 2020, a 28.7 percent decline within the nine-year period. Furthermore, increased use of natural gas by electrical power plants and other factors are expected to impact future coal production, especially in the Central Appalachian Region, where recent reports indicate coal production declined by almost 20 percent in 2012. State records indicate coal production in West Virginia declined by seven percent in 2012. Additional declines in coal production within the State are anticipated in the future. Those declines will directly influence permitting and inspection and enforcement (I&E) workloads and

the number of people needed to manage the State's regulatory program.

Current data for 2012 and 2013 demonstrates that WVDEP has reduced vacancies within its regulatory program. As noted by WVDEP, the number of vacant positions since 2011 has been reduced by 50 percent and stands at 15.45 FTE vacant positions. This demonstrates that past efforts by OSM and WVDEP to address this issue have been successful.

Petitioners have correctly noted that OSM's Annual Reports for West Virginia indicate that OSM continues to prioritize staffing within the State. This approach has proven effective based on the recent data indicating reductions in the State's vacancy rate.

OSM Determination:

After reviewing Petitioners' allegations in conjunction with WVDEP's response during the verification process, the improvement in the State's hiring rate and other factors indicating a potential reduction in workload, OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

As asserted by WVDEP, since 2011, the number of vacant positions has been reduced by 50 percent and is currently 15.45 FTE vacant positions, or less than six percent. This vacancy rate is anticipated for a large agency and it is not an indicator of program failure. Although the cumulative number of acres under permit has increased, there are other factors such as the decline in the number of permits and the economic forecasts that indicate a decreasing workload in West Virginia. OSM will continue to monitor this situation as a routine part of oversight and work with WVDEP to ensure that it has sufficient staffing and funding to properly administer its permanent regulatory program.

III. WVDEP's FAILURE TO ADHERE TO SMCRA's PERMITTING PROCESSES

c. Chronic Understaffing, and WVDEP's Failure to Remedy this Problem, Significantly Contributes to Permitting Failures

ii. Chronic Understaffing in the Permitting Program

Summary of Petitioners' Allegations:

Expanding upon the general allegations of staffing failures addressed in section (c)(i) above, Petitioners assert that staffing shortages are especially acute in WVDEP's permitting program. In support of this allegation, Petitioners assert that in 2011, WVDEP had three and a half fewer FTE permit review staff than it did in 2003. Petitioners assert this is an example of a program failure because the total permitted acreage had increased by 47,074 acres. Therefore, according to Petitioners, in 2011, each permitting FTE was responsible for an additional 1,654 permitted acres—a 25 percent increase—than they were responsible for reviewing in 2003. Petitioners allege as acreage per permit increases, it is impossible for permitting staff to diligently undertake the site-specific inquiry necessary to achieve due diligence in their permit reviews, thus causing on-the-ground impacts for mining communities. Petitioners contend, "with a massive number of

acres assigned to permitting staff, the required rigor is not feasible."

Petitioners contend lack of funding cannot be blamed for understaffing because OSM has committed substantial resources for permitting and other WVDEP staff. According to Petitioners, OSM provided WVDEP an increase of approximately $3.3 million in its regulatory program between 2003 and 2011.

Petitioners compared WVDEP's permitting technical staff to staff in Maryland, Virginia, and Tennessee. According to Petitioners, Tennessee is a useful benchmark because OSM administers the program. Petitioners rely upon a chart they allegedly compiled from annual evaluation reports from 2007 to 2011. This chart depicts a five-year period of "Permitted Acreage per Permit Employee" in West Virginia, Maryland, Virginia, and Tennessee. According to Petitioners, WVDEP permitting employees—on average over a five-year period—are responsible for twice the permitted acreage than their counterparts in Virginia and almost five times the number of acres as those in Maryland.

Petitioners conclude that WVDEP's alleged refusal to correct this problem compels OSM to withdraw WV program approval and substitute Federal enforcement so OSM can provide the staff necessary to properly administer the program.

WVDEP's Response:

WVDEP did not specifically address Petitioners' allegation that its permit review staff is chronically understaffed. However, WVDEP relies upon its argument set forth in section (c)(i), above, to dispel the allegations made by Petitioners.

OSM Analysis:

Petitioners rely on past OSM oversight reports to support their allegation that WVDEP's permitting program is chronically understaffed. The data presented in the petition is for the period 2007 through 2011 and is accurate. It should be noted that the permitting staff numbers do not include vacant positions.

Petitioners compare WVDEP's permitting data to permitting data in Virginia, Maryland, and Tennessee, but again with an emphasis on a comparison of permitted acreage per permitting action. Petitioners made no attempt to compare activities in West Virginia to States with similar sized programs such as Pennsylvania and Kentucky.

As stated in section (c)(i) above, OSM does not concur that permitted acreage is the best indicator of the State's workload for permit reviewers or inspectors. Also as noted above, permitting actions have decreased significantly over the past seven years and economic forecasts indicate they will continue to do so.

Petitioners did not present any data alleging that WVDEP's permitting actions are incomplete or untimely because of inadequate staffing. Other than showing an increase in permitted acreage per permit reviewer since 2007, Petitioners have not identified any other reasons why the State is failing to properly administer its approved program.

Responding to OSM oversight, WVDEP has gradually increased permit review staff since 2011. Excluding vacancies, during EY 2012 and 2013, the State's permit review staff totaled 52.4 and 55.5 FTE positions, respectively. WVDEP's permit review staff has increased by more than 30 percent since 2011. Since the State still has 7.5 FTE vacant positions in permit review, OSM is encouraging WVDEP to fill those vacancies.

As discussed above, coal production within West Virginia is expected to decline by 28.7 percent between 2011 and 2020. A decline in coal production will most likely result in a decline in future State permitting activities. Given these forecasts, OSM and WVDEP will have to monitor this situation closely to ensure that the State will make the necessary adjustments in the future to guarantee that it has adequate funding and staffing.

OSM Determination:

After considering Petitioners' claims, WVDEP's response and information showing an increase in permitting staff along with a decrease in permitting activities during the verification process, OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

Current data demonstrates that the State's permit review staff has actually increased by more than 30 percent since 2011, thus demonstrating that WVDEP has been striving to reduce vacancies and increase its permit review staff as OSM has encouraged it to do. Finally, permitting actions have dropped steadily for several years and economic forecasts show that coal production in West Virginia is in decline. This decline is expected to decrease the number of State permitting activities and the number of staff required to review permits.

IV. WVDEP's ENFORCEMENT FAILURES

a. WVDEP Failed to Properly Conduct Mandatory Inspections

Summary of Petitioners' Allegations:

According to Petitioners, WVDEP is failing to conduct inspections, as required. Petitioners allege that chronic understaffing inhibits WVDEP's ability to properly conduct mandated inspections resulting in significant problems on the ground, including violations being overlooked and going unabated. According to Petitioners, the permitted acreage-to-inspection-employee ratio in West Virginia is very high compared to nearby states. Petitioners allege, "there is simply no way that [WVDEP] inspectors can conduct the kind of thorough inspections necessary to detect every permit violation."

Petitioners compare a five-year average permitted acreage per inspection employee in West Virginia, with similar data in Maryland, Virginia, and Tennessee. According to Petitioners, with a five-year average permitted acreage of 4,649 per I&E employee, WVDEP's I&E staff has a much higher workload than I&E staff in other States.

Petitioners compared I&E staff workloads by listing the average number of complete and partial inspections conducted annually by States divided by the average number of I&E staff members.

According to Petitioners, this data indicates that during a five-year period, each WVDEP I&E staff member conducted 105 complete inspections and 202 partial inspections; more than any I&E staff member in Maryland, Virginia, or Tennessee.

Petitioners also compared the average size of inspectable units in each State. This revealed that during 2007 through 2011, the average acreage of complete inspections per I&E staff member in West Virginia was 16,745, and the average acreage of partial inspections was 32,203. Further, Petitioners allege that WVDEP's staff is responsible for substantially more acreage than all comparable States. Citing to the volume of work allegedly performed by WVDEP I&E staffs, Petitioners allege that WVDEP frequently fails to carry out its mandated monthly mine inspections. According to Petitioners, WVDEP has not completed its number of required complete and partial inspections for the past seven years. Allegedly relying upon OSM's Annual Report data, Petitioners contend that WVDEP failed to complete an average of 4,572 complete and partial inspections from 2005 through 2011. Petitioners allege inadequate inspection staffing has resulted in thousands of mandatory inspections not being completed.

WVDEP's Response:

During the past three calendar years, WVDEP completed inspections at the rate of 96.7 percent in the third quarter of 2012, to a low of 91.3 percent in the second quarter of 2011. WVDEP believes this compares favorably to the inspection frequencies attained by other State regulatory programs.

In addition, WVDEP notes the number of inspections that it has completed in excess of its required inspection frequency. According to WVDEP, on permits where the required frequency was attained, WVDEP completed many more inspections than required. For such permits, WVDEP conducted 458, 398, and 611 excess complete inspections in 2010, 2011, and 2012, respectively, and 3,352, 3,887, and 3,582 excess partial inspections for the same years. According to WVDEP, if excess inspections were included in its inspection frequency calculations, WVDEP may be achieving an inspection frequency rate of over 100 percent. Instead, consistent with the wise use of its agency's resources, these excess inspections have been focused on problem areas, issues of higher regulatory concern, and areas of frequent citizen complaints.

The State provided a table that lists inspectable permits, missed complete and partial inspections, and excess complete and partial inspections for 2010, 2011, and 2012.

OSM Analysis:

Petitioners rely on past OSM oversight reports to support their allegation that WVDEP is not conducting the required number of mandatory inspections. The inspection data presented in the petition is for the periods 2007 through 2011, and 2005 through 2011. Petitioners calculated the number of complete and partial inspections that WVDEP failed to complete during the period 2005 through 2011.

OSM reports through 2011 contain a cautionary statement that the calculation numbers for required inspections "are approximations because part way through the [EY] sites may change

'activity status' or become eliminated because of final bond release." Therefore, OSM uses this table as an indicator to determine if a more precise review is necessary. In 2011, OSM calculated that West Virginia conducted 91 percent of its complete inspections and 113 percent of its partial inspections. OSM did not consider this as an indicator of a potential problem, given the assumption as noted above. In 2012, OSM found WVDEP conducted 89 percent of its complete inspections and over 100 percent of its partial inspections for permitted operations on an average statewide basis. There is a margin of error in the assumptions, as noted in previous years. On abandoned sites (bond forfeiture sites that are awaiting final reclamation or are still on the State's inventory because WVDEP is treating water discharges), OSM attributed the State with making 54 percent of its complete inspections and more than 100 percent of its partial inspections. However, OSM does not consider this an issue, as the required frequency on these sites will be reduced to one complete inspection per year for most sites and WVDEP far exceeds this number.

During 2012, inspection frequency was evaluated by OSM on a permit-specific basis. The inspection frequency calculated on a permit basis shows that some sites have more than required inspections and others have less. Under this scenario, WVDEP met inspection frequency on 77.3 percent of its total inspectable units. As part of its comments on the OSM West Virginia Annual Evaluation Report, WVDEP questioned the accuracy of these numbers. OSM responded that it would work with WVDEP on this data in the future, but OSM does not consider this a program issue because where shortfalls appeared to occur, it was only related to a few inspections per permit and because WVDEP had performed more partial inspections than required.

In its response to the Part 733 petition, WVDEP offers a chart showing it did miss frequency at some sites but did far more inspections than required overall for the past 3 years. This information indicates WVDEP does more inspections than required. OSM finds this data to be reliable.

Petitioners also compared West Virginia's inspection data to inspection data in other States (Maryland, Virginia, and Tennessee) that have relatively small inspection staffs and significantly smaller permitted acreage than West Virginia and other large coal producing states like Pennsylvania and Kentucky. It should be noted that I&E staff numbers do not include vacant positions.

Petitioners acknowledge that each WVDEP I&E staff member conducted the highest average number of complete and partial inspections of any of the four small program States the Petitioners evaluated during the period 2007 through 2011. However, Petitioners apparently believe this statistic, combined with the fact that WVDEP staff members are responsible for large acreages when compared to smaller States is an indicator that the inspection workforce is understaffed.

Petitioners offered no other allegations as to the inadequacy of the State's inspections. OSM does not concur that indications of a heavy workload compared to States with smaller programs demonstrates that WVDEP is improperly administering the WV program.

OSM Determination:

Data supplied by the State indicates West Virginia is conducting more inspections than required overall. However, OSM notes the requisite frequency was not always met on each site. Petitioners allege a correlation between program failure and WVDEP inspectors' larger workloads compared to their counterparts in other States with smaller SMCRA programs. OSM cannot verify Petitioners' allegation, as OSM finds no evidence of a program failure due to the significant workloads of WVDEP inspectors.

After considering Petitioners' allegations, WVDEP's response, OSM and State inspection frequency data during the verification process, OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

IV. WVDEP's ENFORCEMENT FAILURES

b. WVDEP Fails to Make Adequate Use of Enforcement Tools

Summary of Petitioners' Allegation:

According to Petitioners, WVDEP seldom fully uses the enforcement tools authorized by SMCRA and WVSCMRA. Further, in the few instances where WVDEP uses these tools, it is done in a manner that results in no real deterrent effect, even in the face of significant violations. Petitioners cite to WVDEP's alleged failure to issue Show Cause Orders where patterns of violations plainly exist, failure to issue significant fines, and failure to impose multiple day fines for ongoing violations.

WVDEP's Response:

WVDEP provides a general response that it operates an exemplary surface mining regulatory program and Petitioners' allegations are unfounded or erroneous.

OSM Analysis:

This introductory paragraph offers no specific allegations. Petitioners present generalized allegations of deficiencies in WVDEP's implementation of SMCRA and WVSCMRA-authorized enforcement tools.

OSM Determination:

This section does not provide any specific allegations. Therefore, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

IV. WVDEP's ENFORCEMENT FAILURES

b. WVDEP Fails to Make Adequate Use of Enforcement Tools

i. Failure to Utilize Show Cause Orders Where Patterns of Violations Exist

Summary of Petitioners' Allegation:

Petitioners allege WVDEP does not appropriately use Show Cause Orders, citing to W. Va. Code Section 22-3-17(b) and 30 CFR Section 722.16(c)(3), the portions of the State and Federal regulations detailing the circumstances when it is appropriate to issue orders requiring an operator to "show cause" why the permit should not be revoked or suspended. To support their claims, Petitioners cite to a few permits as "a small sampling of permits with very similar factual patterns where no show cause order was issued despite the plain appearance of a pattern of violations." Despite the fact that Petitioners only cite to these four specific examples, they believe WVDEP should have issued a Show Cause Order on a number of other undisclosed permits.

Falcon Surface Mine

According to Petitioners, the permittee received violations on August 1, 2008, June 5, 2009, and July 17, 2009, for sediment control violations resulting in discolored water leaving the permit area. Additional sediment control violations were issued on March 5, 2009, September 9, 2009, May 4, 2010, July 29, 2010, March 10, 2011, and July 25, 2011. Some of these violations were issued in the form of a Compliance Order. Additionally, permittee received violations for unauthorized placement of material on the downslope on August 11, 2008, January 29, 2009, and April 30, 2009. Allegedly, the permittee also received numerous violations for failing to follow their mining plan on April 30, 2009, August 13, 2009, and December 14, 2009. The permittee allegedly received violations for dumping garbage on unapproved areas of the permit area on August 19, 2010, October 27, 2010, and February 24, 2011. Petitioners claim this demonstrates an egregious pattern of violations.

Toney's Fork

According to Petitioners, the permittee received violations for unauthorized placement of material on the downslope on November 17, 2006, March 9, 2007, June 13, 2007, and August 23, 2007. The permittee also received violations on September 30, 2008, December 1, 2008, February 9, 2009, August 18, 2009, and January 13, 2010, for tracking mud onto roadways. Petitioners allege this demonstrates a pattern of violations and the permittee should have been issued a Show Cause Order.

Boone North #2

Petitioners allege permittee received violations on June 23, 2008, July 22, 2008, and May 28, 2009, for failing to construct sediment control structures. Petitioners state that the permittee was also guilty of four blasting violations and three contemporaneous reclamation violations, but Petitioners do not provide dates for when these alleged violations occurred. Petitioners allege

that this demonstrates a pattern of violations and the permittee should have been issued a Show Cause Order.

Spring Fork Surface Mine #1

Petitioners allege permittee received violations on March 20, 2006, May 31, 2006, and September 18, 2006, for placing material on the downslope. The permittee received violations on October 24, 2007, April 6, 2008, and July 2, 2008, for failing to construct sediment control structures. The permittee allegedly received three other sediment control violations, yet WVDEP determined a pattern of violations was not established. The permittee received additional sediment control violations on June 23, 2006, July 20, 2006, and June 13, 2007. Petitioners allege that this demonstrates a pattern of violations and the permittee should have been issued a Show Cause Order.

In addition to the four examples of WVDEP allegedly misusing Show Cause Orders, Petitioners generally contend that WVDEP "rarely uses the process to go after active operations and hold violators responsible." However, Petitioners acknowledge that WVDEP issued Show Cause Orders in 137 instances between January 2005 and June 2011. Petitioners allege the Show Cause Orders that were issued were inappropriate or ineffective as the vast majority of the Orders were issued to companies that were likely to be bankrupt. According to Petitioners, 32 show cause proceedings were initiated against active operations. Moreover, as evidence of a general ineffectiveness of the Show Cause Order process, Petitioners cite to the Coal Mountain #1 Surface Mine. According to Petitioners, the fact that this permit was issued multiple Show Cause Orders in 2005, 2007, and 2008, yet allegedly later received 67 violations, WVDEP's usage of the Show Cause Order process is ineffective.

WVDEP's Response:

WVDEP explains that during 2005 through 2011, it revoked 95 permits. In each of these cases, the Show Cause Order was the mechanism of enforcement, demonstrating WVDEP's compliance with protocol. WVDEP asserts that although this is a tool that may be used at WVDEP's discretion, WVDEP has not hesitated to use this tool to appropriately enforce the WV program. WVDEP asserts that it is using this enforcement mechanism in a "deliberate, responsible, and effective manner consistent with [the approved WV] program."

WVDEP concedes that the Falcon Surface Mine has a troubled history. WVDEP explains that the permittee is currently in bankruptcy. During the bankruptcy process, the company is operating under an approved reclamation agreement with WVDEP, effective through January 31, 2014. The company is in compliance with the reclamation agreement, and it continues to complete the work needed to prevent off-site environmental impacts and minimize reclamation liability at the site.

Regarding the Toney Fork No. 2 Mine, WVDEP explains "agency procedures for a request for show cause may not have been followed" and a review is underway to determine the prudent course of action going forward.

WVDEP cites to the discretion it is granted in administering Show Cause Orders as an explanation to why some violations cited by Petitioners relating to the Boone North No. 2 and

Spring Fork No. 1 mines, did not result in the issuance of an order. WVDEP asserts several violations were considered following a request for Show Cause Order, but the circumstances did not justify using this tool.

WVDEP does not offer an explanation as to the history of the Coal Mountain #1 Surface Mine, as explained by Petitioners.

OSM Analysis:

The WV program provides a great deal of discretion regarding pattern of violation determinations and issuance of Show Cause Orders. WVSCMRA at Section 22-3-17(b) provides that WVDEP must find that a pattern of violation exists as a result of the operator's lack of reasonable care and diligence, or that the violations are willfully caused by the operator, before a Show Cause Order can be issued. Thus, a series of violations may not necessarily result in a Show Cause Order if WVDEP cannot make the discretionary finding regarding the operator's lack of reasonable care or willfulness in causing a violation.

West Virginia's regulations provide similar discretion to the WVDEP when contemplating issuing Show Cause Orders. The regulations at Section W. Va. CSR Section 38-2-2.20.4.a. provide that for a Show Cause Order to be issued, the WVDEP must find that a pattern of violations exists and the violations were caused willfully or through an unwarranted failure to comply. Petitioners provide listings of violations that they believe, constitute a pattern of violations. However, the regulations set forth criteria for establishing a pattern of violations, requiring the same or similar violations to occur during two or more inspections of a permit area within any 12-month period. A Show Cause Order is inappropriate without the findings mandated in the statute and regulations. Petitioners admit WVDEP issued numerous Show Cause Orders, thereby acknowledging that the agency has exercised its discretion on a number of occasions with the issuance of those Orders.

With respect to the status of the Falcon Mine, on February 14 and 19, 2013, involuntary petitions for reorganization under Chapter 11 were filed against Frasure Creek, LLC in the United States Bankruptcy Court for the Eastern District of Kentucky. A Court Order was issued on March 4, 2013, consolidating this case with Trinity Coal Corporation (Trinity), its parent corporation. An order confirming the joint Chapter 11 plan of reorganization filed by Trinity was issued by the Court on November 8, 2013.

OSM Determination:

The WV program provides discretion to WVDEP as to when it may use Show Cause Orders. WVDEP demonstrated it does use Show Cause Orders when appropriate and consistent with law. Furthermore, WVDEP provided examples of the usage of Show Cause Orders, demonstrating it exercised discretion on several occasions to implement this enforcement tool. For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

IV. WVDEP's ENFORCEMENT FAILURES

b. WVDEP Fails to Make Adequate Use of Enforcement Tools

ii. WVDEP Issues Fines too Small to Adequately Deter Violations

Summary of Petitioners' Allegation:

Petitioners allege that in the instances when WVDEP does issue fines to enforce violations of SMCRA, the fines are too small to effectively deter violations. According to Petitioners, between 2006 and October 2011, a total of 5,692 Notice of Violations (NOV's) were issued by WVDEP to coal mines, but 1,481 were assessed no fine. Of the remaining 4,211 violations, half were fined $1,000 or less.

Petitioners further allege WVDEP fails to adjust penalties for inflation, thus making WVDEP's penalty program ineffective at deterring violations.

To support its claim that "the gap between the cost of fines and the cost of compliance is too large to incentivize compliance with permit conditions and the law [and b]y issuing such small fines, WVDEP has sent a message to mining operators that violations will not be taken seriously," Petitioners cite to three permits where they believe the fines should have been assessed at a higher rate: the Toney Fork #2, Boone Number #2, and the Bee Tree Mines.

WVDEP's Response:

WVDEP contends it is following the approved State program when assessing civil penalties. WVDEP inspectors use the mandates of W.Va. CSR Section 38-2-20.7 when recommending the amount of civil penalties. Following the inspector's initial recommendation for the penalty to be assessed, an independent assessment officer evaluates the recommendation for consistency and effectiveness. If requested, an assessment hearing occurs and the penalty may be further adjusted. WVDEP also notes an improvement in this procedure. Should the penalty be adjusted during the assessment hearing, the hearing officer must document the rationale for the modification.

WVDEP notes that from 2006 through 2011, it assessed over $13 million in civil penalties for violations.

OSM Analysis:

Petitioners have made a two-fold argument: 1) civil penalties issued by the WVDEP are insufficient to deter violations and 2) the penalties are not adjusted for inflation. Regarding the allegation of insufficient penalties, the approved WV program at W. Va. CSR Section 38-2-20.7 provides the regulations for assessing penalties. These regulations require that civil penalty assessments consider such factors as the operator's history of violation, the seriousness of the violation, the operator's negligence, and the operator's good faith in completing remedial actions. The regulations afford WVDEP a great deal of discretion when making the assessment and assigning a penalty value.

There is no basis for Petitioners' contention that penalties must be adjusted for inflation, as there is no such requirement for State regulatory programs. The Federal Register Notice cited by Petitioners provides that the civil penalty provisions of each State program must contain penalties that are no less stringent than those set forth in SMCRA. The Federal Register further notes that OSM will evaluate each State program to determine if any changes are necessary and will send a notice under 30 CFR Part 732 if a change is required. To date, OSM has not determined West Virginia should increase its civil penalty amounts.

This matter was further discussed in a July 15, 2009, Federal Register Notice (74 *Fed. Reg.* 34490), whereby OSM announced it would increase civil penalties in States where OSM acted as the regulatory authority. However, this increase did not apply to approved State programs. OSM explained that Section 518 of SMCRA fails to enumerate a point system for assessing civil monetary penalties, so OSM cannot require States to adopt the point system and civil penalty amounts enumerated in 30 CFR Section 845.14. This determination is supported by the decision in *In re Permanent Surface Mining Regulation Litigation*, No. 79-1144, Mem. Op. (D.D.C. May 16, 1980). The Secretary requested clarification, but the court would not uphold imposition of penalties upon the State as stringent as those detailed in 30 CFR Section 845.15.

OSM Determination:

The civil penalty system affords WVDEP significant discretion in determining penalty amounts. As noted above, OSM cannot hold states to OSM's penalty system or amounts. For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

IV. WVDEP's ENFORCEMENT FAILURES

b. WVDEP Fails to Make Adequate Use of Enforcement Tools

iii. WVDEP Fails to Issue Multiple Day Fines

Summary of Petitioners' Allegations:

Petitioners allege that although SMCRA and WVSCMRA expressly grant WVDEP authority to count each day of a continuing violation as a separate violation for the purpose of penalty assessments, it fails to do so. Petitioners claim the inverse is true, alleging "the examples of ongoing violations with miniscule fines are abundant." According to Petitioners, WVDEP's records indicate over 100 violations that extended beyond a 90 day period. Petitioners specifically cite to four permits: the Twilight Surface Mine, Upper Big Branch Surface Mine #1, a CONSOL underground mine, and the Grapevine South Surface Mine. According to Petitioners, each of these permits had violations that extended for such a long period of time that WVDEP should have considered using its authority to levy fines in order to accelerate compliance or deter such future action, yet it actively chose not to. In the interim, the permit holders continued to mine coal. In Petitioners' view, this results in companies having "little incentive to come into compliance with the law[.]"

Petitioners assert that "in order to ensure that violators are assessed damages that actually discourage future violations and protect the environment, OSM must assume authority of [the WV] program."

WVDEP's Response:

WVDEP relies upon W. Va. CSR Section 38-2-20.5.a to address Petitioners' claim by citing to the provisions of this regulation that give WVDEP discretion in determining whether to assess a penalty for multiple days. The sole situation in which the WV program requires an assessment of multiple day penalties occurs when the penalty amount is $3,500 or more and the violation has been unabated for two or more days past the original abatement period. WVDEP notes that this scenario has only occurred once since 2006. Given the circumstances and the restitution paid by the operator, the assessment conference officer determined a penalty for one day was sufficient.

OSM Analysis:

WVDEP's permit records verify that the amounts of the civil penalties assessed generally coincide with Petitioners' allegations. However, the approved WV program affords WVDEP significant discretion in determining appropriate penalty amounts. Section 22-3-17(c) of WVSCMRA provides that civil penalties may not exceed $5,000. Additionally, this section provides that each day of continuing violation *may* be deemed a separate violation for purposes of penalty assessments. In determining the amount of the penalty, consideration shall be given to the operator's history of previous violations at the particular surface-mining operation, the seriousness of the violation, including any irreparable harm to the environment, hazard to the health or safety of the public, whether the operator was negligent, and demonstration of good faith of the operator in attempting to achieve rapid compliance after notification of the violation.

The WV program does not require that each day a violation continues to be considered a separate violation for penalty assessment purposes. Additionally, WVDEP may consider several factors when determining the amount of the penalty. Petitioners did not object to the use of mitigating factors when WVDEP calculated the amount of the assessment.

OSM Determination:

Although the assessment penalty figures provided by Petitioners are accurate, WVDEP, pursuant to the approved WV program, is afforded significant discretion for assessing penalty amounts.

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

IV. WVDEP's ENFORCEMENT FAILURES

c. West Virginia Failed to Enforce Dam Safety

Summary of Petitioners' Allegations:

Petitioners alleged that WVDEP failed to enforce permit violations and dam safety regulations, placing nearby communities and the environment at risk. Citing a breakthrough event in another state, and failure of a push out—coarse refuse pushed out over settled slurry within an impoundment to form a pad for subsequent construction—Petitioners alleged that dam failures are too common in West Virginia. Petitioners claim that despite OSM's repeatedly voiced concerns, WVDEP's oversight remains lax. Petitioners paraphrase OSM's most recent Annual Evaluation Report, citing a number of issues identified with regard to maintenance, operation and inspection of these structures, and the need for additional training or diligence in State inspection of impoundments.

Petitioners allege WVDEP allowed an operator (Energy Marketing) to continue operating an impoundment, flouting Federal law, ignoring violations and fines, and putting the public at risk. Specifically, Petitioners cited the requirement that certifications by a professionally licensed engineer must be submitted quarterly and annually for impoundments.

Petitioners contend that "SMCRA regulations and the Coal Act provide parallel enforcement schemes for impoundments." Specifically, Petitioners allege that SMCRA and the Coal Act require that impoundments have approved design, construction, and maintenance plans prior to commencement of construction, and that the plans must be adhered to during construction and maintenance. Petitioners allege WVDEP failed to enforce these requirements in cases where MSHA issued citations for violations. They provided examples of MSHA citations that did not lead to corresponding WVDEP citations at three impoundments in West Virginia.

WVDEP's Response:

With regard to the allegation that the State has failed to enforce permit violations and Dam Safety Regulations, according to WVDEP, all WVDEP inspectors and engineers attended the MSHA training in 2011 and 2013. All WVDEP engineers attended the MSHA Dam Safety Conference in July, 2013.

WVDEP stated that the breakthrough event cited by Petitioners occurred in another State. WVDEP noted that it has worked with OSM on a three-phase study of breakthrough potential in West Virginia. WVDEP also noted that it monitored the Nolan Run push-out failure site with greater frequency prior to the event, including the day before it occurred. WVDEP noted that no evidence of a problem was observed and it worked with MSHA in the investigation of the incident.

With regard to Petitioners' allegation that WVDEP failed to close an impoundment for an unreasonable length of time in spite of multiple violations, the State noted that the impoundment had not been actively operating since 1994, and had inactive status since 2004. The State indicated that the operation had been effectively shut down under ten Cessation Orders and a

variety of other enforcement actions. The State indicated that the impoundment was routinely inspected by WVDEP inspectors, supplemented by engineers, and that they continued to make inspections to "assure that the facility posed no threat to the public". WVDEP further indicated that the operator had effectively abandoned the site. WVDEP noted that the only reason the permit had not been revoked was that the operator was attempting to sell the site to another entity.

Regarding Petitioners' allegation that WVDEP failed to cite operators for SMCRA violations at three West Virginia impoundments when MSHA cited the operators for violations, WVDEP explained MSHA and WVDEP requirements are not necessarily the same. While some overlap exists, MSHA enforces laws aimed at worker safety, while WVDEP enforces laws relative to public safety and environmental matters. WVDEP also noted that violations cited by MSHA could have been abated prior to a WVDEP inspection. The State also commented on MSHA's assignment of the degree to which the violation contributes to hazards and that 21 of 27 violations noted in the petition were labeled by MSHA as not having significantly and substantially contributed to the cause and effect of a coal or other mine safety or health hazard. WVDEP contends these less serious violations are ones that are more easily corrected.

OSM Analysis:

Petitioners cited two incidents to support their allegation that dam failures are common occurrences in West Virginia. However, neither example supports the allegation. The Martin County breakthrough event was not a dam failure and did not occur in West Virginia. No such breakthrough with release to the environment has occurred in West Virginia. The second example, the Robinson Run push-out failure, was not a dam failure, and that event remains under investigation. Since no dam failures have occurred in the State since 1972, it cannot be said that dam failures are common occurrences in West Virginia.

Petitioners allege the State has failed to enforce permit violations and regulations governing dam safety. Additionally, they allege that OSM identified problems with WVDEP inspection processes regarding maintenance, operation and inspection of impoundments, and that a need exists for additional training or diligence in WVDEP inspection of impoundments. OSM does not concur. WVDEP engineers and inspectors have received significant training related to dam safety. Although OSM identified potential weaknesses as part of its oversight responsibilities these weaknesses were identified as procedural issues that could be fully addressed in inspector meetings and training. Additionally, during a 2012 study, OSM determined no violations of dam requirements were found during OSM's 19 detailed oversight inspections, which included the presence of a qualified OSM engineer. Therefore, no program failure exists.

Petitioners again allege that WVDEP fails to address OSM concerns resulting in lax WVDEP oversight. Additionally, WVDEP and OSM have worked, or are currently working together, to resolve the underlying issues. As indicated in OSM's report on the potential for slurry to breakthrough into underground works, WVDEP has taken specific steps to address all findings.

Petitioners allegations in asserting WVDEP allowed an impoundment to continue in operation for an unreasonable length of time at a specific permit, despite multiple violations are unsupported. The operation no longer has any active coal mines, and has not been placing refuse

in the impoundment for years. WVDEP cited this operation multiple times for failure to submit engineer certifications, and a citation labeled as the "last extension" was issued on October 14, 2011. Therefore, the operation was effectively shut down. Subsequent efforts by WVDEP and the United States Department of Labor (DOL) were aimed at effecting reclamation using private, as opposed to public, funds. After the Department of Justice filed suit against the then defunct company, the DOL advised WVDEP that it considered the site to be "orphaned," and that MSHA would no longer conduct Federal inspections. WVDEP explained that it would continue inspecting under its program jurisdiction until the site was reclaimed. The permit was revoked on February 27, 2013.

OSM cannot find evidence that the State is failing to cite all violations based on MSHA violations cited at three impoundments which did not have corresponding State violations. WVDEP notes it does not share parallel enforcement schemes with MSHA. While some overlap exists, MSHA enforces laws aimed at worker safety, while WVDEP enforces laws relative to public safety and environmental matters.

It is clear that all MSHA violations were either failures to follow the approved plan, or violations of reporting requirements, and the State program includes similar requirements. However, enforcement by the two agencies is parallel, not congruent. Specifically, MSHA approves plans in stages; WVDEP approves the entire plan simultaneously. Therefore, the "approved plan" is not the same for the two agencies. Differences also exist regarding reporting requirements. This is attributable to the differing missions of the agencies. Finally, the two agencies do not coordinate onsite inspections, nor do they provide each other with results of inspections, such as lists of citations issued. There is no regulatory requirement that they coordinate in this manner. In two of the three described cases, Petitioners' claims cannot be verified. In one of the impoundments, Petitioners' claim that WVDEP should have written a violation similar to an outstanding MSHA violation may be true in one of 11 MSHA violations listed. Each of the examples offered by Petitioners are outlined and analyzed below:

Brushy Fork Impoundment

During the period from 2004, through February 2010, MSHA issued nine citations, all related to failure to follow the approved plan. During the same period, WVDEP conducted 109 inspections and issued five NOVs. Two were related to the impoundment, one for excessive lift thickness, and one for failure to construct to maintain a 1.5 static safety factor. Neither of these appear on Petitioners' list of MSHA violations. This shows WVDEP cited violations not cited by MSHA. In none of the cases did the two agencies conduct inspections on the same date. Potentially, a violation may be evident on the date of one inspection and may be abated prior to an inspection by another agency. Furthermore, the agencies are focused on separate types of violations. Petitioners' claims cannot be verified.

Chess Refuse Impoundment

During 2011 and 2012, MSHA issued 11 citations. Eight of these citations related to failure to follow the approved plan and three related to reporting requirements. During the same period, WVDEP conducted 73 inspections. WVDEP did not issue any NOVs during this period. In one case, on April 10, 2012, the State inspector noted that the permit was under an MSHA Cessation

Order, but no WVDEP NOV was issued. Petitioners' claims regarding this site appear to be valid in one of the 11 MSHA cases. The remaining ten MSHA cases cannot be verified.

Tinsley Branch Impoundment

During 2011, MSHA issued six citations. Five of these citations related to failure to follow the approved plan and one related to reporting requirements. During the same period, WVDEP conducted 30 inspections. WVDEP did not issue any NOVs during this period. Again, in none of the cases did the two agencies conduct inspections on the same date. Petitioners' allegations cannot be verified.

WVDEP was correct in noting that MSHA and WVDEP requirements are not necessarily the same. WVDEP was also correct in noting that MSHA violations may, in many cases, be abated prior to the State inspector performing an inspection at the site. As an example, in 2012, OSM performed 19 oversight inspections of impoundments. No violations were issued. In each case, the inspection team included an OSM inspector and a qualified engineer.

Based on information provided by Petitioners and review of WVDEP enforcement documents for the timeframe discussed, it cannot be said that State inspectors improperly administer the WV program. As explained herein, MSHA and WVDEP inspectors were never present on any of the sites on the same date. In most cases, inspections by the two agencies were separated by several days or weeks. There is no regulatory requirement that the two agencies coordinate inspection activities.

OSM Determination:

The MSHA violations referenced in the petition do not provide evidence that WVDEP is failing to properly cite violations. The inability to correlate results of inspections performed by MSHA and WVDEP means that sufficient evidence does not, and in most cases could not, exist to criticize either agency based on results of inspections performed by the other. There is no support for the allegation that WVDEP is inappropriately administering its program.

In general, OSM recognizes that WVDEP should improve impoundment inspection procedures, as stated in the OSM's 2012 Annual Report. As part of its oversight responsibilities, OSM occasionally notes areas in which WVDEP can improve its enforcement of specific regulations. In these cases, OSM works with WVDEP at meetings and training sessions to emphasize the areas requiring attention. However, this is not an indication of a WV program failure. The fact that OSM did not find a violation on the 19 detailed oversight inspections it conducted in 2012 is a strong indicator that there is not a systemic failure.

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

However, OSM will continue its oversight in order to further improve the dam safety component of the approved WV program.

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

a. Overview of SMCRA's Requirements to Protect Water Quality and Hydrologic Balance

b. Flooding Remains a Significant Problem in West Virginia

i. WVDEP's Failure to Address Potential Flooding Impacts in the Permitting Process with SWROAs

I. Opening Remarks and SWROAs Generally

Summary of Petitioners' Allegations:

Petitioners allege WVDEP has failed to minimize the effects of surface mining and reclamation disturbances upon the hydrologic balance both within the permit area and in adjacent areas. Petitioners cite WVDEP's rule revisions, which require a SWROA for every permit, as failing to prevent flooding. The SWROA requires that the permit impose controls upon mining and reclamation, so that during-mining and post-mining, surface water runoff does not exceed the pre-mining runoff.

Petitioners describe the SWROA, the SWROA process, what is to be expected in the permit, and in field implementation. Petitioners allege the State reviewers are unqualified to evaluate the complex conditions discussed in the SWROA. The petition states that WVDEP does not conduct its own independent analysis and relies on the permit designers for data and analysis. Petitioners allege WVDEP does not use the recommended watershed modeling methods developed by the United States Army Corps of Engineers (ACOE). Petitioners also claim WVDEP does not regularly evaluate its program to ensure its efficacy and has performed no independent or scientific evaluations since the 2002 Flood Analysis Technical Team (FATT) Report.

WVDEP's Response:

WVDEP defends the SWROA and the SWROA process, emphasizing that it is the most advanced effort of any regulatory program and does not result from a Federal mandate. However, it is noted that flooding may occur despite proper SWROA implementation given the unpredictability of violent storms and steep topography. Failure of sediment-control structures within the system that result in flooding may not be due to failure of the SWROA or its implementation in the field.

WVDEP also notes that it has conducted numerous SWROA training events, both in-house and for industry, and that their trained permit reviewers include experienced professional engineers. WVDEP also stresses that while it does not mandate the use of the ACOE's watershed modeling methods, it accepts the use of hydrologic programs common within the mining industry, including the aforementioned software.

OSM Analysis:

The SWROA requirements added to the WV program in 2003, mandate an approach different than those provided in Federal regulations to protect against the detriment caused by flooding

events. WVDEP's approach incorporates modeling of pre-mining and post-mining storm runoff, in addition to modeling concurrent with mining to ensure storm runoff during and post-mining is not increased. None of the other six Appalachian coal mining states use this approach for storm runoff predictions and storage design criteria contained in the WV program.

WVDEP began to focus on flood protection policies and guidelines in 1997, as a result of localized flooding events related to valley fills and excess spoil disposal. These guidelines, intended to minimize flooding and prevent off-site damage, were eventually extended to actual rule. In 2003, WVDEP revised its contemporaneous reclamation and excess spoil rules requiring a SWROA. The implementation of the provisions included new requirements, as well as revisions to existing surface mining permits. Therefore, allegations of failure to prevent flooding in accordance with SWROA requirements, prior to 2003, are not germane to Petitioners' allegations.

Petitioners' assertion that WVDEP relies largely on the applicant's analysis and data in lieu of a more detailed independent analysis is correct. Many of the WV program requirements rely on engineering certifications and inspections by qualified people. WVDEP must review the reasonableness of the representations made and assess the accuracy. Petitioners' claim that SWROA training is insufficient is unsupported. WVDEP developed and delivered specialized training to industry, consultants, regulatory staff, and OSM staff in May 2013 that addressed many of the areas OSM considered problematic in previous oversight evaluations.

WVDEP neither allows nor encourages the use of ACOE models. WVDEP will allow any accepted storm water model that follows accepted standard engineering practices. Applicants seem to use the SedCad model exclusively; however, this model is only one of many that WVDEP will allow. WVDEP does not endorse or require any specific modeling procedure.

It is valid that there has not been an independent engineering or scientific evaluation of flooding since the 2002 FATT Report. However, WVDEP has created a Mining Data Explorer available on the web to access real time rainfall interaction with mining sites. The concept of this tool was to allow WVDEP personnel to investigate sites which have been subject to heavy storms to judge the effectiveness of storm water requirements. OSM has a similar program it intends to use for selecting mines for oversight in EY 2014.

OSM Determination:

As detailed above, WVDEP implements a regulatory scheme that incorporates an approach different than the Federal regulations to ensure material damage to the hydrologic balance outside the permit area does not occur. Recent State activities, particularly in regard to training, mitigate the allegations concerning the permit reviewer's abilities. Petitioners are correct that WVDEP has not conducted independent studies and relies heavily on information and analysis provided by the permit applicant. While OSM agrees that the State should review the operator's analysis for the reasonableness of assumptions, there is not a requirement at the State or Federal level requiring independent studies or analysis. State activities indicate it is striving for improvement; not a systemic failure to administer the program, as alleged by Petitioners.

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2). However, OSM will evaluate other aspects of WVDEP's administration of its SWROA requirements as noted in the determination at V (b)(i)(III).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

a. Overview of SMCRA's Requirements to Protect Water Quality and Hydrologic Balance

b. Flooding Remains a Significant Problem in West Virginia

i. WVDEP's Failure to Address Potential Flooding Impacts in the Permitting Process with SWROAs

II. OSM's Conclusions Regarding WVDEP's SWROA Failures

Summary of Petitioners' Allegation:

Petitioners allege that based upon two cited OSM reports, WVDEP has displayed a pattern of failure in administering the SWROA program and has not implemented OSM's recommended corrective actions. Specifically, Petitioners note OSM's 2009 Oversight Report (2009 Report) found glaring errors in the SWROA that it attributed to poor assumptions, modeling mistakes, and omissions of critical information. Petitioners further noted OSM found several instances where the applicant did not consider valid worst case conditions in the models. Petitioners also quote the 2009 Report, as stating "the effectiveness of SWROAs couldn't be properly analyzed because adequate monitoring of storm water runoff discharges is not required under existing conditions"

Petitioners then summarize OSM's 2010 Oversight Report, alleging many problems identified in the 2009 Report still exist. Petitioners also note that OSM determined WVDEP only implemented some of the corrective actions they committed to perform.

WVDEP's Response:

WVDEP notes SWROA training is conducted for WVDEP and OSM personnel, engineering consultants, and industry employees. The most recent training was conducted in May 2013.

OSM Analysis:

Petitioners' allegations are based on the 2009 Report and the follow-up to that report. In addition to these cited reports, there are the 2010 through 2012 OSM Annual Evaluation Reports, which discuss SWROAs and recommendations for improvement. All of the OSM reports conclude that the SWROA concept is valid and the associated emphasis on storm water management has had positive effects in the field. However, these reports do make many recommendations to improve the implementation of SWROA process.

The 2009 Report concluded five of the SWROAs evaluated would not result in an increase of peak discharge at the mines sampled. OSM concluded that the SWROA concept has resulted in enhancements that include improved surface mining drainage design, timely construction of the sediment controls, emphasis on more creative and safer water detention, and improved valley fill drainage and construction practices. However, the 2009 Report questioned the input parameters for worst case scenarios, discharge monitoring points not representative of the mine, and assumed surface water runoff values not representative of accepted engineering standards. However, it is noted that the West Virginia SWROA regulations do not include the requirement to measure actual runoff discharges to field verify the assumptions and determine the true effectiveness of the SWROA modeling. Further, corrective actions were listed including training for permit reviewers and industry, training for the field staff to monitor SWROA effectiveness during inspections, and monitoring of violation history to determine if off-site impacts related to excessive peak discharges exist.

OSM's 2010 Annual Evaluation Report reiterated that "the current methods do not always guarantee an evaluation of the worst case scenario for each sediment control structure." The report also found that while WVDEP conducted training for its permit reviewers and field staff, the industry training was not conducted.

The follow-up to the 2009 Report focused on the off-site impacts to the SWROA process and found that of the eight sites investigated, three had significant off-site impacts showing ineffective SWROA processes. It was also determined that WVDEP's failures to require SWROA revisions to changed mine plans or after violations occurred were likely attributed to excessive peak runoff.

Based upon the report findings, WVDEP agreed to specific measures to improve the SWROA process. These measures included: applicants must consider multiple stages of the operation in order to determine the worst case scenario; modeling must include narratives and descriptions of the assumptions; drainage structures in the SWROA should be identified on all maps and in calculations; revised SWROAs need to be included in any revisions of the drainage areas, channels, or structures; all drainage structures must be certified on an annual basis by a professional engineer; if any differences between design and as-built conditions exist, the SWROA must be revised; WVDEP staff will randomly review operations where actual precipitation exceeds established levels; and WVDEP will conduct both in-house and industry training. Additionally, OSM determined in that year WVDEP had not completed the training with the industry as it proposed and was not independently reviewing violations for SWROA trends.

The 2011 Annual Oversight Report mentioned the results of the SWROA follow-up study, as well as the Kayford Mountain and Snap Creek 1 (S-5019-96) Root Cause Analysis. The off-site damage report, which is not referenced in the allegation, concludes that an inadequate application of the SWROA contributed to the off-site damage at Kayford. Similarly, the Snap Creek Mining operation was directly responsible for the flooding and debris flow at the tributary to the Left Fork of Rich Creek. The report found that off-site damage downstream of Valley Fill 4, after the June 12-13, 2010, storm event, resulted from mine plan changes that were not accompanied with a new SWROA. These off-site damage reports demonstrated that in these two

instances, the SWROA requirement was not sufficient to prevent increases in peak runoff during and post-mining, when compared to pre-mining data.

The 2012 Annual Evaluation Report noted that the WVDEP conducted internal training for its inspectors in November 2011 and for its permit reviewers in April 2012. WVDEP made the Mining Data Explorer available on the web to access real-time rainfall interaction with mining permit sites. The report also states that WVDEP is still considering how to conduct evaluations of off-site runoff events with regard to SWROA methodology, and that the SWROA industry training had not been conducted.

OSM conducted special and follow-up evaluations and found several deficiencies in the SWROA review and implementation process. Some of these deficiencies have been corrected. WVDEP has conducted training for inspectors and permitting staff and has recently conducted training for industry, consultants, and other stakeholders. Both review and inspection staff are better trained and more experienced in understanding the SWROA requirements and implementation in the field.

Of the 328 oversight inspections conducted during EY 2013, four permittees were not following the approved SWROA and one permittee did not perform an area-wide impact analysis after an annual storm event. These oversight inspections are an indication that the State is requiring SWROA changes with permit revisions and operators are generally following the SWROA designs. However, these inspections do not include expert review of the SWROA to determine if the assumptions are valid. The violations that have been identified as a result of OSM studies have been addressed individually by the WVDEP.

It is correct that WVDEP does not require real-time data collection and monitoring to calibrate or verify the models and assumptions used in approved SWROAs.

OSM Determination:

Petitioners' allegation regarding OSM's findings is generally correct. However, the petition does not mention that OSM, in its oversight reports, stated it observed improved conditions in the field. WVDEP's use of a SWROA incorporates a different approach to preventing material damage outside the permit area, ensuring better protection from flooding and off-site damage than in the past. OSM has not had an opportunity to evaluate the effectiveness of the 2012 and 2013 State training, as OSM has not conducted subsequent detailed engineering oversight. Oversight inspections indicate that WVDEP is requiring operators to revise SWROAs with permit revisions. The fact that WVDEP has conducted additional training and initiated a system to use rainfall data to direct inspectors to sites more quickly after a storm indicates WVDEP is addressing these issues raised by Petitioners.

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2). However, OSM will evaluate other aspects of WVDEP's administration of its SWROA requirements as noted in the determination at V (b)(i)(III).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

a. Overview of SMCRA's Requirements to Protect Water Quality and Hydrologic Balance

b. Flooding Remains a Significant Problem in West Virginia

i. WVDEP's Failure to Address Potential Flooding Impacts in the Permitting Process with SWROAs

III. Independent Studies Confirm WVDEP's SWROA Failures

Summary of Petitioner's Allegations:

Petitioners cite to a study conducted by a team of hydrologists reviewing 16 SWROAs illustrating that the runoff curve numbers used in the SWROA analysis is incorrect, thereby inflating the pre-mining runoff.

WVDEP's Response:

WVDEP states that environmental groups will support assumptions demonstrating less runoff in the pre-mining stage, while industry consultants are likely to do the opposite. WVDEP also questions the validity of the Natural Resources Conservation Service (NRCS) soil classification as the classification was performed "from afar" and not for the conditions that exist in southern West Virginia. Regarding Petitioners' Buffalo Mountain Surface Mine (Buffalo) allegation, WVDEP's response specifically mentions that the allegation relies upon an old SWROA, not the recently approved, revised SWROA. WVDEP states that the permittee was required to submit an application for revision to address the proper soil classification, once WVDEP became aware that the NRCS had re-classified soils in that area.

OSM Analysis:

The report cited in the petition, entitled "A Review of Pre-mining Curve Numbers Used in the Surface Water Runoff Analysis for Sixteen Surface Mines in West Virginia" focuses primarily on runoff curve numbers for pre-mining conditions. The report claims the numbers are higher than the actual calculations; thereby inflating pre-mining discharge. The report uses the NRCS web soil survey to determine the soil data for each of the 16 mine sites referenced.

Upon review of the Bioengineering Group's study, OSM acknowledges the results differ. This study evaluated the pre-mining runoff curve numbers using the latest interactive data developed by NRCS. This interactive data provides more detailed and updated soil information for the sites, which was used to refine and update pre-mining runoff curve numbers. The end result was pre-mining runoff numbers significantly different from those submitted in approved SWROAs for the sites. These lower runoff numbers produce significantly lower runoff volumes and peak flows than those originally approved.

OSM validated that WVDEP revised the Buffalo SWROA on permit number S-5018-07, to consider more specific soil types.

OSM performed a random investigation into Buffalo, one of the examples referenced in the report. Using the NRCS web soil survey, OSM verified the results as noted. The report did not present any modeling and focused on the accuracy of the pre-mining curve numbers for each permit. Conclusions specific to Buffalo include that the approved SWROA is based upon a Hydrologic Soil Group of C, although the site is actually comprised of 50 percent of Group B. Group B has higher infiltration properties, and thus would result in modeling with a reduced pre-mining curve number and overall lower predicted pre-mining surface runoff. The report also assumes the pre-mining condition is "Woods, in good condition", while the SWROA cited it as "Woods, in fair condition". Fair condition will also result in a higher curve number. Although it was not possible to determine if "fair" or "good" was the more accurate condition, calculating the pre-mining curve number with "Woods, in fair condition" still results in a lower curve number due to the change in the Hydrologic Soil Group. The OSM study of Buffalo identifies the potential differences between WVDEP's SWROA calculations and those derived by the Bioengineering Group due to differences in soil profiles considered.

WVDEP asserts environmental groups will support assumptions demonstrating less runoff in the pre-mining stage, while industry consultants are likely to do the opposite. WVDEP states that the pre-mining conditions might be different than what is shown in a soils map. These viewpoints demonstrate one of the inherent flaws of the SWROA process: that the actual SWROA modeling is not validated in the field. While OSM finds the independent study by the Bioengineering Group as persuasive in demonstrating that the pre-mining runoff curve numbers are likely inflated, there may continue to be some judgment used in the assumptions and field conditions considered in the SWROA modeling process.

OSM believes it is likely that many SWROAs would show a different result when combined with refined soils analysis. However, OSM does recognize that revised soils analysis will not eliminate the need for professional judgment for engineering parameters such as vegetative cover. OSM discussed soil analysis and runoff curve number selection topics in the May 2013 training.

Several other factors must be considered in determining whether WVDEP is properly administering its program:

- The approved WV program uses a different approach to preventing material damage outside the permit area that requires more specific demonstrations related to peak discharge than is found in the Federal regulations or other Appalachian State programs.
- Based on the agendas and OSM employee attendance at recent WVDEP training sessions, WVDEP is implementing the commitments made as a result of earlier OSM findings. The training also covered selection of soil types, which relates to the concerns in the specific examples. However, OSM has not performed oversight to verify the effectiveness of the recent training.
- OSM field observations indicate operators are controlling the impacts of storms better than they did prior to 2003.
- During the 2013 inspection year, OSM conducted 328 inspections where SWROA compliance was emphasized and discovered only four cases where the operator was

not following the conditions considered in the SWROA model or where WVDEP had not required a revision of the SWROA when the plans changed. This did not include a review of the adequacy of the SWROA but does show the WVDEP is requiring the conditions considered to be followed in the mining operation.

WVDEP notes in its response how different assumptions can be made in the model depending on the reviewer's intended result and suggests more research in this area.

OSM Determination:

Although OSM acknowledges Petitioners' independent study demonstrates a need for a more careful review of some of the assumptions used in the models, OSM also recognizes that the WV program uses a different approach than the Federal regulations to predict and mitigate storm runoff in order to prevent flooding and off-site damage. OSM also recognizes that specific West Virginia requirements were created to address unique conditions due to West Virginia's large surface mines and extremely steep topography. After completion of the verification process, OSM determined information presented warrants further evaluation of this allegation to determine whether there is reason to believe WVDEP is not effectively implementing, administering, maintaining, or enforcing the approved WV program.

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

b. Flooding Remains a Significant Problem in West Virginia

ii. Studies by OSM and ACOE Found Significant Watershed Impacts Caused by Surface Mining Operations

Summary of Petitioners' Allegation:

Petitioners allege WVDEP failed to prevent material damage to the hydrologic balance, which occurred as a result of increases in discharges between pre-mining and post-mining conditions. Petitioners discuss a 2000 joint OSM and ACOE study discussing the impacts surface mining operations have upon a watershed. Petitioners relied on the reports to support substantial changes in discharges, which they allege are a direct result of surface mining activities.

WVDEP's Response:

In its response, WVDEP generally denies Petitioners' allegations.

OSM Analysis:

Petitioners' facts were taken directly from the cited studies. The studies were included in Appendix H of the EPA's June 2003 Mountaintop Mining/Valley Fills in Appalachia Draft Programmatic Environmental Impact Statement (EIS). The conclusions drawn from the studies were for active valley fills and the differences in stages of operation were very site specific and would depend upon conditions in receiving streams. The draft EIS concluded that based upon

these studies, even with the predicted increases in peak flow, flooding on the banks outside the receiving stream channel would not occur.

However, WVDEP made revisions to its contemporaneous reclamation and excess spoil rules in 2003. Furthermore, WVDEP issued a policy on May 25, 2004, in accordance with its regulations, requiring all new permits issued after January 1, 2004, to contain a SWROA and existing permits had to comply with the SWROA requirements based upon permitted acreage. Permits greater than 400 acres had to demonstrate compliance or submit a revision complying with the SWROA requirements by June 29, 2004. Permits greater than 200 acres and less than 400 acres had to demonstrate compliance or submit a revision complying with the SWROA requirements by December 26, 2004. Permits greater than 100 acres and less than 200 acres had to demonstrate compliance or submit a revision complying with the SWROA requirements by June 24, 2005. Permits greater than 50 acres and less than 100 acres had to demonstrate compliance or submit a revision complying with the SWROA requirements by December 21, 2005. Permits less than 50 acres had to demonstrate compliance or submit a revision complying with the SWROA requirements by June 19, 2006. Only permits less than 50 acres that constitute a haulroad, load out or ventilation facility are exempt from the SWROA requirements. Any allegations of failure to prevent flooding prior to 2003 are inapplicable because the new rules were intended to minimize flooding and prevent off-site damage.

OSM Determination:

Petitioners' allegation is unsupported because the documentation cited is dated prior to the implementation of West Virginia's SWROA requirements approved by OSM on July 7, 2003. As noted, WVDEP implemented the SWROA provisions in such a manner as to cover all existing and future permits.

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2). However, OSM will evaluate other aspects of WVDEP's administration of its SWROA requirements as noted in the determination at V (b)(i)(III).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

b. Flooding Remains a Significant Problem in West Virginia

iii. Flooding Events

Summary of Petitioners' Allegation:

Petitioners cite flooding from specific storms in 2001, 2002, 2003, and 2009 as evidence of WVDEP's failure to protect the hydrologic balance and prevent material damage. The petition also cites several NOVs issued by WVDEP for various permit sites illustrating that WVDEP was aware of the violations, but that it did not issue significant fines to prevent the permit violations.

WVDEP's Response:

WVDEP's response mentions the flooding in Mingo County from May 2009, and specifically states the storm impact was greatest in areas of the county where there were no mining operations subject to SMCRA. Rather, the only mining operation that was being conducted in the heavily impacted areas was from a Federally-funded highway project that is an exempt surface mining site.

WVDEP's response also states that the petition grossly understated the precipitation amounts in the Gilbert Creek watershed. Based on WVDEP's analysis, the storm event exceeded that of a 100-year design storm event, thus, far exceeding the design criteria. WVDEP further states that the rain gauges recorded measurable precipitation every day of the month leading up to the event and that significant flooding would have occurred regardless of mining activities. WVDEP's response also states that, with the exception of breeching one internal temporary ditch at the Premium No. 2 Mine, none of the other structures failed, even though the runoff exceeded the design criteria.

Finally, WVDEP's response details the investigation it conducted after the flooding event and states that it took appropriate enforcement action where warranted. It issued 14 enforcement actions following the flooding, while only seven of the cited conditions had the potential to adversely impact Gilbert Creek. WVDEP refutes Petitioners' claims that the NOVs issued at the site contributed to the flooding.

OSM Analysis:

WVDEP revised its contemporaneous reclamation and excess spoil rules in 2003. The revisions require all surface mining permits to contain a SWROA. Any allegations of failure to prevent flooding prior to 2003 are inapplicable because the new rules were intended to minimize flooding and prevent off-site damage.

As for the findings from the FATT, which were also included in Appendix H of the EPA's June 2003 Mountaintop Mining/Valley Fills in Appalachia Draft Programmatic EIS, the statements concerning the mining impact percentages were accurate. The petition did not address the logging impacts within the Seng Creek watershed. Moreover, the Sycamore Creek watershed, with negligible mining disturbances, still experienced "out of bank flows" with extensive surface water impacts, although the language used in the petition may cause the reader to reach a different conclusion. The report determined both logging and mining influenced the degree of runoff in the study watersheds. Once again, this report discusses events that occurred prior to West Virginia's 2003 SWROA requirement.

OSM Determination:

The allegations made by Petitioners do not consider the current WV program. Specifically, the storms cited occurred prior to OSM conducting oversight of the SWROA process following the issuance of a WVDEP policy that all permits issued after 2004 must contain a SWROA. Further, these instances occurred prior to OSM initiating concerted oversight evaluations of the

effectiveness of WVDEP's improved program implementation. Therefore, the events cited in the petition are no longer relevant; OSM and WVDEP have taken action and improvement to the program has occurred. However, OSM will evaluate other aspects of WVDEP's administration of its SWROA requirements as noted in the determination at V (b)(i)(III).

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

c. WVDEP is Allowing for Watershed Disturbance on a Scale that Guarantees Impairment and is Therefore Failing to Ensure Mining Operations Comply with Water Quality Standards

Summary of Petitioners' Allegation:

Petitioners allege that WVDEP is allowing watershed disturbances from mining of such a size that will guarantee impairment and therefore the mining operations will not comply with water quality standards. Petitioners cited to W.Va. CSR 47-2-3.2.i, reading in part, "no significant adverse impact" to the aquatic ecosystem is permitted.

WVDEP's Response:

WVDEP disputes Petitioners' contention that watershed disturbance of ten percent or more by mining will guarantee biological impairment and that mining is the "dominant driver" of land use change in Central Appalachia. WVDEP contends that the culmination of all anthropogenic activities is the cause of the aforementioned land use changes. WVDEP further states that unlike residential and commercial development, mining impacts are less enduring due to reclamation and revegetation. The alleged ten percent watershed impairment threshold cited by Petitioners is disputed. WVDEP states that any study that relates aquatic resources to mining disturbances is flawed because among other shortcomings, all other anthropogenic activities have not been considered. WVDEP asserts Petitioners' cited studies cannot and do not provide strong enough correlations without consideration of other important factors.

OSM Analysis:

Petitioners' allegations are predicated upon the assumption that impairment equates to a "significant adverse impact." The two definitions do not necessarily coincide. Impairment can be defined in varying degrees depending on level of stream use. Essentially any change related to mining or any other anthropogenic activity could be considered impairment depending on the criteria evaluated. Conversely, the term "significant adverse impact" is a better assigned threshold because it is based on the water resource's existing condition and use. The latter defines material damage outside of the permit area.

The 2008 United States Environmental Protection Agency (EPA) study cited in this section relates impairment of the stream to "elevated ionic strength" which can have an adverse impact on the macro-invertebrates. Ionic strength is directly related to specific conductance. West Virginia has neither enacted a specific water quality standard for conductance nor has EPA issued a recommended water quality standard. Additionally, the definition of "impairment" in a scientific study does not directly comport to the legal definition incorporated in regulations.

The inevitability of specific conductance concentrations rising to the level of significant adverse impact from surface mining activities is not certain, as alleged. Generally, the ultimate quality of the discharging waters is directly related to the lithology of the disturbed strata, the volume of material disturbed, increased surface area (directly related to particle sizes), and the post-mining hydrologic regime. Various techniques of special handling of specifically designated materials and hydrologic engineering have shown potential to dramatically decrease the water quality impacts of surface mining, such as total dissolved solids (TDS). Additionally, the question of at what threshold specific conductance causes significant impacts remains unresolved in the scientific community. The work of Maggard and Kirk contradict to a substantial degree that of Pond and others.

Although mining inevitably results in land and water quality impacts, OSM enforces conformity with legal requirements authored to minimize these inherent impacts while protecting public safety and the environment.

Land use changes caused by surface mining do not necessarily equate to significant impacts to receiving streams or to material damage to the hydrologic balance outside the permit area.

Petitioners' characterization of EPA's October 16, 2009, letter is inaccurate. Petitioners allege the report asserts that "impairment in ninety percent of the areas downstream" of large scale mining/valley fill operations has occurred. However, the letter reads, "90 percent of streams below valley fills were degraded." The term "degraded" means a change has occurred from the pre-existing condition. This level of impact does not necessarily equate to significant impairment. Additionally, this statistic does not preclude WVDEP from requiring the operator to amend the mining permits to minimize downstream impacts. Thus, EPA's letter should not be interpreted as indicating that material damage has occurred to streams in these areas.

There is no dispute that surface mining and concomitant valley fill operations impact downstream water quality. SMCRA provides that impacts are permissible; however, material damage to the hydrologic balance is impermissible. Specifically, "impairment" is not synonymous with significant adverse impact or material damage, as Petitioners assert.

OSM Determination:

OSM will continue to ensure WVDEP is administering its program in a manner that prevents material damage to the hydrologic balance; however, for the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

d. WVDEP Fails to Issue SMCRA Violations where NPDES Violations Exist

Summary of Petitioners' Allegation:

Petitioners allege that OSM failed to automatically take enforcement action when OSM has reason to believe an NPDES violation has occurred. Petitioners argue that WVDEP rarely issues citations when those violations occur on a mine site, even though SMCRA permits require compliance with the CWA. Petitioners state that WVDEP's failure to enforce CWA violations on SMCRA sites allows improper permitting or bond release. Petitioners allege that, as a result, WVDEP's allegedly continuous failure to issue NPDES violations shows a pattern of failure to protect water quality and illustrates WVDEP's inability to properly implement SMCRA.

WVDEP's Response:

WVDEP stated Petitioners' allegation that there were 7,195 NPDES exceedances of water quality standards reported by mining companies in a five year period should be put in context with the number of reports. The number of compliance reports sent to WVDEP over the five year period equates to 1.3 million data points, so the fact that less than half of one percent of those reports showed an exceedance of a water quality standard actually shows a compliance rate of 99 percent and is not indicative of a program failure. WVDEP noted it has assessed nearly $28 million in civil penalties and supplemental environmental projects (SEPs) against the coal industry since 2006 for NPDES exceedances. WVDEP reiterates its contention that this particular allegation deals with the CWA and OSM has no jurisdiction over the CWA and WVWPCA.

With regard to bond releases, WVDEP advised that the petition disregards the fact that WVDEP requires submission of raw, untreated samples at the time of bond release and that OSM often conducts oversight of the release process.

WVDEP asserts it is not obligated to issue violations unless the violation is determined during the course of an inspection. Further, WVDEP asserts self-reported violations can serve as the basis for WVWPCA enforcement actions but not, in itself, the basis for issuance of an NOV. WVDEP notes that it only receives this information on a quarterly basis and WVDEP notes that it can be several months between the submission of the quarterly information and the actual development of the WVWPCA QNCR.

For the specific cases listed in the table, WVDEP gave explanations of the actions it had taken under WVWPCA to address the multiple noncompliance issues. The State also asserted that the WVWPCA actions appeared to be effective in reducing the incidents of self-reported violations, except in one case that they would review again. In another case WVDEP explained that the cause of the self-reported violations at the NPDES point were determined not to have originated from the WVSCMRA operation.

OSM Analysis:

OSM was able to generally reproduce the number of exceedances of NPDES standards alleged by Petitioners by reviewing the State's data base for self-reported violations. OSM was also able to verify that no WVSCMRA violations were issued for the permits in the table cited by Petitioners to purportedly indicate many months of alleged violations between 2006 and June 2011.

However, OSM concurs with WVDEP that the apparently large numbers of self-reported exceedances do not appear to indicate a systemic failure of the program when put in the context of reporting NPDES outlets. WVDEP has approximately 1,360 NPDES permits. There are over 20,000 associated outlets that are sampled twice monthly, and a DMR submitted quarterly. Over 60,000 lab samples are submitted quarterly. The QNCR consists of two quarters, which would include approximately 123,348 submitted lab sampling results. Only the permits that have events of excursions of water quality are listed on the QNCR. During the time period, January 1, 2006, through June 30, 2011, approximately 1,356,828 laboratory discharge monitoring reports for individual inspection units were submitted to WVDEP. Out of the 1,356,828 reports, 7,802 were cited in the QNCR for exceedances.

Further, OSM disagrees with Petitioners' allegation that every NPDES self-reported exceedance triggers a WVSCMRA violation. It is the failure to report or failure to take corrective action that could trigger a WVSCMRA violation. *W. Va. Highlands Conservancy, et al*., 152 IBLA 158 (2000). The statements made by WVDEP indicating that they could never take an action under WVSCMRA based solely upon self-reported exceedances does not exactly comport to the IBLA decision. OSM acknowledges that WVDEP has a several-month delay entering the self-monitoring reports into its electronic database that is accessed to review permits and monitor violations.

However, OSM has initiated a study to determine how often discharges from mines exceed NPDES effluent limitations or are subject to hydrologic balance-related violations under the SMCRA permit and determine what, if any, actions were taken under the State's surface mining program to address those exceedances. In May 2012, OSM and WVDEP signed a Work Plan to evaluate operational and permit changes made by operators to correct water quality issues as identified by exceedances of NPDES effluent limitations, or by a WVSCMRA permit violation related to the hydrologic balance. It is contemplated that a review of the WVDEP data base will occur. NPDES self-reported violations will be analyzed to compare and calculate the number of SMCRA permits associated with NPDES permits where self-reported violations are recorded. The impact of WVDEP's delay in recording of operator's self-monitoring reports into the WVDEP database will also be analyzed. Further, the team will review water quality parameters to determine which are most commonly exceeded under either the NPDES or SMCRA permit. A sample of WVSCMRA permits will be reviewed to determine the timeliness and effectiveness of operational and WVSCMRA permit changes to correct the violations.

WVDEP and OSM initiated a Work Plan to identify and review a sample of permits.

OSM Determination:

Petitioners assume self-reported exceedances of NPDES permit limits require a corresponding WVSCMRA violation to be issued; however, this is not true. Additionally, the number of outlets reporting non-compliance is a small percentage of the total outlets reporting and does not indicate a systemic failure. However, after completion of the verification process, OSM determined information presented warrants further evaluation of this allegation to determine whether there is reason to believe WVDEP is not effectively implementing, administering, maintaining, or enforcing the approved WV program.

OSM will continue its evaluation to determine why some mines have repetitive self-reported exceedances. As part of this evaluation, OSM will determine if WVDEP, using the WVWPCA as the only authority to correct self-reported exceedances, impacts the effectiveness of the WV approved program.

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

e. WVDEP Impermissibly Suspended the State's Narrative Water Quality Criterion

Summary of Petitioners' Allegations:

WVDEP is utilizing recent action by the West Virginia legislature to attempt to suspend existing narrative criteria used to identify biologically impaired streams and to unlawfully avoid adding streams to the State's Section 303(d) list of impaired waters.

In 2012, West Virginia's legislature passed Senate Bill 562, requiring WVDEP to develop and secure legislative approval of new rules to interpret the narrative criterion for biological impairment. Petitioners indicated that Senate Bill 562 effectively amended West Virginia's narrative water quality standards. Petitioners allege that instead of continuing with the existing EPA-approved methodology for interpreting the narrative standard until new rules could be promulgated, WVDEP added no new streams to the Section 303(d) list for biological impairment, using Senate Bill 562 as its justification.

WVDEP's Response:

WVDEP asserts that for the past 13 years, WVDEP has relied upon the West Virginia Stream Condition Index (WVSCI) as a tool for assessing whether streams within the State are meeting the narrative water quality standard for the protection of the aquatic ecosystem. However, WVDEP contends that because the WVSCI assessment protocol has not been subject to the rulemaking process, it has declined to add streams that scored below a 60.6 according to the WVSCI score as a biologically impaired stream for the purposes of submittal to the EPA.

WVDEP also notes that the West Virginia legislature has charged it with the task of developing a new assessment tool for the narrative water quality standard that looks holistically at the health of the aquatic ecosystem, not just at benthic macro-invertebrates, and to propose it as a rule for

legislative approval. Because WVDEP has not yet accomplished this task, it did not make new recommendations to EPA; however, it also did not make recommendations for removal from the Section 303(d) list of impaired streams. WVDEP contends it is working closely with the EPA on this issue.

OSM Analysis:

Petitioners have indicated that WVDEP has violated CWA provisions that require maintenance of a list of impaired waters. The provisions are found in 33 U.S.C. Section 1313(d). There are no SMCRA provisions requiring the maintenance of such lists and Petitioners are not alleging violations of water quality standards from the perspective of specific parameters nor material damage to the hydrologic balance. Thus, this determination is more appropriately vested in the EPA as the authority regulating the CWA and is outside OSM's purview.

OSM Determination:

Petitioners' allegations as stated are more appropriately addressed by the CWA regulating authority. For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

f. WVDEP's Failure to Regulate Selenium Pollution Compels Action from OSM

i. Selenium Pollution Generally

ii. Selenium Pollution is a Significant Problem in West Virginia

iii. WVDEP Failed to Regulate Selenium Pollution

I. Examples of WVDEP Failure to Prevent Selenium from Causing Material Damage to the Hydrologic Balance

II. WVDEP Approves New Permits that Fail to Prevent Selenium Pollution Because it Relies on Inadequate Background Data

III. WVDEP Fails to Require Selenium Removal Facilities, Adequate Monitoring, or Require Testing for Discharges

IV. WVDEP Wrongfully Relies on Material Handling Plans to Control Selenium

V. WVDEP Fails to Factor in Relevant Data when Establishing NPDES Permit Limits for Selenium

VI. Additional Examples WVDEP's Flawed Permitting Process Allowing for Selenium Pollution

Summary of Petitioners' Allegation:

Petitioners assert that because SMCRA mandates compliance with the CWA, violations of the CWA are also automatically SMCRA violations. Petitioners further reason that SMCRA compels State SMCRA regulatory authorities to protect water quality in the absence of properly protective measures from the applicable State CWA authority. Petitioners allege WVDEP is failing to adequately regulate selenium. Based upon Petitioners' reasoning that CWA violations are essentially SMCRA violations too, WVDEP's alleged failure to regulate selenium triggers an obligation of OSM to intervene and "immediately address the problem of selenium pollution in West Virginia."

Petitioners provide an overview of the alleged impacts of selenium and cite to a variety of scientific studies outlining detrimental impacts of selenium. In forming their allegations, Petitioners cite and rely on a determination that, "the connection between coal mining and selenium discharges is well established," and "EPA's experts have stated that '[t]he 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." Further, Petitioners allege selenium associated with surface coal mining has been detected at elevated levels in many of West Virginia's streams, citing to a chart prepared by WVDEP allegedly evidencing "accumulation of selenium in fish tissue at levels that exceed the level at which toxic effects occur."

Petitioners allege that WVDEP does not impose required selenium monitoring and fails to establish required effluent standards. Moreover, Petitioners assert WVDEP is not following its own guidance on regulating elevated selenium discharges upon discovery and that WVDEP's guidance relative to selenium is flawed. To reach these conclusions, Petitioners cite to WVDEP's alleged application of its policies that allow existing operations, where selenium water pollution is identified after mining operations have begun, to be exempt from sampling the remaining undistributed strata for selenium at all. Citing to WVDEP's Permitting Handbook, Petitioners allege "WVDEP relies on the false premise that high selenium overburden is restricted to the dark shale adjacent to coal intervals and requires special handling of material." Petitioners allege that selenium is expensive to treat and once exposed, it will remain a perpetual problem.

Further, Petitioners assert that because selenium pollution is difficult to avoid in selenium rich areas, "an agency committed to addressing this problem might consider significantly limiting or even prohibiting coal mining in selenium-rich areas." However, according to Petitioners, WVDEP has continued to allow surface mining in "selenium seams," and that WVDEP is "more interested in allowing mining operations to move forward than protecting the environment."

Petitioners allege that WVDEP has failed to use its authority to prevent selenium pollution from causing material damage to the hydrologic balance and "by failing to ensure compliance with

West Virginia water quality standards, WVDEP violates SMCRA and [WV]SCMRA." Petitioners reference the Colony Bay Mine as an example of alleged failure.

Petitioners assert that when approving new permits, proper background data is not collected. For example, according to Petitioners, WVDEP requires too few core samples to appropriately analyze a permit for selenium potential and, allegedly, in some instances—such as the Alex Energy permit—do not require any sampling.

Petitioners seem to assert that WVDEP approved permits indicating the potential for high selenium values, yet deems the potential for selenium pollution as speculative. Petitioners reference the Central Appalachian Mine (Grapevine South Surface Mine), as an alleged example. Further, Petitioners seem to advocate construction of treatment facilities in advance of the mining.

Additionally, Petitioners allege WVDEP wrongfully relies on material handling to control selenium, yet these policies are erroneous. Petitioners allege that WVDEP does not apply material handling plans to coal and thus, selenium disturbed during the mining process may enter discharge or receiving streams, core sampling is not appropriate and the use of alkaline encapsulation of high selenium materials increase the mobility of selenium and allegedly result in a higher likelihood of selenium leaching into surface and ground water. Additionally, Petitioners, citing to two Hobet Mining operations in the Mud River Watershed, assert that WVDEP's material handling plans "simply do not work."

Petitioners allege that WVDEP's Division of Mining ineffectively communicates with WVDEP's Division of Water, resulting in a "bureaucratic oversight." To support this allegation, Petitioners reference the Bandmill Coal Corporation's Tower Mountain Mine. According to Petitioners, this mine in the Rum Creek Watershed is located on a Section 303(d) list for selenium impairment. Petitioners deduce that because, allegedly, "valley fill [operations] are the sole potential source of selenium at this site" and "overwhelming evidence [exists] that discharges from the mine have caused material damage to the hydrological balance in the Rum Creek Watershed," WVDEP's renewal of the permit without imposing selenium limits or monitoring at any outfall was inappropriate.

Petitioners allege WVDEP's permitting process allows for selenium pollution. Petitioners provide several examples to support this contention, including the allegation that permit holders are essentially allowed to cherry-pick which outfalls it chooses to submit as "representative of the entire mine site" when submitting outfall sampling lists during the renewal process. Again, Petitioners reference the Tower Mountain Mine, stating the outfalls sampled were not truly representative of the permit and thus did not trigger a reasonable potential analysis for selenium or lead limits in the permit. Moreover, Petitioners allege WVDEP did not follow State and National guidance in assessing this permit.

Petitioners allege WVDEP ignores its alleged policy related to determining when selenium limitations or monitoring are required. Petitioners reference the Aracoma Coal, Tinsley Branch Deep Mine as support for this allegation. Petitioners allege that when issuing this permit, Petitioners did not consider the following: the fact that Rum Creek—the mine discharges to a tributary of this water body—is allegedly on the impaired streams list due to selenium

impairment; the mining company reported 3.66 μg/L of selenium discharge; and that the mine was operating in the Chilton Seam, a seam allegedly known to be high in selenium. Petitioners allege that any one of these factors should have "triggered a reasonable potential analysis for selenium."

Citing to the Dynamic Energy mine site as an example, Petitioners allege that WVDEP grants permits on mine sites that have demonstrated, "numerous exceedances of the chronic selenium criterion at baseline water quality monitoring stations."

WVDEP's Response:

WVDEP explains that beginning in 2003, when the draft Programmatic EIS for Appalachian Surface Coal Mining indicated that selenium may be a parameter of concern, West Virginia took steps to protect its water resources from selenium pollution. WVDEP contends that avoidance of elevated selenium in the effluent water can be achieved by identifying selenium-rich strata and employing special handling techniques to reduce or prevent those strata from yielding unacceptable levels of selenium. These measures are imposed where and when needed. Additionally, WVDEP requires selenium effluent limits when there is "reasonable potential for selenium pollution." Where there are selenium problems and a permit is already active, a compliance schedule is issued to the mine operators. Since 2006, WVDEP has initiated 22 enforcement lawsuits against operations that are insufficiently meeting effluent standards imposed by WVDEP; therefore, allegedly demonstrating WVDEP's proactive approach to eliminating selenium pollution.

Moreover, WVDEP asserts that while development of geologic information and its use in developing material handling plans for reducing the possibility of selenium pollution may be a function of SMCRA or WVSCMRA, "WVDEP's actions related to selenium regulation on an individual NPDES permit is a WVWPCA/CWA function that is subject to USEPA's oversight, not OSM's." To support this assertion, WVDEP cites to the requirement that prior to WVDEP approving a new NPDES permit or a reissuance—such as a renewal—or a major modification of an NPDES permit, WVDEP must submit a draft permit to EPA for review. In the event EPA objects to the draft NPDES permit, WVDEP is foreclosed from issuing the permit until EPA's objection is resolved.

WVDEP addressed each of the six permit-specific allegations raised by Petitioners, concluding that they considered selenium properly on five sites and made an error in regard to one site, as it did not properly consider sample data. Effluent limits have been applied to that permit as a result of a judicially-approved settlement agreement. WVDEP's responses to Petitioners' individual permit references are detailed below.

Colony Bay

WVDEP asserts that Petitioners data is erroneous. On May 5, 2012, the permittee submitted an application for reissuance providing water data for Outlet 002. The self-reported selenium concentrations were 1.130 μg/L and significantly lower than the numeric water quality standard for selenium. Thus, WVDEP reached the conclusion that there was no need for selenium monitoring or limits in the NPDES permit.

Alex Energy

WVDEP acknowledges "concentrations of selenium above the threshold level of 1 mg/Kg for selenium in the overburden" exist on this permit. However, WVDEP also notes that the receiving streams to this permit do not indicate impairment related to selenium and nearby permits mining the same coal seams are not yielding elevated selenium. Additionally, EPA voiced no objections to the issuance of the permit, as it responded to WVDEP's draft permit with a no-comment letter. WVDEP explains that such a letter indicates EPA has no objections or issues with the draft permit and it may be issued by WVDEP. WVDEP explains that in consideration of these factors, "report only" provisions for selenium were incorporated in the permit.

Subsequent to the NPDES permit issuance, Twenty-mile Creek of the Gauley River, a receiving stream, was listed on the Section 303(d) list as impaired regarding selenium. The issuance of the NPDES permit is currently being appealed by two environmental groups.

Central Appalachian/Grapevine South Surface Mine

WVDEP explains that "the need for selenium treatment facilities for this permit only became apparent with the application for reissuance that is currently pending." Further, WVDEP explains, in 2004, when the permit was originally issued, the effects of selenium were not commonly recognized as a parameter of concern for the mining industry and no regulatory authority with responsibility for regulating the coal industry had required selenium treatment to be installed. Also, when the permit was reissued in 2009, the effluent selenium was less than the 5.0 μg/L standard; therefore, WVDEP did not believe it was a problem.

The present reissuance of the NPDES permit is in process. Because recent samples have exhibited selenium concentrations exceeding 5.0 μg/L, WVDEP will incorporate effluent standards into the reissued permit. WVDEP required the applicant to submit a compliance schedule for the present discharges. Additionally, WVDEP plans to require the applicant to make any revisions to the permit to conform to the appropriate treatment regime. Further, WVDEP states that when the application is deemed technically complete, a draft permit will be prepared and sent to EPA for review prior to issuance.

Bandmill Coal, Tower Mine

WVDEP asserts this permit was originally issued in 1993, and reissued in 2001, 2006, and 2012. Water quality data has neither demonstrated selenium concentrations exceeding 5.0 μg/L nor have the immediate receiving streams been listed on the Section 303(d) impaired list. WVDEP notes EPA offered no comment or objection to the reissuance of the NPDES permit. However, WVDEP does acknowledge that downstream of the immediate receiving streams, Rum Creek is listed on the Section 303(d) impaired list for selenium. The reissuance of this NPDES permit is presently under appeal by two environmental groups.

Aracoma Coal, Tinsley Branch Deep Mine

WVDEP explains that no indication of selenium exceeding five μg/L was present during the reissuance of the permit. Therefore, WVDEP did not believe it was necessary to add selenium to

the effluent standards. On September 21, 2012, EPA issued a no-comment, no objection, response to the reissuance of the permit letter.

Dynamic Energy

WVDEP admits it overlooked sampling data in the application indicating selenium in excess of the water quality standard at locations downstream from the mining operation. Reissuance of the NPDES permit was appealed by two environmental groups and a settlement agreement was reached that instituted effluent limits.

OSM Analysis:

OSM agrees that SMCRA does not supersede the CWA. However, the contention made by WVDEP in its response to the petition that OSM has no oversight over "WVDEPs action related to selenium regulation on individual NPDES permits" must be placed in context in order to appropriately respond to Petitioners' allegations. The approved WV program, of which OSM has oversight authority, requires protection of the hydrologic balance. Therefore, WVDEP's actions in regulating surface mining to prevent discharges that violate West Virginia's water quality standards, including standards for selenium, are within OSM's purview.

Petitioners' statement, "[s]elenium is extremely expensive to treat and there is reason to believe that once selenium is exposed by mining it will remain a perpetual problem," is not entirely correct. Treatment for selenium can be expensive; however, it is not necessarily perpetual. Studies of selenium related to mining in the southern West Virginia coalfields indicate that it is released at an accelerated rate and may achieve effluent standards without treatment within 25 years. The decay rate for selenium concentrations is significantly higher than that for acid mine drainage (AMD) parameters such as acidity, iron, and sulfates. Moreover, Petitioners' assertions that "mining operations are causing serious, persistent, and unmitigated harm in violation of the CWA and SMCRA due to persistent discharges of selenium to downstream waters," as the source of their allegations, stem from blogs authored by several of Petitioners.

Contrary to Petitioners' allegations, WVDEP has clearly made a concerted attempt to address the pressing selenium problem. For example, WVDEP created the November 13, 2007, "Selenium Implementation Guidance" document as part of the Handbook for Permitting. This document provides guidance to prevent or minimize the weathering and leaching of selenium from surface mining. It is true that some past mining activities have created elevated concentrations of selenium, but this is not to say that more recent operations have not been properly designed to prevent such problems and existing problems are by-and-large treated. While there is evidence that some discharges have exceeded the 5.0 μg/L in-stream standard and have gone untreated, we also see that WVDEP is taking appropriate action where this is discovered.

OSM did not verify the level of stream degradation or impacts to aquatic fauna alleged by Petitioners. OSM agrees that mining, both surface and underground, can, under certain circumstances release selenium. Selenium is regulated as a water quality standard in West Virginia. Therefore, the question before OSM is whether WVDEP is being diligent in its duties to ensure operators do not violate water quality standards as it relates to WVSCMRA's hydrologic protection requirements.

Petitioners' supposition that special handling of selenium-rich materials cannot be used effectively to mitigate potential selenium problems is without foundation. If materials are handled properly, the release of selenium may not be completely eliminated, but can be released at a rate that does not exceed concentrations of concern. Selenium-rich strata are identified by a series of drill holes and analysis of the cuttings/core. The darker organic rich shale is generally the targeted zone; which are in stark contrast to the predominant sandstone units throughout the southern West Virginia coalfields. These shale units can be easily identified in most cases and segregated by personnel in the field. Once segregated and stockpiled, this material is placed in isolated pods above the projected water table and covered with a low permeability material. The most difficult part of this operation in southern West Virginia is procuring enough low permeability material in strata largely dominated by sandstones and siltstones.

Petitioners allege WVDEP has failed to regulate selenium pollution. The first line of their reasoning is that the Handbook for Permitting gives operators an opportunity to avoid testing, special handling, and monitoring for selenium if the historic water quality does not show the potential to exceed water quality standards for the parameter. From a scientific and pragmatic standpoint, this makes sense and should not allow for any additional problems. It is generally accepted that the majority of selenium problems are confined to specific coals and enclosing strata within a defined area in the southern coalfields. If a coal seam outside of the aforementioned criteria is to be mined and data demonstrates disturbing the overburden to access that seam does not pose a problem with elevated selenium concentrations in the effluent, it is not prudent to require an operator to sample the overburden and monitor for selenium. Further, if overburden does not have excessive concentrations of selenium, special handling is unnecessary.

Petitioners allege WVDEP does not require operators to sample the remaining strata for selenium on active sites where elevated concentrations of selenium have developed in the effluent. This allegation is based on Petitioners' reading of the State's permitting handbook. OSM does not concur that this is the correct interpretation of the handbook. OSM believes the handbook gives WVDEP the flexibility and authority to require more tests and changes in material handling, as necessary. Authorities on selenium conclude that, excluding the removed coal, the highest concentrations of selenium is best correlated with strata located adjacent to coal. Authorities on selenium, Unrine and Warner, noted "better correlations" exist between selenium and total organic carbon. Dark and black shales are high in total organic carbon; therefore, WVDEP required the special handling of pit cleanings and other dark shale units.

Petitioners' allegation that "WVDEP relies on the false premise that high selenium overburden is restricted to the dark shale adjacent to the coal" does not comport with what is written into the Handbook for Permitting. The handbook proscribes special handling of any unit that exceeds 1.0 mg/Kg for selenium, in addition to the "pit cleanings."

Petitioners allege that WVDEP guidelines do not adequately assess pre-mining data to prevent selenium pollution. They contend that the sample spacing and number of core holes for the selenium potential analysis is inadequate. No studies or data were presented to bolster the assertion that the overburden sampling intervals are too broadly spaced and inadequate in

number. Petitioners' problems with the spatial sampling frequency and methods of overburden material handling lack essential scientific foundation. Clearly, WVDEP believes at this time the prescribed sampling spacing is adequate and no studies or data have come to light to indicate otherwise. Regardless of the qualifications of the individuals referenced in the petition, no studies or data were presented to indicate that the present sampling intervals and scenario is inadequate.

Petitioners allege that treatment facilities should be constructed prior to the initiation of mining or the advent of any selenium effluent problems. Petitioners presume that elevated concentrations of selenium are a preordained consequence of coal mining. However, if an operator conducts mining and reclamation techniques in a manner designed to prevent a selenium discharge, there is no reason to predict such a discharge will occur. There is not a provision in SMCRA to treat for a problem that does not yet exist. Additionally, the permit could not be issued if the reviewer believed it would create discharges with selenium above effluent standards.

Petitioners indicate that WVDEP fails to require adequate monitoring at sites in phases of release where selenium has not been detected. OSM finds no reason to suggest the State add this parameter at the time of bond release because selenium tends to be mobilized quickly once the overburden is disturbed. Therefore if selenium were to be a problem, it would be noted shortly after mining commenced. The research into the mobility of selenium does not show a delayed response to mining and exposure.

Petitioners assert that WVDEP "wrongfully relies on material handling plans to control selenium." However, no studies or data are cited to support the assertion that special handling will not work. First, it is stated that there is no provision to deal with the coals themselves during mining. There is no indication that the coals during the brief time that they are exposed prior to their removal pose a problem. Also, any water accumulation in the pit is pumped to treatment ponds and is dealt with there. If the selenium concentration is elevated, it can be treated prior to discharging from the pond. Second, they reiterate their assertion that the overburden sampling system and handling the dark shale are inadequate. This point is discussed in various sections at length above. Third, it appears that Petitioners misread the Handbook for Permitting sections dealing with special handling with respect to selenium. There is no provision for alkaline encapsulation; that provision is earlier in the Handbook and is related to AMD prevention. It is true that selenium tends to be more mobile under alkaline conditions. Petitioners assert that "material handling plans simply do not work." The basis for this statement is lacking. The technical aspects of special handling have sound scientific foundation. We may not yet have studies and long term evidence as to the efficacy of special handling, but we do not agree that WVDEP is acting inappropriately in approving those material handling plans that should work.

It appears that the Hobet Mining site conducted a considerable amount of mining before selenium was an element of concern and prior to engaging in special handling for selenium. Any present selenium effluent excursions may not entirely be due to failure of the special handling. Even if the special handling has not worked at this site, it does not preclude success at another

site as long as special handling provisions are properly conducted with appropriate geologic and hydrologic conditions. Therefore, experiences at this site are not indicative of the success of special handling in-place on other sites

Petitioners allege WVDEP issued new permits that would discharge to already impaired Section 303(d) listed streams without assigning permit effluent limits for selenium. Petitioners allege WVDEP is not considering pre-mining evidence of selenium and not requiring existing permits to make modifications without consideration of newly discovered selenium from the operations or nearby. To support their allegations, Petitioners list six cases where they believe WVDEP failed to act to ensure compliance with water quality standards for selenium. Each case is examined in detail below.

Colony Bay

This permit has been active since at least 1981 and received SMCRA and NPDES final bond releases during 2012. Selenium effluent limits were not in effect at the time of permit approval. The most recent permitting action occurred in 2007. Petitioners indicated that in September 2006, EPA approved the final TMDL for the Coal River, including Cazy Creek and Beaver Pond Branch. The TMDL assigned end of pipe selenium waste load allocations for Colony Bay's outfalls discharging to the impaired streams. Petitioners contend that even though the EPA approved waste load allocations, WVDEP released the final bond on this permit without any consideration of the amount of selenium discharged at the site.

However, according to WVDEP, Colony Bay Coal Company submitted an application for permit reissuance on May 5, 2012. The reissuance application contained water quality data for Outlet 002 as a representative outlet for discharges from the facility. Selenium concentrations reported in this analysis were 1.130 μg/L, which is significantly lower than the water quality standard for selenium of 5.0 μg/L.

Due to the age of this permit and the fact that selenium is mobilized quickly after disturbance from mining, there is no evidence to indicate that the discharge from this mine is violating water quality standards for selenium. Petitioners allege that permit number S-15-81 causes material damage to the hydrologic balance by discharging selenium into the waters of West Virginia. However, Petitioners' allegation does not support a finding that the Colony Bay permit, number S-15-81, causes or contributes to selenium pollution of the state waters.

Alex Energy

Analysis for selenium in the overburden shows there are some thin strata with concentrations above the 1.0 mg/Kg threshold. The non-coal strata exhibited selenium concentrations up to 4.45 mg/Kg. These selenium-rich units ranged from 0.4 to 3.0 feet thick. The permit application documentation identified the strata with elevated selenium and detailed how these materials would be handled in a narrative accompanied by maps and cross sections illustrating aspects of the special handling. The coals exhibited selenium values up to 6.64 mg/Kg. However, the coal will be totally removed except for a small residual percentage.

The receiving streams are not on the Section 303(d) or TMDL listings. However, the permit was given "report only" selenium requirements. This requirement was established because the selenium rich zones are relatively thin and they will be special handled, therefore it is expected that selenium will not be a problem. If the permitting authority believed that selenium would be a problem, it cannot issue the permit. The "report only" proviso allows for determination in case the site fails. The background data in section J-6 shows no selenium concentrations above the respective detection limits of 0.5 and 1.0 μg/L.

WVDEP's NPDES permit files showed that NPDES Baseline Water Quality (BWQ) monitoring sites did not show the presence of selenium in any of the pre-mining baseline water monitoring sites. WVDEP's response was confirmed by reviewing the online electronic permitting files. Selenium was not indicated as a parameter for either the original permit or as a parameter that was added during permit renewal. The NPDES writer stated that none of the receiving streams associated with the permit showed selenium in the Section 303(d) or TMDL listings. The water analyses from the four BWQ stations used for this application showed no concentrations detected in any of the samples.

Petitioners allege that the S-3008-11 permit should have had selenium as an NPDES parameter. Petitioners further allege that thicker seams had elevated selenium concentrations, but these seams will be mined and removed. The State evaluated the surrounding mining operations in the watershed with respect to any mining operations that were discharging elevated selenium concentrations, and found none.

Twenty-mile Creek is listed as an impaired receiving stream. Biological and pH impairments in the stream occur adjacent to the permit, but no selenium impairment is present. The only selenium impairment noted in Twenty-mile Creek watershed is in Hughes Fork, which is located on the opposite side of the watershed. One WVDEP Watershed Assessment Program (WAP) station in the immediate vicinity of the permit reports a selenium occurrence of 1.0 μg/L in 2012.

Petitioners have not demonstrated that Alex Energy permit S-3008-11 is contributing to selenium impairment. Further, WVDEP is requiring monitoring for selenium, which will show if the predictions used in the permitting decision are valid.

Central Appalachian Mine/Grapevine South

The petition alleges it is erroneous that WVDEP does not require selenium removal facilities at new mines where both core sampling indicates high selenium values and NPDES selenium permit limitations are enacted. However, in accordance with SMCRA and the WV program, WVDEP does not issue permits if selenium in the effluent is expected to be elevated to the point where a permanent treatment facility would be required.

Specific to the Central Appalachian Mine permit number, S-5025-08, treatment facilities are unnecessary. Review of the permit indicates there are some stratigraphic zones with very slightly elevated selenium concentrations, which range from 1.02 to 1.84 mg/Kg. The permit requires these zones to be special handled to ensure encapsulation above the projected post-

mining water table. According to documentation reviewed, selenium is not a problem within the watersheds draining the project area.

Baseline surface water samples located in Section J of the permit application did not indicate any elevated selenium samples. Furthermore, all monitoring sites reported values that were below detection limit, with a selenium range of 0.535-0.975μg/L.

In summary, Petitioners' allegation does not demonstrate permit number S-5025-08 could cause or contribute to selenium pollution of the State's waters.

Bandmill Coal, Tower Mine

The petition states that a receiving stream (Right Hand Fork of Rum Creek) showed an in-stream selenium concentration of 27.6 μg/L in June of 2011, and WVDEP renewed the NPDES permit on October 14, 2012, without effluent limits for selenium. Without documentation on how the sample was collected and handled, this single elevated sample does not sufficiently indicate there is a problem.

Impaired streams for this permit include Burgess Branch, Camp Branch, Guyandotte River, Right Hand Fork/Rum Creek, and Rum Creek. The 2010 Section 303(d) list states that biological and selenium impairments are currently present. Selenium sampled in Burgess Branch in 2006 was 19 μg/L and in the same location in 2011 was 27.6 μg/L. The Guyandotte River selenium sample in 2010 indicated 1.0 μg/L.

The available information from WVDEP NPDES permit files indicates that the water quality parameters associated with this permit include; flow, pH, total suspended solids, settleable solids, iron, manganese, and aluminum. In the files selenium is not identified as a parameter of concern.

Given the fact that this permit is twenty years old, and it was issued prior to scientific studies identifying selenium as a contaminant, it is understandable that selenium was only tested for once. The sample is poorly marked, but appears to have been sampled at a pond outlet. The selenium concentration was below the detection limit. The NPDES permit files show that selenium was not elevated at the NPDES outlets during permit renewal, with a concentration of less than 5.0 μg/L at NPDES outlet 006.

In summary, Petitioners' allegation does not demonstrate that permit number S-5023-93 could cause or contribute to selenium pollution of the State's waters. Petitioners allege that valley fills, within the watershed, are the sole potential source for selenium at the Right Hand Fork of Rum Creek. This allegation does not demonstrate that a particular source of discharge contributes to selenium pollution in the State's waters.

OSM agrees that nearby streams listed as having selenium-related impairment and should be considered carefully in the CHIA and water monitoring plans. WVDEP used professional judgment in determining how much information was necessary from the operation to demonstrate that it is not contributing to impairment. While OSM would prefer more monitoring

to ensure prevention of material damage to the hydrologic balance outside the permit area, OSM does not conclude that WVDEP is improperly administering its program.

Aracoma Coal, Tinsley Branch Deep Mine

Little data was found within the permitting file available online to corroborate or refute the allegations concerning this permit. However, the referenced 3.66 µg/L sample is below the effluent limit for selenium of 5.0 µg/L. So, Petitioners have failed to show that a problem exists with this permit. There are four baseline in-stream samples for Rum Creek and a sample from Tinsley Hollow all of which showed selenium below 2.0 µg/L (detection limit). Clearly, background data did not indicate that selenium may be an effluent problem.

The available information from the WVDEP NPDES permit files shows that this permit has been reclaimed. The water quality parameters associated with a reclaimed permit include specific conductance, pH, total suspended solids, settleable solids, sulfates, iron, manganese, aluminum, and TDS.

The NPDES permit files show that selenium was not a parameter of concern, as water samples from outlets 001 and 005, during permit renewal, showed concentrations of 3.66 and 3.0 µg/ L, respectively, which is below the West Virginia water quality standard of 5.0 µg/L. Potential impaired receiving streams are Dingess Run and Rum Creek. The data available for those streams, the 2005 WVDEP samples, do not show that selenium was analyzed. Biological and selenium impairments are currently present in the 2010 Section 303(d) and TMDL lists for these streams.

In summary, Petitioners' allegation does not demonstrate permit number U-5004-99 could cause or contribute to selenium pollution of the State's waters. Conversely, the permit renewal data indicated that a low concentration of selenium occurred in the permit's discharge, which was below the water quality standard for the parameter. OSM agrees that nearby streams listed as having selenium-related impairment should be considered carefully in the CHIA and water monitoring plans. WVDEP used professional judgment in determining how much information was necessary from the operation to demonstrate that it is not contributing to impairment. While OSM would prefer more monitoring to ensure prevention of material damage to the hydrologic balance outside the permit area, OSM does not conclude that WVDEP is improperly administering its program.

Dynamic Energy

It is unclear what constitutes a "high selenium" coal seam. Regardless, the coals are the object of mining and will be removed. A review of all available relevant permit sections, such as J-6, failed to find a single selenium sample analysis. Therefore, it is uncertain how Petitioners came to the conclusion that there were several instances where the chronic selenium criterion was exceeded.

Moreover, OSM confirmed WVDEP's response by reviewing the online electronic permitting files. Selenium was not indicated as a parameter for either the original permit or as a parameter

that was added during permit renewal. The available information from WVDEP's permit files indicates that the NPDES permit parameters that are sampled include specific conductance, pH, TSS, settable solids, sulfates, iron, manganese, aluminum, and TDS; other parameters (in outlet 100) including potassium, sodium, calcium, and magnesium were also sampled, but they did not show any elevated concentrations.

The TMDL was developed in 2004 for the receiving streams of this permit, which include Long Branch, McDonald Fork, Road Branch, Toler Hollow, and Reedy Branch. Selenium was not mentioned, but could be under the general "metals" umbrella. Selenium sampled in Sturgeon Branch in 2005 was 1.0 μg/L.

In summary, Petitioners allege that a high number of selenium-containing coal seams are mined in the watershed. The allegation does not address the permit's proposed materials handling plan, and the removal of selenium containing seams from the permit area. In addition, WVDEP admitted it made an error in the review of sampling data and that selenium effluent limits have been added to the NPDES permit as a result of an appeal of that permit. This again demonstrates that WVDEP does take action on selenium findings and that there are other administrative avenues for interested parties to pursue.

OSM Determination:

After review of WVDEP's response, WVDEP's electronic permitting system, and Petitioners' allegations during the verification process, OSM determined this allegation warrants further evaluation to determine whether there is reason to believe WVDEP is not effectively implementing, administering, maintaining, or enforcing the approved WV program

The information supplied by Petitioners does not demonstrate that WVDEP has disregarded the potential for mines to discharge selenium in excess of State water quality limits. OSM does agree that, in the cases where there is selenium impairment in nearby streams, WVDEP used its professional judgment in accepting what OSM might consider a minimum amount of information as a demonstration that the mine is not contributing to the impairment. This does not constitute evidence that the State is failing to administer its program, but it is an area OSM should study.

V. WVDEP FAILED TO PROTECT THE WATER QUALITY AND QUANTITY

g. WVDEP Fails to Properly Regulate Conductivity

i. Conductivity from Mining Causes Serious Damage

ii. Elevated Levels of Conductivity are Harming West Virginia's Waters

iii. WVDEP Relies on Flawed Guidance to Manage Conductivity, Resulting in Significant Harm to Aquatic Life

I. The Guidance Does Not Apply to Rainfall Driven Discharges

II. WVDEP Relies on its Guidance to Avoid Federal Permitting Requirements

III. WVDEP Allows Operations to Fail WET Tests to Avoid Taking Immediate Action to Prevent Continued Violations of Water Quality Standards

IV. WVDEP Relies on Monitoring and Fails to Place Limits on Key Discharges

V. The Guidance Does Not Apply to Operations Deemed Substantially Complete

Summary of Petitioners' Allegations:

Petitioners allege WVDEP improperly manages conductivity, resulting in significant harm to West Virginia streams and potential harm to streams and wildlife in the future. Relying upon the language of 30 U.S.C. Section 1292, reading that SMCRA shall not be construed as superseding, amending, modifying, or repealing, among other laws, the CWA, as well as provisions of WVSCMRA, that also mandate water quality protection, Petitioners assert OSM should immediately address the "problem of conductivity" in West Virginia. Petitioners assert that OSM is compelled to protect water quality in the absence of properly protective measures from the State CWA authority. Petitioners support their assertions via a three-series approach, each of which is discussed in the separate headings, as noted above, and discussed in order, herein.

Petitioners cite to a variety of scholarly articles cautioning the reader of the danger of increased conductivity and the resultant biological impairment of streams.

Petitioners allege impairment resulting from conductivity has reached alarming levels in West Virginia's waters. Again, Petitioners cite to a variety of scholarly articles discussing conductivity generally to reach this conclusion. Petitioners cite to the 2009 fish kill in Dunkard Creek as evidence of inflated conductivity in West Virginia's waters, citing to WVDEP's acknowledgment that the cause of the kill was the presence of a toxic golden algal bloom.

Petitioners cite to EPA's guidance establishing benchmark conductivity in Appalachian streams in order to denigrate the practices of WVDEP relative to its permitting of "Surface Coal Mining Operations to Protect West Virginia's Narrative Water Quality Standards." This allegation is couched in five general allegations, as enumerated above in Roman numeral (i)(I-V), and discussed in order herein.

Petitioners allege that "even if sites are causing material damage to the hydrologic balance and causing or contributing to water quality standard excursions" WVDEP would not require these sites to have conductivity limitations in the permit, at the time of permit application, because it was "past the point when measures that could be undertaken under an Aquatic Ecosystem Protection Plan or an Adaptive Management Plan could be effective in reducing the permitted operation's impact on the aquatic ecosystem."

Petitioners assert that WVDEP's alleged failure to consider rainfall driven discharges is a significant oversight, as such discharges can add loads of pollutants to watersheds and extend the harm to aquatic life downstream.

Petitioners assert that WVDEP, in certain circumstances, solely rely on the Whole Effluent Toxicity (WET) approach for assessing the health of aquatic life. Moreover, Petitioners assert that WVDEP routinely fails to implement a triad approach of implementing biocriteria as recommended by EPA. EPA recommends establishing water quality standards and utilizing chemical and biological assessments in addition to WET.

Petitioners allege that WVDEP endorses the failure of surface mining operations to comply with the law by condoning failure of a WET assessment, and subsequently, not taking immediate action to prevent continued violations.

Petitioners allege WVDEP fails to place limitations on the amount of TDS or sulfates discharged.

WVDEP's Response:

WVDEP dismisses Petitioners' allegations regarding conductivity, relying on the 2012 determination by the District Court for the District of Columbia in the *Nat'l Mining Ass'n v. Jackson* case, holding that EPA exceeded its statutory authority under the CWA and SMCRA and infringed on State authority under those statutes when issuing Final Guidance relative to, among other things, acceptable conductivity levels for streams impacted by coal mining. WVDEP asserts that West Virginia does not have a water quality standard for conductivity and EPA does not have a recommended water quality standard for conductivity. West Virginia reconciles that because the Court determined EPA has a narrowed role in regulating water quality impacts from mining, OSM should not "intrude" in West Virginia's interpretation of its water quality standards "under the guise of applying SMCRA's regulations for the protection of the hydrologic balance." Essentially, WVDEP asserts OSM has no authority to regulate conductivity and should abstain from reaching a determination in favor of Petitioners, as the regulation of conductivity does not fall within OSM's purview.

OSM Analysis:

Petitioners' analysis of the science behind conductivity, while informative, offers no direct evidence supporting the allegation that WVDEP is not conforming to the approved WV program. The petition is absent of specific examples of WVDEP's deviation from the approved program. Moreover, Petitioners consistently discuss the *potential* for harm, citing to "elevated risk," and elsewhere suggesting "conductivity measured downstream from mountaintop mining sites *could be* more than twenty or thirty times higher than conductivity levels… [emphasis added]."

Petitioners do not offer any specific examples, relative to conductivity, of WVDEP not conforming to the requirements of W.Va. CSR Section 38-3-22e that defines material damage to the hydrologic balance outside the permit area as:

> any long term or permanent change in the hydrologic balance caused by surface mining operations which has a significant adverse impact on the capability of the affected water resource to support existing conditions and uses.

Additionally, Petitioners place significant weight upon EPA's decision to use its veto power relevant to the Spruce No. 1 Mine, claiming "this was the first time EPA had ever used its veto power in such a way." However, EPA has invoked its veto power of a Section 404 permit 12 times prior to the Mingo Logan Coal permit application. Petitioners also do not discuss the fact that WVDEP is in compliance with the current law, as West Virginia does not have a water quality standard for conductivity as a specific parameter.

Petitioners reference the significant fish kill in Dunkard Creek as evidence that conductivity causes material damage to the hydrologic balance. It should be noted that WVDEP did enforce the WVWPCA to remedy that situation, including issuing an order establishing parameters for chlorides and specific conductance to protect water uses. The Dunkard Creek case actually indicates WVDEP will consider specific conductance where necessary to protect designated water use.

To the extent there are impacts to water quality, whether undefined or assigned to a specific source, WVDEP can and does use both WVSCMRA and the WVWPCA program to address such issues. Petitioners have provided no evidence to the contrary.

Petitioners reference the permitting guidance WVDEP permit writers use to develop site-specific NPDES permit conditions. WVDEP has used this guidance since May of 2012, without EPA objection. OSM finds allegations regarding the appropriateness of this guidance to be within the purview of EPA.

Similar to the other allegations in this section, Petitioners make generalizations, offering only one specific example of a permit with allegedly high conductivity. Petitioners essentially allege the Whitman No. 3 Mine is as an example of where material damage must be occurring because it is allegedly discharging high conductivity water into an impaired stream. Conductivity, by itself, is not a West Virginia water quality standard and increased conductivity alone does not provide a basis for an assumption that material damage will occur. Petitioners note that a TMDL is under development for the impaired stream—the correct forum for development of water quality standards for consideration in developing controls for the permit.

Since the approval of the WV program in 1981, OSM and WVDEP have collaborated to develop a variety of action items and programs to ensure the protection of water quality. Germane to this allegation, is the program initiated in 2002, relative to the evaluation of trend stations. In an effort to improve West Virginia's assessment of cumulative hydrologic impacts, OSM and West Virginia established 236 trend stations in streams within the coal mining regions of West Virginia. WVDEP has maintained routine monitoring at those sites and OSM continues to review these stations to assess the overall impacts of mining. Conductivity and benthic measurements are included in the data.

Moreover, West Virginia has not enacted a water quality standard for conductivity and EPA does not have a recommended water quality standard for conductivity. Until a standard for

conductivity is approved for the WV program, OSM will continue to monitor WVDEP's administration of its program in the context of determining, on a case-by-case basis, if conductivity is the measurable factor that caused material damage to the hydrologic balance, not conductivity as a single parameter.

OSM Determination:

OSM notes, allegations of material damage from conductivity must be assessed on a case-by-case basis, based on an impact to the designated water use as established in WVSCMRA. West Virginia has not enacted a water quality standard for conductivity and EPA does not have a recommended water quality standard for conductivity. Until a standard for conductivity is approved for the WV program, OSM will continue to monitor WVDEP's administration of its program in the context of how it prevents material damage to the hydrologic balance including consideration of any factor, such as conductivity, if it is demonstrated to be the direct cause of material damage.

For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

h. WVDEP Fails to Ensure Adequate Bond for Sites that Discharge or May Discharge Polluted Water

Summary of Petitioners' Allegation:

Petitioners assert that WVDEP has failed to adjust bonding requirements to adequately address the ongoing cost of long term selenium, conductivity, and acid mine pollution treatment. In reaching this conclusion, Petitioners rely upon 30 U.S.C. Section 1259, and the regulations promulgated thereunder. The cited SMCRA section mandates that the amount of the bond required "shall be sufficient to assure the completion of the reclamation plan if the work had to be performed by the regulatory authority in the event of forfeiture." Additionally, Petitioners reference what they deem a "nondiscretionary" requirement of 30 U.S.C Section 1259(e), that bond be adjusted when long-term treatment becomes necessary. Petitioners allege that SMCRA requires permits to include data to assess the potential for selenium pollution.

Petitioners proclaim that OSM is "undoubtedly well aware" of WVDEP's flawed application of the bonding requirements. As support for this allegation, Petitioners cite to pending litigation and a former primacy petition relative to bonding.

WVDEP's Response:

WVDEP discredits this allegation by citing to West Virginia's Special Reclamation Water Trust Fund (SRWTF) and the Special Reclamation Fund Advisory Council (the Council) relied upon by West Virginia to ensure that the SRWTF continues to be adequately funded. In 2012, the

Council recommended an increase of the State's coal severance tax from 14.4 cents per ton to 27.9 cents per ton. Fifteen cents per ton of the tax is dedicated to the SRWTF.

WVDEP also cites to the 2011 Consent Decree entered into by WVDEP as a result of lawsuits filed by the West Virginia Highlands Conservancy, Inc., establishing a schedule for West Virginia's bond forfeiture reclamation program to obtain NPDES permits at each bond forfeiture site where water treatment is necessary.

OSM Analysis:

As a threshold matter, Petitioners' generality in relationship to this allegation and acknowledgement that "this petition simply raises bonding as yet another significant deficiency in WVDEP's program ***" without offering *any* specific examples of any deviation from the approved WV program. Moreover, considering the information available, Petitioners' allegation cannot be verified.

Petitioners cite to 30 U.S.C. Section 1259, as support for its general allegation of failure of WVDEP's implementation of the bonding requirements. However, SMCRA specifically provides "[t]he amount of the bond required of each bonded area…shall be determined by the regulatory authority." *Id.* at Section 1259(a). Moreover, Petitioners neglect to acknowledge the statutory right to operate an alternative bonding system. *Id.* at Section 1259(c). The alternative bonding system used by West Virginia—that has been approved by OSM—requires a site specific bond amount, ranging from $1,000 to $5,000 per acre and is further supplemented by a tax on coal production. W. Va. CSR Section 38-2-11.

Contrary to Petitioners' allegations, OSM has a long history of reviewing and monitoring the adequacy of West Virginia's bonding program. OSM conditionally approved the WV program, including the use of an alternative bonding system, on January 21, 1981. Following this, actuarial studies were ordered to assess the viability of the fund established to provide for future reclamation in accordance with 30 C.F.R. Section 800.11(e). After several studies and assessments were performed, deficiencies in the fund were identified. OSM, by letter dated June 29, 2001, initiated corrective action pursuant to a Part 733 notification, as OSM believed WVDEP was not conforming to the statutory and regulatory bonding requirements. Furthermore, OSM required WVDEP to submit to OSM a required amendment to demonstrate compliance with the treatment of unanticipated long-term discharges, citing required conformity with 30 CFR Section 800.11(e).

Ultimately, on May 29, 2002, OSM approved changes to West Virginia's bonding program and removed the required amendment. OSM determined that West Virginia was in compliance with the bonding provisions of 30 U.S.C. Section 1259, and the corresponding regulations, as the approved program integrated adoption of a special reclamation tax rate increase and the creation of the Council, to ensure the effective, efficient, and financially stable operation of the reclamation fund. A West Virginia court has upheld OSM's finding related to approval and sufficiency of the West Virginia alternative bonding system. This judicial determination was conditioned upon adherence to OSM's caveat in its approval that in the event the West Virginia legislature and governor do not approve the Council's recommendations, OSM will reevaluate

the adequacy of the system and if appropriate commence action to compel West Virginia to amend its program to restore consistency with Federal requirements.

As noted in WVDEP's response, the State has established a Special Reclamation Water Trust Fund as a sub-part of the Special Reclamation Fund (SRF). The approved program requires an actuarial review of the SRF every two years. As recently as July 11, 2012, OSM approved an amendment to the WV program recommended by the Council, resulting in additional money being made available to meet WVDEP's obligation to assure that it has available sufficient money to complete the reclamation plan for any areas which may be in default at any time..

OSM routinely monitors West Virginia's administration of the SRF. OSM's 2011 West Virginia Annual Oversight Report notes that the SRWTF continues to show significant progress in eliminating the backlog of reclamation, and credits WVDEP for installing water treatment facilities. In 2012, OSM's Oversight Plan highlights several noteworthy activities demonstrating further progress:

- Reclamation of 19 permits;
- Installation of five additional treatment facilities;
- Initiation of efforts to obtain NPDES permits on all of West Virginia's forfeited water treatment facilities as required by a Consent Decree originating from two U.S. District Court Orders holding that WVDEP was violating the CWA by emitting pollutants from a point source without a permit;
- Significant increase in the tax rate to maintain solvency of the SRWTF; and
- Several studies and activities commissioned by the Council to assist in the efficient administration of the SRWTF.

Additionally, pursuant to the Consent Decree referenced above, WVDEP is to issue NPDES permits for the remaining bond forfeiture sites that require water treatment. WVDEP is required to use information and analyses developed under the Consent Decree to make recommendations to the Council and the West Virginia legislature about needed adjustments to the Fund. This too supports OSM's determination that further evaluation is not needed because OSM and WVDEP are consistently and routinely involved in monitoring the viability of the alternative bonding system and in particular, the Fund.

Although not binding upon WVDEP, courts in other jurisdictions have determined that should an alternative bonding system be converted to a full cost bonding system, 30 CFR Section 800.11(e) continues to apply to sites that were forfeited or may be forfeited as a result of the system conversion or failure. Therefore, Petitioners concerns should be assuaged that given the interpretation of the regulation in other jurisdictions, WVDEP is obligated to ensure sufficient resources are available for full reclamation regardless of the status of the alternative bonding system.

In regard to Petitioners' general allegation that the potential for selenium pollution must be reviewed when assessing bond, OSM finds that the WV program provides for consideration of all impacts of pollution discharges on the bonding program. While selenium is a relatively new parameter of concern, there is no reason to believe that WVDEP and the Council ignore the costs

of selenium treatment on forfeiture sites requiring such treatment. The Council meets regularly and all issues impacting water quality and costs are addressed. The Council and the actuary consider these factors when assessing the monetary health and stability of the SRF.

To the extent Petitioners allege that West Virginia permits do not include adequate parameters to address selenium, OSM addresses this topic in Section V(f). Likewise, to the extent Petitioners allege that OSM must regulate conductivity and that bond should be adjusted accordingly, West Virginia's obligations relative to conductivity are discussed in Section V(g).

OSM is aware that some sites have developed unexpected selenium discharges and operators have constructed expensive treatment systems to treat the discharges. To date, none have been forfeited. OSM finds no reason to believe this will not be factored into deliberations by WVDEP and the Council on how to maintain a solvent, effective bonding system

OSM Determination:

Petitioners do not consider the fact that West Virginia operates an OSM-approved alternative bonding system, which incorporates a Council, consisting of diverse interests, to ensure its effectiveness, as well as an actuarial study conducted every two years. Additionally, WVDEP is successfully treating for AMD, using money from the fund. WVDEP has established a history of maintaining solvency, effectively treating water and obtaining required NPDES permits for forfeiture discharges. Moreover, WVDEP will be held to the requirements of 30 CFR Section 800.11(e) regardless of the status of the alternative bonding system. OSM will continue to monitor how WVDEP and the Council adjust for selenium, or any other new requirement, as well as the impacts associated with declining coal production and corresponding decreased tax revenue base, to ensure the SRF remains solvent. For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

V. WVDEP FAILED TO PROTECT WATER QUALITY AND QUANTITY

i. WVDEP's Failure to Properly Define Impacted Areas in CHIA Results in Harm to Watersheds

Summary of Petitioners' Allegation:

Petitioners allege that WVDEP's use of the CHIA is inadequate in numerous ways, claiming that WVDEP's primary failure to comply with the law is because it does not require the inclusion of both anticipated and existing mining operations in the cumulative impact area (CIA) considered in WVDEP CHIAs. Petitioners provided four cases to demonstrate their concerns, which are analyzed below.

Marfork Coal Company, Bee Tree Surface Mine

Petitioners allege that WVDEP failed to include anticipated mining in a CHIA that was developed for Marfork's Permit No. S-3010-04, the Bee Tree Surface Mine. Petitioners allege that the CHIA did not consider the potential impacts of two adjacent proposed permits, even

though the Eagle No. 2 and No. 3 mines were noted on the permit cultural resources map. WVDEP's administrative records reveal that the Eagle No. 2 permit (Permit No. S-3028-05) was pending while the Eagle No. 3 permit was under review. According to Petitioners, both mines should have been considered anticipated mining and factored into the analysis. After the Eagle No. 2 permit was issued, Petitioners claim the CHIA did not address the adjacent Eagle No. 3 mine as anticipated mining. Both mines were shown on the cultural resources map, yet were not discussed specifically within the text. Further, Petitioners also allege that the CHIA for the Eagle No. 2 permit, did not address all anticipated mining, citing as an example the lack of consideration of permit number S-3010-04, the Bee Tree Surface Mine. Petitioners allege that the S-3028-05 CHIA should have acknowledged the Eagle No. 3 surface mine.

Patriot Coal Company, Wildcat No. 2 Mine

Petitioners allege that the CHIA for permit number S-3016-06 Patriot Coal Company Wildcat No. 2 mine, issued January 2008, failed to consider all the anticipated mining in the CIA, which includes the proposed Patriot Coal Company Wildcat Longbottom surface mine. Petitioners allege that the CHIA for the S-3016-06 permit did not mention the proposed Wildcat Long-bottom surface mine (later issued as permit number, S-3021-07), even though it is located in the S-3016-06 CIA. Additionally, Petitioners allege that the Wildcat No. 2 CHIA does not address elements such as groundwater flow, head pressure, or the possibility of inter-basin transfer.

Apogee Coal Company, North Rum Surface Mine

Petitioners allege that WVDEP did not address all anticipated mining when performing the CHIA for the Apogee North Rum Surface Mine, permit number S-5006-05. Specifically, Apogee's permit number S-5007-01 was not considered, even though it was in operation since 2001.

Independence Coal Company, Twilight South Mine

Petitioners allege that Independence Coal Company's Twilight South Mine, permit number S-5028-08, was issued in March 2010, but failed to consider permit number S-5017-07, issued in April 2009, and S-5024-08, issued in March 2012. Petitioners state that all of the permits were within the Coal River watershed. The Coal River watershed is about 570,000 acres in size, and approximately 116,000 acres, or 20 percent of this watershed, are permitted for surface mining. Petitioners allege that approximately 42,000 acres, or seven percent, of the total acreage has been disturbed by mining since 1977. Approximately 100 miles of streams have been buried within the Coal River watershed, and another 50 miles of streams are in danger of being buried by proposed valley fills. Petitioners allege another ten miles of streams are likely to be covered by valley fills if pending permit applications are approved. Petitioners further state that when such a high amount of mining activity exists within a single watershed, the consequences of WVDEP's frequent failure to consider all anticipated mining when conducting CHIAs is devastating to the watershed.

WVDEP's Response:

Marfork Coal Company

WVDEP contends that the approved WV program requires that the CHIA assess the probable cumulative impacts of all anticipated mining in the CIA on the hydrologic balance. WVDEP states that a cultural resources map submitted as part of the Bee Tree mine permit application, permit number S-3010-04, shows that the Eagle No. 2 and Eagle No. 3 mines are contiguous to the Bee Tree permit. A permit application for the Eagle No. 2 mine was submitted while the Bee Tree surface mine permit application was under review. The approved Eagle No. 2 mine shares a common boundary with the Bee Tree mine. Further, WVDEP states that no permit application has ever been submitted for an Eagle No. 3 Mine. The CHIA written for the Bee Tree Surface Mine does not refer to either Eagle mine by name.

WVDEP alleges that the Eagle No. 2 Mine should have been considered when preparing the CHIA for the Bee Tree permit. The terms "cumulative impact area" and "all anticipated mining" are defined in W. Va. CSR Section 38-2-239. Under these definitions, the Eagle No. 2 Mine would be considered as part of "all anticipated mining" for the Bee Tree Mine, but the Eagle No. 3 Mine would not. WVDEP alleges this is because an application was pending for the Eagle No. 2 Mine at the time of the Bee Tree CHIA, but not for the Eagle No. 3 Mine. WVDEP's response states specifically that despite the lack of specific mention of the Eagle No. 2 Mine in the CHIA for Bee Tree, it is clear that the Eagle No. 2 Mine was considered in the CHIA. Furthermore, WVDEP states that in the introduction to the Bee Tree CHIA that the application is the "first new surface mine proposed for this watershed." Also, WVDEP contends the CHIA addresses material damage. This referral to more than one surface mine indicates the CHIA writer was aware of proposed adjacent mining.

Patriot Coal Company

In its response, WVDEP agrees with Petitioners' statement that the Wildcat No. 2, permit number S-3016-06, CHIA does not mention the Longbottom Surface Mine, permit number S-3021-07. This surface mine was proposed while the application for the Wildcat No. 2 Mine was under review. WVDEP asserts that while the Longbottom Surface Mine was not specifically mentioned in the CHIA by name, the CHIA does discuss the presence of previous mining in the watershed in these strata, and in doing so, addresses the Longbottom Surface Mine. Furthermore, WVDEP asserts that the CHIA discusses the water quality of Left Fork of Longbottom Creek, thereby establishing the ambient nature of the water quality from the existing mining in the CIA and what can be anticipated through the mining of the Longbottom Surface Mine. WVDEP adds that the Longbottom Surface Mine does include the proposed Wildcat No. 2 Surface Mine operation in its discussion of all anticipated mining in the CIA.

WVDEP also responds to the criticism that the CHIA fails to discuss the groundwater flow, dip, head pressure, or the possibility of inter-basin flow. The Wildcat No. 2 operation is a highwall, contour, and area mining operation. WVDEP's response states that CHIAs written for deep mines focus on the impacts anticipated from the deep mine, as justified by data and observation of any impacts from other deep mines. The CHIAs for the deep mine permits in the CIA that are

listed in the Wildcat No. 2 Mine CHIA do address these concerns and other permits in the area also assess these issues.

Apogee Coal Company

WVDEP responded that the S-5006-05 CHIA was not included in the S-5007-01 CHIA because in 2006, the agency began using a new WVDEP electronic database tool to help CHIA writers identify mining operations in CIA watersheds. WVDEP states that a flaw in the electronic tool omitted the S-5007-01 permit, which resulted in the S-5007-01 mining operation permit not being included in the S-5006-05 CHIA. In 2011, an amendment to the permit included the missing permit in the updated CHIA analysis.

Independence Coal Company and Horizon Resources

WVDEP explained the S-5017-07 permit was not included nor discussed in the CHIA for the Twilight South Mine permit (Permit No. S-5028-08) because the agency's electronic database permit layer tool to help CHIA writers identify mining operations in watersheds failed. In WVDEP's electronic database, the S-5017-07 permit was incorrectly labeled as part of S-5015-94. The permit data has since been updated to distinguish between these two permits. WVDEP states that the S-5017-07 permit was not mentioned in the CHIA; however, its permit area is shown in the CIA that accompanied the CHIA. The S-5024-08 permit was also omitted from mention in the Twilight South permit CHIA, but has been considered in a subsequent CHIA for this CIA.

OSM Analysis:

Both Federal and State CHIA requirements leave the regulatory authority with much discretion as to its preparation and the factors to be considered. The CHIA is cited in Section 501(b)(3) of SMCRA. In general, WVDEP's evaluation of a CHIA is a process that determines major or significant surface and groundwater cumulative impacts from the proposed operation, existing operations, and anticipated mining. Although there are no specific requirements for a CHIA, there are several objectives that are required for a satisfactory CHIA.

The major points to be addressed by WVDEP should include:

1. A determination of the CIA with respect to a proposed operation or a significant revision to an existing coal mining operation;
2. A determination of the extent of all anticipated mining in a defined CIA where anticipated mining shall include, at a minimum, the entire projected lives through bond release of:
    a. The proposed operation;
    b. All existing operations; and
    c. Any operation for which a permit application has been submitted to the regulatory agency; and,
3. An assessment of the probable cumulative impacts of all anticipated mining on the hydrologic balance in the CIA and a determination that the proposed operation

has been designed to prevent material damage to the hydrologic balance outside the permit area.

Petitioners allege WVDEP failed to include all anticipated mining in the CHIA. Petitioners' four examples are analyzed below.

Marfork Coal Company

While it is clear that the CHIA did not specifically mention the Eagle No. 2 and No. 3 permits as potential mine sites, the map referenced by Petitioners clearly depicts the two possible operations, indicating the CHIA developer was aware of their presence. During its review, OSM discovered that although the cultural resources map referenced the presence of the Eagle No. 3 mine, the permit application was never submitted. Ideally, the Bee Tree Surface Mine CHIA would have directly mentioned the Eagle No. 2 mine along with reclaimed and active mining operations, but it did not. However, this does not mean that the impacts of future mining were not considered during the development of the CHIA and the issuance of the permit. The CHIA text is explicit and relates to the impacts of previous surface and underground mining, and discusses in detail the surface and ground water resources of the mining operations in the CIA. Additionally, the CHIA discusses the expected changes related to the implementation of strata analysis and special handling techniques. The CHIA also provides a detailed discussion of CIA water resources that include consideration of all the existing surface water quality in the CIA watershed. Moreover, the discussion of the water resources of the watershed is thorough, and documents in detail the mining activities, water resources, and impacts occurring in the watershed as a result of mining. The document fulfills the basic CHIA requirements and conforms to the WVDEP guidelines governing CHIA drafting. These guidelines were developed in 2007, by the CHIA Quality Analysis/Quality Control (QA/QC) Panel in conjunction with OSM.

Patriot Coal Company

It is correct that the CHIA did not specifically mention permit number S-3021-07, as anticipated mining. OSM recognizes that the narrative should have addressed hydrologic elements such as groundwater flow, dip, head pressure, or the possibility of inter-basin transfer. The WVDEP CHIA author chose to primarily discuss the impacts of surface and underground mining for the affected seams in that area in broad impact terms. Although a few specific operations were mentioned, it is not indicative of all past, present, and anticipated mining impacts. OSM acknowledges that WVDEP's statement: "CHIAs written for deep mines focus on the impacts anticipated from the deep mines, as justified by data and observation of any impacts from other deep mines," may justify further oversight. Both underground and surface permit applications require consideration of all mining operation permits located in the CIA and should be discussed in detail in all CHIAs. It is one of the basic tenets of the CHIA process to discuss the addition of a proposed mining operation and its cumulative effects in a CIA, whether the proposed mining permit is a surface mine or an underground mine operation. Although there are no specific guidelines for hydrologic elements, OSM recommends the following be considered in order to accurately reflect all relative hydrologic circumstances: groundwater flow, dip, head pressure, or inter-basin transfer.

Apogee Coal Company

It was initially unclear how Petitioners concluded that existing Permit No. S-5007-01 was not considered in the CHIA for Permit No. S-5006-05 as Permit No. S-5007-01, is considered in the third page of the Apogee CHIA. However, WVDEP acknowledged in its response that initially, an omission had occurred but that permit number S-5007-01 was appropriately referenced in the amended permit for number S-5006-05. The CHIA listed 117 permits for surface and underground mines within the CIA, thus even if permit number S-5007-01, had not been listed due to human error, a single omission out of over 100 operations would not be sufficient to demonstrate a systemic failure of the WV program.

Independence Coal Company and Horizon Resources

Petitioners' cite three examples of allegedly inaccurate CHIAs completed without permits included in the analysis. Dates of permit issuance range from March 2006 to March 2010. There are over 100 mining operations that are located in this watershed, which is comprised of both pre-and-post-SMCRA underground and surface mining operations. The three permits cited by Petitioners are surrounded by over 100 mining permits and pre-SMCRA mining operations in which the size of the CIA depicted by the permit reviewer for permit S-5028-08 as a HUC-12 size (between 15 to 62 square miles) watershed.

The S-5028-08 CHIA defines the CIA and discusses in detail the numerous mining operations in the CIA, with the exception of the S-5017-07 and S-5024-08 permits. Much complex mining exists in this watershed between the pre-and-post-mining operations that can obscure current operations, such as the S-5017-07 and S-5024-08 permits. It is noted that these permits were not included; however, the omission of the two permits from the S-5028-08 CHIA does not materially degrade the integrity of the CHIA, as the document discusses the ambient water resources in the watershed that have been impacted by a myriad of anticipated mining that has occurred over the years. Ideally, permit number S-5028-08's CHIA would have been more specific and referenced and discussed these two permits in detail, but the discussion concerning the water resources of the watershed was complete.

In 2007, a joint OSM and WVDEP QA/QC Panel made numerous recommendations to improve the CHIA process. The development of the CHIA database was one recommendation that was acted upon; however, OSM is not aware if any of the other recommendations were undertaken. A few of the recommendations included development of a revised guidance document and training for both State and industry staff in the CHIA process. Other specific recommendations were also included, which would greatly improve the CHIA process in West Virginia. The draft guidance has not been finalized, but is underway.

In 2011, OSM investigated potential mining impacts between 2002 and 2010 on a 29,000 acres watershed using data derived from West Virginia stream monitoring Trend Station 071 and other sources. OSM's 2011 Oversight Report includes the following statements:

> All the information shows that discharges from mining activities, especially the underground and impoundment mining operations in this trend station watershed

> suggest a cause and effect relationship between water quality and benthic macro-invertebrate taxa. The West Virginia [WVSCI] scores trend downward with time from 'good' to 'gray zone' to 'fair'. This study shows there may be some impacts that are influenced by underground mines and other possible causes that bear further review as more mining is proposed in this watershed.

OSM has not conducted oversight on CHIAs within this watershed and does not currently know how West Virginia is using the OSM Trend Station 71 Report or information from other trend stations in their CHIA process. However, OSM–through technical assistance and grant efforts–is aware of several improvements the State is making to assist in CHIA development:

- WVDEP uses a combination of available geologic and hydrologic data provided by the applicant, adjacent hydrogeological permit information, computer models, and expert knowledge to support coal mine permitting decisions during the CHIA assessment process;
- The Natural Resource Analysis Center at West Virginia University (WVU/NRAC) has developed the basic Watershed Characterization and Modeling System (WCMS) toolbar and expanded toolbars including tools for low flow calculations, and more advanced Hydrologic System Program-Fortran (HSPF) modeling toolbar for statistical analysis of water quality data to aid in the decision making process;
- The toolbars expand the capabilities of ArcGIS 10.x (ESRI's ArcGIS Information Mapping System) to support WVDEP's Division of Mining and Reclamation permitting functions, and writing CHIAs; and
- WVDEP staff will receive training on the modeling water quality tool bar, anticipated to begin in 2014.

Recently, WVDEP, in conjunction with OSM and NRAC, developed a large scale watershed modeling tool to be used with ArcGIS to produce cumulative impact models to assess addition of a proposed mining operation to other anticipated mining in the watershed being reviewed. At the core of this modeling system, it uses the HSPF to model the load levels of certain pollutants that may influence water quality in West Virginia watersheds. The WCMS toolbar integrates WVDEP's Trend Station water quality data, permit information, digital water quality information from all permitted surface mine activity, and all known underground mining occurrences into a comprehensive flow and water quality model. Hydrologic modeling starts with a stream flow model using HSPF and then extrapolates that data to the defined CIA. For example, the WCMS toolbar can model the cumulative loading of TDS and sulfates in a watershed. This model had been developed from over six years of applied science research with WVDEP, OSM, and NRAC at a cost of greater than $600,000 over that duration.

WVDEP's electronic database of mining information includes the locations of surface mines, refuse facilities, and underground mines; however, underground mine occurrences are not as detailed. The underground mine maps in WVDEP's database reflect only underground mine subsidence control plans (SCPs) and not mine developed areas. Operational underground mines have not been updated in WVDEP's database for the last several years, making it difficult for the

permit review to be cognizant of all anticipated mining located in a CIA watershed. CHIA thoroughness is dependent upon contemplation of all mining operations, including anticipated mining, so that the permit reviewer is able to fully assess the effect of a proposed mining operation upon a CIA.

OSM is also working with WVDEP in the development of manual and training modules for the monitoring of underground mines. Both agencies have determined that predictions of underground mining impacts often lack validation and sometimes there are unpredicted hydrologic consequences. OSM and WVDEP are working on this manual to improve the monitoring of underground mines so predictions can be verified.

OSM Determination:

Petitioners' allegations that WVDEP sometimes missed and did not consider information from existing or anticipated mining permits are valid. Omissions made by WVDEP were identified and need to be addressed. OSM agrees anticipated mining data related to underground mining should have been considered in the CHIAs referenced above.

In 2011, OSM conducted a detailed review of a 29,000 acre West Virginia watershed. This review indicated that potential mining impacts needed further review, as more mining is proposed in the West Fork of Pond Fork (Trend Station 71). OSM does not know how the State is using information in the Trend Station 71 Report, or other information from the 236 trend stations in West Virginia. OSM has not conducted any CHIA oversight in recent years.

However, OSM notes WVDEP has conducted various activities to improve the CHIA process, including:

- Development of GIS layers with all mining identified;
- Continued work with WVU in the development of a large scale watershed modeling tool to be used in the ArcGIS environment to produce cumulative impact models;
- Collaboration between WVDEP and OSM to develop an underground monitoring manual and training modules to provide validation of predictions and hence better CHIAs; and
- Continued maintenance of the 236 stream trend stations where all potential mining pollutants and benthic analysis have been performed consistently since 2002.

In summary, Petitioners' allegations indicate areas where WVDEP erred during the CHIA process. However, WVDEP is currently implementing CHIA improvements, indicating that the WV program is properly being administered. Additionally, the CHIA requirements in the approved WV program grant discretion to WVDEP when developing CHIAs.

Petitioners' information combined with the fact that OSM has not conducted a specific oversight study to analyze the sufficiency of WVDEP's development of CHIAs—specifically in light of the 2007 settlement agreement terms—highlights the need for OSM to evaluate this topic.

After completion of the verification process, OSM determined information presented warrants further evaluation of this allegation to determine whether there is reason to believe WVDEP is not effectively implementing, administering, maintaining, or enforcing the approved WV program.

VI. WEST VIRGINIA DOES NOT MEET SMCRA's REQUIREMENTS FOR THE RECLAMATION OF MINE SITES

a. WVDEP Fails to Enforce SMCRA's Contemporaneous Reclamation Requirements

i. Overview of SMCRA's Contemporaneous Reclamation Requirements

ii. WVDEP Fails to Enforce These Requirements

Summary of Petitioners' Allegations:

Petitioners allege that WVDEP has failed to provide sufficient enforcement to ensure compliance with contemporaneous reclamation requirements. Specific examples include four Independence Coal Company permits in the Twilight Mine Complex in Boone County and two in Nicholas County on the Power Mountain Complex. Petitioners suggest WVDEP engaged in an abuse of discretion when granting contemporaneous reclamation variances. The petition also claims extended abatement times on three violations. Petitioners allege WVDEP knowingly failed to enforce violations.

WVDEP's Response:

WVDEP emphasizes that regulatory issues are addressed through OSM oversight and that contemporaneous reclamation is a "priority 1" issue in the PA for EY 2014 and 2015.

With regard to adequate justification for issuing contemporaneous reclamation waivers or variances on the Twilight permits, WVDEP cites to the Consent Decree entered by the U.S. District Court for the Southern District of West Virginia on February 17, 2000. WVDEP states this necessitates that all of the State regulations regarding contemporaneous reclamation be addressed in applications and also requires WVDEP to enforce requirements in the field. WVDEP asserts these two example permits were issued variances before the Consent Decree.

WVDEP states that there are currently three outstanding violations on the Twilight complex for failing to meet timing requirements, although the mines are in compliance with acreage limitations. These violations were issued on April 17, 2013. The inspector reports a substantial amount of reclamation has occurred. Further, WVDEP requires Independence to meet interim milestones and requires daily reports on the presence of reclamation equipment.

The Power Mountain Complex is not specifically mentioned in WVDEP's response.

OSM Analysis:

Petitioners' claims relative to WVDEP's abuse of discretion and improper granting of contemporaneous reclamation variances cannot be verified. WVDEP acknowledges that this may have been an issue in the past. However, WVDEP cites the *Bragg* Consent Decree as a product of any shortcomings and notes that WVDEP permit staff has complied with its requirements and required improved permit content and findings on this issue since the conclusion of the litigation.

Petitioners assert extended abatement times on four example violations. The claims are accurate. All four of the violations mentioned ran unabated for extended periods of time.

Review of WVDEP's TAGIS indicated the Spruce Run Mine could be permit number S-3018-06, and the North Mine may be permit number S-3005-98; however this has not been unequivocally confirmed. Both permits were issued NOVs, NOV #2 and NOV #25, respectively, on April 27, 2010, for non-compliance with contemporaneous reclamation regulations. Both violations were abated and terminated on November 28, 2011. The two Twilight violations were extended for two years until abatement.

Whether or not WVDEP knowingly allowed any non-compliance activity cannot be verified. All cases mentioned were issued violations for non-compliance and were abated at later dates, indicating enforcement action was taken. OSM acknowledges abatement could have occurred sooner; however, these discrete examples do not indicate a systemic program failure. Other data suggests the State does make operators remain in compliance with contemporaneous reclamation standards.

Special emphasis was given to contemporaneous reclamation during OSM oversight evaluations performed in the 2010 through 2013 EY. The CHFO performed 2,100 mine site inspections from January 1, 2008, to July 9, 2013. During that time period, oversight inspections identified:

- 16 contemporaneous reclamation violations that were deferred to the State for violations; and
- An additional six Ten Day Notices (TDNs) were issued to the State for contemporaneous reclamation violations.

This translates to approximately one percent of OSM's inspections that identified contemporaneous reclamation violations.

OSM Determination:

Petitioners have cited minimal examples of alleged deficiencies. Further, OSM's limited findings of failure to meet contemporaneous reclamation standards during oversight inspections, demonstrate this is not a systemic problem, as Petitioners allege. For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

VI. WEST VIRGINIA DOES NOT MEET SMCRA's REQUIREMENTS FOR THE RECLAMATION OF MINE SITES

b. Revegetation Requirements

Summary of Petitioners' Allegation:

SMCRA requires that mining sites be revegetated when mining ceases. WVSCMRA mandates that the revegetation consist of "a diverse, effective, and permanent vegetative cover of the same seasonal variety native to the area" that is "capable of self-regeneration and plant succession" at its naturally occurring rate. Introduction of new species is only allowed if it will further the objectives of the approved post-mining plan. In order to create stable growth, operators are required to keep the revegetated area healthy for five years after the revegetation efforts have been implemented.

OSM and the State's regulations require diverse, effective, and permanent cover that is native to the area and in accordance with the post-mining plan. Operators must also comply with 30 CFR Sections 816.113, 816.114, and 816.116, which set forth specific requirements for timing, soil stabilization, and standards for success. When creating the standards for success, OSM describes each monitoring requirement necessary for the type of land area being revegetated.

WVDEP's Response:

WVDEP does not specifically address this section, as no site specific allegations are raised.

OSM Analysis:

Petitioners provide a summary of OSM and state regulations relative to reclamation and, as such, do not present any allegations in this section.

OSM Determination:

OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

VI. WEST VIRGINIA DOES NOT MEET SMCRA's REQUIREMENTS FOR THE RECLAMATION OF MINE SITES

c. Requirements for Soils Preservation

Summary of Petitioners' Allegation:

West Virginia's regulations for proper backfilling operations and soil reclamation require soil segregation, protection of the topsoil, and use of topsoil on the backfill unless the topsoil is of poor quality. West Virginia requires operators to "[r]estore the topsoil or the best available subsoil which is best able to support vegetation." Petitioners allege WVDEP has failed to

facilitate the achievement of this goal, instead allowing for widespread soil degradation, as discussed *infra*.

WVDEP's Response:

WVDEP explains that the definition of "topsoil" includes only the A and E horizons, presenting a practical problem, as the topsoil in portions of West Virginia is very thin and little remains following clearing and grubbing in anticipation of mining. WVDEP asserts that Petitioners ignore the fact that a soil substitute must support not only tree growth, but ground cover needed to control erosion and sedimentation leaving the site. WVDEP has discretion in allowing topsoil substitutes when the applicant has demonstrated the volume of topsoil on the permit is insufficient to meet mandatory depth requirements for topsoil.

WVDEP also details variances regarding approximate original contour (AOC) and post-mining land use that are allowed pursuant to the approved WV program.

WVDEP cites to regulations not addressed by Petitioners in order to reach the conclusion that WVDEP "is complying with all the requirements of the approved State program in its approval of soil media in reclamation."

OSM Analysis:

Petitioners provide a summary of OSM and State regulations relative to soil preservation and as such, do not appear to present any allegations in this section.

OSM Determination:

OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

VI. WEST VIRGINIA DOES NOT MEET SMCRA's REQUIREMENTS FOR THE RECLAMATION OF MINE SITES

d. WVDEP Fails to Require Properly Protective Soil Removal and Reclamation Measures for Mining Sites

Summary of Petitioners' Allegation:

Petitioners allege that WVDEP is improperly requiring surface mines to ensure that soil at mining sites is properly removed, stored, and reclaimed. According to Petitioners, operators are rarely required to retain the topsoil layer, as WVDEP all too often accepts inadequate claims that the soil at many sites is of "insufficient quantity" for sustaining vegetation and therefore subject to a topsoil substitute exemption from the rule.

Where exceptions are granted, WVDEP does not impose the required conditions for exceptions. Under the exception, the operator must "remove, segregate, and preserve in a like manner such

other strata that is best able to support vegetation." SMCRA further requires mine operators to "restore the topsoil or the best available subsoil which is best able to support vegetation." Petitioners assert that the use of grey sandstone as a soil substitute is inadequate to support post-mining vegetative covers. Petitioners also believe that inadequate vegetative cover is responsible in part for flooding in the vicinity of surface mines.

WVDEP's Response:

WVDEP again explains that the definition of "topsoil" includes only the A and E horizons, presenting a practical problem, as the topsoil in portions of West Virginia is very thin and little remains following clearing and grubbing in anticipation of mining. WVDEP asserts that Petitioners ignore the fact that a soil substitute must support not only tree growth, but ground cover needed to control erosion and sedimentation leaving the site. WVDEP has discretion in allowing topsoil substitutes when the applicant has demonstrated the volume of topsoil on the permit is insufficient to meet mandatory depth requirements for topsoil.

In order to refute Petitioners' claims that "WVDEP routinely allows the use of grey sandstone for soil substitution and re-vegetation," WVDEP explains that the regulations require that all available brown weathered material be used. Moreover, when the brown weathered material is not readily available, then up to two-thirds of the mine soil may consist of the best available material or mix of materials as long as the materials meet the stringent chemical criteria detailed in W. Va. CSR Section 38-2-14-.4.c.

WVDEP asserts that grey un-weathered sandstone is often found to be better for supporting ground cover, citing to the Appalachian Regional Reforestation Initiative's (ARRI) Forest Reclamation Advisory Number 8 "Selecting Materials for Mine Soil Construction When Establishing Forests on Appalachian Mine Sites" published by the ARRI Science Team.

Additionally, WVDEP asserts that not all mine sites are reclaimed to commercial forestry or forestland post-mining land uses as Petitioners seem to allege. The determination for the most appropriate soil material used to achieve the most prudent post-mining land use is determined on a site-specific and permit-specific basis. WVDEP directs attention to the fact that soil testing is performed in determining whether material on a site can maintain vegetation.

WVDEP also asserts that Petitioners misrepresent the circumstances of the flooding in Dorothy, West Virginia in relation to the Princess Beverly mining operation. WVDEP explains that the site was in the process of been reconfigured, and was, thus, not revegetated when an extreme storm occurred exceeding the 100-year storm protections in place on the permit. WVDEP did issue violations to the operator. Ultimately, it was determined by the West Virginia Surface Mine Board that the mining operation did not contribute to any damage off of its permitted area. The site has been revegetated in accordance with the original revegetation plan. WVDEP provided graphics of the successfully revegetated permit.

OSM Analysis:

The West Virginia regulations, at W. Va. CSR Section 38-2-7.4.b.1.D, detail the procedures for selecting topsoil substitutes. These procedures require operators to recover and use the soil volume equal to the total soil volume on the mined area, as shown on the soil maps and survey, except for those areas with a slope of at least 50 percent. The regulations further require that all saved soil includes all of the soil horizons O through Cr (with O defined as the top-most horizon of soil dominated by organic material and Cr defined as the horizon or layer below the C horizon, consisting of weathered or soft bedrock, including saprolite or partly consolidated soft sandstone, siltstone, or shale).

However, these procedures further define and expand the materials that are to be recovered and used as soil substitutes when soil volumes are insufficient to meet depth requirements. If the O through Cr layers are insufficient to meet the soil volume required, the operator must recover weathered, slightly acid, brown sandstone located within ten feet of the soil surface to supplement the top layers. If recovering the sandstone within ten feet of the soil surface still provides insufficient soil volumes, the operator must recover and use all of the weathered, slightly acid, brown sandstone from below ten feet of the soil surface. Finally, if the applicant demonstrates that the recovered sandstone is still insufficient to meet soil depth requirements, then up to two-thirds of the mine soil may consist of the best available material or mix of materials. The best available material or mix of materials must include at least 75 percent sandstone with additional requirements for fine materials and acid-base accounting. The 75 percent sandstone requirement does not specify the use of either grey or brown sandstone. Therefore, it is possible that an operator must use grey sandstone as a component of the substituted soils.

In addition to the allegations regarding the use of sandstone in topsoil substitutes, Petitioners allege that, “in most sites, no vegetation of value has returned years after mining has ceased.” However, Petitioners provided no specifics on sites where vegetation is lacking or provided no information on what they consider to be vegetation of value. Additionally, Section 22-3-23 of WVSCMRA provides that the requirements for final bond release must include an evaluation of vegetation.

OSM Determination:

WVDEP’s response gave a clear explanation of the procedures for developing topsoil substitute requirements. However, it remains unclear whether these requirements are being consistently implemented in the field. Since the implementation of the WVDEP’s regulations related to forestlands and wildlife habitat in 2005, OSM has not conducted a specific oversight study to analyze WVDEP’s enforcement of its regulations regarding protection of soils and topsoil substitutes. This fact combined with Petitioners’ allegations led OSM to the determination that the information presented warrants further evaluation of this allegation to determine whether there is reason to believe WVDEP is not effectively implementing, administering, maintaining, or enforcing the approved WV program.

VII. WVDEP's ACTIONS FAIL TO COMPORT WITH THE MANDATES OF THE ENDANGERED SPECIES ACT

Summary of Petitioners' Allegation:

After providing a brief overview of portions of the Endangered Species Act (ESA), Petitioners intertwine the allegation of a violation of the ESA with the other allegations within the 733 Petition. In reaching their conclusion that WVDEP has violated the ESA, Petitioners generalize that, "the exhaustive body of evidence showing West Virginia is failing to comply with SMCRA, [demonstrates] West Virginia's mining program is failing to comply with the ESA."

In addition to this generalized allegation, Petitioners claim WVDEP is not conforming to its own guidance regarding ESA compliance by not enforcing the requirement that mining companies are to conduct surveys for endangered species, as mandated by 30 CFR Section 816.97. According to Petitioners, WVDEP guidance documents state that all permits and permit renewals require consultation with the Fish and Wildlife Service (FWS). However, allegedly, Petitioners' review of the permits issued in 2011 by WVDEP revealed that "surveys were almost never included in the permit files and consultation with the FWS was almost never requested."

Petitioners do not specifically reference any threatened or endangered species or any species that are proposed for listing. However, they reference the allegations within the body of the petition, in which fish kills and loss of diversity are mentioned generally.

WVDEP's Response:

WVDEP claims it has complied with the 1996 Biological Opinion (BiO)—described in more detail in the analysis below—and is, thus, exempt from the prohibitions of Section 9 of the ESA. Additionally, WVDEP asserts that consultation with FWS is an "informal one" and "[a] review of new permits the WVDEP approved in 2011, shows that…an endangered species survey and informal consultation was completed in every case."

OSM Analysis:

In order to assess this allegation, a brief overview of the applicable portions of the ESA is necessary. Similar to many other laws, the ESA, although not specifically listed, is included in the cadre of "other Federal laws" that may not be "superseded, amended, modified, or repealed" by SMCRA, as detailed in 30 U.S.C. Section 1292. Moreover, Section 7 of the ESA requires that prior to a Federal agency going forward with any new program (such as the 1981 approval of the WV program), it must analyze whether that program might affect any listed species of fish, wildlife, or plant and, if so, formally consult with FWS to determine if the effects of the program will jeopardize the continued existence of the protected species or destroy or adversely modify the species' designated critical habitat. *See* 16 U.S.C. Section 1536. This consultation results in FWS issuing a BiO. A determination that the proposed action may jeopardize a species is not an automatic bar to the program. There are several mechanisms by which the program may continue, albeit with "reasonable and prudent alternatives" to the proposed action that is designed to prevent jeopardy to a species. 50 CFR Part 402.

In compliance with 30 U.S.C. Section 1253(b)(1) and the ESA, OSM consulted with FWS when approving the State programs—including the WV program. FWS issued a BiO concluding there was "No Jeopardy" as a result of the programs.

In 1996, FWS determined a renewed consultation on the SMCRA program was necessary. The new BiO was issued shortly thereafter, finding there is and will be "No Jeopardy" to any species listed then or in the future as a result of OSM's implementing regulations under Title V of SMCRA, even though there will likely be some "incidental takes," so long as OSM's regulations are followed and enforced by OSM and the State regulatory authorities.

Additionally, FWS advised that the following reasonable and prudent measures must be implemented by OSM or the State regulatory authority to minimize incidental takes:

- The regulatory authority—in this case West Virginia—must implement any required compliance with any species-specific measures developed by a FWS field office and the regulatory authority (this pre-supposes consultation and often includes involvement with the permittee and OSM, if the regulatory authority deems it is appropriate);
- As possible, the regulatory authority must quantify the take resulting from activities occurring under the program, i.e., the permit. Whenever a dead or impaired individual of a listed species is found, the local FWS office must be notified within one working day of the discovery; and
- Whenever the regulatory authority decides not to implement one or more of the species-specific measures recommended by FWS, it must provide a written explanation to FWS. If the FWS field office concurs, it will provide a concurrence letter as soon as possible. However, if FWS does not concur, the issue must be elevated through the chain of command of the regulatory authority, OSM and FWS.

The above requirements are to be performed in conjunction with the requirements of the approved State program. Therefore, as long as WVDEP is implementing these rules, any incidental take of a protected species during the course of a coal mining and reclamation operation will not be subject to any penalties under the ESA. 16 U.S.C. Section 1536(b)(4) and (o)(2).

It is important to note that should WVDEP—as the regulatory authority—believe any of the criteria of the reasonable and prudent measures mandated by FWS are not being met, it has the discretion to bring this to FWS's attention. Moreover, OSM maintains a relationship with FWS. At no time in the last ten years has any disagreement between WVDEP and FWS developed to the level of requiring OSM intervention.

The single incident cited by Petitioners, the Dunkard Creek fish kill in 2009, is not in itself, indicative of an overarching or systemic deficiency in the approved WV program. Moreover, Petitioners fail to mention the corrective action, including the settlement agreement reached with CONSOL, relative to the fish kill and the resultant positive impacts upon West Virginia waterways.

Petitioners cite to the guidance documents issued by WVDEP, as support for their allegation that the ESA is being violated. Guidance documents are not part of the approved WV program; thus, OSM does not oversee these provisions. As long as WVDEP is not implementing a policy that is less stringent than SMCRA, or less effective than the corresponding regulations, OSM does not have jurisdiction over West Virginia's guidance documents. OSM discussed this issue with officials at FWS and confirmed there is no reason to believe WVDEP's actions are less stringent than SMCRA or less effective than the corresponding regulations.

Throughout the allegation, Petitioners do not reference any examples of a threatened or endangered species with affected critical habitat. A general allegation that a taking "may" or "is likely" to occur is not ripe for determination. Moreover, Petitioners do not provide details regarding how many permits were issued versus how many consultations OSM had with FWS; they simply assert "surveys were almost never included in permit files and consultation was almost never requested." The determination of "almost never" is subjective and fails to consider the discretionary component assigned to WVDEP.

Moreover, OSM consulted with FWS and determined that the statements put forth by WVDEP are accurate, informal consultation with FWS did in fact occur in 2011, and does occur on a regular basis. FWS also indicated that WVDEP staff participated in an educational training exercise to provide WVDEP staff with the ability to make threshold threatened and endangered species (T&E) determinations. Annually, WVDEP reports to FWS the number of T&E determinations made. This report details the number of permits reviewed and the habitat, if any, affected by proposed mining. As detailed above, FWS confirmed WVDEP is well within its purview, pursuant to the BiO, to make these threshold determinations.

OSM Determination:

FWS confirms WVDEP is complying with the BiO and provides substantive documentation of WVDEP complying with the mandates of the BiO. For the reasons detailed above, following the verification process OSM determined this allegation will not be evaluated pursuant to the procedures outlined in 30 CFR Section 733.12(a)(2).

Conclusion:

The procedure initiating the action advocated by Petitioners is found within 30 CFR Part 733. Specifically, Petitioners request immediate substitution of Federal enforcement of the WV program or that OSM recommend that the Secretary of the Interior withdraw approval of all or part of the WV program, as outlined in 30 CFR Sections 733.12(f) and (g). However, Petitioners' request does not consider the threshold processes established in 30 CFR Part 733. Prior to the initiation of actions requested by Petitioners, the regulation-mandated verification and evaluation processes, among other analyses, detailed in 30 CFR Sections 733.12(a)(2)-(d), must be performed.

Following the procedure established in these regulations, OSM has completed the 30 CFR Section 733.12(a)(2) verification process, and determined 14 of the 19 allegations do not warrant further evaluation. Further, OSM identified five allegations that shall be evaluated as prescribed within 30 CFR Section 733.12(a)(2). Evaluation will aid OSM in determining if there is reason

to believe that WVDEP is not effectively implementing, administering, maintaining, or enforcing these portions of the WV program as detailed in 30 CFR Section 733.12(b). This process, among the other processes required by 30 CFR Part 733, must be completed prior to implementing substitution or withdrawal of the WV program. OSM will keep Petitioners apprised of the evaluation status and OSM's conclusions following completion.

REFERENCES

SECTION III:

West Virginia Dept. of Environmental Protection, *Termination of Not Started Permits that are 3 Years Old*, Inspection and Enforcement Handbook § 3 (1993).

SECTION V:

Bragg v. Robertson, 83 F. Supp. 2d 713 (S.D. W.Va. 2000).

Hawkins, Jay W., *Statistical Characteristics of Coal-Mine Discharges on Western Pennsylvania Remining Sites*, Water Resources Bulletin, Vol. 30, No. 5, 861-869 (1994).

Kirk, E. J., R. A. Johnston, and R. Maggard, *An Evaluation of the Mayfly Abundances and WV-SCI Scores Compared to Levels of Conductivity in Several Streams in Southern West Virginia* 5-18 (2010).

Maggard, R. R., *The Effects of Specific Conductance of Water on the Benthic Macroinvertibrate Community Downstream of Coal Mining Activities* 89-124 (2009).

Messinger, T., *Comparison of Storm Response of Streams in Small, Unmined and Valley-Filled Watersheds, 1999-2001, Ballard Fork, West Virginia*, United States Geological Survey, Water-Resource Investigations Report 02-4303 (2003).

Office of Surface Mining Reclamation and Enforcement, *SWROA Oversight Report* (2009).

Office of Surface Mining Reclamation and Enforcement, *Annual Evaluation Report* (2010-2012).

Office of Surface Mining Reclamation and Enforcement, *Annual Oversight Report* (2011).

Pa. Fed'n of Sportsmen's Clubs, Inc. v. Kempthorne, 497 F.3d 337 (3d Cir. 2007).

Pond, G. J., M. E. Passmore, F. A. Borsuk, L. Reynolds, and C. J. Rose, *Downstream Effects of Mountaintop Coal Mining: Comparing Biological Conditions Using Family- and Genus-level Macroinvertebrate Bioassessment Tools*, J. N. Am Benthol. Soc., Vol. 27, No 3, 717-737 (2008).

Unrine, J. M., B. Collin, and R. C. Warner, *Selenium Concentrations and Solid-State Chemical Speciation in Black Shale Associated with a West Virginia Coal Seam*, Environmental Considerations in Energy Production, Society of Mining, Metallurgy and Exploration, Inc., J. R. Craynon ed., Englewood, CO, 438-442 (2013).

Vesper, D. J., *Selenium Distributions in Kanawha Formation Rocks from Boone County, West Virginia* 88 (2008).

Vesper, D. J., M. Roy, C. J. Rhoads, *Selenium Distribution and Mode of Occurrence in the Kanawha Formation, Southern West Virginia*, U.S.A., 73 Intl. J. of Coal Geology 237-249 (2008).

Warner, R. C. and C. T. Aqouridis, *Mining Methods and BMPs to Minimize TDS Evolution*, Presented at the West Virginia Mine Drainage Task Force Symposium, Morgantown, WV. (2011), *at* http://www.wvmdtaskforce.com/proceedings/2011.cfm.

W. Va. Highlands Conservancy, Inc. v. Norton, 238 F. Supp. 2d 761 (S.D. W. Va. 2003).

W. Va. Highlands Conservancy, Inc. v. Huffman, 625 F.3d 159 (4th Cir. 2010).

W. Va. Highlands Conservancy, Inc. v. Huffman, Civ. Action No. 2:07-0410 (S.D. W. Va. 2011).

W. Va. Highlands Conservancy, Inc. v. Huffman, 588 F. Supp. 2d 678 (N.D. W. Va. 2009).

Ziemiekwicz, P. F. and R. J. Lovett, *Natural Selenium Attenuation at the Lab, Outlet, and Watershed Scales*, 8-20 (2012).

SECTION VI:

Bragg Notice of Filing of Second Joint and Agreed Revision to the Consent Decree, Civil Action No. 99-2443(L) (S.D. W. Va. 2000).

Office of Surface Mining Reclamation and Enforcement, *Reg-8 I&E Report* (visited July 18, 2013), *at* http://ismpitfs06/Reports/Pages/Report.aspx?ItemPath=%2fINE%2fGeneral+Reports%2fInspections.

Office of Surface Mining Reclamation and Enforcement, *Reg-8 I&E Report* (visited July 9, 2013), *at* http://ismpitfs06/reports/ine/generalreports/Violations.

West Virginia Dept. of Environmental Protection, Letter to Thomas Shope, Regional Director, OSM (July 26, 2013).

West Virginia Dept. of Environmental Protection, *WVDEP TAGIS Mining Data Tools*, *at* http://tagis.dep.wv.gov/mining/.