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September 1, 2014

RE: Response to Public Comments

KPDES Nos. KYGE40000 and KYGW40000
AI No. 35050
Franklin County, Kentucky

Dear Commenters:

Thank you for participating in the public comment process for the draft general permits for coal mining in eastern Kentucky (KYGE 40000) and western Kentucky (KYGW 40000). This Response to Public Comments was prepared in accordance with Kentucky Pollutant Discharge Elimination System (KPDES) regulation 401 KAR 5:075, Section 12. The comments have been briefly described below and the division's responses to those comments and subsequent changes made to the permits and fact sheets in response to comments follow:

Comment 1: The proposed permits require virtually all permittees to conduct Whole Effluent Toxicity (WET) testing even though the current KPDES General Permit (GP), which the EPA approved consistent with the Clean Water Act (CWA), contained no such requirement. Discharges that exhibit toxicity occur infrequently and only under highly unusual circumstances. Proposed WET testing requirements will mandate massive expenditures by an industry that is under tremendous economic pressure merely to confirm that their discharges pose no threat of aquatic toxicity.

Response 1: The Division of Water (DOW) appreciates the comment and recognizes the concerns regarding the substantial increase in costs to the industry incurred as a result of the new requirements in this permit. However, DOW has determined that selected discharges from coal mining operations in eastern Kentucky generally have reasonable potential to cause or contribute to excursions above the narrative water quality standard for conductivity. In order to implement the narrative water quality standard in the general permit, KYGE4 requires WET testing pursuant to 40 CFR 122.44(d), in-stream biological monitoring, and in-stream water-quality trend analyses for specific conductivity, total suspended solids, and total sulfates. This monitoring is the means by which the narrative standard for conductivity is to be measured. If the monitoring indicates impacts

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from the discharge to the biological integrity of the stream the general permit requires the permittee to develop and implement an adaptive management plan.

KYGW4 includes WET testing to address the potential for discharges from non-reclamation areas to cause or contribute to an instream excursion above the numeric criterion for whole effluent toxicity.

Comment 2: The Toxicity Reduction Evaluation (TRE) process is too long, and must be revised to reduce or halt a discharge that violates the initial and repeated WET tests, and to immediately move into the TRE process.

Response 2: DOW appreciates the comment and recognizes that the TRE process can be prolonged. However, the TRE requirements in Section 3 of the general permit are consistent with EPA's Whole Effluent Toxicity (WET) Control Policy in 40 C.F.R. 136 and the 1991 Technical Support Document for Water Quality-based Toxics Control.

Comment 3: Western Kentucky needs chronic WET testing for the re-mining of old areas in which water quality problems already exist, such as acid mine drainage from past mining activities, to avoid the situation that unfolded in eastern Kentucky. Chronic WET testing should be placed on underground and Preparation Plants for continuous flow.

Response 3: DOW appreciates the comment. The determination of when and which (chronic or acute) WET testing requirements apply depends on the outfall frequency and duration of flow. Chronic WET testing is required for those outfalls that exhibit a "continuous flow" as defined in the permit, i.e., "without cessation or has an average flow of 96 hours or greater". Outfalls with continuous flows are excluded from coverage under the general permit for western Kentucky (KYGW4) and require an individual permit.

Comment 4: WET testing requirements should include only 100% effluent and based on that concentration because many streams will be comprised of 100% effluent. 50% mortality and 25% inhibition of reproduction or other biological process are too weak to be protective of aquatic life.

Response 4: The DOW appreciates the comment and agrees that WET testing should be conducted using 100% effluent for discharges covered under the applicable general permit. The WET testing requirements in the general permit are required to be performed on 100% effluent. The LC₅₀ and the IC₂₅ concentrations provide the basis for developing water quality standards, established in the 1991 Technical Support Document for Water Quality-Based Toxics Control. Section 3.9.1 of the general permit for eastern Kentucky (KYGE4) and Section 3.9 of the general permit for western Kentucky (KYGW4) establish noncompliance with the acute toxicity limit if the LC₅₀ is less than 100% effluent. Section 3.9.2

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of KYGE4 establishes noncompliance with the chronic toxicity limit if the IC₂₅ for reproduction or growth is less than 100% effluent.

Comment 5: Include numeric limits on sulfate in the permit.

Response 5: The DOW appreciates the comment. However, there is no Kentucky water quality standard for sulfate to protect Warm Water Aquatic Habitat. The only water quality standard in 401 KAR 10:031 for sulfate is the Human Health Domestic Water Supply water quality standard (250,000 µg/L) which would be impractical to implement as a limit in these general permits because the reasonable potential analysis must evaluate the potential to violate the water quality standard at the nearest downstream drinking water intake, which must be done on an individual basis. If “reasonable potential” to cause or contribute to excursions above a water quality standard exists requiring an effluent limit not in the general permit, the applicant will be required to obtain an individual permit. DOW has determined that certain discharges from coal mining operations in eastern Kentucky generally have reasonable potential to cause or contribute to excursions above the narrative water quality standard for conductivity. In order to implement the narrative water quality standard in the general permit, KYGE4 requires WET testing pursuant to 40 CFR 122.44(d), in-stream biological monitoring, and in-stream water-quality trend analyses for specific conductivity, total suspended solids, and total sulfates. This combination of limitations and monitoring is the means by which the narrative standard for conductivity is to be measured and implemented.

Comment 6: A continuous discharge should be forty-eight rather than ninety-six hours.

Response 6: The DOW appreciates the comment. The definition of “continuous discharge” is codified in 40 CFR 122.2, which is applicable in these KPDES general permits. 40 CFR 122.2 defines a “continuous discharge” as a “discharge that continues without interruption throughout the operating hours of the facility, except during infrequent shutdowns, process changes, or other similar activities.” For the purposes of the coal general permits, discharge duration is required to determine if the discharge would be subject to acute or both acute and chronic water quality criteria. 401 KAR 10:001 Section 1 (10) states the “Chronic criteria means the highest in-stream concentration of a toxic substance or an effluent to which organisms are able to be exposed for ninety-six (96) hours without causing an unacceptable harmful effect.” 401 KAR 10:031 Section 6 Table 1, Footnote 7 states: “Chronic = protective of aquatic life based on ninety-six (96) hour exposure that does not exceed the criterion of a given pollutant more than once every three (3) years on the average.” 401 KAR 10:001 Section 1(2) "Acute criteria" means the highest in-stream concentration of a toxic substance or an effluent to which an organism can be exposed for one (1) hour without causing an unacceptable harmful effect 401 KAR 10:031

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Section 6 Table 1, Footnote 6 states: “Acute criteria = protective of aquatic life based on one (1) hour exposure that does not exceed the criterion for a given pollutant.”

Comment 7: The instructions for form NOI-KYG04 state that an e-NOI submitted by a corporation must be signed by a “principal executive officer of at least the level of vice president”. This provision should be expanded to include the requirements of 40 CFR § 122.22.

Response 7: DOW appreciates and agrees with this comment. The DOW has amended the general permits to include all signatory authority provided in 40 CFR § 122.2.

Comment 8: The permits should allow representative outfalls for WET testing due to lack of qualified labs. Alternatively, the Division of Water should require WET testing on outlets which are non-precipitation induced like West Virginia.

Response 8: A representative outfall can be used if it is demonstrated to be in accordance with Section 7.2 of KYGE4 and Section 6.2 of KYGW4. WET is required when reasonable potential exists for discharges to cause or contribute to an instream excursion above the numeric criterion for whole effluent toxicity pursuant to 40 CFR § 122.44(d)(iv) The permits require WET testing on any outfall that demonstrates reasonable potential, including both precipitation and non-precipitation induced discharges.

Comment 9: Wastewater resulting from coal mining contains trace level concentrations of numerous substances not specifically regulated under the Clean Water Act (CWA) or its standards. Courts have reached a number of different conclusions regarding whether the discharge of such unregulated pollutants is authorized under the permit shield afforded by U.S.C. 1342. In general, the courts have considered whether the discharge of such pollutants was known to and contemplated by the permit-issuing agency at the time of permit issuance. This issue should be addressed directly in both GPs with statements confirming that DOW contemplates and authorizes the discharge of such substances, that their environmental effects are adequately addressed by the provisions of the permit, and that no additional disclosure of such substances is necessary other than as required by the e-NOI.

Response 9: The DOW appreciates the comment and the concern regarding other pollutants. 40 C.F.R. § 122.21 [Note 1] discusses the scope of pollutants required for a coal mining application. In addition, the agency has clarified in the fact sheets the pollutants that were considered in developing the general permit.

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Comment 10: The Division should eliminate Section 5 and Section 6.9 of proposed KYGE4, which mandate an in-stream water quality trend monitoring program leading to re-evaluation of the facility's Best Management Practices (BMPs) if specified trigger levels are reached. The baseline would be established by one annual sample. The water quality trigger would consist of two quarterly average pollutant concentrations in the "discharge" greater than the baseline, combined with 10 or 20 percent increases in in-stream water quality over baseline. The requirement is unnecessary to implement any aspect of the CWA Section 402 permit program, would impose significant costs on coal operations subject to the requirement, and would produce data that would be of little or no value in protecting in-stream water quality.

Since the "discharge" would be measured end-of-pipe, it would be expected to exceed in-stream concentrations under almost all circumstances and, since in-stream pollutant concentrations vary seasonally with precipitation, it can be expected that all facilities subject to the requirement will be in a constant state of BMP review even though in-stream water quality is totally satisfactory.

Response 10: DOW appreciates the comment. 40 C.F.R. § 122.44(k)(4) authorizes the use of BMPs to control the discharge of pollutants, stating: "The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA." Requiring the permittee to develop individual benchmarks to judge BMP effectiveness is consistent with general permits issued by EPA. For example the EPA Vessel General Permit requires permittees to evaluate the BMPs employed and take corrective actions to resolve any problems. BMPs are the design, construction, operational and maintenance standards established to ensure the activity minimizes environmental impact. All coal mining activities are required to obtain a Surface Mining Control and Reclamation Act (SMCRA) permit from the Kentucky Department for Natural Resources. This SMCRA permit requires the site operator to develop and implement a mining plan approved by the Division of Mine Permits, that meets uniform standards established in Kentucky Administrative Regulations Chapter 405, and that apply to all coal mining and processing activities.

As noted previously in Response 1, DOW has determined that discharges from certain coal mining operations in eastern Kentucky generally have reasonable potential to cause or contribute to excursions above the narrative water quality standard for conductivity. In order to implement the narrative water quality standard in the general permit, KYGE4 requires WET testing pursuant to 40 CFR § 122.44(d), in-stream biological monitoring, and in-stream water-quality trend analyses for specific conductivity, total suspended solids, and total sulfates. If the monitoring indicates changes in water quality resulting from the discharge the general permit requires the permittee to develop and implement an

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adaptive management plan. The two conditions required to evaluate the BMPs are:

- 1) Quarterly average pollutant concentrations in the discharge are greater than the in-stream baseline concentrations for those pollutants; and
- 2) The rolling average of two consecutive calendar quarters of in-stream concentrations for the same pollutants are:
 - a) 10 percent greater than the baseline concentrations for two consecutive calendar quarters, or
 - (b) 20 percent greater than the baseline concentrations for any calendar quarter.

Comment 11: The draft permits fail to apply Alternate Precipitation Effluent Limitations (APELs) to discharges of total recoverable iron on the basis that the effluent limitations for total recoverable iron are water quality based and some are technology based. Failure to apply APEL to the technology based effluent limitations for total recoverable iron renders the limitations more stringent than comparable federal limitations and violates KRS 224.16-050.

Response 11: The DOW appreciates the comment and concurs that current total recoverable iron limits in the draft permits are Water Quality Based Effluent Limitations (WQBELs) and Technology Based Effluent Limitations (TBELs). 40 C.F.R. 434 provides that, upon demonstrating that a qualifying event has occurred, the monthly average for total recoverable iron concentration shall be the WQBEL of 3.5 mg/l in lieu of the 3.0 mg/l. A footnote has been added to the general permits to reflect this change.

Comment 12: NetDMR was not designed for coal permit reporting. The program is slow and the database may be too weak to handle the vast quantity of points that will be uploaded. Currently it takes 1 to 15 minutes for approval to upload a single sewage Discharge Monitoring Report (DMR). Manual data entry into NetDMR is unrealistic and files would have to be imported.

Response 12: The DOW appreciates the concern expressed in the comment. DOW is sensitive to the limits of EPA's NetDMR system. DOW is moving to the NetDMR system to comply with the requirements of the pending federal e-Reporting Rule. This proposed rule has been through the public comment process and is in final revision. The agency anticipates that the e-Reporting Rule will be final on January 1, 2015.

Upload files are not limited to a single permit and EPA does not limit the number of outfall-parameter rows that can be uploaded at one time. The upload process completes automatically without user intervention within about one minute. Once the upload has completed, the NetDMR system evaluates the upload and provides a response within approximately fifteen minutes regardless of the size of the file being uploaded. The user is required to take additional action only if the format of the upload file was incorrect.

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DOW is working with EPA to resolve NetDMR deficiencies as issues are identified (e.g. upload file performance and the ability to upload DMR comments have been identified by EPA as among the highest priority issues for the new release of NetDMR, which is anticipated in early 2015).

DOW will be providing training specifically for the coal industry regarding using NetDMR. DOW Permit Support personnel are also available to provide assistance with formatting and troubleshooting NetDMR issues. Any person needing assistance with NetDMR can contact DOW Permit Support personnel via netdmr@ky.gov.

Comment 13: The No Discharge (NODI) Code 9 used for not collecting the minimum number of samples is confusing and inappropriate for reporting only 1 flow per monitoring period. The Division should create a separate No Discharge (NODI) code for Not Constructed outfalls.

Response 13: DOW appreciates the comment. NetDMR reporting will significantly change the current reporting requirement and methods, and coal-specific training information will be provided on DOW's website. In response to this comment, DOW requested and received EPA approval for the NODI Code of "N" for "Not Constructed." DOW has added clarification to EPA-provided NODI Code for NetDMR.

Comment 14: NODI Code C is used for no flows and requires adding a statement certifying that the sediment control structures were constructed, maintained, and operated in accordance with DNR-approved performance standards. Copies of all PE-certified outlets are on file in Frankfort, and easily accessible to the public. Only one attached statement per KPDES permit, and one rainfall data document, should be required when signing DMRs to save hours in signatures and attachments.

NODI Code J is used for reporting make-up water from sediment structures to Prep Plants. These are closed circuits and should not be a required attachment to the DMR.

Response 14: DOW appreciates the comment. DOW believes NODI Codes C and J are appropriately used as listed above. The Department of Natural Resources requires the attachments and certifications to be addressed on the DMRs.

DOW will accept a single document for each permit with all of the required information, including any required rainfall data for each monitoring period. DOW will also accept attaching the document in NetDMR to a single DMR from the monitoring period provided the document clearly indicates what monitoring period and outfalls are represented in the document.

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Comment 15: The reclamation limits in the permit are too lenient. A cited study shows that selenium peaks approximately seven years after mining begins, and continues on a slow decline for an additional twenty years. The cabinet needs to provide appropriate permit limits based on a reasonable potential analysis for reclamation sites.

Response 15: The DOW appreciates the commenter's concerns regarding selenium in reclamation discharges. The permits state that an outfall may not transition to reclamation area effluent limits and monitoring requirements until certain conditions are met, including that the effluent from the sediment control structure is substantially compliant with the water quality-based effluent limits. If the effluent from an outfall is determined to be exceeding the selenium limits, the permit would not be transitioned to reclamation status.

Comment 16: Eastern Kentucky and West Virginia share many coal seams and therefore pollutants, so the general permit for eastern Kentucky should contain an aluminum limit similar to those of West Virginia, or aluminum monitoring.

Response 16: The DOW appreciates the concern. Kentucky's water quality standards do not include aluminum criteria. The water quality standards do include a general narrative standard at 401 KAR 10:031, Section 2(1)(d) which states that surface waters shall not be aesthetically or otherwise degraded by substances that injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life. As the general permit includes Whole Effluent Toxicity, in accordance with 40 CFR § 122.44(d)(1)(v) to address other narrative standards, DOW does not agree that an effluent limit for monitoring for aluminum is necessary.

Comment 17: The permit should have stronger selenium limits. This permit uses Kentucky's newly weakened selenium standards, which are currently being challenged in court. At the very least Kentucky should agree to adopt any changes to the selenium standard that may come out of that court case. Should use limits on Se that are strong and enforceable.

The fish tissue effluent limit and sampling procedures will not protect sensitive species. The Selenium limits of 5µg/l for chronic and 20 µg/l for acute should be used in this permit.

The sampling procedures allow for extirpation of entire fish populations from direct receiving streams.

The sampling procedures will not yield representative samples of fish tissue with collecting as little as 2 individuals in each composite sample.

Response 17: DOW shares the commenter's intent to ensure proper protection of fish. The division disagrees with the commenter's conclusion that the new chronic water

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quality criteria for selenium are less protective than the previous chronic criterion. DOW is confident that the current chronic criteria, in their reliance on fish tissue, are more protective and defensible based on current scientific understanding and evidence. The division is required to use its current water quality criteria for selenium, which were approved by EPA and are appropriate and enforceable.

Regarding the comment that the fish tissue effluent limit and sampling procedures will not protect sensitive species, current scientific evidence establishes the lack of protection against selenium toxicity based on water column limits, the division disagrees. In 1998, the Environmental Protection Agency (EPA) held a *Peer Consultation Workshop on Selenium Aquatic Toxicity and Bioaccumulation*. The conclusion of that workshop held that tissue more accurately predicts selenium-related toxicity effects. In vivo study data conclude fish are the most sensitive aquatic organism to selenium toxicity, which led to the EPA drafting fish tissue-based selenium criteria in 2004. The subsequent withdrawal of the proposed criteria resulted from the criteria not being derived with full adherence to the method by which toxic criteria are developed.

The USEPA subsequently called for additional data. The Society of Environmental Toxicology and Chemistry (SETAC) called for the Pellston Workshop (2009) on selenium, and included scientists and regulators from academia, federal agencies, state agencies, consultants and the regulated industry. The Pellston Workshop published a compendium, *Ecological Assessment of Selenium in the Aquatic Environment*, upholding that dietary exposure to (primarily organic) selenium compounds result in toxicity.

Regarding the enforceability of the selenium water quality standard in the permit, the selenium monitoring and limitation requirements established in the general permits are clearly enforceable. The general permits require that discharges from any KPDES outfall classified as an in-stream sediment control structure be monitoring twice per month and meet a monthly average for total recoverable selenium of 5.0 µg/L and a daily maximum of 20 µg/L (see Table 1 of KYGW400000; Table 2 of KYGE400000). If the monthly average concentration of total recoverable selenium exceeds 5.0 µg/l the permittee is required to collect and analyze fish tissue for selenium residue to determine compliance with the fish tissue limitation. This is done in accordance with Section 2.7 and Section 2.9 of KYGW4 and KYGE4, respectively, as well as Appendix A: Methods for the Collection of Selenium Residue in Fish Tissue Used to Determine KPDES Permit Compliance. If the monthly average concentration of total recoverable selenium exceeds 5.0 µg/l and the permittee is unable to obtain fish tissue, the 5.0 µg/l trigger becomes the effluent limitation and there is a permit violation (see Section 2.7.2(3) of KYGW4 and 2.9.2(3) of KYGE4).

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Regarding the comment that the sampling procedures allow for extirpation of entire fish populations from direct receiving streams, the division disagrees. The sampling procedures to acquire fish tissue for residue analysis were designed with the need to ensure that the fish collected are as proximal to the permitted discharge as practical, while recognizing the distribution of fish populations in headwater stream habitats is not uniform. Given that selenium uptake is generally distributed evenly across a fish community in any given watershed, the collection several representative fishes from the community can be used to determine total selenium residue concentration.

Regarding the comment that the sampling procedures will not yield representative samples of fish tissue, the division disagrees. Selenium is not strongly biomagnified in the food web and the opportunity for bioaccumulation is evenly distributed across the fish community, it is just as meaningful to monitor fish species representative of the herbivore and invertivore feeding strategy as the piscivore (top predator) fishes. Additionally, it is unnecessary to sample a large number of individual fish to ensure protection from selenium toxicity – even with certain expected variance in fish populations there is an inherent protective component (margin of safety) in the methodology required to develop water quality criteria. To ensure representation of the most vulnerable class of fish to selenium toxicity in tissue samples, DOW requires that all individual fish collected are of a size that represents reproductive maturity and are within an established range of body size for all species. The common fish taxa to consider when sampling in headwater and wadeable streams are provided in the DOW's standard operating procedure as guidance to the regulated community and third party interests. When intermittent streams cease flowing, many species will aestivate in pools rather than move into perennial streams not suitable to their life-history, thus maintaining the close connection to an intermittent receiving stream.

Comment 18: The Division of Water has provided a compliance schedule for existing facilities that delays monitoring and compliance with the selenium effluent limits until January 1, 2016 but has not provided any justification for the delay, nor a statement that a discharger cannot immediately comply with the water quality-based effluent limitation upon the effective date of the permit. In accordance with 40 C.F.R. §122.47(a)(1) compliance schedules must be designed to achieve compliance “as soon as possible”.

Response 18: Section 303(e)(3)(F) of the CWA authorizes the use of a compliance schedule to meet effluent requirements based on new or revised water quality standards provided the compliance schedule duration does not exceed that specified in Sections 301(b)(1), 301(b)(2), 306 and 307. DOW anticipates existing facilities will need to make modifications to their operations to achieve compliance with the revised water quality standards for selenium therefore a compliance schedule has been included in the permits. DOW agrees that 40 C.F.R. §122.47(a)(1)

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requires the compliance schedule be designed to achieve compliance as soon as possible. The language in the general permits has been modified to require compliance “as soon as possible but no later than January 1, 2016”.

The compliance schedule for existing facilities implementing a new requirement is provided in 40 CFR 122.47(a). 40 CFR 122.47(a) states that a permit may when appropriate specify a schedule of compliance leading to compliance with the CWA and regulations. Monitoring is a regulatory requirement established in 40 CFR 122.48(b) and is further supported by 40 CFR 122.41(j) which establishes how monitoring results are to be reported.

In addition, concerns have been expressed regarding the availability of sufficient laboratory infrastructure in the state and the region for the substantial demand on sample collection, fish tissue analysis and WET analysis created by these new general permit requirements. It is estimated that the division will receive between 1200 and 1500 NOIs for coverage under these general permits. The immediate demand for these services may surpass the local and regional capacities.

Finally due to the expected volume of renewal NOIs the agency has changed due date for submission of the NOI to 180 days from the effective date of the permit. As a practical matter, because the agency will be processing new and expanded operations for the first several months after this permit becomes effective, the compliance schedule for existing facilities will only extend compliance with the new general permit coverage a few months. The fact sheet has been amended to clarify the allowance of a compliance schedule.

The division is finalizing the eNOI process and will notify potential applicants as soon as the eNOI process is fully available for use.

Comment 19: The approval of monitoring at only representative outfalls (ROs) is a major modification to the permit that requires public participation and EPA oversight. The permits violate the Clean Water Act by failing to include these processes.

Response 19: The DOW appreciates the comment and has clarified its obligations regarding permit modification and public notice. These general permits are proposed as new permits and do not constitute the modification to an existing permit. In accordance with 40 C.F.R. §§ 124.6, 124.8, and 124.9 DOW prepared draft permits and fact sheets, and developed an administrative record for the general permits. The fact sheets and draft permits were public noticed, made available for comment, and a public hearing held in accordance with 40 C.F.R. §§ 124.10, 124.11 and 124.12, and 401 KAR 5:075, Section 12.

The use of representative outfalls must be approved in accordance with the requirements of Section 7.2 of KYGE4 and Section 6.2 of KYGW4. Therefore, the employment of representative outfalls would not constitute a modification of the general permit.

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In light of concerns expressed in comments received, DOW will modify its process regarding public notification of the receipt of NOIs and issuance of coverages under KYGE4 and KYGW4. DOW will provide email notifications of receipt of NOIs and final decisions by the division to all individuals on the Public Notice listserv. Additionally, DOW posts daily on the Department for Environmental Protection's eSearch website all issuances of these general permit coverages. By selecting the AI Details link, an interested party can review the coverage letter, the electronic notice of intent (NOI), and other supporting data. This approach is intended to address concerns regarding the transparency of the NOI review process and to ensure that the public is aware of the division's decisions regarding the review and consideration of the NOIs.

In addition, to the extent that coverages issued under a general permit are found to be final agency determinations by which any person is aggrieved, the right to a hearing would be as provided for in KRS 224.10-420(2)¹ and the regulations promulgated thereunder.

Comment 20: The use of representative outfalls is not authorized by the Clean Water Act. All discharges from a covered facility must comply with all applicable effluent limitations in accordance with 40 C.F.R. §122.41(a). The only way to determine such compliance is to actually monitor the effluent. The Division of Water claims that 40 C.F.R. §122.41(j) provides the basis for allowing monitoring at representative outfalls. This regulation mandates samples and measurements taken for purpose of monitoring shall be representative of the monitored activity but it does not justify a permit condition that allows numerous discharge points to go completely unmonitored. Other regulations, 40 C.F.R. §122.48(b) requires the permit to specify the required monitoring type, intervals, and frequency sufficient to yield data which is representative of the monitored activity including continuous monitoring when appropriate.

Response 20: DOW appreciates the comment. The requirements regarding Effluent Characteristics in the permit application are laid out in 40 C.F.R. §122.21(g)(7). 40 C.F.R. §122.21(g)(7)(i) and provide that "When an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that quantitative data as applying to the substantially identical outfall." The data collected from a representative outfall is then used to determine reasonable potential and establish effluent limitations and other conditions within a permit. The use of representative outfalls for compliance monitoring of effluents that are "substantially similar" was included in EPA's 2008 Multi-Sector General Permit which provides for the use of representative outfalls for compliance monitoring. The general permits include explicit criteria in the permit as to what will be accepted as "substantially similar"

Comment 21: The carbonaceous biochemical oxygen demand (CBODs) and ammonia limits found in the permits are not protective. EPA has recently developed revised

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ambient water quality criteria for ammonia including different criteria for when mussels are present.

Response 21: DOW appreciates the comment regarding appropriate limits. DOW has included in the general permits effluent limitations that are protective. DOW has not adopted EPA's recent recommended national water quality criterion for ammonia; this recommendation followed Kentucky's most recent triennial review of water quality standards. The effluent limitations for CBOD and ammonia are derived from the current water quality standards in 401 KAR 10:031 and are applied using the EPA model QUAL2K. The limits in the permit were developed using the most conservative assumptions for this model.

Regarding the protection of mussel species, the general permits exclude coverage for coal mining and/or processing operations that propose to directly discharge into a receiving water body designated as an Outstanding State Resource Water (OSRW), listed in Table C of 401 KAR 10:026, Section 5.

Comment 22: The General Permit must exclude all operations that discharge to streams where endangered species have been documented or tributaries to those streams regardless if they have been listed as an OSRW.

The current exclusion regarding OSRWs that support federally listed Threatened and Endangered Species as listed in Table C of 401 KAR 10:026, Section 5 is inadequate to fully protect these species. All streams that support such species are not listed in Table C and the designation process to list a stream as an OSRW occurs only once every three years thereby allowing potential impact on such a species. Additionally, discharges to tributaries to such streams are likely to contribute to impairment that would adversely impact the species. Therefore the exclusion should be expanded to cover streams that support federally listed threatened and endangered species not yet listed and the tributaries to such streams or those listed in Table C.

Response 22: DOW appreciates the comment and the agency shares the concern to protect Kentucky's population of threatened and endangered species. If a stream supports federally listed species it automatically qualifies to be designated as an Outstanding State Resource Water (OSRW). However, in order for that stream to be designated as an OSRW the DOW must undergo the procedures for re-designation of the water body as an (OSRW) outlined in section 2, 3 and 4 of 401 KAR 10:026. After being designated an OSRW, the additional requirements of 401 KAR 10:31 Section 8 apply. The commenter is correct that new listings for OSRWs are generally done at the time of the triennial review, when DOW reconsiders its water quality standards and considers changes. Regulatory changes are required to follow the process laid out in KRS 13A.

Although the exclusion is limited to those waters listed in Table C waters that would be listed as OSRWs pursuant to the automatic inclusion requirements of

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401 KAR 10:031, Section 8(a)3, DOW retains the authority (see Section 1.2 (6)) of the general permit to require an individual permit for waters not yet listed in Table C, or for discharges to tributaries of waters that support threatened or endangered species, if the division determines that the discharges are more appropriately controlled through the issuance of an individual permit.

Comment 23: Kentucky's chronic freshwater standard for iron is 1 mg/L, yet the monthly average limit for iron in this permit is 3 mg/L. The exception states that "the chronic criterion for iron shall not exceed 3.5mg/L if aquatic life has not been shown to be adversely affected." However, the permit fails to establish adequate requirements to ensure that aquatic life is not adversely affected.

Response 23: DOW appreciates the comment. The chronic water quality criterion for iron is 3.5 mg/L iron if aquatic life has not been shown to be adversely affected (401 KAR 10:031, Section 6, Table 1). If a coal mine directly discharges to waters where aquatic life has been shown to be adversely affected by iron, with or without a TMDL, the division would apply the 1 mg/L water quality criterion. The division will use all available data in making this decision and exercise its authority under Section 1.2 (6).

Comment 24: The cabinet failed to address the potential for bench sediment control structures that cause violations of acute water quality standards. Acute selenium & WET testing may be appropriate for these outfalls, but it appears that no reasonable potential analysis (RPA) was conducted.

Response 24: DOW did perform a reasonable potential analysis for selenium on bench sediment control structure discharges, the results of which are provided in Table 10 of the KYGE40000 Fact Sheet. The results of that analysis indicate that approximately 1.4% of the samples analyzed exhibited reasonable potential of 90% or greater of the current acute water quality standard. Based on this analysis the division determined that reasonable potential did not exist to justify imposition of selenium monitoring or limitations on bench sediment control structures in KYGE40000. However, if reasonable potential for exceedance of the applicable water quality standard for selenium is demonstrated by a facility in a bench sediment control structure discharge as a part of the application process, that facility will be required to obtain an individual permit.

Comment 25: The permit should include limits on more pollutants, especially those commonly found at coal mines. States use a "reasonable potential analysis" (RPA) to determine what pollutants need to be included in a permit. Reclamation areas need limits for chlorides, heavy metals (Mg, Fe, Se, Hg, etc) and TDS.

Response 25: DOW appreciates the comment. DOW has excluded from general permit coverage and requires an individual permit for discharges that demonstrate a

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reasonable potential for one or more pollutants of concern that are not listed in the permit.

Please note that DOW retains the authority and the option to make site-specific determinations regarding the appropriateness of the use of the general permit for any operation.

Comment 26: The permits fail to demonstrate that the application of best management practices (BMPs) is sufficient to prevent violation of narrative water quality standards (WQS). The Division of Water should establish uniform protocols for BMPs, and they should be available for public review when an applicant seeks general permit coverage.

Response 26: DOW appreciates the comment. 40 C.F.R. § 122.44(k)(4) authorizes the use of BMPs to control the discharge of pollutants, stating: “The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.” BMPs are design, construction, operational and maintenance standards established to ensure the activity minimizes environmental impact. Coal mining operations must obtain a Surface Mining Control and Reclamation Act (SMCRA) permit from the Kentucky Department for Natural Resources (DNR). The surface mining permit requires the site operator to develop and receive DNR approval for a mining plan that complies with the design, construction, operational and maintenance standards in 405 KAR Chapters 1, 3, 7, 8, 16, 18 and 20. These regulations impose uniform best management practices that must be applied by all coal mining and processing activities. Requiring the permittee to develop individual benchmarks to judge effectiveness of the BMPs is consistent with general permits issued by EPA. For example the EPA Vessel General Permit requires permittees to evaluate the BMPs employed and take corrective actions to resolve any problems.

As noted previously in response to Comment 1, DOW has determined that certain discharges from coal mining operations in eastern Kentucky generally have reasonable potential to cause or contribute to excursions above the narrative water quality standard for conductivity. In order to implement the narrative water quality standard in the general permit, KYGE4 requires WET testing pursuant to 40 CFR 122.44(d), in-stream biological monitoring, and in-stream water-quality trend analyses for specific conductivity, total suspended solids, and total sulfates. If the monitoring indicates changes in water quality resulting from the discharge the general permit requires the permittee to develop and implement an adaptive management plan. The two conditions required to evaluate the BMPs are:

3) Quarterly average pollutant concentrations in the discharge are greater than the in-stream baseline concentrations for those pollutants; and

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- 4) The rolling average of two consecutive calendar quarters of in-stream concentrations for the same pollutants are:
 - b) 10 percent greater than the baseline concentrations for two consecutive calendar quarters, or
 - (b) 20 percent greater than the baseline concentrations for any calendar quarter.

Comment 27: Discharges do not fit NPDES regulatory requirements for general permits which are intended to authorize discharges from categories composed entirely of storm water or have “substantially similar” discharges. 40 C.F.R. § 122.28(a)(2). General permits may regulate only one or more categories or subcategories of discharge or sludge use or disposal practices in §122.28(a)(1), 40 C.F.R. § 122.28(a)(2)(i) Stormwater, or 40 C.F.R. § 122.28(a)(2)(ii) one or more categories or subcategories of point sources other than stormwater or of “treatment works treating domestic sewage”. In either case, each category or subcategory must involve the same or substantially similar types of operations, discharge same types of waste, require same effluent limitations, operating conditions, require same or similar monitoring, and in the Director’s opinion, are more appropriately controlled under a general permit.

Response 27: DOW appreciates the comment regarding the appropriateness of utilizing a general permit for this sector. DOW has determined that both the eastern and western Kentucky coal general permits are consistent with the requirements of 40 C.F.R. § 122.28(a)(2)(ii).

In 2002, EPA promulgated effluent guidelines for the coal mining industry: Coal Mining Point Source Category BPT, BAT, BCT Limitations and New Source Performance Standards (40 C.F.R. 434) which included the subcategories: Subpart B – Coal Preparation Plants and Coal Preparation Plant Associated Areas, Subpart C – Acid or Ferruginous Mine Drainage, Subpart D - Alkaline Mine Drainage, Subpart E - Post-Mining Area, Subpart F- Miscellaneous Provisions, Subpart G- Coal Remining and Subpart H - Western Alkaline Coal Mining. Past KPDES general permits for coal mining in 2004 and 2009 have been based on the requirements of 40 C.F.R. § 434.

In the proposed general permits for eastern and western Kentucky coverage has been limited to those activities subject to the “new source” requirements of Subparts B, C, E and F. The basis for limiting coverage to these subparts is that the technology based effluent limitations are essentially the same. Subpart C addresses both surface mining and underground mining activities. Subparts E and F have also been included as the requirements contained within these subparts apply to facilities that would be subject to Subparts B and C. Coverage has been limited to “new sources” only because of the dates for determining used for determining a “new source” are over 30 years old [Subpart B is January 31, 1982 and for Subparts C and E is May 4, 1984] and the likelihood of a significant number of “existing sources” still in operation is nearly nil.

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Neither of the general permits provides coverage for alkaline mines because there are a relatively small number of facilities that have been previously categorized as having an alkaline discharge.

Comment 28: 40 C.F.R. § 122.28(a)(3) requires that when any source within a category or subcategory requires water quality-based effluent limits, then all sources within that category or subcategory require the same water quality based effluent limitations. In Section 4.1 of the Fact Sheet, DOW acknowledges that some sources will likely require different water quality-based effluent limitations and indicates that based on a reasonable potential analysis performed on data submitted via an electronic notice of intent (NOI) that an individual operation may be required to obtain an individual permit pursuant to Exclusion 6 in Section 1.2 of the permit and Fact Sheet. Additionally, the Fact Sheet includes data that indicates monitoring requirements and effluent limitations would be needed for many existing facilities for cadmium, nickel, and lead. This data clearly demonstrates that some sources with the General Permit's subcategories require water quality-based effluent limitations. Failing to include these limits in the General Permit violates 40 C.F.R. § 122.28(a)(3).

Response 28: DOW appreciates the comment. The DOW has determined that the proposed general permits comply with the requirements of 40 C.F.R. §122.28(a)(3) by imposing water quality-based effluent limitations for iron, selenium, narrative water quality standard for conductivity, whole effluent toxicity, and pH on those categories and subcategories that have "substantially similar" effluents. Pursuant to 40 C.F.R. § 122.28(a)(4)(ii) the general permit may exclude specified sources or areas from coverage. The exclusion of coverage of an activity that requires water quality-based effluent limitations other than those listed in the general permit is consistent with this requirement. This exclusion is further supported by 40 C.F.R. § 122.28(b)(3)(i)(G)(4) which authorizes the Director to require an individual permit based on other factors.

Comment 29: The general permit includes numerous provisions that allow post issuance determinations such as: reasonable potential analysis, in-stream monitoring locations and background conditions through the submission of a Pre-mining Survey Map, and the development of a Best Management Practices Plan (BMPP) that establishes protocols and benchmarks for evaluating the effectiveness of the selected best management practices. These determinations are improperly shielded from public participation and EPA oversight.

Response 29: DOW appreciates the concern regarding the transparency of decisions and determinations made by the DOW based on information provided in the NOI. DOW reviews each NOI and supporting information to ensure that the facility qualifies for coverage under the general permit and that the general permit is the appropriate permitting approach for the applicant facility.

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In light of concerns expressed in comments received, DOW will modify its process regarding public notification of the receipt of NOIs and issuance of coverages under KYGE4 and KYGW4. DOW will provide email notifications of receipt of NOIs and final decisions by the division to all individuals on the Public Notice listserv. Any person that wishes to be added to this listserv should send a request to DOWPublicNotice@ky.gov and their email will be added to the email listserv. Additionally, DOW posts daily on the Department for Environmental Protection's eSearch website all issuances of these general permit coverages. By selecting the AI Details link, an interested party can review the coverage letter, the electronic notice of intent (NOI), and other supporting data. This approach is intended to address concerns regarding the transparency of the NOI review process and to ensure that the public is aware of the division's decisions regarding the review and consideration of the NOIs.

In addition, to the extent that coverages issued under a general permit are found to be final agency determinations by which any person is aggrieved, the right to a hearing would be as provided for in KRS 224.10-420(2) and the regulations promulgated thereunder.

Based on these factors, DOW disagrees that these determinations are improperly shielded from public participation and EPA oversight.

Comment 30: The General permit lacks many important exclusions that are necessary to protect water quality. The General Permit must exclude all operations with discharges that have reasonable potential to violate water quality standards for any parameter not expressly limited in the permit. The Fact Sheet states that if reasonable potential is demonstrated for one or more pollutants then an individual permit may be required. Without the incorporation of specific water quality-based effluent limits for these pollutants in the General Permit, failure to require an individual permit violates 40 C.F.R. § 122.44(d) which requires the inclusion of effluent limitations for any pollutant demonstrated to have reasonable potential. The DOW must include water quality-based effluent limitations for these pollutants in the General Permit or include an express exclusion in the General Permit for any facility that demonstrates reasonable potential.

Response 30: The Division of Water appreciates the concern that the general permits exclude all operations with discharges that have reasonable potential to violate water quality standards for any parameter not expressly limited in the permit. DOW has changed the word "may" to "will" in the Fact Sheet. DOW conducts a reasonable potential analysis of the effluent data submitted with the NOI. If this data indicates reasonable potential to exceed the water quality criteria for a parameter that does not otherwise have an effluent limit in the general permit, the facility will be required to obtain an individual permit.

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Comment 31: The general permit impermissibly circumvents many important public participation and EPA oversight requirements. The Clean Water Act (33 U.S.C. §§ 1251(e), 1342(b)(3), (b)(4), (d) and (j)) along with 40 C.F.R. §§ 123.30, 123.44, 124.5(c), 124.6(e) and 124.10 requires states to provide meaningful public participation including public notice and comments, public hearings, judicial review and EPA oversight. The general permit contains numerous provisions that require the Division of Water to make facility-specific determinations regarding the scope of coverage and permit conditions based on information submitted after the finalization of the General Permit. These determinations are not subject to the same public participation and EPA oversight that apply to the issuance or modification of an NPDES permit. Pursuant to 40 C.F.R. § 124.6(c),(d) a draft permit must be prepared that includes all monitoring requirements, effluent limitations, standards, prohibits, and conditions under 40 C.F.R. §§ 122.41, 122.42, and 122.44. The preparation of a fact sheet that includes descriptions of the types and quantities of wastes, fluids, or pollutants that are treated, stored, disposed of, injected, emitted or discharged, a brief summary of the basis for the draft permit conditions, and any calculations or other necessary explanation of the derivation of specific limitations is required by 40 C.F.R. § 124.8. In addition to the draft permit and fact sheet the state is required by 40 C.F.R. § 124.6(e) to develop an administrative record (§ 124.9), provide for public notice (§ 124.10), make available for public comment (§ 124.11), give opportunity for public hearing (§ 124.12), issue a final decision (§ 124.15) and response to comments (§ 124.17).

Response 31: DOW appreciates the concern regarding the transparency of decisions and determinations made by the DOW based on information provided in the NOI. DOW determined that the process for issuing a general permit is in compliance with federal and state law. DOW prepared a draft permit and fact sheet and developed an administrative record for the general permits in accordance with the requirements of 40 C.F.R. §§ 124.6, 124.8, and 124.9. The fact sheet and draft permit were public noticed, made available for comment, and a public hearing held in accordance with 40 C.F.R. §§ 124.10, 124.11 and 124.12, and 401 KAR 5:075.

DOW has determined that the review process and decision making regarding individual general permit coverage decisions also comply with applicable federal and state laws. DOW reviews each NOI and supporting information to ensure that the facility qualifies for coverage under the general permit and that the general permit is the appropriate permitting approach for the applicant facility.

In light of concerns expressed in comments received, DOW will modify its process regarding public notification of the receipt of NOIs and issuance of coverages under KYGE4 and KYGW4. DOW will provide email notifications of receipt of NOIs and final decisions by the division to all individuals on the

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Public Notice listserv. Any person that wishes to be added to this listserv should send a request to DOWPublicNotice@ky.gov and their email will be added to the email listserv. Additionally, DOW posts daily on the Department for Environmental Protection's eSearch website all issuances of these general permit coverages. By selecting the AI Details link, an interested party can review the coverage letter, the electronic notice of intent (NOI), and other supporting data. This approach is intended to address concerns regarding the transparency of the NOI review process and to ensure that the public is aware of the division's decisions regarding the review and consideration of the NOIs.

In addition, to the extent that coverages issued under a general permit are found to be final agency determinations by which any person is aggrieved, the right to a hearing would be as provided for in KRS 224.10-420(2) and the regulations promulgated thereunder.

Comment 32: The general permit includes numerous provisions that allow post issuance determinations such as: reasonable potential analysis, instream monitoring locations and background conditions through the submission of a Quality Assurance Project Plan and the development of a Best Management Practices Plan that establishes protocols and benchmarks for evaluating the effectiveness of the selected best management practices. These determinations are improperly shielded from public participation and EPA oversight.

Response 32: See **Response 31**

Comment 33: The general permit lacks many important exclusions that are necessary to protect water quality. The general permit must exclude all operations with discharges that have reasonable potential to violate water quality standards for any permit not expressly limited in the permit. The Division of Water states that in the Fact Sheet that if reasonable potential is demonstrated for one or more pollutants then an individual permit may be required. Without the incorporation of specific water quality-based effluent limits for these pollutants in the General Permit failure to require an individual permit by the Division of Water violates the requirements of 40 C.F.R. § 122.44(d) which requires the inclusion of effluent limitations for any pollutant demonstrated to have reasonable potential. The Division of Water must include water quality-based effluent limitations for these pollutants in the General Permit or include an express exclusion in the General Permit for any facility that demonstrates reasonable potential. The cabinet needs to require a significant number of samples for permit applications to ensure that the Reasonable Potential Analysis (RPA) is based on sufficient data.

Response 33: The application requirements of 40 C.F.R. § 122.21(g)(7)(i) state: "When "quantitative data" for a pollutant are required, the applicant must collect a sample of effluent and analyze it for the pollutant in accordance with analytical methods approved under Part 136 of this chapter unless use of another method is

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required for the pollutant under 40 CFR subchapters N or O.” The use of a single sample for reasonable potential analysis is consistent with the EPA approved Kentucky’s Reasonable Potential Procedures in 2001 which was developed using EPA’s 1991 Technical Support Document for Water Quality-based Toxics Control.

Comment 34: The general permit must exclude all operations that discharge directly to an impaired water or any first or second order tributary regardless of the existence of a Total Maximum Daily Load (TMDL). The prior general permit excluded from coverage all discharges to waters impaired for coal mining pollutants without the requirement of an approved TMDL in place. However in this version the exclusion has been narrowed in scope to apply to direct discharges to an impaired water for which an approved TDML has been developed. No explanation of why this exclusion was narrowed was offered by the Division of Water in the Fact Sheet. The narrowing of this exclusion renders it nearly meaningless as the Division of Water has not developed many TMDLs for waters impaired by coal mining operations. The previous exclusion should be reinstated and expanded to include discharges to first or second order tributaries to impaired waters. Discharges to such tributaries can be expected to contribute to the impairment. Pursuant to 40 C.F.R. § 122.44(d) such discharges require water quality-based effluent limits that must be imposed through an individual permit.

Response 34: The general permit water quality based effluent limitations, which are equivalent to the water quality standards, ensure that discharges permitted pursuant to the general permit whether discharged to an impaired or unimpaired water will not cause or contribute to an impairment of a water body for which a TMDL has not been developed because the water quality standard must be met in the discharge itself. Kentucky has determined that the permit conditions in the general permits, the proposed effluent limitations, trend analyses, adaptive management requirements, etc., provide assurance that the discharge will not cause or contribute to existing violations of WQS. In the case of a pollutant of concern that is causing or contributing to an impairment of a water body for which a TMDL has not been developed, the general permit does not already limit, and reasonable potential has been demonstrated for that pollutant, DOW will require an individual permit in accordance with exclusion 6 in Section 1.2.

Comment 35: The exclusions listed in the 2009 Coal General Permit should be reinstated in this general permit. Many of the practical exclusions included in the 2009 Coal General Permit have been removed without providing justification of the removal. The Division of Water has not demonstrated that these types of operations do not exhibit reasonable potential to violate water quality standards for pollutants not limited in the General Permit. All of the types of discharges listed in the previous exclusions pose unique threats that require specific effluent limitations that should be imposed through individual permits.

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Response 35: DOW appreciates the comment. Several exclusions that were in the previous permit were removed from the new general permits because the new general permits include effluent limits and conditions specific to these categories of discharges, including whole effluent toxicity (WET) limits, biological-based limits, and in-stream water quality trend analyses for specific conductivity, total suspended solids, and sulfates which are used as triggers for an enforceable adaptive management plan. These limitations and conditions are a significant improvement over the 2009 general permit. Although these exclusions may no longer be present in the general permits, Section 1.2 (6) of the general permits provides that the division may require any discharger to obtain an individual permit that would be more appropriately controlled using an individual permit. The Division of Water has provided additional discussion in the fact sheets for both permits regarding the removal of a number of the specific exclusions.

Comment 36: The General Permit fails to include necessary selenium limitations for in-stream outfalls that receive runoff from “reclamation areas only.” In-stream sediment structures that receive drainage from “reclamation areas only” need selenium limitations. DOW has provided no support for its assertion that once the surface area of a coal mine has been returned to required contour and revegetation has commenced that there should be no reasonable potential for violations of water quality standards. The General Permit language constraining “reclamation only” effluent limitations to outfalls that have been in substantial compliance with the WQBELs does not cure this defect. Transition to “reclamation only” status that removes WQBELs represents a major modification that must be subject to public participation, EPA oversight and judicial review. Although not defined “substantial compliance” appears to mean something less than full compliance.

Response 36: To transition from active mining effluent limitations and monitoring requirements to reclamation area effluent limitations and monitoring requirements the new general permits require that there is no drainage from active surface mine areas, underground workings of underground mines (active or post mining), or coal preparation plant or associated areas, and that the effluent from the sediment control structure has been substantially in compliance with the water quality-based effluent limitations (WQBELs). The permittee is also required to provide certification to DOW that these conditions have been met as per Section 2.2 of KYGW4 and Section 2.4 of KYGE4. DOW will review the available information and make a determination as to whether the transition to reclamation qualifies. Upon determination that the transition qualifies DOW will issue a modified general permit coverage letter. This modified general permit coverage letter will be posted on the Department for Environmental Protection’s eSearch webpage.

In light of concerns expressed in comments received, DOW will modify its process regarding public notification of the receipt of NOIs and issuance of coverages under KYGE4 and KYGW4. DOW will provide email notifications of receipt of NOIs and final decisions by the division to all individuals on the

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Public Notice listserv. Any person that wishes to be added to this listserv should send a request to DOWPublicNotice@ky.gov and their email will be added to the email listserv. Additionally, DOW posts daily on the Department for Environmental Protection's eSearch website all issuances of these general permit coverages. By selecting the AI Details link, an interested party can review the coverage letter, the electronic notice of intent (NOI), and other supporting data. This approach is intended to address concerns regarding the transparency of the NOI review process and to ensure that the public is aware of the division's decisions regarding the review and consideration of the NOIs.

Comment 37: The General Permit fails to include necessary selenium limitations on bench sediment control structures. KYGE4 does not include any selenium limits for bench sediment control structures. According to the Fact Sheet at least some of these outfalls have reasonable potential to cause or contribute to violations of Kentucky's acute selenium water quality criterion. The Division of Water cannot refuse to apply acute effluent limits for bench sediment control structures covered under the General Permit.

Response 37: See **Response 24**. If a bench sediment control structure exhibits reasonable potential to cause or contribute to a violation of the acute selenium water quality criterion then general permit coverage will be denied and an individual permit required.

Comment 38: The general permits' effluent limits will not prevent violations of the narrative standards. Increased conductivity caused by coal mining impairs water and harms aquatic life. Kentucky's water quality standards prohibit raising levels of total dissolved solids or conductivity to the point that the indigenous aquatic community is adversely affected. There is overwhelming scientific evidence that demonstrates that ionic pollution in the discharges proposed to be authorized by KYGE4 causes significant adverse effects on aquatic life. The conditions proposed in the General Permit for protection of the narrative standard are inadequate and the Division of Water must include a numeric effluent limit for conductivity or some other appropriate indicator parameter for ionic pollution. EPA guidance recommends a conductivity of 300 micro Siemens per centimeter ($\mu\text{S}/\text{cm}$) as an appropriate benchmark.

Response 38: See **Response 39**. Kentucky does not currently have a numerical water quality standard for conductivity. The numerical interpretation of a narrative water quality standard using the recommended value of 300 $\mu\text{S}/\text{cm}$ from EPA's 2011 permitting guidance violates Kentucky Revised Statute 13A.130 which prohibits the modification, expansion or limitation of a statute or regulation by an administrative body through an internal policy, memorandum or other form of action. In order to adopt a numeric conductivity standard DOW would have to

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propose changes to its water quality standard regulations and go through the KRS 13A regulation promulgation process.

Kentucky's narrative water quality standard for total dissolved solids or conductivity, 401 KAR 10:031, Section 4(1)(f), states that "Total dissolved solids or specific conductance shall not be changed to the extent that the indigenous aquatic community is adversely affected." The effect of this criterion is that discharges to a water body cannot cause changes in the in-stream total dissolved solids concentration or specific conductance that would result in an adverse effect on the indigenous aquatic community.

DOW determined that certain coal mine discharges in eastern Kentucky generally had reasonable potential to violate the narrative water quality standard for Kentucky. Therefore, the draft general permit for eastern Kentucky includes whole effluent toxicity (WET) limits and biological-based limits as well as in-stream water quality trend analyses for specific conductivity, total suspended solids, and sulfates. These paired monitoring and limitation approaches are used as triggers for an adaptive management plan. DOW has determined that the proposed permit requirements provide adequate assurance that the discharge will not cause or contribute to existing violations of water quality standards.

Comment 39: Whole Effluent Toxicity (WET) testing is inadequate to protect sensitive macroinvertebrates. Section 3 of KYGE40000 requires permittees to conduct effluent Whole Effluent Toxicity (WET) testing quarterly. The species used in WET testing are more tolerant than the macroinvertebrates found in Appalachian headwater stream therefore rendering permit's WET limits inadequate to protect Kentucky's narrative water quality standards. History shows WET testing is not a good proxy for conductivity and we should have a standard. The comment suggests exchanging WET testing for a conductivity limit of 300 $\mu\text{s}/\text{cm}$.

Response 39: See **Response 38**. In accordance with the requirements of 40 C.F.R. § 122.44(d)(1)(v) when the permitting authority determines that a discharge has reasonable potential to cause or contribute to an instream excursion of a narrative water quality standard the permit must contain effluent limits for whole effluent toxicity. DOW has determined that reasonable potential generally exists in eastern Kentucky for excursions of the narrative water quality standard for total dissolved solids and specific conductance to occur. Therefore WET testing and effluent limitations are imposed pursuant to 40 C.F.R. § 122.44(d)(1)(v). 40 CFR § 122.44(d) which requires WET testing for narrative water quality standards in which there is "a reasonable potential to cause or contribute to an in-stream excursion above the standard".

In addition to WET testing, the draft general permit for eastern Kentucky includes biological-based limits as well as in-stream water quality trend analyses for specific conductivity, total suspended solids, and sulfates. These paired monitoring and limitation approaches are used as triggers for an adaptive

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management plan. DOW determined that the proposed effluent limitations, WET testing, in-stream biological monitoring, the water quality trend analyses, and the adaptive management requirements provide adequate assurance that the discharge will not cause or contribute to existing violations of water quality standards.

Comment 40: In-stream monitoring requirements and additional BMP requirements will not protect against biological impairment. The Division of Water offers no justification for imposing the in-stream monitoring and additional BMP requirements on new and expanded operations only and not applying these requirements on existing operations. Pursuant to 40 C.F.R. §§ 122.4(d) and 122.44(d) any discharge that has the potential to cause or contribute to violations of water quality standards must be subject to water quality-based effluent limitations. The Division of Water has extensive monitoring data collected pursuant to the 2009 Coal General Permit that demonstrates that existing facilities have the potential to create conductivity levels in receiving streams that exceeds the 300 $\mu\text{S}/\text{cm}$. Therefore existing operations should be subject to the in-stream monitoring and additional BMP requirements.

Response 40: See **Response 38, 39, and 41**. DOW appreciates the comment. As previously noted; the division developed water quality based permit requirements in the general permit for discharges from coal mining operations. In addition, the division will perform a reasonable potential analysis on the data submitted to the division seeking coverage under the general permit to determine whether eligibility under the general permit is warranted or whether an individual permit is required.

Comment 41: The use of a “baseline” biological score as the performance benchmark instead of a passing score on Kentucky’s approved biological index means that already impaired streams will not be protected. Coal mining discharges to impaired waters would be allowed to continue to add to the impairment without any action as long as the existing impairment did not worsen. Thus the General Permit does not “ensure compliance” with the water quality standards in accordance with 40 C.F.R. §§ 122.4(d) and 122.44(d). Limitations must control all pollutants that have reasonable potential to cause or contribute to an excursion above any State water quality standard.

Response 41: See **Response 38, 39, and 40**. DOW appreciates the comment. DOW has determined that the general permit protects impaired waters from further impairment and complies with 40 C.F.R. §§ 122.4(d) and 122.44(d). In addition, where a surface water is impaired due to the presence of a pollutant(s) of concern, the impairment is further addressed via the development and implementation of a Total Maximum Daily Load (TMDL) for that pollutant(s).

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Comment 42: Instead of relying entirely on ineffective BMPs DOW must include numeric effluent limit for conductivity. The general permit must include a numeric effluent limit for conductivity of 300 $\mu\text{S}/\text{cm}$ to protect against violations of the narrative water quality standard; 40 C.F.R. §122.44(d)(vi)(C) explains that where a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has reasonable potential to cause or contribute to the excursion of a narrative criterion within an applicable state water quality standard, the permitting authority must establish effluent limits on an indicator parameter for the pollutants of concern. Conductivity is an indicator parameter for ionic pollution therefore a numerical limitation must be established.

Response 42: The DOW appreciates the comment but maintains that the general permits do not rely on “ineffective BMPs.” The use of best management practices to control the discharge of pollutants is authorized by 40 C.F.R. § 122.44(k)(4) which states “the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA”. Best management practices are design, construction, operational and maintenance standards established to insure the activity conducted is minimizing environmental impact. All coal mining activities are required to obtain a Surface Mining Control and Reclamation Act permit from the Kentucky Department for Natural Resources.

This permit requires the operator of the site to develop, submit for review and approval by the Division of Mine Permits, and implement a mining plan that complies with the design, construction, operational and maintenance standards set forth in Title 405 of the Kentucky Administrative Regulations. The standards imposed through 405 KAR are uniform best management practices that must be applied by all coal mining and processing activities. Requiring the permittee to develop individual benchmarks to judge effectiveness of the best management practices is consistent with general permits issued by EPA. For example the EPA Vessel General Permit requires permittees to evaluate the best management practices employed and take corrective actions to resolve the problem. Based on these factors the Division of Water does not agree the permit violates the requirements of 40 C.F.R. § 122.28(a)(2)(ii)(C).

Comment 43: The Division of Water should reinstate the “5-mile policy” exclusion in general permits to ensure protection of domestic drinking water supplies.

Response 43: The DOW appreciates the comment and to make more explicit has amended the general permits to include the “5-mile policy” general permit exclusion for new and expanded discharges. It was not the intent of the division to remove this exclusion. Rather, this exclusion exists in regulation at 401 KAR 5:005 Section 30 (b) and is applicable regardless of whether the general permit explicitly states the exclusion.

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Comment 44: Notice of Intent (NOI) Review. EPA commented: The KDOW did not impose water quality based effluent limits (WQBELs) for a list of metals based on the reasonable potential (RP) information in Table 5 (western GP) and Table 8 (eastern GP) of the fact sheets.¹ It is our understanding that coverage under the GPs will not be granted for any facility that demonstrates RP to cause or contribute to excursions above WQSs (WQS) for any pollutants not controlled in the proposed GPs with a WQBEL. The RP analysis will be conducted by the KDOW based on data submitted by the applicant as part of the NOI. In cases where there is a finding of RP, or in the absence of further data being provided by the applicant, it is our understanding that these applicants would not be eligible for GP coverage and would instead be directed by KDOW to seek coverage under an individual permit. It is the EPA's further understanding that any such individual permit would include appropriate WQBELs for these parameters.²

However, the fact sheet indicates that KDOW will “continue to perform an RP analysis on operations required to submit an electronic NOI and should reasonable potential be demonstrated that an effluent limitation is required for one or more of these pollutants an individual permit may be required” (Emphasis added). The use of the word “may” in the fact sheet indicates that the KDOW seems to retain the discretion to not require individual permits with necessary WQBELs even in cases where data submitted by the applicant as part of its NOI clearly demonstrates that RP exists. If applied as a discretionary rather than mandatory obligation, this would not meet CWA requirements that all NPDES permits include effluent limits stringent enough to ensure compliance with WQSs. We have discussed this concern with KDOW and it is our understanding that the language in the permits and fact sheets will be revised to specify that an individual permit will (instead of “may”) be required in cases where NOI data demonstrates RP.³

It is the EPA's understanding that the KDOW is proposing to screen the potentially large number of NOIs that will be submitted and review effluent information to determine whether RP exists to cause or contribute to an exceedance of an applicable WQS (and thus whether the applicant will be denied coverage under the GP and instead be directed by the KDOW to seek

¹ A review of these tables shows that, based on effluent data for facilities covered under the currently effective GP, a small percentage of dischargers exhibited reasonable potential to cause or contribute to violations of chronic criteria for cadmium, lead, and nickel. In the absence of any additional information to the contrary, the facilities identified in Tables 5 and 8 of the fact sheets should be required to obtain an individual permit and should be notified immediately that they are ineligible for coverage under the GP.

² The EPA notes that KDOW's RP analysis must evaluate whether the effluent is causing or contributing to an exceedance of a WQS for impaired water bodies. Water bodies that are impaired have no assimilative capacity for the pollutants that are causing the impairment. Therefore, we expect “end of pipe” WQBELs for all coal facilities that discharge any detectable level of pollutants to a water body that is impaired for a coal mining related pollutant.

³ To provide proper notice to applicants, the fact sheet and permit should state the effluent concentrations that will demonstrate reasonable potential for each of the metals for which effluent concentrations will be included on the NOI form.

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coverage under an individual permit). The obligation to review the many NOIs that potentially will be submitted will have significant resource implications on the KDOW and possibly on the applicants as well. There are several ways to mitigate the resource impacts and we offer the following alternative approaches for your consideration:

- A. Revise the permit to expressly exclude from coverage any facility reporting effluent concentrations of metals reported on the NOI at levels 90% or greater of the applicable wasteload allocations or the numeric WQS.⁴
- B. Include WQBELs (assuming no dilution) and monitoring requirements in the GPs for coal mining related pollutants being discharged that may cause or contribute to waters impaired by coal mining, and for which the KDOW has a numeric WQS. The WQBELs and appropriate monitoring requirements would automatically apply for those pollutants that demonstrate RP to cause or contribute to an exceedance of a WQS, including discharges to impaired waters.
- C. The above two alternative approaches do not require the KDOW to review applicant information and take formal action to deny GP coverage or require submission of an individual permit application. Employing one of these alternatives would also shorten the time for an applicant to obtain an appropriate permit.

Response 44: The DOW appreciates the comment and has revised the fact sheets as requested. The Division of Water conducted reasonable potential analysis of all data submitted by general permit holders, as required by the previous general permit. This analysis, which is summarized in Tables 8, 9 and 10 in KYG04E and Tables 5 and 6 in KYG04W, indicates that a very small percentage of coal mining operation discharges will demonstrate reasonable potential (RP) for some metals to cause or contribute to excursions above water quality standards. The division intends to review each NOI submitted, including effluent information to determine whether RP exists to cause or contribute to an exceedance of an applicable water quality standard.

The division considered including water quality based effluent limits (WQBELs) and/or corresponding monitoring requirements in the GPs for facilities with discharges that demonstrated RP. It was determined that including WQBELs and/or monitoring for the entire suite of metals in all GPs due to a very small percentage of facilities that may exhibit RP would impose unnecessary cost and requirements in the general permit for the vast majority of applicants that do not exhibit RP for those parameters. Therefore, the division determined that permitting such facilities was more appropriately done using an individual permit.

⁴ The KDOW's reasonable potential procedures, as described in the fact sheets, require effluent limitations for a pollutant if that pollutant is present at concentrations 90% or greater than the wasteload allocation.

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Consequently, the division understands and appreciates that the use of “may” in the permit (i.e. “...should reasonable potential be demonstrated that an effluent limitation is required for one or more of these pollutants an individual permit may be required”) may not reflect the division’s intention to exclude from coverage under the GP for those facilities with discharges that demonstrate RP for metals. Therefore, the division has changed the word “may” to “will” as requested.

Comment 45: Water Quality-based limits for narrative WQS EPA commented: To help ensure compliance with Kentucky’s narrative WQS, ⁵ the draft GP for Eastern Kentucky includes whole effluent toxicity (WET) limits and biological-based limits. In addition, the WET testing and biological based assessments, along with an in-stream water quality trend analyses (specific conductivity, total suspended solids, and sulfates), are used as triggers for an enforceable adaptive management plan. These limitations and conditions are a significant improvement over the 2009 Kentucky GP, especially those requirements related to ionic pollution (measured as specific conductivity or total dissolved solids).⁶ In particular, the EPA appreciates explicit recognition in the draft GP that “[a] single annual biological index score lower than the baseline biological category minimum score, thus resulting in a lowering of the biological category, is a permit violation” for new/expanded discharges. Including the suite of requirements and imitations noted above, addresses and acknowledges the strong body of peer-reviewed scientific literature that has been published since the 2009 GP that establishes a causal link between coal mining-related discharges and biological impairment.

These conditions in the eastern Kentucky GP for new/expanded discharges, i.e. the proposed effluent limitations, the trend analyses, and the adaptive management requirements noted above, provide assurance that the new/expanded discharge will not cause or contribute to existing violations of WQS. Therefore, we recommend that similar biologically-based limits and in-stream water quality trend analysis provisions be included in the western Kentucky GP for new discharges to provide similar assurance that discharges will not cause or contribute to existing violations of the WQS.

Response 45: The DOW appreciates the comment and have revised the western Kentucky general permit fact sheet to address EPA’s recommendations. The division agrees with EPA’s conclusion that the draft general permit for eastern Kentucky

⁵ 401 KAR 10:031 Section 2(1)(d)-(e) states that “Surface waters shall not be aesthetically or otherwise degraded by substances that: (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life; (e) Produce undesirable aquatic life or result in the dominance of nuisance species. 401 KAR 10:031 Section 4(1) states that “The following parameters and associated criteria shall apply for the wildlife, arborous growth, agricultural, and industrial uses: (f) Total dissolved solids or specific conductance. Total dissolved solids or specific conductance shall not be changed to the extent that the indigenous aquatic community is adversely affected.

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is a significant improvement on the previous general permit. The division also agrees with EPA's recognition that the inclusion of effluent limitations (i.e. WET limits, in-stream biological limits and water quality trend analysis) are an appropriate approach to protecting the narrative water quality standard and that these effluent limitations, in combination with enforceable adaptive management requirements are designed to ensure compliance with Kentucky's water quality standards and will not cause or contribute to impairments.

In contrast to the streams of eastern Kentucky, the division does not at this time have the instream water quality and effluent discharge data in western Kentucky associated with coal mining operations that indicates a reasonable potential to exceed the narrative water quality standard for conductivity, which is the basis for which the instream biological limits, in-stream water quality trend monitoring, and adaptive management requirements are imposed in the eastern Kentucky general permit. The streams in the western Kentucky coal fields generally do not exhibit impairments related to conductivity. This is largely due to a substantial difference in the geology and the corresponding biology in the streams of eastern and western Kentucky. The geology of the western Kentucky coalfields includes more carbonates and the residence time of the water in the watersheds tends to make the western Kentucky water older and more mature; meaning that the water generally includes significantly greater and different total dissolved solids than the upland streams of eastern Kentucky. With the harder water of the western Kentucky coalfields comes a benthic fauna that is correspondingly more tolerant of elevated total dissolved solids. As such, the threshold for impairment via conductivity is greater for western Kentucky streams and the division correspondingly observes fewer streams in western Kentucky where conductivity causes impairment.

Based on this information the division determined that reasonable potential does not generally exist in the western Kentucky coal field for coal mining discharges to exceed the narrative water quality standard for conductivity as it relates to the development of the western Kentucky general permit requirements. Consequently, the division determined that it is not appropriate at this time to require the conductivity requirements imposed in the eastern Kentucky general permit for mining operations in western Kentucky. Any facility for which the division has information to indicate or otherwise believes has reasonable potential to cause or contribute to excursions above water quality standards the division has the authority to require an individual permit.

Comment 46: Compliance schedules for selenium and WET monitoring and limits. EPA commented: The draft GPs include a fish tissue-based selenium limit and WET limits based on the assumption that coal mining operations have RP to cause or contribute to violations of Kentucky's WQS. However, for existing facilities, the effluent limits for selenium and WET do not begin until January 1, 2016. The regulatory requirements for compliance schedules are set forth at 40 CFR §

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122.47, and include an obligation that compliance be achieved “as soon as possible” and the permit must set forth interim requirements to achieve the limit for compliance schedules that are longer than one year. We recommend that KDOW add information to the fact sheets explaining why the compliance schedules for these limits are necessary and how the requirements of 40 CFR § 122.47 will be met.

In addition to explaining how the GPs meet the regulatory requirements of a compliance schedule, the EPA does not believe it is appropriate to use a compliance schedule to delay monitoring for selenium or WET. Compliance schedules are generally appropriate where necessary to allow a reasonable opportunity to attain compliance with a new or revised effluent *limit*. We do not understand the basis for distinguishing existing discharges from new discharges with regard to effluent monitoring for selenium (i.e. existing discharges are given until January 1, 2016 before they are required to monitor for selenium versus 30 days for new/expanded discharges). We recommend that effluent monitoring of selenium and WET for existing and new/expanded discharges begin within 30 days of coverage.

Response 46: See **Response 18**. The DOW appreciates the comment. As recommended by EPA, the fact sheets have been amended to include information explaining why the compliance schedules for these limits and delay in monitoring are necessary and how the requirements of 40 CFR § 122.47 will be met.

Comment 47. Fish tissue monitoring requirements for selenium. EPA commented: We also note that the draft permits require fish tissue sampling only when 5 µg/L is exceeded during the permit term as an average monthly trigger, even when NOI data already shows effluent at or exceeding 5 µg/L. When an applicant submits a NOI to be covered under the GPs and the effluent or in-stream data reveal a selenium level at or greater than 5 µg/liter, it is our understanding that the permit, to implement Kentucky’s WQS’s,⁷ must require fish tissue sampling to begin at the time the permit is issued in accordance with CWA § 301(b)(1)(C) and 40 CFR § 122.44(d). We recommend that the GPs require immediate commencement of fish tissue sampling when the NOI data demonstrates reasonable potential (i.e., selenium concentrations at or greater than 5 µg/L). The immediate fish tissue sampling requirement should replace the approach in the draft GPs, where the facility is not required to monitor fish tissue unless the sampling during the permit also demonstrates reasonable potential. If the NOI application data does not demonstrate reasonable potential for selenium, further monitoring of the effluent is acceptable.

⁷ 401 KAR § 10:031 states that “A concentration of five and zero tenths (5.0) µg/L or greater selenium in the water column shall trigger further sampling and analysis of whole-body fish tissue or alternately of fish egg/ovary tissue.”

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Response 47: The DOW appreciates the comment. DOW respectfully disagrees with EPA's conclusions in this comment. The agency receives data with the NOI for which the division conducts reasonable potential analysis. However, for purposes of the general permits, the division has assumed that certain coal mining discharges generally have reasonable potential to cause or contribute to excursions above water quality standard for selenium and therefore requires monitoring and limitations for selenium. The general permits and the requirements regarding selenium are fully compliant with 33 USC 1311 (b)(1)(c) and 40 CFR § 122.44(d).

The water quality standard for selenium in 401 KAR § 10:031 states that "A concentration of five and zero tenths (5.0) µg/L or greater selenium in the water column shall trigger further sampling and analysis of whole-body fish tissue or alternately of fish egg/ovary tissue." The division has determined that it is not appropriate to apply the 5 µg/L threshold to further require fish tissue analysis to RP data as RP data is preliminary in nature and is not compliance data.

Upon review, the division could not locate language in either 33 USC 1311 (b)(1)(c) or 40 CFR § 122.44(d) that indicates where reasonable potential data exceeding the water quality standard would compel the division to include any requirement in the permit other than effluent limits. Indeed, CFR § 122.44(d) plainly indicates that when reasonable potential has been demonstrated for an individual pollutant, the permit must contain effluent limits for that pollutant. With respect to selenium, the general permits both assume reasonable potential for selenium and the permits require monitoring and limits for selenium. The general permits further require that if compliance monitoring of effluent exceeds the 5 µg/L threshold for selenium, fish tissue analysis is required consistent with the implementation of Kentucky's water quality standards.

Comment 48: Effluent monitoring requirements for other constituents. EPA commented: As described in the fact sheets, Kentucky's RP procedures require inclusion of an effluent monitoring requirement for pollutants present in the discharge at concentrations 70% or greater than an applicable wasteload allocation or numeric WQS. The GPs do not include any mechanism for requiring monitoring of pollutants present in the NOI data at 70% or greater than the wasteload allocation. Table 5 (western GP) and Table 8 (eastern GP) within the fact sheets show that concentrations at 70% or greater are present at a small percentage of facilities.

To be consistent with the KDOW's RPA procedures, the EPA recommends that the GPs be revised to require effluent monitoring when pollutants are present in the effluent at concentrations of 70% or greater than a wasteload allocation or numeric WQS. Similar to the recommendations above, the GPs could include contingent monitoring requirements that would automatically apply when pollutants are present at 70% or greater.

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Response 48: See **Response 44**. The DOW appreciates the comment and has addressed EPA's recommendation in response below. The division has conducted a reasonable potential analysis of effluent data provided in compliance with the previous general permit. The number of effluent samples demonstrating RP by exceeding the 90% threshold of the water quality standard was either non-existent or very low, generally varying between 0% and 3%.

The division also notes (see Table 8 in KYGE4 and Table 5 in KYGW4) that virtually all of the effluent data identified by reasonable potential analysis as exceeding the 70% threshold also exceeded the 90% threshold. This is one basis for the division agreeing with EPA to draft the general permit such that it requires an individual permit when a facility demonstrates RP requiring a water quality based effluent limit for parameters that are not otherwise limited in the general permit.

With respect to EPA's suggestion to include contingent monitoring requirements in the GP that would automatically apply, the division has determined that this would present an unnecessary additional complication to the general permit. There would be a negligible number of facilities in the monitor only category that the general permits would have to create a complex monitoring and reporting mechanism for relative to the number of general permit coverages already required to obtain individual permits to receive water quality based effluent limits for parameters not otherwise limited in the general permit.

As stated previously, the division agrees with EPA that permit applicants that demonstrate RP for parameters not otherwise limited in the permit, will be required to obtain an individual permit. In addition, in **Response 49** to follow, the division has agreed to add additional monitoring requirements for new operations.

Comment 49: Application requirements for new coal mines. EPA commented: Federal Regulations at 40 CFR § 122.21(k)(5)(vi) provides that new source and new discharge applicants must complete and submit Items V and VI of NPDES application Form 2C no later than two years after the commencement of the discharge. The GPs allow new mines without existing discharges to use representative data from "an adjacent existing activity which is substantially identical" to the proposed activity to complete the NOI data application requirements, or if there are no substantially identical adjacent activities, the applicant may estimate expected discharge levels. The permits do not include the requirement in 40 CFR § 122.21(k)(5)(vi) that new mines complete and submit Items V and VI of NPDES application Form 2C no later than two years after the commencement of the discharge. Without this requirement, there may be no opportunity to determine whether GP coverage is appropriate based on actual effluent data or whether the facility should instead be directed to seek coverage under an individual permit per 40 CFR § 122.28(b)(3).

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In order to ensure that all facilities with RP to cause or contribute to violations of WQSs are identified, and appropriate WQBELs established, we recommend that the permit be revised to make clear that all new mines must collect and submit the required data for toxic metals, cyanide, and phenols within two years of commencement of discharge. This is consistent with regulatory requirements and will better allow the KDOW to identify facilities that have RP to cause or contribute to an excursion of WQS that are not addressed by the GP and, therefore, should be required to submit individual permit applications from such facilities at the time of GP reissuance if not sooner.

Response 49: The DOW appreciates the comment and has revised the permit as recommended. The general permits provide for new mines without existing discharges to use representative data from “an adjacent existing activity which is substantially identical” to the proposed activity to complete the NOI data application requirements in order that the division can conduct reasonable potential analysis to determine if coverage under the general permit is appropriate. 40 CFR § 122.21(k)(5)(vi) requires that no later than two years after commencement of discharge new mining dischargers applying for NPDES permits must complete and submit Items V and VI of NPDES application Form 2c (see § 122.21(g)) unless this reporting has otherwise occurred via discharge monitoring reporting. If the division’s reasonable potential analysis determines that reasonable potential for metals does not exist, a general permit coverage will be issued. However, as the general permit would not require monitoring for metals, cyanide, and phenols an argument could potentially be made that the obligations pursuant to 40 CFR § 122.21(k)(5)(vi) would not be met. In order to fully resolve the concern, the division is revising the general permits to require within two (2) years of commencement of discharge that new operations shall submit to DOW actual discharge data for the pollutants required by the eNOI.[Section 7.12 of KYGE4 and Section 6.12 of KYGW4]

Comment 50: RP analysis for potential constituents in coal discharges with numeric criteria in Kentucky’s WQS. EPA commented: The NOI data requirements include information on the concentrations of metals, phenol, and cyanide present in the existing or proposed discharge, which is consistent with the application requirements for a primary industrial category. However, the fact sheet does not indicate that a RP analysis was performed for the metals antimony, thallium, or mercury which have water column-based criteria based on fish consumption values to protect human health in the Kentucky WQS.⁸ Similarly, there is no indication that an RP analysis was performed for phenol or total chromium. Concentrations of these constituents are required to be submitted by the

⁸ 401 KAR § 10:031Section 2(2) states that “The water quality criteria for the protection of human health related to fish consumption in Table 1 of Section 6 of the administrative regulation are applicable to all surface water at the edge of the assigned mixing zones except for those points where water is withdrawn for domestic water supply use”...and (a)“The criteria are established to protect human health from the consumption of fish tissue, and shall not be exceeded.”

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applicant by the KDOW at the time of the NOI. This is consistent with current federal regulations for individual permits because concentrations of metals, cyanide, and phenols are required to be submitted in the NPDES application for new mining discharges (40 CFR § 122.21(k)) and existing mines (40 CFR § 122.21(g)). In addition, the EPA's final Development Document for Effluent Limitations Guidelines and Standards for the Coal Mining Point Source Category (EPA/1-82/057, 1982) found that metals, cyanide, and phenols are expected to be present in discharges from coal mining operations. Therefore, we ask that you conduct an RP analysis for each of the metals, cyanide, and phenol based on the appropriate Kentucky numeric WQS in order to consider the potential of discharges to cause or contribute to an exceedance of Kentucky's criteria for these constituents⁹.

Response 50: The DOW appreciates the comment and has made changes to the fact sheets as recommended. The division conducted reasonable potential analysis for antimony, thallium, mercury, total chromium, cyanide and total phenol as well as the other constituents in Table 8 in KYGE4 and Table 5 in KYGW4. In addition, the division has included updated tables and language in the fact sheets (Table 8 in KYGE4 and Table 5 in KYGW4) that illustrate that reasonable potential analysis was performed on parameters related to coal mining discharges using all applicable water quality standards. The division will continue to conduct reasonable potential analysis on data submitted with the eNOI for all applicable water quality standards.

Comment 51: Public availability of information. EPA recommends that the KDOW make publically available in an easily accessible form each submission by an applicant of actual or expected effluent data along with all relevant in-stream data, so that such information is available to the EPA and citizens prior to covering any facility under the GPs. In addition, the KDOW has provided assurances that parties have the right under the Commonwealth's law and regulations to challenge a decision to allow coverage under the GP or to deny coverage.

Response 51: The DOW appreciates the comment and has addressed the recommendations made by EPA. In light of concerns expressed in comments received, DOW will modify its process regarding public notification of the receipt of NOIs and issuance of coverages under KYGE4 and KYGW4. DOW will provide email notifications of receipt of NOIs and final decisions by the division to all individuals on the Public Notice listserv. Any person that wishes to be added to this listserv should send a request to DOWPublicNotice@ky.gov and their email will be added to the email listserv. Additionally, DOW posts daily on the Department for

⁹ We understand that Kentucky's acute and chronic aquatic life criteria are expressed as numeric values for chromium III and chromium VI. We recommend that, should effluent data indicate that total chromium exceeds either value, further monitoring and assessment be required.

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Environmental Protection's eSearch website all issuances of these general permit coverages. By selecting the AI Details link, an interested party can review the coverage letter, the electronic notice of intent (NOI), and other supporting data.

In addition, to the extent that coverages issued under a general permit are found to be final agency determinations by which any person is aggrieved, the right to a hearing would be as provided for in KRS 224.10-420(2) and the regulations promulgated thereunder.

The Division of Water appreciates the time and effort you have given to participate in the permit process.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Goodmann', with a stylized flourish at the end.

Peter T. Goodmann, Director
Division of Water

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ⁱ KRS 224.10.420(2): Any person not previously heard in connection with the issuance of any order or the making of any final determination arising under this chapter by which he considers himself aggrieved may file with the cabinet a petition alleging that the order or final determination is contrary to law or fact and is injurious to him, alleging the grounds and reasons therefor, and demand a hearing. An order or final determination includes, but is not limited to, the issuance, denial, modification, or revocation of a permit, but does not include the issuance of a letter identifying deficiencies in an application for a permit, a registration or a certification, or other non-final determinations. This subsection does not abrogate the right to a hearing on a draft permit afforded by KRS 224.40-310. Unless the cabinet considers that the petition is frivolous, it shall serve written notice of the petition on each person named therein and shall schedule a hearing before the cabinet not less than twenty-one (21) days after the date of such notice, except as provided in KRS 224.10-410 or unless the person complained against waives in writing the twenty-one (21) day period. The right to demand a hearing pursuant to this section shall be limited to a period of thirty (30) days after the petitioner has had actual notice of the order or final determination complained of, or could reasonably have had such notice.