

US EPA ARCHIVE DOCUMENT

APPENDIX D

Resolution of Permit Appeal Issues for Clean Water Act Facility Missouri State Operating Permits (MSOPs)

The following table contains the terms of resolution for certain Permit Appeal Issues raised by Defendants regarding the Missouri State Operating Permits (MSOPs) identified below. The left column of the table identifies each Permit Appeal Issue, and the second column from the left identifies the MSOP or MSOPs for which resolution is complete.

Collectively, the following ten facilities are referred to as the “CWA Facilities”:

- a. Brushy Creek Mine/Mill - MSOP No. MO-0001848: re-issued February 26, 2010; modified July 13, 2010; appeal filed March 26, 2010; supplement to appeal filed May 19, 2010
- b. Buick Mine/Mill - MSOP No. MO-0002003: re-issued September 25, 2009; modified July 13, 2010; appeal filed October 23, 2009; supplement to appeal filed May 19, 2010
- c. Fletcher Mine/Mill - MSOP No. MO-0001856: re-issued November 13, 2009; modified July 28, 2010; appeal filed December 11, 2009; first amended notice of appeal filed April 23, 2010; supplement to amended notice of appeal filed May 19, 2010
- d. Sweetwater Mine/Mill - MSOP No. MO-0001881: re-issued July 10, 2009; modified July 13, 2010; appeal filed August 7, 2009; supplement to appeal filed May 19, 2010
- e. Viburnum (#28/29) Mine/Mill - MSOP No. MO-0000086: re-issued December 4, 2009; modified July 13, 2010; appeal filed January 4, 2010; supplement to appeal filed May 19, 2010
- f. Viburnum Mine #35 (Casteel) - MSOP No. MO-0100226: re-issued March 19, 2010; modified July 13, 2010; appeal filed April 16, 2010; supplement to appeal filed May 19, 2010
- g. West Fork - MSOP No. - MO-0100218: re-issued March 12, 2010; modified July 13, 2010; appeal filed April 9, 2010; supplement to appeal filed May 19, 2010
- h. Buick Resource Recycling - MSOP No. MO-0000337: re-issued August 23, 2002; modified February 23, 2007; comments filed March 15, 2010
- i. Glover Facility - MSOP No. MO-0001121: re-issued March 23, 2007; appeal filed April 20, 2007; first amended notice of appeal filed April 14, 2010
- j. Herculaneum Lead Smelter - MSOP No. MO-0000281: re-issued February 28, 2003; comments filed January 6, 2010

**TABLE 1 – CWA Facility MSOPs Modifications to Resolve Permit Appeal Issues
MSOP Modifications Issued in July 2010**

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
1	The Doe Run Resources Corporation is the correct owner name	Fletcher Mine/Mill (para. 10)	MDNR made the correction to the owner name.
2	Monthly mercury monitoring should not be required or should be changed to annual monitoring.	<i>Global issue applicable to all CWA Facilities</i> Buick Mine/Mill – 002& 003 (para. 13) Sweetwater Mine/Mill – 002 (para. 14 & 16)	MDNR changed the requirement to annual monitoring. MDNR also removed the requirement for mercury monitoring in the Buick Mine/Mill permit at Outfall 003, the in-stream monitoring point.
3	Monthly mercury monitoring should be changed to annual monitoring; WQBEL limit should be removed until sufficient data supports a reasonable potential analysis.	Viburnum 28/29 – 002 & 004 (para. 20)	MDNR changed the requirement to annual monitoring.
4	Permit requires use of EPA methods 1669 and 1631E for mercury sampling and analysis, respectively. Mercury is not part of the ore body mined and has not been detected since Jan 2006 at detection limit of 0.2 ug/L. EPA guidance only suggests use of the ultra low testing method, but indicates other methods may be appropriate sometimes.	<i>Global issue applicable to all CWA Facilities</i> Brushy Creek Mine/Mill – 001, 002 & 003 (para. 12) (para. 24 – request for stay) Buick Mine/Mill – 002 & 003 (para. 13) Fletcher Mine/Mill – 001, 002 & 003 (para. 15) Sweetwater Mine/Mill – 002 (para. 15) Viburnum 28/29 – 002 & 004 (para. 20) West Fork Unit – 001, 003 & 004 (para. 8) Viburnum Mine #35 – 001 & 003 (para. 7)	MDNR removed the sampling methodology requirements from the permit. Monitoring for mercury is required by the effluent guidelines (40 CFR Part 440 Subpart J), unless the permittee can demonstrate mercury is not present in the discharge. The permittee shall choose sampling and analysis methods based on the detection limits necessary to demonstrate compliance with the effluent guideline and the applicable state water quality standards.
5	Monthly sampling for copper is not necessary and should be changed back to annual.	Fletcher Mine/Mill – 001, 002 & 003 (para. 16)	MDNR changed the copper sampling frequency to annual.
6	Interim and final monitoring requirements and limits for oil and grease should be removed.	Fletcher Mine/Mill – 001, 002 & 003 (para. 17)	MDNR removed the oil and grease limit from the permit

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
7	Discrepancies between the fact sheet references to WET testing requirements and the permit should be resolved, including references to WET testing for 001 and 004.	Sweetwater Mine/Mill (para. 17)	MDNR prepared a fact sheet for the permit modification that clarifies that WET testing is only required at Outfall 002, as stated in the permit. The original fact sheet statement regarding WET testing at Outfalls 001 and 004 was in error.
8	The daily maximum and monthly average values in the fact sheet for cadmium, copper, lead and zinc on pages 7 & 11 should be updated based on the appropriate hardness (provided by Doe Run in para. 10 of the Appeal).	Brushy Creek Mine/Mill (para. 23)	MDNR prepared a fact sheet for the permit modification that identifies the correct daily maximum and monthly average values for cadmium, copper, lead and zinc. The original fact sheet information regarding these limitations was in error.
9	Interim limits for metals should be adjusted upward using an appropriate translator to account for the undissolved portion.	Brushy Creek Mine/Mill – 001, 002 & 003 (para. 9 & 10) Fletcher Mine/Mill – 001, 002 & 003 (amended para. 14)	MDNR adjusted interim limits based on default hardness and dissolved metals translators (DMTs).
10	Because neither outfall has discharged in 5 years, the WET monitoring requirement should be annual, not quarterly Because of infrequent discharges and likelihood of discharges only during high-flow conditions, an AEC of 100% at critical low-flow conditions is not meaningful. Therefore, WET testing requirement should be monitoring only.	Brushy Creek Mine/Mill – 002 & 003 (para. 14) Fletcher Mine/Mill – 002 & 003 (amended para. 23)	MDNR revised permit language to clarify that WET testing is only required for Outfall 001, as stated in the table in Part C, paragraph 10.

TABLE 2 – Dismissed Permit Appeal Issues

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
11	The permit contains inconsistent requirements for WET testing of 100% AEC and 1.6 TUC, which should be clarified and corrected.	Sweetwater Mine/Mill – 002 (para. 21)	No change to the permit. Appeal dismissed.
12	The permit should clarify inconsistencies regarding effluent v. in-stream sampling.	Sweetwater Mine/Mill – 002 (para. 22)	No change to the permit. Appeal dismissed.
13	Only a single-dilution Allowable Effluent Concentration (ACE) of 100% should be required and not a multiple dilution test series.	<i>Global issue applicable to all CWA Facilities</i> Brushy Creek Mine/Mill – 001 (para. 17) Fletcher Mine/Mill – 001, 002 & 003 (para. 18) Sweetwater Mine/Mill – 004 (para. 22) Viburnum 28/29 – all outfalls (para. 21) Viburnum Mine #35 – 001 & 003 (para. 15)	No change to the permit. Appeal dismissed.
14	A TRE should not be required by Paragraph D.2 of the Schedule of Compliance because the facility has been passing its WET tests.	Brushy Creek Mine/Mill – 001 (para. 21)	No change to the permit. Appeal dismissed. TRE suspended by Consent Decree under compliance schedule
15	Only acute, and not chronic, WET testing should be required.	<i>Global issue applicable to all CWA Facilities</i> Brushy Creek Mine/Mill – 001 (para. 15) Buick Min/Mill – 002 (para. 16) Fletcher Mine/Mill – 001 (para. 18) Sweetwater Mine/Mill – 002 (para. 20) Viburnum 28/28 – 002, 003 & 004 (para. 21) Viburnum Mine #35 – 001 & 003 (para. 13)	No change to the permit. Appeal dismissed.

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
16	A single failed WET test should not be a permit violation, but should trigger accelerated testing and potentially the TIE/TRE process.	<i>Global issue applicable to all CWA Facilities</i> Brushy Creek Mine/Mill – 001 (para. 18) West Fork Unit – 001 (para. 10) Viburnum Mine #35 – 001 & 003 (para. 16) Fletcher Mine/Mill – 001 (amended para. 20)	No change to the permit. Appeal dismissed.
17	TIE or TRE should only be triggered after 3 consecutive WET failures, not simply after any 3 WET failures; TIE/TRE should be suspended after 3 consecutive passing WET tests.	<i>Global issue applicable to all CWA Facilities</i> Brushy Creek Mine/Mill – 001 (para. 18) Fletcher Mine/Mill – 001, 002 & 003 (para. 18) Viburnum 28/29 – 002, 003 & 004 (para. 21) West Fork Unit – 001 (para. 11) Viburnum Mine #35 – 001 & 003 (para. 17)	No change to the permit. Appeal dismissed.
18	WET testing frequency should be changed from quarterly to annually.	Sweetwater Mine/Mill – 002 (para. 18) Viburnum 28/29 – 002, 003 & 004 (para. 21) Viburnum Mine #35 – 001 & 003 (para. 12)	No change to the permit. Appeal dismissed.
19	Permit description includes design flows and actual flows, but not “flows dependent upon precipitation” as requested by Doe Run; flows are highly variable based on rainfall and groundwater infiltration.	Viburnum 28/29 – 004 (para. 14)	No change to the permit. Appeal dismissed. The permit as written authorizes stormwater flows and does not impose a limit on flow.
20	Preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of best management practices (BMPs) should not be required.	<i>Global issue applicable to all CWA Facilities</i> Buick Mine/Mill (para. 18) Fletcher Mine/Mill (para. 20 / amended para. 25) Sweetwater Mine/Mill (para. 23)	No change to the permit. Appeal dismissed. Doe Run agrees, pursuant to the Consent Decree, to prepare and implement a SWPPP and implement BMPs at all CWA Facilities

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
21	Permit should authorize stormwater discharges in addition to wastewater discharges.	<i>Global issue applicable to all CWA Facilities</i> Buick Mine/Mill (para. 9) Fletcher Mine/Mill (para. 11) Sweetwater Mine/Mill (para. 7) Viburnum 28/29 (para. 12)	No change to the permit. Appeal dismissed. Note that each outfall that is authorized to include stormwater discharges is specifically identified (usually on the second page of the permit).
22	Lat /Long coordinates for all three outfalls are incorrect; and should be in GPS format.	<i>Global issue applicable to all CWA Facilities</i> Buick Mine/Mill (para. 10) Fletcher Mine/Mill (para. 12) Viburnum 28/29 (para. 13)	No change to the permit. Appeal dismissed.
23	Nitrate as nitrogen, total nitrogen and phosphorus should be removed from the permit; Outfall 001 has only negligible nutrients and Outfalls 002 & 003 have not discharged since at least 2004 – no reasonable potential.	<i>Applicable to West Fork Mine/Mill, also, which discharges to the West Fork of the Black River</i> Brushy Creek Mine/Mill – 001, 002 & 003 (para. 8)	No change to the permit. Appeal dismissed.
24	Draft TMDL for Courtois Creek and Indian Creek issued by MDNR but not final. DR has concerns with draft TMDL. Permit should not be issued until TMDL is final.	Viburnum 28/29 (para. 16)	No change to the permit. Appeal dismissed.
25	Schedule of compliance should be extended to 5 years to allow DR adequate time to respond to drastically lower limits and conduct site-specific water quality studies.	<i>Globally issue applicable to all CWA Facilities</i> Buick Mine/Mill (para. 20) Fletcher Mine/Mill (para. 23 / amended 28) Viburnum 28/29 (para. 25)	No change to the permit. Appeal dismissed. The Consent Decree provides a schedule of compliance.
26	In-stream monitoring at Outfall 003 should be eliminated; such in-stream monitoring was eliminated from other DR permits.	Buick Mine/Mill – 003 (para. 17)	No change to the permit. Appeal dismissed.

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
27	Because the facility was not previously required to monitor for arsenic and nickel, the permit should not include limits, but rather monitoring only>	Buick Mine/Mill – 002 & 003 (para. 12)	No change to the permit. Appeal dismissed.
28	Monitoring data from Jan 2006 to July 2009 shows no potential for TSS to exceed permit limits; WQBEL for TSS should be removed and changed from monthly to annual monitoring.	Fletcher Mine/Mill – 001 (para 13) Viburnum 28/29 – 002 & 004 (para. 18)	No change to the permit. Appeal dismissed.
29	Recreation uses are not assigned to the unnamed tributary of Adair Creek; with in-stream aeration, bacteria die-off, and mixing, there will be no reasonable potential for discharges to cause or contribute to violations of the bacteria standard in Logan Creek. Therefore, bacteria limits should be removed from the permit.	Sweetwater Mine/Mill – 001 (para. 10)	No change to the permit. Appeal dismissed.
30	Limits in prior permit for BOD, TSS and percent removal efficiency are protective of downstream uses and should be maintained.	Sweetwater Mine/Mill – 001 (para. 8)	No change to the permit. Appeal dismissed.
31	Narrative WQBELs should not be in permit because they are not directly applicable to the discharges covered by the permit, a violation would not necessarily imply that one of the discharges was the cause, and there is no corresponding provision that proves an opportunity to assess or demonstrate compliance.	<i>Global issue applicable to all CWA Facilities</i> Buick Mine/Mill (para. 19) Fletcher Mine/Mill (para. 22 / amended para. 27) Sweetwater Mine/Mill (para. 24) Viburnum 28/29 (para. 24) West Fork Unit (para. 15) Viburnum Mine #35 (para. 20)	No change to the permit. Appeal dismissed.

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
32	Outfalls 001, 002 & 003 should be combined into one outfall; drainage pathway does not become waters of the State until it leaves Doe Run's property; combined Outfall location should be on the east side of B Day Road with in-stream monitoring at Outfall 002.	Viburnum Mine #35 – 001, 002 & 003 (para. 6)	No change to the permit. Appeal dismissed.
33	Numeric limits for lead, copper and zinc at Outfall 002 should be replaced with monitoring only; Outfall 002 is a domestic outfall that discharges no process wastewater; Outfall 002 discharges infrequently and at low volume.	Viburnum Mine #35 – 002 (para. 11)	No change to the permit. Appeal dismissed.

TABLE 3 – Permit Appeal Issues Held In Abeyance – Supporting Documentation for Permit Modification to be Filed and Issue Resolved Pursuant to Section VII, Subsection D (See, Paragraph 79.a.i.)

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
34	Final site-specific limits for cadmium, lead and copper for Outfalls 001, 002 & 003 should have been calculated using the site-specific translators provided by Doe Run in its July 29, 2009 comments.	Brushy Creek Mine/Mill – 001, 002 & 003 (para. 10)	Permittee may submit information for site-specific and/or permit-specific limitations.
35	Site-specific hardness data from Bill's Creek should be used to re-calculate the effluent limits for cadmium, copper, lead and zinc.	Brushy Creek Mine/Mill – 001, 002 & 003 (para. 11)	Permittee may submit information for site-specific and/or permit-specific limitations.
36	An allowance based on flow in the West Fork Black River should be considered when calculating effluent limitations if chronic criteria are required (legal issue of whether mixing zones are allowed)	Brushy Creek Mine/Mill – 001, 002 & 003 (para. 22)	Permittee may submit supporting information for interpretation of 10 CSR 20-7.031(4) regarding the application of mixing zones in unclassified waters.
37	MDNR should not have used default DMT to translate dissolved waste load allocations to total recoverable metals limits; DR's data from the previous permit should be used to develop site-specific limits for metals.	Buick Mine/Mill (para. 11)	Permittee may submit information for site-specific and/or permit-specific limitations.
38	MDNR should not have used default DMT for Outfall 001 to translate dissolved waste load allocations to total recoverable metals limits; DR's data from the previous permit should be used to develop site-specific limits for lead and zinc.	Fletcher Mine/Mill – 001 (para. 14 / amended para. 15)	Permittee may submit information for site-specific and/or permit-specific limitations.
39	Effluent limits for cadmium, copper, lead and zinc should be calculated using site-specific hardness data for 2006-2009 collected by DR to recalculate the WQBELs.	Sweetwater Mine/Mill – 002 & 004 (para. 12)	Permittee may submit information for site-specific and/or permit-specific limitations.

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
40	Default DMT should not have been used to calculate WQBELs for lead and zinc at Outfalls 002 & 004; MDNR should recalculate limits for lead and zinc using site-specific translators.	Sweetwater Mine/Mill – 002 & 004 (para. 13)	Permittee may submit information for site-specific and/or permit-specific limitations.
41	Effluent limits for cadmium, copper, lead and zinc for Outfalls 002 & 004 should be calculated using site-specific hardness data for 2006-2009 collected by DR to recalculate the WQBELs.	Viburnum 28/29 – 002 (para. 17)	Permittee may submit information for site-specific and/or permit-specific limitations.
42	MDNR should not have used default DMT for Outfall 004 to translate dissolved waste load allocations to total recoverable metals limits; DR's data from the previous permit should be used to develop site-specific limits for lead and zinc.	Viburnum 28/29 – 004 (para. 19)	Permittee may submit information for site-specific and/or permit-specific limitations.
43	Default DMT should not have been used to translate the dissolved waste load allocations for lead, zinc, copper and cadmium to total recoverable limits for Outfalls 001, 002 & 003; MDNR should recalculate metals limits consistent with DMTs derived from site-specific data.	Viburnum Mine #35 – 001, 002 & 003 (para. 8)	Permittee may submit information for site-specific and/or permit-specific limitations.
44	Effluent limits for cadmium, copper, lead, mercury and zinc, as well as conversion factors for cadmium and lead, for Outfalls 001, 002 & 003 should be calculated using the site-specific hardness data for 2006-2009 collected by DR, which is representative of the current discharge.	Viburnum Mine #35 – 001, 002 & 003 (para. 9)	Permittee may submit information for site-specific and/or permit-specific limitations.
45	An allowance based on flow in Crooked Creek should be considered when calculating effluent limitations if chronic criteria are required (legal issue of whether mixing zones are allowed).	Viburnum Mine #35 – 001, 002 & 003 (para. 10)	Permittee may submit supporting information for interpretation of 10 CSR 20-7.031(4) regarding the application of mixing zones in unclassified waters.

TABLE 4 – Permit Appeal Issues Held In Abeyance – Supporting Documentation for Alternative WET Sampling and/or Testing Methodologies to be Filed and Issue Resolved Pursuant to Section VII, Subsection E

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
46	An alternative test species (e.g., daphnia magna) should be used for chronic WET testing instead of Ceriodaphnia dubia because the latter is not endemic to the area and it is sensitive to the natural background levels of metals.	Brushy Creek Mine/Mill – 002 & 004 (para. 16) Buick Mine/Mill – 002 (para. 16) Fletcher Mine/Mill – 001 (para. 18 / amended para. 19) Sweetwater Mine/Mill – 002 (para. 19) Viburnum 28/29 – 002 & 004 (para. 21) Viburnum Mine #35 – 001 & 003 (para. 14) West Fork Unit – 001 (para. 9)	Permittee may submit an application for alternative WET sampling and/or testing procedures.
47	In the event chronic WET testing is imposed on the facility, MDNR and EPA should approve an alternate WET test procedure, which may include, but not be limited to, employing a new test species, an endpoint or organism response, or a toxicity test concept that is not represented in EPA's approved methods.	Brushy Creek Mine/Mill – 002 & 004 (supplement para. 25) Buick Mine/Mill – 002 (supplement para. 21) Fletcher Mine/Mill – 001 (supplement para. 29) Sweetwater Mine/Mill – 002 (supplement para. 26) Viburnum 28/29 – 002 & 004 (supplement para. 26) Viburnum Mine #35 – 001 & 003 (supplement para. 21) West Fork Unit – 001 (supplement para. 17)	Permittee may submit an application for alternative WET sampling and/or testing procedures.

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
48	When conducting accelerated WET testing upon failure of a WET test, only the species that failed in initial test should be subject to the additional multiple dilution testing.	Brushy Creek Mine/Mill – 001 (para. 19) Buick Mine/Mill – 002 (supplement para. 23) Fletcher Mine/Mill – 001 (amended para. 21) Sweetwater Mine/Mill – 002 (supplement para. 28) Viburnum 28/29 – 002 & 004 (supplement para. 28) Viburnum Mine #35 – 001 & 003 (para. 18) West Fork Unit – 001 (para. 12)	Permittee may submit an application for alternative WET sampling and/or testing procedures.
49	WET test samples should not have to be collected using a 24-hour composite for logistical reasons. Neither mine dewatering source nor effluent quality vary significantly over a 40 hour period; more labor and equipment, creating an undue burden; vandalism and threat of expensive equipment because of lack of security in the rural area where sampler must be paced.	Brushy Creek Mine/Mill – 001 (para. 20) Fletcher Mine/Mill – 001 (amended para. 22) Viburnum Mine #35 – 001 & 003 (para. 19) West Fork Unit – 001 (para. 13) Buick Mine/Mill – 002 (supplement para. 24) Sweetwater Mine/Mill – 002 (supplement para. 29) Viburnum 28/29 – 002 & 004 (supplement para. 29)	Permittee may submit an application for alternative WET sampling and/or testing procedures.

TABLE 5 – Permit Appeal Issues Held In Abeyance – Supporting Documentation for Permit Modification to be Filed and Issue Resolved Pursuant to Section VII, Subsection D (See, Paragraph 79.a.ii.)

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
50	<p>The Clean Water Commission removed 4-mile segment of Big Creek from 303(d) list “because recent data indicated it is no longer impaired” after a TMDL was issued. Since Big Creek is no longer impaired, the TMDL is moot and any effluent limits based thereon for the 4-mile segment of Big Creek are invalid.</p> <p>Metals limits based on the TMDL for lead, copper, cadmium, zinc, selenium and thallium are moot and must be recalculated.</p> <p>Selenium limits were added to the permit based on the recommendation of the TMDL, which is now moot.</p>	<p>Glover Facility (para. 14)</p> <p>(para. 15)</p> <p>Outfalls 004 & 005 (para. 20)</p>	<p>No change to the permit.</p> <p>If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.</p>
51	<p>Permit effluent limits are based on waste load allocation in the TMDL for Big Creek, not for Scoggins Branch, which is the actual receiving stream.</p> <p>Since Scoggins Branch is an unclassified water, only acute metal water quality standards apply.</p> <p>Since Scoggins Branch is the receiving stream, acute water quality standards for metals should be basis for WQBELs.</p>	<p>Glover Facility (para. 16)</p> <p>(para. 17)</p> <p>(para. 18)</p>	<p>No change to the permit.</p> <p>If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.</p>
52	<p>If effluent limits are calculated as chronic WQBEL for Big Creek, then they should be based on an upstream 7Q10 flow of 0.48 cfs and hardness level that accounts for hardness contributed by Scoggins Branch.</p>	<p>Glover Facility (para. 21)</p>	<p>No change to the permit.</p> <p>If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.</p>

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
53	Metals WQBELs should be recalculated for TMDL and permit based on more reliable, site-specific data.	Glover Facility – 001, 002, 003 & 006 (amended para. 11)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
54	Permit limits should be calculated for Scoggins Branch, not Big Creek, as the receiving stream.	Glover Facility – 001, 002, 003 & 006 (amended para. 12)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
55	WQBELs should be recalculated based on only acute metal water quality standards because Scoggins Branch is an unclassified water.	Glover Facility – 001, 002, 003 & 006 (amended para. 13)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
56	WQBELs for cadmium, copper, lead, and zinc at outfalls 003 and 006 should be recalculated using site-specific hardness values representative of low flow conditions.	Glover Facility – 003 & 006 (amended para. 14)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
57	Metals limits for Outfalls 003 and 006 should be recalculated using site-specific dissolved metals translators (DMTs).	Glover Facility – 003 & 006 (amended para. 15)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
58	The TMDL and permit limits for Outfalls 003 and 006 should be recalculated using more recent 7Q10 values for Big Creek.	Glover Facility – 003 & 006 (amended para. 16)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
59	If effluent limits are calculated based on chronic WQBEL in Big Creek, then they should be segregated into 4 different WQBELs for different stream flows (as in previous permit).	Glover Facility – 003 (para. 22)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
60	Flow tiered limits in previous permit are allowable under 10 CSR 20-7.031(4)(A)4.F and should be retained.	(amended para. 18)	

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
61	Doe Run has or will shortly submit an application to construct a pipeline to transport effluent from Outfall 003 to Big Creek; when the discharge is relocated, the TMDL and permit should recalculate metals limits for Outfalls 003 and 006 using Big Creek and its 7Q10 value.	Glover Facility – 003 & 006 (amended para. 19)	No change to the permit. If the Big Creek TMDL is modified, the permittee may submit an application for a permit modification.
62	If SWPPP is required for an industrial stormwater outfall, numeric limits for that outfall should be removed from the permit.	<i>Global issue applicable to all CWA Facilities</i> Sweetwater – 004 (para. 23)	No change to the permit - permittee may submit an application & information for a permit modification. The permittee has agreed, pursuant to the Consent Decree, to prepare and implement a SWPPP and BMPs at all CWA Facilities. However, the permittee may submit a request for a permit modification to either eliminate the discharge authorization/outfall or to limit the discharge authorization to high-flow/wet weather events. MDNR would consider the data provided in the permit modification request in assessing reasonable potential under possible alternative discharge conditions. (10 CSR 20-7.031(4)(A)4.F)
63	Non-contact cooling water discharged through 002 is derived from groundwater, which contains natural background concentrations of metals that often exceed the analytical detection limits. In lieu of setting limits at detection, they should be set at the water quality based effluent limit (WQBEL).	Glover Facility- 002 (para. 19)	No change to the permit - permittee may submit an application & information for a permit modification. The permittee may submit a request for a permit modification, with supporting documentation, to eliminate the outfall and limits from the permit demonstrating that the outfall has been closed.
64	An allowance based on the flow in West Fork Black River should be considered when calculating effluent limits if chronic criteria are required.	Brushy Creek Mine/Mill – 001, 002 & 003 (para. 22)	No change to the permit - permittee may submit an application & information for a permit modification. The permit limits for chronic criteria are required by application of State law to protect the down-stream classified water, the West Fork of the Black River. The permittee may submit a request for a permit modification that provides supporting documentation for site-specific water quality based limitations consistent with 10 CSR 20-7.031(4).

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
65	Because MDNR did not provide data to justify new limits for chlorides plus sulfates, and data are not available to evaluate reasonable potential, the chloride plus sulfate limits should be removed.	Buick Mine/Mill – 002 (para. 14)	No change to the permit - permittee may submit an application & information for a permit modification. This is a monitoring only requirement. Data regarding sulfates included in the permit application demonstrate the presence of sulfates. There were few data points available, which indicated a high degree of variability, therefore necessitating continued monitoring to assess potential impacts from the facility. If additional sampling indicates consistently lower levels of sulfates, the permittee may submit an application for a permit modification, with supporting documentation.
66	In the absence of data supporting reasonable potential for cadmium limits, the permit should contain only monitoring requirements.	Buick Mine/Mill – 002 (para. 15)	No change to the permit - permittee may submit an application & information for a permit modification. In addition to being a WQBEL, the limit for cadmium is also required by the effluent guidelines (40 CFR Part 440, Subpart J). Previous sample analysis showing “non-detect” at a detection limit of 5 micrograms per liter was not a sensitive enough detection limit to indicate the current water quality standards for cadmium are being met. The permittee may submit a request for a permit modification, with supporting documentation, for site-specific water quality based limitations.
67	Outfall 003 was confirmed closed by EPA’s Apr 2009 inspection – seep along or near plugged pipe; monitoring & limits for Outfall 003 should be removed from permit.	Viburnum 28/29 – 003 (para. 15)	No change to the permit - permittee may submit an application & information for a permit modification. MDNR will entertain a request for a permit modification, with supporting documentation, to eliminate the outfall from the permit.
68	Outfalls are emergency discharge points or stormwater outfalls that do not regularly discharged except in extreme storm events; they should not have monthly monitoring and effluent limits based on critical low flow conditions and should instead only have effluent event based monitoring requirements.	Brushy Creek Mine/Mill – 002 & 003 (para. 13) Fletcher Mine/Mill – 002 & 003 (para. 19 / amended para. 24) Viburnum 28/29 – 005 & 006 (para. 22)	No change to permit unless and until the permittee submits an application for a permit modification. Existing data is not sufficient to support a no-reasonable potential determination. MDNR has required that the permit either prohibit discharge or specify limits based on low flow conditions. The permittee may submit a request for a permit modification, with supporting documentation and discharge options and limitations, for consideration by the department.

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
69	Special Condition 7 pertaining to operational conditions for Outfalls 003 and 004 does not accurately reflect the ELG regulations at 40 CFR 441.100-440.104.	West Fork Unit – 003 & 004 (para. 16)	<p>No change to permit unless and until the permittee submits an application for a permit modification.</p> <p>Existing data is not sufficient to support a no-reasonable potential determination. MDNR has required that the permit either prohibit discharge or specify limits based on low flow conditions. The permittee may submit a request for a permit modification, with supporting documentation and discharge options and limitations, for consideration by the department.</p>
70	WQBELs should be calculated using acute and not chronic water quality criteria for Outfalls 001, 002 & 003; discharges are to an unclassified segment 4.2 miles from Crooked Creek; MO wqs do not require chronic protections for unclassified streams.	Viburnum Mine #35 – 001, 002 & 003 (para. 10)	<p>No change to the permit - permittee may submit an application & information for a permit modification.</p> <p>Both acute and chronic permit limits are required by application of State law to protect the down-stream classified water, Crooked Creek. The permittee may submit a request for a permit modification that provides supporting documentation for site-specific water quality based limitations consistent with 10 CSR 20-7.031(4).</p>
71	Outfall 002 should be deleted from the permit because the source of non-contact cooling water has been discontinued and will not discharge in the future.	Glover Facility – 002 (amended para. 17)	<p>No change to the permit - permittee may submit an application & information for a permit modification.</p> <p>MDNR will entertain a request for a permit modification, with supporting documentation, to eliminate the outfall from the permit.</p>
72	Outfall 006 is an emergency spillway from a stormwater flow basin that only discharges during heavy rain and extreme storm events; therefore numeric limits should be removed and monitoring only should be required.	Glover Facility – 006 (amended para. 20)	<p>No change to the permit under the current discharge scenario unless and until the permittee submits an application for a permit modification.</p> <p>The permittee may submit a request for a permit modification to either eliminate the discharge authorization/outfall or to limit the discharge authorization to high-flow/wet weather events. MDNR would consider the data provided in the permit modification request in assessing reasonable potential under possible alternative discharge conditions. (10 CSR 20-7.031(4)(A)4.F)</p>

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
73	10 CSR 20-7.031(4)(a)4.F allows flow tiered limits, and are appropriate for small headwater streams. Flow tiered limits should be allowed for chronic effluent limits calculated for Bee Fork Creek.	Fletcher Mine/Mill – 001, 002 & 003 (para. 21 / amended para. 26)	No change to the permit - permittee may submit an application & information for a permit modification.
74	10 CSR 20-7.031(4)(A)4.F allows flow tiered limits, and should be allowed, taking into consideration the significant upstream flows in Logan Creek.	Sweetwater Mine/Mill – 001, 002 & 004 (para. 11)	No change to the permit - permittee may submit an application & information for a permit modification.
75	10 CSR 20-7.031(4)(a)4.F allows flow tiered limits, and are appropriate for small headwater streams. Flow tiered limits should be allowed for chronic effluent limits calculated for Indian Creek.	Viburnum 28/29 – all outfalls (para. 23)	No change to the permit - permittee may submit an application & information for a permit modification.
76	10 CSR 20-7.031(4)(a)4.F allows flow tiered limits. Flow tiered limits were allowed in the previous permit and should be continued.	West Fork Unit – 001 (para. 14)	No change to the permit - permittee may submit an application & information for a permit modification.
77	Because of ammonia degradation in dry ditch and mixing in Adair Creek, there will be no measurable increase in ammonia levels in Adair or downstream in Logan Creek, therefore there is no reasonable potential for discharges from Outfall 001 to impact aquatic life and the effluent limit should be removed from the permit.	Sweetwater Mine/Mill – 001 (para. 9)	No change to the permit - permittee may submit an application & information for a permit modification.
78	Exiting effluent limits for cadmium, copper, lead and zinc at Outfall 002 should be maintained until an appropriate study has been conducted that considers site-specific water quality criteria in streams receiving discharges from DR facilities, and site-specific derivation of WQBELs.	Sweetwater Mine/Mill – 002 (para. 25)	No change to the permit - permittee may submit an application & information for a permit modification.

	Permit Appeal Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in appeal document)	Resolution of Permit Appeal Issue
79	In the event chronic WET testing is imposed on the facility, the permits should include site-specific WET testing requirements that take into account assimilative capacity of the receiving stream at varying receiving stream flows and varying discharge rates through the outfall that may be caused by precipitation events, site-specific aquatic life, beneficial uses, or any other relevant and appropriate factors.	Brushy Creek Mine/Mill – 001 (supplement para. 26) Buick Min/Mill – 002 (supplement para. 22) Fletcher Mine/Mill – 001 (supplement para. 30) Sweetwater Mine/Mill – 001 (supplement para. 27) Viburnum 28/28 – 002, 003 & 004 (supplement para. 27) Viburnum Mine #35 – 001 (supplement para. 22) West Fork Unit – 001 (supplement para. 18)	No change to the permit - permittee may submit an application & information for a permit modification.

TABLE 6 – Future MSOP Potential Permit Appeal Issues

	Future Permit Comment Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in comment letter)	Resolution of Permit Appeal Issue
80	Primary lead smelter allowances should be used in determining and defining pollutant sources and the associated mass loading.	Buick Resource Recycling – 001 (comment 1)	Under review by MDNR.
81	A schedule of compliance of more than one year should be granted to this facility.	Buick Resource Recycling – 001 (comment 2)	Under review by MDNR.
82	The default hardness used in the permit is inappropriate; DR's site-specific hardness should be used.	Buick Resource Recycling – 001 (comment 3)	No change to the permit – permittee may submit an application & information for site-specific limitations.
83	There is no reasonable potential to violate water quality standards for Total Recoverable Chromium (III) and Dissolved Chromium (VI); quarterly sampling should be changed to annual sampling of these parameters.	Buick Resource Recycling – 001 (comment 4)	Under review by MDNR.
84	Acute water quality standards should apply, as this facility discharges to an unclassified stream.	Buick Resource Recycling – 001 (comment 5)	No change to the permit – permittee may submit an application & information for site-specific limitations. MDNR interprets State law to require both acute and chronic permit limits to protect the down-stream classified water. The permittee may submit a request for permit limitations that provides supporting documentation for site-specific water quality based limitations consistent with 10 CSR 20-7.031(4).
85	The monthly average limit for ammonia should be calculated differently; ammonia degradation should be accounted for in deriving chronic ammonia limits.	Buick Resource Recycling – 001 (comment 6)	No change to the permit – permittee may submit an application & information for site-specific limitations.
86	Default DMTs should not have been used; site-specific data for Sweetwater Mine should be used while DR continues to collect data and formulate site-specific DMTs	Buick Resource Recycling – 001 (comment 7)	No change to the permit – permittee may submit an application & information for site-specific limitations.

	Future Permit Comment Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in comment letter)	Resolution of Permit Appeal Issue
87	Doe Run requests that Outfalls 002 and 003 be re-instated in the permit, or, in the alternative, requests the opportunity to conduct a no feasible alternatives analysis as to Outfalls 002 and 003.	Buick Resource Recycling – 002, 003 (comment 10)	Under review by MDNR.
88	Special Condition 9 should be removed from the permit, as it is beyond the scope of federal and state clean water laws.	Buick Resource Recycling – 002, 003 (comment 12)	Under review by MDNR.
89	Special Condition 10 should be removed from the permit, as hydrocarbon parameters are not contained in the draft permit.	Buick Resource Recycling – 002, 003 (comment 13)	Under review by MDNR.
90	WET testing at Outfalls 002 and 003 should be removed from the permit.	Buick Resource Recycling – 002, 003 (comment 14)	Under review by MDNR.
91	An alternative species, such as the daphnia magna, should be used in chronic WET testing.	Buick Resource Recycling – 001, 002 & 003 (comment 14)	No change to the permit – permittee may submit information to support an alternate WET methodology.
92	Water quality based limits were calculated using an ambient hardness; site-specific hardness is more appropriate.	Herculaneum Lead Smelter – 001, 003, 004 & 005 (comment 2)	No change to the permit – permittee may submit an application & information for site-specific limitations.
93	Water quality based effluent limitation should be calculated by first calculating a dissolved metal concentration, then translated using an appropriate dissolved metal translator, at which time the long-term averages, average monthly limits, and maximum daily limits can be calculated using the EPA statistical method.	Herculaneum Lead Smelter – 001, 003, 004 & 005 (comment 3)	No change to the permit – permittee may submit an application & information for site-specific limitations.
94	Quarterly testing for silver is inappropriate as there is no reasonable potential to violate WQS and should be changed to annual monitoring.	Herculaneum Lead Smelter – 001 (comment 6)	Under review by MDNR.
95	Chemical Oxygen Demand should be a monitoring only requirement.	Herculaneum Lead Smelter – 001 (comment 7)	Under review by MDNR.
96	Three years is an appropriate compliance schedule for meeting final limits.	Herculaneum Lead Smelter – 001 (comment 8)	Under review by MDNR.

	Future Permit Comment Issue (summary of issue raised by permittee)	Applicable MSOP(s) – Outfall(s) (paragraph in comment letter)	Resolution of Permit Appeal Issue
97	Monitoring requirement for sulfate at Outfall 003 should be removed from the permit.	Herculaneum Lead Smelter – 003 (comment 10)	Under review by MDNR.
98	Default DMTs should not have been used to translate dissolved waste load allocations to total recoverable effluent limits.	Herculaneum Lead Smelter – 001, 003, 004 & 005 (comment 2)	No change to the permit – permittee may submit an application & information for site-specific limitations.
99	An alternative species, such as the daphnia magna, should be used in chronic WET testing.	Herculaneum Lead Smelter – 001 (comment 13)	No change to the permit – permittee may submit information to support an alternate WET methodology.
100	Site-specific mixing zones are appropriate.	Herculaneum Lead Smelter – 001 (comment 14)	No change to the permit – permittee may submit an application & information for site-specific limitations.
101	Outfall 004 should be eliminated from the Permit.	Herculaneum Lead Smelter – 004	