Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
01	01-01	The announcement indicates this procedure is the result of a citizen suit. What are particulars on the citizen suit?	Appalachian Research & Defense Fund (ARDF) filed suit against EPA for failure to complete nondiscretionary duties under the Clean Water Act with regards to development of TMDLs and lists of impaired waters still needing TMDLs. The suit was settled on July 9, 1997. The agreement contains many commitments for West Virginia and EPA. EPA is required to complete the following major commitments if West Virginia fails to: TMDLs for 44 streams, at least 7 a year for the next 6 years; complete eight specific TMDLs by September, 1999; develop TMDLs for 469 acid mine drainage (AMD) streams in 12 years, with the first 100 due in 2001. These TMDLs will be established and final no later than March 31, 2001.	Carol Ann
01	01-03	How can the State of West Virginia or the USEPA establish or assign TMDLs? What are the basis for the assigned values? Please provide me with the research materials or any information that will be used to assign TMDLs to the Tygart River drainages. A key to acceptable watershed research data is a calibration period.	The Clean Water Act itself and the implementing regulations, 40 CFR 130.7 Total maximum daily loads (TMDL) and individual water-quality based effluent limits, gives the states and EPA a mandatory obligation to develop TMDLs. The TMDL Report " Metals and pH TMDLs for the Tygart Valley River Watershed, West Virginia" does provide a full technical description and data used to develop the TMDLs.	Carol Ann
05	05-01	The primary concerns deal with the farmers who can ill afford to hire lawyers to defend themselves against enforcement of unreasonable request such as keeping their cattle out of their own streams and requiring them to make a major outlay of money to build fences, etc. to prevent same from access to their own water.	The Tyagart Valley River Watershed addresses impacts associated with Mine Drainage. This comment does not seem to be connected to this TMDL in West Virginia.	Carol Ann
05	05-02	The concentrations of pollutants are based on data collected during the past several years. We believe the data would have to be based on a period when we were not in a severe draught which has lasted for approximately 3 years. The run-off from this period would be far more concentrated and would, therefore, not be accurate as an assessment of water quality.	The model was run for baseline conditions for the period January 1, 1987 through December 31, 1992. Predicted in-stream concentrations of aluminum, iron, and manganese for the impaired waterbodies in the Tygart watershed were compared directly to the TMDL endpoints. This comparison allowed evaluation of the expected magnitude and frequency of exceedances under a range of hydrologic and environmental conditions, including dry periods, wet periods, and average periods.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
08	08-01	Commenter submitted sampling data to WVDEP for Foxgrape Run and Little Hackers Creek to support their request that the streams be removed from this section 303(d) list. Apparently this data was not used in the TMDL analysis. The commenter requests that no TMDL be written for these streams.	The data submitted to West Virginia Division of Environmental Protection containing sample results for Fox Grape and Little Hackers was evaluated and the model was revised accordingly. Note that the allocations require reduction of only aluminum in subwatersheds of concern.	WVDEP
12	12-05	Coastal is concerned about the apparent assumption that point sources are currently contributing concentrations of pollutants at the upper extremes of their permitted limits. This is very inaccurate. As described above, if the model assumes that the concentrations in the receiving streams are due in part to permitted mines discharging at a concentration well in excess of actual discharge concentrations, then the reductions in pollutant loadings predicted by the TMDL will not occur.	Based on direction given by WVDEP, the baseline condition was adjusted to better represent point source discharge quality. Instead of using maximum daily effluent limitations, discharges were modeled using the wasteload allocations associated with existing permit conditions (see Table 5-1.) Implementation of the TMDL wasteload allocations will be accomplished using the effluent limitation development procedures of EPA's Technical Support Document for Water Quality-Based Toxics Control. Implementation of TMDL wasteload allocations is to be accomplished using the effluent limitation development procedures of EPA's Technical Support Document for Water Quality-Based Toxics Control". Implementation of TMDL wasteload allocations is to be accomplished using the effluent limitation development procedures of EPA's Technical Support Document for Water Quality-Based Toxics Control". Because of the allocation philosophy used in the TMDL, point source reductions are only required where maximized non point source reductions do not result in compliance with water quality criteria. As such, the point source reductions need to occur regardless of the schedule of non point source implementation.	WVDEP

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
12	12-01	Coastal believes that the time allowed in the public comment period is insufficient to conduct a thorough review of the complex and technically detailed TMDL. Coastal requests that EPA extend the comment period by ninety days to allow better public input into the TMDL process.	EPA has participated in, what we believe to be an extensive public participation process. The basic requirement for public participation is a 30 day comment period for the final TMDL. EPA has gone well beyond that allowing the watershed stakeholders the opportunity to participate at various stages of the TMDL development. In addition, Canaan Valley Institute (CVI) has served as a facilitator for several stakeholder meetings in addition to those attended by EPA. Coastal had the opportunity to attend these training and discussion sessions as well as the EPA public meetings. The public meetings pertaining to the Tygart Valley River watershed occurred as follows: 1) January 26, 1999Public meeting presenting an introduction to the TMDL process, together with the requirements of the consent decree, 2) July 28, 1999 public meeting presented by WVDEP, EPA and Tetra Tech., 3) May 9, 2000 public meeting presented by WVDEP, EPA and Tetra Tech., 4) October 11, 2000 public meeting presented by WVDEP, EPA and Tetra Tech., and 5) January 15, 2001 public meeting presented by WVDEP, EPA and Tetra Tech.. Because of the extensive public process during the development of the model as well as the TMDL, EPA does not believe that a 90 day extension to the comment period is warranted.	Tom Henry
12	12-02	Technical information relied upon in the TMDL appears to be technically deficient. For example, Coastal's Permit No. O-1008-98 is incorrectly identified as being in SWS 59. In fact, Permit No. O-1008-98 is located in SWS 68, approximately three miles away from the location indicated by EPA, and on a different stream.	The location of permit O-1008-98 has been corrected. (page A-16-4). Note that the map subwatershed numbering scheme has been revised from the draft version.	TTWVDEP

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
12	12-03	How does the TMDL account for Coastal's contribution to the watershed? It appears that the TMDL assumes that Coastal's mine has been contributing some historical level to the watershed, resulting in some of the loading which has caused the impairments in the watershed. Clearly, this is impossible, particularly where the discharges have only recently begun to occur. On the converse, the TMDL may be counting on Coastal to discharge relatively large quantities of water, in effect diluting other pollutant loads entering the watershed. Again, this is a dangerous assumption, considering that Coastal's discharges may be much lower in volume than those projected in the TMDL. For example, the TMDL projects that Coastal's Freeport mine will discharge an average of 22 gallons per minute, which is credible. However, the TMDL projects that Coastal's Kittaning mine will discharge an average of 303 gallons per minute. This is highly unlikely.	The predicted average flow for the Coastal Coal Kittaning mine(permit # U-1014-92) is 20.64 gallons per minute. WV DEP provided start dates for certain new points. Facilities with late start dates were not included in model calibration. However, the discharges were modeled appropriately for baseline and TMDL conditions.	TTWVDEP

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
12	12-04	The draft does not adequately describe either the method of calculating the wasteload allocations nor the data relied upon in these calculations. While the draft TMDL explains in general terms the method for calculating the current loading for point sources, it is impossible to determine what information was used to determine the current loading for specific point sources within the watershed and how this information was assimilated into the calculations. Coastal questions the accuracy of the information put into the model regarding the current loadings from point sources in the Tygart Valley River watershed.	A top-down methodology was followed to develop the TMDLs and allocate loads to sources. Headwaters were first analyzed, because their impact frequently had a profound effect on down-stream water quality. Loading contributions were reduced from applicable sources for these waterbodies and TMDLs were developed. Model results from the selected successful scenarios were then routed through down-stream waterbodies. Therefore, when TMDLs were developed for down-stream impaired waterbodies, up-stream contributions were representing conditions meeting water quality criteria. Using this method, contributions from all sources were weighted equitably. In some situations, reductions in sources impacting impaired headwaters ultimately led to improvements far down-stream (due to the inherent larger assimilative capacity of the down-stream waters). This effectually decreased required loading reductions from many potential down-stream sources. Waste load allocations (WLAs) were made for all permitted facilities except for limestone quarries and those with a Completely released or Phase 2 released classification. For TMDL purposes these point sources are assumed to be compliant with water quality criteria, since they were assumed to have little potential water quality impact. Loading from revoked permitted facilities was assumed to be a nonpoint source contribution based on the absence of a permittee. The WLAs for aluminum, iron, and manganese (for each permit) are presented in Tables 4a, 4b, and 4c for each of Appendices A-1 through A-21. The WLAs are presented as annual loads, in terms of pounds per year and as permit discharge concentrations. They are presented on an annual basis (as an average annual load), because they were developed to meet TMDL endpoints under a range of conditions observed throughout the year. The permitted concentrations represent a range of concentrations that achieve in-stream water quality criteria (under the same range of conditions). Each parameter was assigned a WLA (as a concentration) within a range of discharge concentrations, the minimum reflecting the in-stream water quality criteria, the maximum having been derived from the EPA's Technical Support Document for Water Quality-based Toxics Control (USEPA, 1991) to find the monthly average discharge concentration. The ranges are as follows: Al: 0.75-4.3mg/L, Fe: 0.5 or 1.5 -3.2mg/L, Mn: 1.0-2.0 mg/L.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
12	12-06	Perhaps most troubling is the apparent inequities in distributing the wasteload allocations among sources within the watershed. For instance, according to the TMDL, Coastal's Kittaning and Freeport mines discharge into SWS 103 (an unnamed tributary of the Left Fork of Little Sandy Creek). According to data contained in Tables 3a to 3c on pages A-14-116 and A-14-116, as well as Coastal's permit application and the CHIA, this tributary actually has good water quality. However, the TMDL proposes to provide Coastal with a load allocation based on 2 mg/l iron, even though SWS 103 is not impaired. On the converse, SWS 104 contains the upper reaches of the Left Fork of Little Sandy Creek. Although the TMDL contains no data for this stream segment, the data in Coastal's permit application and the CHIA indicates that the pH of this segment ranges from 2.8 to 3.2, with high to very high iron levels, moderate to high manganese levels, and high to very high aluminum levels. According to Tables 4a to 4c on pages A-14-117 and A-14-118, there are four permitted mines located on this stream segment. Ironically, the TMDL proposes to provide these mines located on SWS 104 with a load allocation based on 6 mg/l iron (no reduction from current loading is proposed). A review of Appendix B indicates that all four of these permits have been revoked.	The Unnamed Tributary of the Left Fork of Little Sandy Creek is not listed on the West Virginia 1998 303(d) list. This was confirmed by the water quality monitoring data collected at station MT-18-E-3-A-{1} (Tables 3a-c, pages A-14-3). However, this station is located upstream of the Coastal Coal discharges (permit numbers U-1007-98 and U-1014-92) in SWS 103. Furthermore, the Left Fork of Little Sandy Creek (MT-18-E-3) was listed for pH and metals impairments. A number of AML sites and revoked permitted facilities were identified in upstream of MT-18-E-3 in SWS 104. The loadings from these nonpoint sources were reduced to meet the in-stream water quality criteria within SWS 104 (Tables 5a-c, pages A-14-4 through A-14-8). However, in order to meet in-stream water quality criteria immediately downstream (SWS 122), the WLAs for Coastal Coal's permits (U-1007-98 and U-1014-92) required reduction (Tables 4a-d, pages 14-4).	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
12	12-07	The TMDL is woefully inadequate in describing the method of determining the current loadings from nonpoint sources, as well as the method for determining the reductions proposed from nonpoint sources to achieve the desired load allocations set forth in the TMDL.	Loading processes for nonpoint sources or land-based activities are typically rainfall-driven and thus relate to surface runoff and subsurface discharge to a stream. In order to represent AMLs as nonpoint sources, the AML categories were represented as three unique land use categories: high walls, disturbed land, and abandoned mines. The abandoned mines represent either discharge from abandoned deep mines or seeping and leaching from other abandoned mine sites. The forested area land use was reduced to account for the three additional land uses. Since detailed information was limited, AML loadings were calculated by adjusting the contributing concentration to meet in-stream water quality observations. The following general methodology was taken in allocating to sources for the Tygart TMDL. For watersheds with AMLs but no point sources, AMLs were reduced until in-stream water quality standards were met. For watersheds with AMLs and point sources, all point sources were set at permit limits and AMLs were subsequently reduced. AMLs were reduced (without reducing point sources) until in-stream water quality standards were met. If a reduction greater than around 99% was required from AMLs, then reductions were made from point sources. This methodology doesn't set the reduced AML values specifically to the water quality standards or a background level for every situation, rather it is based on the magnitude of AML contributions in each watershed. When reductions are maximized for AMLs, the resulting contribution is roughly equivalent to background levels.	Tetra Tech
12	12-08	Perhaps Coastal's most serious concern involves the implementation of the TMDL. The TMDL does not explain how the desired reductions in loadings from point sources and nonpoint sources will be achieved.	Implementation plans are not a requirement of a TMDL in order to be considered complete. EPA anticipates that various state agencies will need to address the methods by which the final TMDL will be implemented. The TMDL serves as a blueprint for these discussions and eventual implementation activities in various sub-watersheds of the Tygart River.	Tom Henry

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
12	12-09	The TMDL does not describe how the wasteload allocations are to be incorporated in NPDES permits for point sources with valid permits. However, these permitted discharges are inconsequential when compared to the volume of water being discharged from point sources with revoked permits and from nonpoint sources. Unless an effective method can be developed for bringing these discharges into compliance with the requirements of the TMDL, reductions which may be achieved from permitted point sources will not affect the water quality in the Tygart Valley River watershed.	Implementation of TMDL wasteload allocations is to be accomplished using the effluent limitation development procedures of EPA's Technical Support Document for Water Quality-Based Toxics Control". Because of the allocation philosophy used in the TMDL, point source reductions are only required where maximized non point source reductions do not result in compliance with water quality criteria. As such, the point source reductions need to occur regardless of the schedule of non point source implementation.	Carol Ann
14	14-01	These two actions, relying on readily available data and assuming discharge water quality, have caused erroneous data to be used to establish the baseline conditions in the watershed.	All available data was used in model development for the Tygart Valley River TMDL. In addition to data retrieved from STORET, water quality data that was collected by the Special Reclamation Group, Stream Restoration Group was provided by WVDEP OWR. This data was used extensively during model the calibration and validation process. Discharge monitoring reports (DMRs) were also provide by WVDEP. However, the DMRs from mining discharges often provided little or no data. In-stream water quality monitoring data collected by industry that includes observations upstream and downstream upstream of point source discharges was not readily available in the correct format required for modeling purposes. WVDEP and EPA are currently working together to convert this data into a format that can be used in the future.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-02	Reliance on EPA's methodology has resulted in the recommendation of LA's and WLA's in streams that are not impaired for the recommended pollutant. Analysis of the draft TMDL document makes this conclusion undeniable. In addition, the errors that have been discovered raise serious questions about the accuracy and reliability of the LA's and WLA's on the other streams.	A top-down methodology was followed to develop the TMDLs and allocate loads to sources. Impaired headwaters were first analyzed, because their impact frequently had a profound effect on down-stream water quality. Loading contributions were reduced from applicable sources for these waterbodies and TMDLs were developed. Model results from the selected successful scenarios were then routed through down-stream waterbodies. Therefore, when TMDLs were developed for down-stream impaired waterbodies, up-stream contributions were representing conditions meeting water quality criteria. Using this method, contributions from all sources were weighted equitably. In some situations, reductions in sources impacting impaired headwaters ultimately led to improvements far down-stream (due to the inherent larger assimilative capacity of the down-stream waters). This effectually decreased required loading reductions from many potential down-stream sources. In some situations, reductions in sources contributing to unlisted stream segments have been determined necessary to ensure universal compliance with water quality criteria in the watershed. Recent water quality data is not available for all streams in the watershed and MDAS is the best technical tool available to make impairment judgements in such cases.	Tetra Tech
14	14-03	In developing the TMDL analysis for the Buckhannon River last year, a more extensive collection of baseline data was developed which resulted in the determination that some streams or steam segments were actually in compliance with the state water quality standards. These streams or stream segments were erroneously listed on the 303(d) list. As a consequence of this discovery, it was determined that a TMDL was not necessary at these locations. Data is available in the Tygart watershed that is sufficient for de-listing, but these data were ignored in an effort to keep the cost down and accelerate the job.	Recently supplied data was not ignored in the development of this TMDL, it was used in the calibration and verification to the maximum extent practical. The data will be further assessed during the 303d decision making process.	WV/TT/EPA

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-04	In trying to differentiate between LA's and WLA's it is necessary to know the pollutant contributions from each type of source. This report provides data that demonstrates that the EPA and Tetra Tech have significantly underestimated the number of non-point sources, and they have overestimated the amount of pollutants from point sources. If left uncorrected, the TMDL's derived from this analysis will place undue burden on the regulated community, and give false hope to the public that water quality will improve due to the tightening of effluent limits.	The following general methodology was taken in allocating to sources for the Tygart TMDL. For watersheds with AMLs but no point sources, AMLs were reduced until in-stream water quality standards were met. For watersheds with AMLs and point sources, all point sources were set at permit limits and AMLs were subsequently reduced. AMLs were reduced (without reducing point sources) until in-stream water quality standards were met. If a reduction greater than around 99% was required from AMLs, then reductions were made from point sources. This methodology doesn't set the reduced AML values specifically to the water quality standards or a background level for every situation, rather it is based on the magnitude of AML contributions in each watershed. When reductions are maximized for AMLs, the resulting contribution is roughly equivalent to background levels.	Tetra Tech
14	14-05	Water quantity was calibrated at three stations, and water chemistry was calibrated at five stations. The water quantity calibrations appear to be robust, but the water quality calibrations are weaker. Appendix C contains the water quality cllibration results.	Hydrologic calibration was performed at 7 locations and water quality calibration was performed at 12 different locations throughout the Tygart River Watershed (page 4-12).	Tetra Tech
14	14-06	On page C-12 the simulation for Manganese on the Middle Fork River below Cassity appears to overstate the field data by 500 ug/1 to 1,000 ug/1. Since the water quality standard for Manganese is 1,000 ug/1 this overstatement is significant. Of the 24 water samples for which Manganese data are available, only 2 samples exceeded the water quality standard. However, the simulated data indicate that the stream is above 1,000 ug/1 about 80% of the time. (Based on the actual field data and West Virginia's 303(d) listing protocol it is questionable if this segment should be listed at all.)	The water quality calibration for manganese on the Middle Fork River below Cassity was refined to reflect the observed more accurately (page C-12).	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-07	On page C-13 the simulation for Iron on the Middle Fork River above Long Run is similarly overstated. The Middle Fork River is a trout fishery and has a chronic in stream Iron standard of 500 ug/1. 27 samples were analyzed for Iron between 1992 and 1994. Of these 27 samples, 3 exceeded 500 ug/l. One exceedence occurred in 1992, one in 1993 and one in 1994. Given that Iron is a chronic standard it is questionable if this stream should be listed at all.	The water quality calibration for iron at the Middle Fork River above Long Run monitoring station (551114) was refined to represent the observed water quality data more closely (Figure C-17, page C-13). (Need to update final report)	Tetra Tech
14	14-08	The simulation for Manganese on the Middle Fork River above Long Run also overstates the Manganese load. While the simulation mimics the highest observed concentrations, the simulation does not replicate the lowest observed values. Hence the simulation overstates the Manganese load. There are 28 Manganese data points and only 5 times (or 17.9%) is the 1,000 ug/1 standard exceeded. A visual examination of the results on page C-13 indicates` that the simulation exceeds the standard about 30% of the time.	Further adjustment to various parameters did not improve the water quality calibration for manganese at the Middle Fork River above Long Run monitoring station (551114) (Figure C-17, page C-13).	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-09	Black Lick Run Region 5, MTB-18-B-2. Appendix A-5 Table 1 lists Black Lick Run as impaired for Iron. Black Lick run is a class B-1 aquatic life stream. Despite the specific listing of Iron as the pollutant, the draft TMDL for Black Lick Run proposes a reduction in Iron, Aluminum, and Manganese. Water quality data provided in Tables 3a and 3c for Aluminum and Manganese do not contain any data for Black Lick Run (673). However, these tables do contain data for MTB-18-B-2 which is labeled (677). These data show 0.13 mg/1 of Aluminum and 1 mg/1 of Manganese. Never the less, the draft TMDL calls for a 1,924 pound reduction in Aluminum with 1,142.8 pounds coming from the non-point sources and 781.2 pounds coming from the point sources. Further, the draft TMDL calls for a 1,711.8 pound reduction in Manganese, with the bulk of the reduction, 1,106.3 pounds, coming from the point source discharger(s). Neither of these pollutants is listed in the 303(d) list, and neither has been shown to be out of compliance by any data contained in the TMDL. It appears that the proposed reduction is an artifact of the modeling process.	Black Lick Run was listed on the WV 1998 303(d) for iron only. The model calibration for Black Lick Run (MTB-18-B-2) was refined and waste load allocations were assigned for iron, but not for aluminum and manganese (page 5-5 through 5-6).	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
19	19-02	The example allocation of Appendix E exemplifies another problem. Approximately 42% of the existing aluminum load to Snyder Run is assigned to one point source. Note that the permit status for the subject point source is "new" and, according to DEP records, the facility has yet to begin discharging. If allocation must be performed by the process described in the draft TMDL, then an alternative procedure for certain "new" facilities must be developed. If a facility was not contributing pollutants during the period for which the model generated an "existing" condition, or if the model did not include the source in the generation of a "base" condition, then the procedure must not assign a portion of the "existing" or "base" load to the facility. WVDEP will provide information regarding the start date of all "new" permits for EPA's consideration.		Tetra Tech
19	19-04	Approximately 45% of the "permitted" facilities in both watersheds have an assigned permit status of "revoked." Such facilities have forfeited bonds and their Article III permits have been revoked. Most WV/NPDES permits have either expired or have been revoked. Practically, they are no longer in the permitting world because there is no responsible party to permit. As such, WVDEP believes that the TMDL should classify facilities with forfeited bonds in a distinct nonpoint source category.	From the information presented in the Supplemental Information document submitted by WVDEP on February 23, 2001, loading from revoked permitted facilities was assumed to be a nonpoint source contribution based on the absence of a permittee. Therefore, revoked permits are not listed in Table D-5, the loadings associated with the revoked facilities is included in the LAs in Tables D-1 through D-3.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
19	19-05	We also suggest that it is inappropriate to classify facilities operating under remining permits issued under Section 301(p) of the Clean Water Act as point sources. In order to qualify for remining permits, the area to be remined must be an eligible site under the Abandoned Mine Lands (AML) program. Remining permits require improved water quality from the site, which should bring about an improvement in receiving stream water quality, but they do not necessarily require pollutant reduction as prescribed by a TMDL. The remining permits should be viewed as an implementation tool that will be used to partially achieve pollutant reduction from AML nonpoint sources, and thus should not be given a wasteload allocation in the typical manner. WVDEP will provide a list of "remining permits" in both watersheds for EPA's consideration.	Re-mining permits that were identified by WVDEP in the Supplemental Information document were assigned WLAs as typical mining point source permits. This TMDL does not include specific future growth allocations to each subwatershed. Because of the general allocation philosophy used in this TMDL, such allocations would be made at the expense of active mining point sources in the watershed. However, the absence of specific future growth allocations does not prohibit new mining in the watershed. Future growth could occur in the watershed under the following scenario: Remining could occur without a specific allocation to the new permittee, provided that the requirements of existing State remining regulations are achieved. Remining activities are viewed as a partial nonpoint source load reduction from Abandoned Mine Lands.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
19	19-06	The allocation procedures in both TMDLs estimate the existing pollutant contribution of quarries in exactly the same manner as coal mining operations. While the effluent from sandstone quarry operations may exhibit similar qualities to that of coal mining operations, WVDEP believes the effluent quality of limestone quarries is very different. In fact, permits for limestone quarries do not contain effluent limitations for iron, manganese or aluminum. It is recommended that limestone quarries be treated equally to other non-mining point sources in the watersheds. In keeping with the recommendation of the Cheat TMDL Stakeholder Group to provide explicit future growth allocations, the quarry loads could be assigned to future growth in their respective catchments. WVDEP will provide a list of permits that relate to limestone quarries in both watersheds.	From the information presented in the Supplemental Information document submitted by WVDEP on February 23, 2001, the permits that were identified as limestone quarries were treated as non-mining point sources and thus did not receive allocations.	Tetra Tech
19	19-07	The Reasonable Assurance write-ups lack the level of detail necessary to show the agency's true commitment to nonpoint source pollution abatement in the watersheds. We will provide additional details regarding programs and processes associated with the Office of Abandoned Mine Lands and the Office of Mining and Reclamation Special Reclamation Group.	The reasonable assurance section of the report now includes specific details of the WV DEP programs such as Office of Mining and Rreclamationa and the Office of Abandoned Mines Lands and the abatement projects and permits in the watershed.	WVDEP
19	19-08	In the public hearing, various parties commented on issues related to the incorrect location of discharge points and the disagreement between the model outputs and recent water quality monitoring data. WVDEP has also independently identified certain errors and inconsistencies. We will provide the specific information needed to address those issues.	The supplemental information regarding permit locations and recent water quality monitoring data that was provided by WVDEP on February 23, 2001 was used in the analysis during the preparation of the final document.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
19	19-10	Point source allocations are specified as a concentration and loading for each individual Surface Mining Control and Reclamation Act (SMCRA) permit in the watersheds. SMCRA permits have an associated WV/NPDES permit that may, in turn, contain multiple outlets. The TMDLs should describe acceptable procedures for conversion of the SMCRA permit-specific allocations to the individual outlets of WV/NPDES permits. Of particular concern is appropriateness of establishing varying effluent limitations through a weighting process, in contrast to the equal application of the specified concentration to all outlets.	Article 3 permits are being assigned wasteload allocations which may have to be divided among multiple outlets. A system of weighing individual outlet contibution could be used to divide the allocated load among the permitted outfall within an inidividual Article 3 permit.	Carol Ann
19	19-11	40 CFR 434.63 provides alternative effluent limitations for precipitation-induced discharges in the coal mining industry. The TMDLs should address the future applicability of those provisions, especially for existing facilities for which the TMDLs do not require pollutant reduction.	All Waste Load Allocations in the Tyagrt Valley River Watershed were developed based on West Virginia Water Quality Standards. Therefore all future effluent limits will be developed in accordance with the procedures contained in EPA's Technical Support Document for Water Quality Based Toxics Control (USEPA 1991). Under 40 CFR Section 122.44(d), water quality limits will be the most stringent thus overriding 40 CFR 434.63 which only applies to technology based limits.	Carol Ann
19	19-12	The TMDLs generally remove non-mining point sources from consideration. The TMDLs should provide direction regarding the future permitting of existing and/or new non-mining point sources that contain Fe, Al, Zn, or Mn.	If a non-mining point source for the pollutants under consideration is proposed the impacts of that discharge on the water quality must be analyzed. The state should run the model with the additional source to determine if an allocation is necessary or if a re-allocation between all sources would be necessary. Additional guidance can be provided as the situation warrants.	Tom Henry

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
19	19-13	The agency recognizes that the permitting of new facilities in impaired waters could generally be accomplished by assigning a portion of future growth allocations, remining and possibly water quality trading. Further, the agency believes that the permitting of new facilities with effluent limitations based upon the achievement of water quality standards end-of-pipe, in both impaired and unimpaired streams, is allowable. The progression of active permits to permit release should also provide opportunity for new facility permitting. A need exists to detail and clarify the ground rules relative to those implementation issues. There is also a need to define the type, frequency or magnitude of allocation revisions that require formal TMDL modification and EPA approval.	EPA can discuss the details of situations where TMDLs must be re-submitted for EPA review and action. In general, if a revision to a TMDL results in a different total allowable load, a change in the total waste load allocation or a change in the total load allocation, the revisions should be sent to EPA for review and action. In most cases, a re-allocation within the total waste load allocation or load allocation needs not be reviewed by EPA.	Carol Ann
19	19-14	WVDEP will be using the WARMF and MDAS TMDL models for future permitting decisions. As such, WVDEP requests intensive, hands-on training for both models so that we may effectively use them in implementation.	EPA can arrange additional training in the use of both models.	Tom Henry

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
09b	09b-01	Many errors were found In Appendix A 16. from tables 4A, B and C, the following Patriot Mining Company, Inc. permits were listed: Patriot Permit No. / TMDL Table 4 SWS (subwatershed) / Actual SWS (subwatershed) (using map in Mr. 17) O-23-84 — 10 — 6 8-38-82 — 10 — 6, 9 U-87-84 — 15 — 6 O-1012-86 — 18 — 6, 14 8-119-82 — 18 — 6 U-1041-86 — 18 — 14 U-1011-86 — 4 — 7 S-1022-88 — 40 — 30, 38 All of the eight Patriot permits were modeled In the incorrect watershed.	In Appendix A-16, the locations of the eight Patriot Mining permits (O-23-84, S-38-82, U87-84, O-1012-86, S-119-82, U1041-86, U-1011-86, S-1022-88) have been corrected.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
09b	09b-02	In Section 3.4.1 of the TMDL, reference Is made to locations of the most critical AML sources. Table 2, in Appendix A 16, lists abandoned mines in the following subwatersheds: 7, 18, 16, 17, 18, 19, 41, 86 and 88. This Is only a fraction of the AML sites in this watershed. Anker's Hopewell study, conducted over a six-month time period in 1982, documented 20 abandoned deep mine discharges and 5 abandoned surface mine discharges in the following subwatersheds: 5, 6, 13, 20, 26, 30, 43, 49 and 33; none of which are listed In Table 2. None of these subwatersheds are listed for AML reductions in Table 5A, B and C even though these AML sites are the very reason the waters do not meet water quality standards. I have attached a copy of the Hopewell study to my written comments. An electronic version of this data Is not available.	Figure 1 in Appendix A-16 of the Draft Metals and pH TMDL did not correctly identify the subwatersheds. The subwatersheds in Appendix A-16 have been correctly identified in the final TMDL document. AML sites were identified in a number of subwatersheds. The allocation analysis resulted in LA reductions in the following subwatersheds: SWS 7, 8, 10 15, 16, 17, 19. In subwatersheds that contained point sources (SWS 7, 10, 15, 16), additional reduction was required from WLAs in order to meet in-stream water quality criteria. SWS 10 was not listed on the West Virginia 303(d) list, but reductions from LAs and WLAs were necessary to meet in-stream water quality criteria directly downstream (SWS 18). (See Tables 4a-c and 5a-c , pages A-16-4 through A-16-11)	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
09b	09b-03	Subwatershed loadings in the TMDL are calculated numbers, not actual measurements, which are predicted by the model using IQUAL and PQM modules. How do these modules predict AMD loadings? This is much too complex a process for model predictions without better calibration runs. The Three fork Creek watershed has 9 Identified AML sites, as well as many times more unidentified AML sites, 41 permit sites and 6 impaired water bodies, according to Appendix 16. The most similar watershed on which the model was calibrated was Region 17 on the Buckhannon River, which has only 4 AML sites, 10 permit sites and s Impaired water bodies. We feel that the TMDL analysis has greatly underestimated the number of AML sites in the affected watersheds, as is demonstrated by the Hopewell study for the Squires Creek and Birds Creek subwatersheds. We feel that a fair allocation approach would be to require loading reductions proportional to existing loading contributions. With the lack of data in the current model, it is impossible to determine the magnitude of AML site discharge pollutant loading.	The following general methodology was taken in allocating to sources for the Tygart TMDL: For watersheds with AMLs but no point sources, AMLs were reduced until in-stream water quality standards were met. For watersheds with AMLs and point sources, all point sources were set at permit limits and AMLs were subsequently reduced. AMLs were reduced (without reducing point sources) until in-stream water quality standards were met. If a reduction greater than around 99% was required from AMLs, then reductions were made from point sources. This methodology doesn't set the reduced AML values specifically to the water quality standards or a background level for every situation, rather it is based on the magnitude of AML contributions in each watershed. When reductions are maximized for AMLs, the resulting contribution is roughly equivalent to background levels.	Tetra Tech
09b	09b-04	Given these shortcomings with the Tygart analysis, if significant Improvements are not made to the model prior to the establishment of the TMDL, we would encourage that the WV DEP not implement the new proposed effluent limits until the model can be upgraded to more closely reflect actual conditions. If the model is not upgraded, we feel that the most equitable method of allocation would be to require all reductions from AML sites (non~point sources).	Once a TMDL is final, the NPDES regulations require that any permit written for a discharge impacted by the TMDL must be consistent with the wasteload allocations. Significant improvements have been made to the model with the general result of lessening impacts to existing point sources. Implementation of wasteload allocations will occur in accordance with permitting schedule of the States watershed management framework.	Tom Henry

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
09b	09b-05	Encourage Effluent Trading - We also believe that the DEP should be allowed the flexibility when making permitting decisions to make judgements that will allow for maximum pollutant reductions. This could be accomplished either at permitted outfalls or by permit holders making similar reductions at AML non-point sources. If the DEP does not have the authority to do this In this TMDL document, it is unlikely that trading will occur.	This TMDL neither prohibits nor authorizes trading in the Tyagrt River watershed. Both the WVDEP and EPA generally endorse the concept of trading, and recognize that it may become an effective tool for TMDL implementation. However, significant regulatory framework development is necessary before large-scale trading in West Virginia may be realized. EPA will cooperate with the West Virginia Division of Environmental Protection in their development of a statewide or watershed-based trading program. Further, EPA supports program development assisted by a consensus-based stakeholder process. Prior to the development of a formal trading program, it is conceivable that the regulation of specific point source to point source trades may feasible under the framework of the NPDES program. EPA commits to cooperate with the WVDEP to facilitate such trades if opportunities arise.	Carol Ann
09b	09b-06	All watersheds should have loadings set aside for future growth. Significant reductions can be made through remining and effluent trading, but some room for future growth must be set aside in order for the permits to be issued.	This TMDL does not include specific future growth allocations to each subwatershed. Because of the general allocation philosophy used in this TMDL, such allocations would be made at the expense of active mining point sources in the watershed. However, the absence of specific future growth allocations does not prohibit new mining in the watershed. Future growth could occur in the watershed under the following scenarios: 1) A new facility could be permitted anywhere in the watershed, provided that effluent limitations are based upon the achievement of water quality standards end-of-pipe for the pollutants of concern in the TMDL. 2) Remining could occur without a specific allocation to the new permittee, provided that the requirements of existing State remining regulations are achieved. Remining activities are viewed as a partial nonpoint source load reduction from Abandoned Mine Lands. 3) Reclamation and release of existing permits could provide an opportunity for future growth provided that permit release is conditioned upon achieving discharge quality better than the wasteload allocation prescribed by the TMDL. It is also possible that the TMDL may be refined in the future through remodeling. Such refinement may occur to incorporate new information and/or to the redistribute pollutant loads. Trading may provide an additional opportunity for future growth, contingent upon the State's development of a statewide or watershed-based trading program.	Carol Ann

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
09b	09b-07	During the public hearing presentation, it was stated that no NPDES permit limits for manganese would be reduced to less than 1.0 mg/L. When reviewing Appendix A=18, Table 4C, the manganese allocation for permits O-1 OSa-87 and 5-1022-88 are listed as 0.4 mg/L. We request that these limits be reviewed.	The manganese allocation for permit S-1022-88 is 2.0 mg/L (page A-16-5). Since permit O-1035-87 is revoked, the associated loading was represented as nonpoint source loading (SWS 40, Table 5c, page A-16-11).	Tetra Tech
11	11-01	Information was submitted to WVDEP on both watersheds which would have led to certain de-listing procedures. Since a 303d list was not developed last year, the information was sent on to both of EPA's contractors to be utilized in their evaluations. As it turns out, this information was not utilized by either of the contractors, resulting in the assignment of TMDL's on streams and stream segments that did not require in form of corrective remediation measures. Because of this oversight, there are potential biological impairment issues related to over-treatment for manganese or for treatment in general. That is to say, that a reclaimed site receiving a Report Only limit for manganese due to having Post Mining effluent limits, may and in many cases will, have to begin treatment for manganese even though by law, it was meeting all water quality criteria relative to Post Mining requirements.	Recently supplied data was not ignored in the development of this TMDL, it was used in the calibration and verification to the maximum extent practical. The data will be further assessed during the 303d decision making process. Also note DEP concurs that data indicates non-impairment for Fe, Mn and pH for all sites sampled.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
11	11-02	Both models, and especially the Cheat model, utilized far too much assumption rather than factual water quality data. It would also seem that an assumption was made that all three metals existed at each and every mine site for calculation of the VVLA's. Each site is chemistry specific as to what parameters are present in the raw water. The actual raw quality for all the point sources is readily available through the WVDEP AMD Inventory.	All available data was used in model development for the Cheat River TMDL and Tygart Valley River TMDL. In addition to data retrieved from STORET, water quality data that was collected by the Special Reclamation Group, Stream Restoration Group and the Bond Forfeiture group was provided by WVDEP OWR. This data was used extensively during model the calibration and validation process. Discharge monitoring reports (DMRs)were also provide by WVDEP. However, the DMRs from mining discharges often provided little or no data. In-stream water quality monitoring data collected by industry that includes observations upstream and downstream upstream of point source discharges was not readily available in the correct format required for modeling purposes. WVDEP and EPA are currently working together to convert this data into a format that can be used in the future. The amount of quanitifiable data from AML sites is very limited. Available information regarding AML sites was provided by WVDEP. This information included spatial coverages of identified AML sites, the Tygart Valley River Abandoned Mine Drainage Assessment, and Problem Area Data Sheets (PADS). Water quality monitoring data from AML sites was collected by the Stream Restoration Group, Special Reclamation Group and Bond Forfeiture group.	Tetra Tech
11	11-03	Modeling methodology for both watersheds ignores the basic water chemistry precepts associated with AMD and/or mine drainage. In particular, I am referring to the associated treatment problems regarding manganese. This problem is manifested in two ways. Manganese Treatment generally always requires a pH greater than 9 to meet Technology based or water quality based limits. This should be mentioned and accounted for in the TMDL since a pH variance for as high as a 10.5 must be accordingly issued. Over-treatment for manganese removal on a site specific basis results in the resolubilization of aluminum. The amount of resolubilization is based on each site's own unique chemistry. Based on numerous titration's that I have performed on point sources in both watersheds over the last 10 years, compliance with pH, manganese, in conjunction with aluminum will be almost impossible.	The water quality criteria for pH requires it to be above 6 and below 9. In the case of acid mine drainage, pH, is not a good indicator of the acidity in a waterbody and can be a misleading characteristic. Water with near neutral pH (~7) but containing elevated concentrations of dissolved ferrous (Fe2+) ions can become acidic after oxidation and precipitation of the iron (PADEP, 2000). Therefore, a more practical approach to meeting the water standards of pH is to use the concentration of metal ions as a surrogate for pH. Through reducing in-stream metals, namely aluminum and iron, to meet water quality criteria (or TMDL endpoints), it is assumed that the pH will result in meeting the WQS. This assumption is based on the application of MINTEQA2, a geochemical equilibrium speciation model, to aqueous systems representative of waterbodies in the Tygart watershed. By inputting into the model the dissolved concentrations of metals, a pH value can be predicted. Refer to Appendix D for a more detailed description of the modeling. Furthermore, it is assumed that implementation of TMDLs in the Tygart watershed for aluminum, iron, and manganese will result in in-stream metals concentrations meeting the water quality criteria. This assumes that treatment systems are implemented properly and effectively increase pH, in order to precipitate and thus lower metals concentrations.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
11	11-04	We developed the "Manganese Protocol". This involved an evaluation of the biological and chemical consequences of over-treatment for manganese. The process involved Toxicity testing and Benthic monitoring. EPA objected to this process since basically all streams in the state were designated as Category A-Public Intake. Efforts were made to resolve this issue by passing the 5 Mile Rule in the WV Legislature last year. In essence, 5 miles above a public intake, the instream water quality limit of 1 mg/1 no longer applied. Protocol only applies to reclaimed surface type permits. Due to the so-called "Alaska Rule", a self imposed stay of the 5 Mile Rule was implemented pending a review and comments from EPA. It has been over 120 days and we are still waiting for those comments.	The "Manganese Protocol" or 46CSR1 - "Requirements Governing Water Quality Standards" Section 6.2.d Limitations on applicability of the manganese criterion, was received by EPA, and a determination of the Rule has not yet been made. EPA understands the implications of the "Alaska Rule", however this proposal is significant changes to West Virginia's Water Quality Standards.	Carol Ann
11	11-05	Because of the manner in which loadings were calculated (assumptions), the influence of AML discharges has been dramatically under-stated. This potentially threatens the ability to obtain future funding for remediation efforts for AML sites.	Loading processes for nonpoint sources or land-based activities are typically rainfall-driven and thus relate to surface runoff and subsurface discharge to a stream. In order to represent AMLs as nonpoint sources, the AML categories were represented as three unique land use categories: high walls, disturbed land, and abandoned mines. The abandoned mines represent either discharge from abandoned deep mines or seeping and leaching from other abandoned mine sites. The forested area land use was reduced to account for the three additional land uses. Since detailed information was limited, AML loadings were calculated by adjusting the contributing concentration to meet in-stream water quality observations.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
11	11-06	TMDL "Trading" is critical in encouraging such industry sponsored projects to take place. This type of trading would result in construction of passive type treatment systems, which are much more biologically suitable versus active chemical systems.	This TMDL neither prohibits nor authorizes trading in the Tyagrt River watershed. Both the WVDEP and EPA generally endorse the concept of trading, and recognize that it may become an effective tool for TMDL implementation. However, significant regulatory framework development is necessary before large-scale trading in West Virginia may be realized. EPA will cooperate with the West Virginia Division of Environmental Protection in their development of a statewide or watershed-based trading program. Further, EPA supports program development assisted by a consensus-based stakeholder process. Prior to the development of a formal trading program, it is conceivable that the regulation of specific point source to point source trades may feasible under the framework of the NPDES program. EPA commits to cooperate with the WVDEP to facilitate such trades if opportunities arise.	Carol Anne
11	11-07	There is vast confusion as to the method that waste load allocations are converted to actual WV NPDES effluent limits.	For existing technology-based permits, effluent limitations and self-monitoring requirements represent wasteload allocations of 3.2 (mg/l) and 2.0 (mg/l) for iron and manganese, respectively. Aluminum has not been not limited in existing permits, but regular self-monitoring has been required. Based upon a review of self-monitoring results, a wasteload allocation of 4.3 (mg/l) was chosen to represent the aluminum baseline condition. Existing water quality-based permits require compliance with instream water quality criteria end-of-pipe. In the allocation process, existing point sources were assigned wasteload allocation values that range from those representing water quality criteria end-of-pipe to those representing existing technology-based requirements. Each parameter was assigned a WLA (as a concentration) within a range of concentrations - the minimum representing the achievement of water quality criteria end-of-pipe and the maximum representing existing technology-based requirements. (See Table 5-1) Proper implementation of the wasteload allocations will involve effluent limitation development in accordance with the procedures contained in EPA's Technical Support Document for Water Quality Based Toxics Control (USEPA 1991).	Carol Ann

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
18	18-01	The lower reach (M-27, Tygart Dam to mouth) is listed as impaired only with respect to total aluminum in the West Virginia Division of Environmental Protection's (WVDEP) 1998 303(d) list of impaired streams. The lower reach of the Tygart River (below the Tygart Valley Lake Dam), which is included in this draft TMDL report, is listed as impaired with respect to pH and metals water quality criteria in the draft report. The summary of Region 21 (below the dam) in the draft report which lists pH and metals as pollutants for the lower Tygart Valley River should be corrected to list only total aluminum as a pollutant.	The summary of Region 21 has been corrected to list aluminum as the only pollutant (page A-21-3).	Tetra Tech
18	18-02	Upon review of the draft report, it does not appear that the presence or influence of the dam has been considered in the development of the model for determining TMDL's. Influences of the dam include impeded flow, alteration of temperature, and settling of suspended solids, likely resulting in changes in the downstream water quality. This is particularly pertinent in that aluminum has been strongly correlated with suspended solids; a factor that may not be considered in the current model. These influences should all be reflected in the modeled data.	A top-down methodology was followed to develop the TMDLs and allocate loads to sources. Impaired headwaters were first analyzed, because their impact frequently had a profound effect on down-stream water quality. Loading contributions were reduced from applicable sources for these waterbodies and TMDLs were developed. Model results from the selected successful scenarios were then routed through down-stream waterbodies. Therefore, when TMDLs were developed for down-stream impaired waterbodies, up-stream contributions were representing conditions meeting water quality criteria. Using this method, contributions from all sources were weighted equitably. In some situations, reductions in sources impacting impaired headwaters ultimately led to improvements far down-stream (due to the inherent larger assimilative capacity of the down-stream waters). This effectually decreased required loading reductions from many potential down-stream sources. During the allocation analysis, the influence of Tygart Dam was considered negligible since the upstream source contributions were reduced to meet in-stream water quality criteria directly upstream of Tygart Lake. The resulting inflow to Tygart Lake was assumed to meet water quality criteria. Additional direct source contributions to Tygart Lake were not identified and therefore, Tygart Lake outflow was assumed to meet water quality criteria.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
18	18-03	The West Virginia Environmental Quality Board (EQB) has changed the water quality standard for total aluminum to dissolved aluminum since the dissolved fraction is more toxic. This change has been submitted to the legislature and is expected to be approved during this session. In this case, the lower Tygart Valley River may not be impaired with respect to dissolved aluminum since it is usually found in much smaller amounts. The TMDL's for aluminum should not be finalized until the regulatory status of aluminum is determined.	The West Virginia Divison of Environmental Protection's Office of Water Resources recognizes the fact that the Environmental Quality Board has recommmended a change in the aluminum standard from a total to a dissolved value. However, several factors must be recognized to understand the current situation. First, although the Board has recommended the change in the aluminum standard, at this time the West Virginia Legislature has not acted on the recommendation. Until the recommendation is ratified by the legislature, the current value must remain in place as the standard used for Total Maximum Daily Load (TMDL) development in West Virginia. Secondly, The current court ruling (AlaskaClean Water Alliance vs Clark, No. C96-1762R (W.D. Wash.)) requires US EPA approval of state water quality standards prior to implementation for Clean Water Act purposes. Therefore, although the WV legislature could approve the new standard for aluminum, it would not become effective until it receives initial approval from EPA, is revised by the state and approved by EPA or EPA promulgates a federal rule to supersede the State water quality standard.	Tetra Tech
26	26-01	We feel the omission of Canaan Valley Institute (CVI) in the credits should be addressed.		Carol Ann
26	26-02	Streams have improved significantly from this period for many reasons including the decline of mining activity and implementation of AMD projects. Therefore, more recent data should be acquired, incorporated and the model immediately updated to reflect the actual current status of the watershed.	New information will be generated by the Watershed Assessment Program, NPDES permittees , and various reclamation agencies. The TMDL may be refined by WVDEP, with EPA approval, in the future to incorporate additional or new data.	WV
26	26-03	Ignoring data collected within the past 7-8 years is a disservice to the stakeholders and all of those living within the watershed. WV Division of Environmental Protection and industry have collected a tremendous amount of data as part of routine monitoring and this should be used to update the model.	All available data was used in model development for the Tygart Valley River TMDL. In addition to data retrieved from STORET, water quality data that was collected by the Special Reclamation Group, Stream Restoration Group and the Bond Forfeiture group was provided by WVDEP OWR. This data was used extensively during the model calibration and validation process. Discharge monitoring reports (DMRs) were also provide by WVDEP. However, the DMRs from mining discharges often provided little or no data. In-stream water quality monitoring data collected by industry that includes observations upstream and downstream of point source discharges was not readily available in the correct format required for modeling purposes. WVDEP and EPA are currently working together to convert this data into a format that can be used in the future.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
26	26-04	It is critical a truly accurate TMDL document that has determined current water quality and needed water quality improvements be developed. The economy of this area is extremely dependent on extractive industry and using an outdated model will hinder development and create unnecessary economic hardships to those living and working within the watershed.	All available data was used in model development for the Tygart Valley River TMDL. In addition to data retrieved from STORET, water quality data that was collected by the Special Reclamation Group, Stream Restoration Group and the Bond Forfeiture group was provided by WVDEP OWR. This data was used extensively during model the calibration and validation process. Discharge monitoring reports (DMRs)were also provide by WVDEP. However, the DMRs from mining discharges often provided little or no data. In-stream water quality monitoring data collected by industry that includes observations upstream and downstream upstream of point source discharges was not readily available in the correct format required for modeling purposes. WVDEP and EPA are currently working together to convert this data into a format that can be used in the future.	Tetra Tech
26	26-05	During implemention of the TMDL special permit allowances should be made for the use of experimental practices which could lower AMD levels. WV DEP should be given the freedom to allow such things as pollution trading within catchments, remining, research practices and use of emerging technology.	Refer to future growth and trading sections in the TMDL Report.	WV
26	26-06	The USEPA should provide concise, clear and specific direction for the monitoring of streams of what USEPA will need and accept for model revision. This proposal should include the streams and/or stream segments to be monitored, frequency of monitoring, parameters to be monitored and who or what agencies are acceptable to do the monitoring. Rules left to speculation result in plan inadequacies, which could have been avoided.	EPA cannot fully respond to this comment here. We can commit to working with the state in situations where data collection is planing for re-visiting a TMDL. EPA however will not provide detailed plans, since this is a state activity.	Tom Henry
26	26-07	The monitoring program will require additional funding which should be provided by the USEPA.	EPA provides the state with funding for monitoring activities. Any additional monitoring the state believes is necessary for a completed TMDL should be included in their statewide monitoring plan.	Tom Henry

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
26	26-08	The USEPA should provide a detailed list of the specific needs for updatioing the TMDL model. This will provide the direction local stakeholders neeed and desire if their interests are to be considered in future growth and development. Local stakeholder involvement to date had been lacking primarily due to their inability to determine what is needed an/or expcted from them.	Detailed list of water of specific needs for updating the TMDL model: More accurate account of active deep mining areas. Article 3 in-stream water quality data (upstream-downstream of mining discharges). More complete DMR data (time series discharge data) Accurate account of individual mining permit outfalls. Additional AML water quality monitoring data.	Tetra Tech
26	26-09	We would recommend the USEPA work with USDA officials toward the goal of funding the program thus providing another means by which the acid mine drainage problem may be addressed.	EPA will consider this suggestion.	Tom Henry
27	27-01a	WVCA believes that the comment period offered by EPA Region III on this matter and the Cheat River TMDL does not provide adequate time needed for a complete and through technical review of the complex TMDL process. While we file these comments today, we would respectfully request that EPA Region III extend the comment period to 90 days in order to facilitate a more complete review of the process by all those with any interest in this matter. We would also urge that EPA Region III review the entire TMDL development process and methodology in order to correct the problems identified so that a more scientifically sound approach to TMDL formulation and implementation is achieved.	EPA has participated in, what we believe to be an extensive public participation process. The basic requirement for public participation is a 30 day comment period for the final TMDL. EPA has gone well beyond that allowing the watershed stakeholders the opportunity to participate at various stages of the TMDL development. In addition, Canaan Valley Institute (CVI) has served as a facilitator for several stakeholder meetings in addition to those attended by EPA. Coastal had the opportunity to attend these training and discussion sessions as well as the EPA public meetings. The public meetings pertaining to the Tygart Valley River watershed occurred as follows: 1) January 26, 1999 public meeting presenting an introduction to the TMDL process, together with the requirements of the consent decree, 2) July 28, 1999 public meeting presented by WVDEP, EPA and Tetra Tech., 3) May 9, 2000 public meeting presented by WVDEP, EPA and Tetra Tech., 4) October 11, 2000 public meeting presented by WVDEP, EPA and Tetra Tech., and 5) January 15, 2001 public meeting presented by WVDEP, EPA and Tetra Tech.. Because of the extensive public process during the development of the model as well as the TMDL, EPA does not believe that a 90 day extension to the comment period is warranted. The state TMDL program is addressing the public input process.	Tom Henry

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
20	20--01	The allocations apply disproportionately to point source discharges even though EPA itself acknowledges that a majority of the impairment in the watersheds is a result of acid discharges from abandoned mines.	A top-down methodology was followed to develop the TMDLs and allocate loads to sources. Impaired headwaters were first analyzed, because their impact frequently had a profound effect on down-stream water quality. Loading contributions were reduced from applicable sources for these waterbodies and TMDLs were developed. Model results from the selected successful scenarios were then routed through down-stream waterbodies. Therefore, when TMDLs were developed for down-stream impaired waterbodies, up-stream contributions were representing conditions meeting water quality criteria. Using this method, contributions from all sources were weighted equitably. In some situations, reductions in sources impacting impaired headwaters ultimately led to improvements far down-stream (due to the inherent larger assimilative capacity of the down-stream waters). This effectually decreased required loading reductions from many potential down-stream sources. Waste load allocations (WLAs) were made for all permitted facilities except for limestone quarries and those with a Completely released or Phase 2 released classification. For TMDL purposes these point sources are assumed to be compliant with water quality criteria, since they were assumed to have little potential water quality impact. Loading from revoked permitted facilities was assumed to be a nonpoint source contribution based on the absence of a permittee. The following general methodology was used when allocating to sources for the Tygart Valley River TMDL. For watersheds with AMLs but no point sources, AMLs were reduced until in-stream water quality criteria were met. For watersheds with AMLs and point sources, point sources were set at permit limits and AMLs were subsequently reduced. AMLs were reduced (point sources were not reduced) until in-stream water quality criteria were met. If further reduction was required, then reductions were made from revoked mines until in-stream water quality criteria were met. If further reduction was required once AMLs and revoked mines were reduced, point source discharge limits were then reduced. When reductions were maximized for AMLs, the resulting contribution was considered to be equivalent to background levels.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
20	20-02	The TMDLs are based, in part, on alleged impairment of two West Virginia water quality standards - iron and aluminum - even though the West Virginia Environmental Quality Board has already changed one of these standards and is strongly considering changing the other. Already, the West Virginia Environmental Quality Board has changed the aluminum water quality standard from a total standard to a dissolved standard. This would effectively eliminate any continuing water quality concerns for aluminum in this watershed. Moreover, the Chamber has joined other trade organizations in urging the Environmental Quality Board to suspend the criteria for iron. This is particularly important given the fact that West Virginia is one of only a few states in the nation that have an iron water quality standard and that other states, such as Ohio, have recently taken action to eliminate altogether their iron water quality criteria. The Chamber is working with other industry representatives to complete a study establishing a water quality for iron.	The West Virginia Divison of Environmental Protection's Office of Water Resources recognizes the fact that the Environmental Quality Board has recommmended a change in the aluminum standard from a total to a dissolved value. However, several factors must be recognized to understand the current situation. First, although the Board has recommended the change in the aluminum standard, at this time the West Virginia Legislature has not acted on the recommendation. Until the recommendation is ratified by the legislature, the current value must remain in place as the standard used for Total Maximum Daily Load (TMDL) development in West Virginia. Secondly, The current court ruling (AlaskaClean Water Alliance vs Clark, No. C96-1762R (W.D. Wash.)) requires US EPA approval of state water quality standards prior to implementation for Clean Water Act purposes. Therefore, although the WV legislature could approve the new standard for aluminum, it would not become effective until it receives initial approval from EPA, is revised by the state and approved by EPA or EPA promulgates a federal rule to supersede the State water quality standard.	WV
20	20-03	We are particularly concerned that these TMDLs seem to have been developed more to satisfy requirements of the federal Consent Decree than it has been to conduct an appropriate TMDL determination. We urge EPA to approach the Court involved and seek whatever extensions of time from the Court that may be appropriate to allow these TMDLs to be properly determined.	EPA and the Plaintiffs had agreed to an 18 month extension to the original settlement commitment dates. We believe that these TMDLS are appropriate and based on sound information. TMDLS are planning tools that can be modified as additional data and information is available.	Tom Henry

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-10	Bull Run Region 5, MTB-18-B. Bull Run is a category B-1 stream that among others, receives the discharge from Black Lick Run. It is listed on the West Virginia 303(d) list for Iron only. Water quality data provided in the draft TMDL indicate that Aluminum is in compliance at 0.17 mg/l, and the manganese is in compliance at 0.27 mg/1. The draft TMDL ignores hese facts and calls for an Aluminum reduction at 7,583.2 pounds with 1,087 pounds coming from point sources, and a Manganese reduction of 4,546.9 pounds with 1,308.1 pounds coming from point sourcses.	Bull Run (MTB-18-B) was listed on the West Virginia 1998 303(d) list for total iron only. Based on the analysis of the available water quality monitoring data, there were no violations of the iron criteria upstream of the Black Lick Run (MTB-18-B-2) confluence. There were also no AML identified upstream of Bull Run. Loading reductions were not required for Bull Run and AML reduction for iron is only required in Black Lick Run (SWS 665 and 673, Table 5b, page A-5-6).	Tetra Tech
14	14-11	Herods Run Region 6, MTB-30. Herods Run is a category B-2 trout stream. The West Virginia 303(d) list shows that Herods Run is impaired for pH only. Based on the designation KM-30 it does not appear that any water quality sample analyses are presented in Appendix 6, Tables 3a, 3b, or 3c. While no reductions are proposed for point sources in the draft TMDL, load allocations are proposed for this stream. These allocations are Aluminum, 1,959.6 pounds, Iron 2,058.4 pounds, and Manganese 1,244.5 pounds.	Herods Run (MTB-30) was listed on the West Virginia 1998 303(d) list for pH only. Based on the analysis of water quality monitoring data there were no violations upstream of the Swamp Run (MTB-29) confluence. Metals reduction was not necessary upstream of the Swamp Run confluence. AML loadings (seep) to Swamp Run were reduced in order to meet the in-stream pH water quality criteria downstream of the confluence. (SWS 801 and 799, pages A-6-4 through A-6-7)	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-12	Middle Fork River Region 7, MT-33. The Middle Fork River is a B-2 trout stream. The West Virginia 303(d) list shows that the Middle Fork River is impaired for pH and Aluminum. The data contained in Tables 3a, 3b, and 3c cannot be readily identified as to sample location. Further, these data represent a significant series of samples. By only providing the Min, Max and Average values it is impossible to determine if exceedences of the West Virginia water quality standard are frequent or infrequent. Finally, most of the data presented end in 1994. This predates the 1998 303(d) list in which these data should have been incorporated. Since these data were available for the 1998 listing process and the decision was made by the state and approved by EPA not to list the Middle Fork River for Iron and Manganese it is unconscionable that EPA would use this simulation to establish a TMDL in the Middle Fork River in the absence of any new data, particularly one that requires a 48,945.2 pound LA for Iron and a 28,119.5 pound LA for Manganese.	Middle Fork River (MT-33) is a B-2 Trout Stream and was listed on the West Virginia 303(d) list for pH and total aluminum. There a number of AML sites identified upstream of the Middle Fork River (SWS 725, 740, 754 and 757) which are in the drainages for Panther Run (MTM 16-A) and Cassity Creek (MTM-16). As a result of the top down allocation approach, loadings from Panther Run and Cassity Creek were reduced first. As a result, there was no required reduction for the Middle Fork River (SWS 746, 732 and 686, Tables 5a-c, pages A-7-4 through A-7-7).	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-13	Panther Fork Region 9, MTB-27. Panther Fork is a category B-2 trout stream. Appendix A-9, Table 1 shows that Panther Fork is listed for pH only. The 303(d) list does not include any reference to metals. No water quality data are provided in the draft TMDL to indicate that the stream is in violation of the West Virginia water quality regulations for Aluminum, Iron, or Manganese. Never the less, the draft TMDL requires load reductions for all three metals. Aluminum is to be reduced by 9,619.5 pounds, Iron is to be reduced by 8,572.3 pounds, and Manganese it to be reduced by 7,140.8 pounds with the bulk of the Manganese reduction (5,285.9 pounds) coming from the point source discharger(s).	Panther Fork (MTB-27) was listed on the West Virginia 1998 303(d) list for pH only. The water quality calibration was refined and loading from AML were reduced to meet in-stream water quality criteria for pH. Metals loading from 3 revoked permitted facilities (S-0135-78, S-0138-74 and H-0232-00) in SWS 776 was considered as future growth (SWS 776, 791, 792, pages A-9-5 through A-9-8).	Tetra Tech
14	14-14	Mud Lick Region 11, MTB-11-B. Mud Lick is a category B-1 aquatic life stream. It is listed in the West Virginia 303(d) list for Iron and Manganese. Water quality data provided for Aluminum in Table 3a of the draft TMDL document does not show any violation of the West Virginia water quality regulations. Never the less, the draft TMDL proposes a LA of 3,570.0 pounds of Aluminum for this stream.	Mud Lick Run (MTB-11-B) was listed on the West Virginia 1998 303(d) list for iron and manganese. The TMDL allocation analysis showed that Mud Lick Run only required reduction for iron (SWS 506, Tables 5a-c, pages A-11-4 through A-11-5).	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-15	Fink Run & Bridge Run. Region 11, MTB-11 & MTB-11-B.7. These two streams are both B-1 aquatic life streams. They are listed in the West Virginia 303(d) list for pH and Metals. In West Virginia, a 303(d) listing citing metals is frequently a stream which was listed early in the 303(d) process and carried forward cycle after cycle without any reevaluation of the actual chemistry in the stream. The data provided in Appendix A-11 Table 3a contains 13 samples and no violation of the Aluminum standard. The draft TMDL should present a finding of no violation, instead it proposes an Aluminum reduction of 20,857.7 pounds for Fink Run and 3,246.9 pounds for Bridge Run.	Fink Run and Bridge Run were listed on the West Virginia 1998 303(d) list for pH and metals. Based on the water quality data analysis, Bridge Run showed violations for iron, aluminum and manganese (Tables 3a-c, page A-11-3). Loading reductions were required for iron, aluminum and manganese for Bridge Run (SWS 495, Tables 5a-c, pages A-11-4 through A-11-5). Fink Run was found not to violate water quality criteria for iron, aluminum and manganese and therefore, no reduction was required (SWS 496, Tables 5a-c, pages A-11-4 through A-11-5).	Tetra Tech
14	14-16	Fink Run & Bridge Run Region 11, MTB-11 & MTB-11-B.7. These two streams are both B-1 aquatic life streams. They are listed in the West Virginia 303(d) list for pH and Metals. In West Virginia, a 303(d) listing citing metals is frequently a stream which was listed early in the 303(d) process and carried forward cycle after cycle without any reevaluation of the actual chemistry in the stream. The data provided in Appendix A-11 Table 3a contains 13 samples and no violation of the Aluminum standard. The draft TMDL should present a finding of no violation, instead it proposes an Aluminum reduction of 20,857.7 pounds for Fink Run and 3,246.9 pounds reduction of Aluminum in this stream reach.	Fink Run and Bridge Run were listed on the West Virginia 1998 303(d) list for pH and metals. Based on the water quality data analysis, Bridge Run showed violations for iron, aluminum and manganese (Tables 3a-c, page A-11-3). Loading reductions were required for iron, aluminum and manganese for Bridge Run (SWS 495, Tables 5a-c, pages A-11-4 through A-11-5). Fink Run was found not to violate water quality criteria for iron, aluminum and manganese and therefore, no reduction was required (SWS 496, Tables 5a-c, pages A-11-4 through A-11-5).	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-17	Little Hackers Creek Region 20, MT-26-C. Little Hackers Creek is a category B-1 stream and is listed on the 303(d) list for Aluminum only. No data are provided in the draft TMDL to indicate that Iron and Manganese are a problem in this watershed. However, the draft TMDL proposes WLA's for both Iron and Manganese that vastly exceed the LA's.	Little Hackers Creek (MT-26-C) was listed on the West Virginia 1998 303(d) list for aluminum only. WLA reduction was only required for aluminum. The iron and manganese WLAs, which reflect the monthly average discharge concentrations under technology based limits, did not require reduction.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-18	Foxgrape Run Region 20, MT-26-B . Foxgrape Run is a category B-1 stream adjacent to Little Hackers Creek. It is listed on the 303(d) list only for Aluminum. Two water quality data points are contained in the draft TMDL for this watershed. The samples were taken on September 16, 1997 and August 27, 1997 on those dates the Aluminum was 0.18 mg/1 and 0.05 mg/1; the Iron was 0.18 mg/1 on both sample dates; and the Manganese was 0.14 mg/1 and 0.078 mg/1 respectively. None of these samples are in violation of the state water quality regulations. The draft TMDL proposes load reductions for all three metals. The Aluminum is to be reduced by 4,404.6 pounds; the Iron is to be reduced by 5,857.6 pounds; and the Manganese is to be reduced y 3,460.5 pounds. Of these ten streams, six have been falsely listed for Aluminum, five have been falsely listed for Iron, and seven have been falsely listed for Manganese. These results are consistent with the overestimation found in the model calibration and support the position that the model is not providing an accurate or even a reasonable representation of field conditions. One of these streams, although listed in the 303(d) is presented in the draft TMDL document with data that indicates that a violation of the water quality standard for Aluminum does not exist. Despite the conflict between the simulated and the real in-stream data, the draft TMDL proposes an Aluminum reduction.	Fox Grape Run (MT-26-B) was listed on the West Virginia 1998 303(d) list for aluminum only. WLA reduction was only required for aluminum. The iron and manganese WLAs, which reflect the monthly average discharge concentrations under technology based limits, did not require reduction.	Tetra Tech
14	14-19	It is the belief of the West Virginia Coal Association Inc. that EPA is exceeding its legal authority in proposing LA's and WLA's for streams that are not listed in the 303(d) list and for which no, or insufficient data are presented to support a determination of impairment.	40 CFR 130 .7 (4)(ii) specifically includes "Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards.." as evidence that a particular waterbody segment is impaired, thus an appropriate TMDL developed.	Carol Ann

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-20	The pH level can be controlled by dissolved metal concentrations, but not exclusively.	Herods Run (MTB-30) was listed on the West Virginia 1998 303(d) list for pH only. There was insufficient water quality monitoring data for Herods Run to support pH violations upstream of the Swamp Run (MTB-29) confluence. Therefore, metals reduction for Herods Run was not required upstream of the Swamp Run confluence. However, Swamp Run was listed on for pH and metals on the 303(d) list. AML loadings (seep) to Swamp Run were reduced in order to meet both the in-stream water quality criteria for Swamp Run and downstream of the confluence. (SWS 801 and 799, pages A-6-4 through A-6-7) Panther Fork (MTB-27) was listed on the West Virginia 1998 303(d) list for pH only. The water quality calibration was refined and loadings from revoked permitted facilities were reduced to meet in-stream water quality criteria for pH.	Tetra Tech
14	14-21	If this level of under reporting of abandoned mines is extrapolated over all of Region 16 then there may be as many as 120 abandoned mines in the region with only nine included in the TMDL model. Under reporting of AML sites results in a misrepresentation of the pollutant load generated by abandoned sites in the watershed. Since the observed pollutant load in the stream must be accouned for, it follows that the point source load must be increased to make up the difference.	The amount of quanitifiable data from AML sites is very limited. Available information regarding AML sites was provided by WVDEP. This information included spatial coverages of identified AML sites, the Tygart Valley River Abandoned Mine Drainage Assessment, and Problem Area Data Sheets (PADS). Water quality monitoring data from AML sites was collected by the Stream Restoration Group, Special Reclamation Group. Since detailed information was limited, AML loadings were calculated by adjusting the contributing concentration to meet in-stream water quality observations. The following general methodology was taken in allocating to sources for the Tygart TMDL: For watersheds with AMLs but no point sources, AMLs were reduced until in-stream water quality standards were met. For watersheds with AMLs and point sources, all point sources were set at permit limits and AMLs were subsequently reduced. AMLs were reduced (without reducing point sources) until in-stream water quality standards were met. If a reduction greater than around 99% was required from AMLs, then reductions were made from point sources. This methodology doesn't set the reduced AML values specifically to the water quality standards or a background level for every situation, rather it is based on the magnitude of AML contributions in each watershed. When reductions are maximized for AMLs, the resulting contribution is roughly equivalent to background levels.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-22	We have seen that the baseline point source discharge loads have been overstated by the assumption that all point sources at all times are discharging at the maximum level allowed by their permit. We have also seen that the number of AML sites has been under reported, possibly greatly under reported. Given these two errors in baseline development, it is obvious why the LA's are higher than expected.	Based on direction given by WVDEP, the permit limits were adjusted to reflect actual discharge conditions. For model application, the each parameter was assigned a specific range. The minimum reflecting the in-stream water quality criteria and the maximum limit was derived using the EPA Technical Support Document for Water Quality-based Toxics Control to find the monthly average discharge concentration. The ranges are as follows: Al - 0.75 - 4.3 mg/L, Mn - 1.0-2.0 mg/L, Fe - 0.5 or 1.5 - 3.2 mg/L. Loading processes for nonpoint sources or land-based activities are typically rainfall-driven and thus relate to surface runoff and subsurface discharge to a stream. In order to represent AMLs as nonpoint sources, the AML categories were represented as three unique land use categories: high walls, disturbed land, and abandoned mines. The abandoned mines represent either discharge from abandoned deep mines or seeping and leaching from other abandoned mine sites. The forested area land use was reduced to account for the three additional land uses. Since detailed information was limited, AML loadings were calculated by adjusting the contributing concentration to meet in-stream water quality observations. The following general methodology was taken in allocating to sources for the Tygart TMDL. For watersheds with AMLs but no point sources, AMLs were reduced until in-stream water quality standards were met. For watersheds with AMLs and point sources, all point sources were set at permit limits and AMLs were subsequently reduced. AMLs were reduced (without reducing point sources) until in-stream water quality standards were met. If a reduction greater than around 99% was required from AMLs, then reductions were made from point sources. This methodology doesn't set the reduced AML values specifically to the water quality standards or a background level for every situation, rather it is based on the magnitude of AML contributions in each watershed. When reductions are maximized for AMLs, the resulting contribution is roughly equivalent to background levels.	Tetra Tech

Tygart River TMDL Response to Comments Report

LETT	TMDLC	COMMENT	RESPONSE	RESPONDER
14	14-23	The second fatal flaw is the under reporting of the AML sites in the watershed. Water quality improvement can only be achieved if the AML problem is addressed. Due to the under reporting, there will be insufficient remedial action and insufficient money made available to address the problem. This will ultimately result in the environmental community claiming, with some justification, that EPA has failed, in its TMDL responsibility again.	The amount of quanitifiable data from AML sites is very limited. Available information regarding AML sites was provided by WVDEP. This information included spatial coverages of identified AML sites, the Tygart Valley River Abandoned Mine Drainage Assessment, and Problem Area Data Sheets (PADS). Water quality monitoring data from AML sites was collected by the Stream Restoration Group, Special Reclamation Group and Bond Forfeiture group. Since detailed information was limited, AML loadings were calculated by adjusting the contributing concentration to meet in-stream water quality observations. The following general methodology was taken in allocating to sources for the Tygart TMDL. For watersheds with AMLs but no point sources, AMLs were reduced until in-stream water quality standards were met. For watersheds with AMLs and point sources, all point sources were set at permit limits and AMLs were subsequently reduced. AMLs were reduced (without reducing point sources) until in-stream water quality standards were met. If a reduction greater than around 99% was required from AMLs, then reductions were made from point sources. This methodology doesn't set the reduced AML values specifically to the water quality standards or a background level for every situation, rather it is based on the magnitude of AML contributions in each watershed. When reductions are maximized for AMLs, the resulting contribution is roughly equivalent to background levels.	Carol Ann
14	14-24	The third fatal flaw is the proposal to impose LA's and WLA's on streams that are not listed on the 303(d) list. If EPA approves this TMDL with these conditions the West Virginia Coal Association believes that EPA will have exceeded its statutory authority.	40 CFR 130 .7 (4)(ii) specifically includes "Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards.." as evidence that a particular waterbody segment is impaired, thus an appropriate TMDL developed	Carol Ann