

US EPA ARCHIVE DOCUMENT

Appendix B

MSOP Alternative Effluent Limitations and Compliance Deadlines

Except as specifically stated below, compliance for purposes of stipulated penalties will be determined based on the provisions of the effective CWA Facility Missouri State Operating Permit (MSOP).

±Whole Effluent Toxicity (WET) Testing Provisions

For purposes of this Consent Decree, the following “WET testing” provisions shall apply where noted:

- 1) Defendants shall conduct chronic Whole Effluent Toxicity (WET) tests at each CWA Facility on a semiannual basis in April or May and in October or November each year using grab or twenty-four (24) hour composite samples, as set forth in the respective tables, below, and the testing methodology set forth in the effective CWA Facility MSOP.
- 2) During the period specified:
 - a) no stipulated penalties will accrue for failure of a chronic WET test limitation;
 - b) accelerated chronic WET testing will not be triggered by chronic WET failures;
 - c) neither a toxicity identification evaluation (TIE) nor a toxicity reduction evaluation (TRE) will be required, although Defendants’ implementation of the Underground Water Management Plan (UWMP) and/or Surface Water Management Plan (SWMP) at each CWA Facility will address all appropriate investigative and analytical components of a TIE and TRE and the UWMP and/or SWMP reports will include information consistent with a TIE and TRE report; and
 - d) Defendants may suspend any TIE and/or TRE in progress as of the Lodging Date of the Consent Decree until completion of the UWMP and/or SWMP, as applicable.

No Discharge Provisions

For purposes of this Consent Decree, the following conditions shall apply to all “no discharge” provisions set forth below:

- 1) Defendants shall monitor flow from each “no discharge” outfall by using an electronic monitoring and data recording device or through daily observations of a staff gage measuring the distance below the overflow. If a staff gage is used, Defendants shall keep a daily written log for each outfall, which shall at a minimum include the date, time, gage reading and initials of the person performing the observation.
- 2) Should there be a discharge at a “no discharge” outfall, Defendants shall, for each day during which a discharge occurs, keep a record of the approximate time at which discharge began and ended and shall provide an estimate of the flow rate and the total flow/volume of the discharge based upon practicable best practices. Such information shall be included in the Discharge Monitoring Report (DMR) for the respective CWA Facility.
- 3) Practicable best practices for estimating the flow rate and total flow/volume of a discharge, pursuant to paragraph 2 above, shall include measures no less accurate than utilization of the following infrastructure and procedures for each outfall:

- a) Sweetwater Mine/Mill Facility 004: Flow shall be measured twice daily at the V-notch weir at Sweetwater 004 when flowing. Depth of flow in the weir shall be converted to volume using equations found in the US Bureau of Reclamation Water Measurement Manual, (1997).
 - b) Glover Facility 006: Flow shall be measured twice daily at the low berm area for Glover 006 when flowing. Depth, width and velocity of flow in the weir shall be converted to volume using equations found in the US Bureau of Reclamation Water Measurement Manual, (1997).
 - c) West Fork Unit Facility 003: Flow shall be measured twice daily from either a V-notch weir or Parshall flume at the West Fork 003 outfall. The flume or weir shall be installed within ninety (90) days from the Date of Lodging.
 - d) West Fork Unit Facility 004: Flow shall be measured twice daily in the spillway using either the float method described in the US Bureau of Reclamation Water Measurement Manual, (1997) if flow exceeds safe wading depths (>1.5') or if depth of flow is sufficient (>4.0") a standard field flow meter shall be used to convert depth, width and velocity of flow to volume. The float method shall also be used for flow depths less than 4.0".
- 4) Defendants shall not utilize pumps or any other method or equipment to cause a discharge or to increase the flow rate during a period of discharge.

Brushy Creek Mine/Mill Facility – Missouri State Operating Permit No. MO-001848

Issued: 2/26/2010 Modified: 7/13/2010 Expires: 2/25/2015

Appeal Filed: 3/26/2010; Supplement to Appeal Filed: 5/19/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	001, 002, 003	µg/L	417	256	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Zinc, Total Recoverable	001	µg/L	1,500	750	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Cadmium, Total Recoverable	002, 003	µg/L	100	50	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Copper, Total Recoverable	001, 002, 003	µg/L	88	53	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
WET testing - chronic	001					grab	± Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within four (4) Months of the Lodging Date and implemented thirty (30) Days thereafter.

Buick Mine/Mill Facility – Missouri State Operating Permit No. MO-0002003

Issued: 9/25/2009 Modified: 7/13/2010 Expires: 9/24/2014

Appeal Filed: 10/23/2009; Supplement to Appeal Filed: 5/19/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	002	µg/L	562	263	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Zinc, Total Recoverable	002	µg/L	860	430	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
WET testing - chronic	002					24-hour composite	± Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within two (2) Months of the Lodging Date and implemented thirty (30) Days thereafter.

Buick Resource Recycling Facility – Missouri State Operating Permit No. MO-0000337

Issued: 8/23/2002 Modified: 2/23/2007 Expires: 8/22/2007

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	001	lbs/day	2.58	1.05	once/month	24-hour composite	June 1, 2012
		µg/L	190	190			
Antimony, Total Recoverable	001	lbs/day	6.900	4.600	once/month	24-hour composite	June 1, 2012
Total Suspended Solids	001	lbs/day	283	162	once/month	24-hour composite	June 1, 2012
Ammonia as N (summer/winter)	001	mg/L	4.0	4.0	once/quarter ****	grab	June 1, 2012
Arsenic, Total Recoverable	001	lbs/day	2.28	0.92	once/month	24-hour composite	June 1, 2012
Cadmium Total Recoverable	001	µg/L	100	50	once/month	24-hour composite	June 1, 2012
Copper, Total Recoverable	001	µg/L	88	44	once/month	24-hour composite	June 1, 2012
Zinc, Total Recoverable	001	lbs/day	1.67	0.60	once/month	24-hour composite	June 1, 2012
		µg/L	2,120	1,060			
Silver, Total Recoverable	001	µg/L	20	9.8	once/quarter ****	24-hour composite	June 1, 2012
WET testing - chronic	001					24-hour composite	± June 1, 2012
SWPPP							Completed within six (6) Months of the Lodging Date and implemented thirty (30) Days thereafter.

****Sample once per quarter in the months of February, May, August and November.

Fletcher Mine/Mill Facility – Missouri State Operating Permit No. MO-0001856

Issued: 11/13/2009 Modified: 7/28/2010 Expires: 11/12/2014

Appeal Filed: 12/11/2009; First Amended Appeal Filed: 4/23/2010; Supplement to Appeal Filed: 5/19/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	001, 002, 003	µg/L	398	192	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Cadmium, Total Recoverable	001, 002, 003	µg/L	54	26	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Zinc, Total Recoverable	001, 002, 003	µg/L	379	188	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Copper, Total Recoverable	001, 002, 003	µg/L	45	22	once/year	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
WET testing - chronic	001					grab	± Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within four (4) Months of the Lodging Date and implemented thirty (30) Days thereafter.

Glover Facility – Missouri State Operating Permit No. MO-0001121

Issued: 3/23/2007 Expires: 3/22/2012

Appeal Filed: 4/20/2007; First Amended Appeal Filed: 4/14/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	003	lbs/day	0.673	0.264	once/month	grab	Two (2) years from Lodging Date.
		µg/L	>8 cfs = 80	>8 cfs = 80	once/month*		
		µg/L	≤8 cfs = 27	≤8 cfs = 27			
Zinc, Total Recoverable	003	lbs/day	2.452	0.745	once/month	grab	Two (2) years from Lodging Date.
		µg/L	>8 cfs = 2,050	>8 cfs = 1,400	once/month*		
		µg/L	≤8 cfs = 340	≤8 cfs = 340			
Cadmium, Total Recoverable	003	lbs/day	0.481	0.192	once/month	grab	Two (2) years from Lodging Date.
		µg/L	>8 cfs = 46	>8 cfs = 46	once/month*		
		µg/L	≤8 cfs = 13	≤8 cfs = 13			
Thallium, Total Recoverable	003	µg/L	>8 cfs = 176	>8 cfs = 176	once/month*	grab	Two (2) years from Lodging Date.
		µg/L	≤8 cfs = 11	≤8 cfs = 11			
Total Suspended Solids	003	mg/L		monitoring	once/month	grab	Two (2) years from Lodging Date.
All Pollutant Parameters	006		no discharge	no discharge	once/discharge/day	grab	The facility shall be operated in a manner to prevent all discharges for the duration of the Consent Decree.
SWPPP							Completed within two (2) Months of the Lodging Date and implemented thirty (30) Days thereafter.

*For each effluent monitoring event for flow-based limits, Defendants must measure stream flow within sixty (60) minutes of collecting the effluent sample. Defendants shall submit with the Discharge Monitoring Reports (DMRs) documentation such as signed sample collection logs, to demonstrate the time, date and location of sample collection and stream measurement and the person or persons collecting the samples/measurement.

Herculaneum Lead Smelter Facility – Missouri State Operating Permit No. MO-0000281

Issued: 2/28/2003 Expires: 2/27/2008

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Chemical Oxygen Demand	001	mg/L	Monitoring Only	Monitoring Only	one/week	grab	Until issuance of the Herculaneum MSOP.
Lead, Total Recoverable	001	lbs/day	2.72	1.09	once/week	grab	Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
		µg/L	1,500	1,500			
Zinc, Total Recoverable	001	lbs/day	9.9	3.26	once/week	grab	Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
		µg/L	4,900	4,900			
Total Suspended Solids	001	lbs/day	334	185	once/week	grab	Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Arsenic, Total Recoverable	001	lbs/day	12.86	5.216	once/week	grab	Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Cadmium, Total Recoverable	001	lbs/day	1.964	0.785	once/week	grab	Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
		µg/L	720	720			
Copper, Total Recoverable	001	lbs/day	11.839	4.750	once/week	grab	Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
		µg/L	580	580		grab	
Silver, Total Recoverable	001	µg/L	130	130	once/quarter	grab	Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
WET testing - chronic	001					24-hour composite	± Three (3) years from the date of approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within six (6) Months of the Lodging Date and implemented thirty (30) Days thereafter.

Sweetwater Mine/Mill Facility – Missouri State Operating Permit No. MO-0001881

Issued: 7/10/2009 Modified: 7/13/2010 Expires: 7/9/2014

Appeal Filed: 8/07/2009; Supplement to Appeal Filed: 5/19/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	002	µg/L µg/L µg/L µg/L	≥20 cfs = 200 ≥10 to <20 cfs = 160 ≥5 to <10 cfs = 72 0.0 to <5 cfs = 54	≥20 cfs = 200 ≥10 to <20 cfs = 160 ≥5 to <10 cfs = 72 0.0 to <5 cfs = 54	once/month*	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Zinc, Total Recoverable	002	µg/L	440	440	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
All Pollutant Parameters	004		no discharge	no discharge	once/discharge/day	grab	The facility shall be operated in a manner to prevent all discharges until such time as a MSOP or MSOP modification is issued removing Outfall 004.
WET testing - chronic	002					24-hour composite	± Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within two (2) Months of the Lodging Date and implemented thirty (30) Days thereafter.

*For each effluent monitoring event for flow-based limits, Defendants must measure stream flow within sixty (60) minutes of collecting the effluent sample. Defendants shall submit with the Discharge Monitoring Reports (DMRs) documentation such as signed sample collection logs, to demonstrate the time, date and location of sample collection and stream measurement and the person or persons collecting the samples/measurement.

Viburnum Mine/Mill Facility (Mine # 28 & 29) – Missouri State Operating Permit No. MO-0000086

Issued: 12/4/2009 Modified: 7/13/2010 Expires: 12/3/2014

Appeal Filed: 1/4/2010; Supplement to Appeal Filed: 5/19/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Zinc, Total Recoverable	002, 003, 004, 005, 006	µg/L	1,500	750	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Lead, Total Recoverable	004	µg/L	600	300	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
WET testing - chronic	002 & 004					grab	± Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within four (4) Months of the Lodging Date and implemented thirty (30) Days thereafter.

Viburnum Mine #35 (Casteel) Facility – Missouri State Operating Permit No. MO-0100226

Issued: 3/19/2010 Modified: 7/13/2010 Expires: 3/18/2015

Appeal Filed: 4/16/2010; Supplement to Appeal Filed: 5/19/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	001, 003	µg/L	432	246	once/month	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
WET testing - chronic	001 & 003					grab	± Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within six (6) Months of the Lodging Date and implemented thirty (30) Days thereafter.

West Fork Unit Facility – Missouri State Operating Permit No. MO-0100218

Issued: 3/12/2010 Modified: 7/13/2010 Expires: 3/11/2015

Appeal Filed: 4/9/2010; Supplement to Appeal Filed: 5/19/2010

Effluent Parameter	Outfall Number(s)	Units	Daily Maximum	Monthly Average	Monitoring Frequency	Sample Type	Permit Compliance Deadline
Lead, Total Recoverable	001	µg/L µg/L µg/L µg/L	≥40 cfs = 124 ≥30 to <40 cfs = 97 ≥20 to <30 cfs = 69 <20 cfs = 53	≥40 cfs = 124 ≥30 to <40 cfs = 97 ≥20 to <30 cfs = 69 <20 cfs = 53	once/month*	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
Zinc, Total Recoverable	001	µg/L µg/L µg/L µg/L	≥40 cfs = 640 ≥30 to <40 cfs = 560 ≥20 to <30 cfs = 490 <20 cfs = 442	≥40 cfs = 640 ≥30 to <40 cfs = 560 ≥20 to <30 cfs = 490 <20 cfs = 442	once/month*	grab	Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
All Pollutant Parameters	003		no discharge	no discharge	once/discharge/day	grab	The facility shall be operated in a manner to prevent all discharges for the duration of the Consent Decree.
All Pollutant Parameters	004		no discharge	no discharge	once/discharge/day	grab	The facility shall be operated in a manner to prevent all discharges for the duration of the Consent Decree.
WET testing - chronic	001					grab	± Three (3) years from the latter of the final submission of the Site-Specific UWMP or approval of the Site-Specific SWMP, but not to exceed five (5) years from the Effective Date of the Consent Decree.
SWPPP							Completed within four (4) Months of the Lodging Date and implemented thirty (30) Days thereafter.

*For each effluent monitoring event for flow-based limits, Defendants must measure stream flow within sixty (60) minutes of collecting the effluent sample. Defendants shall submit with the Discharge Monitoring Reports (DMRs) documentation such as signed sample collection logs, to demonstrate the time, date and location of sample collection and stream measurement and the person or persons collecting the samples/measurement.