

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0101702

Owner: Exide Technologies
Address: 13000 Deerfield Pkwy, Building 200, Alpharetta, GA 30004

Continuing Authority: Same as above
Address: Same as above

Facility Name: Exide Technologies, Canon Hollow Smelter
Facility Address: 25102 Holt 250 Road, Forest City, MO 64451

Legal Description: SW ¼, Sec. 12, T60N, R39W, Holt County
Latitude/Longitude: See page 2

Receiving Stream: See page 2
First Classified Stream and ID: See page 2
USGS Basin & Sub-watershed No.: See page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

See page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

August 1, 2012
Effective Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

July 31, 2017
Expiration Date

John Madras
John Madras, Director, Water Protection Program

Outfall #001 – Process Wastewater & Stormwater from Lead Recycling Operation - SIC #3341 (Piped to Missouri River)

Lime precipitation, pH adjustment, coagulation, filter press

Design flow is 0.078 MGD. Average flow is 0.040 MGD.

Sampled prior to mixing with Outfall #003 in surge tank at pump station for combined pumping to Missouri River.

Legal Description: SW¹/₄, NE¹/₄, Sec. 10, T59N, R39W, Holt Co.

UTM Coordinates: X= 306619, Y= 4426487

Receiving Stream: Missouri River (P)

First Classified Stream and ID: Missouri River (P) (00251)

USGS Basin & Sub-watershed No.: 10240005-1003

Outfall #002 – Eliminated

Was sanitary wastewater – now officially closed.

Design flow was 20,000 gallons per day.

Legal Description: SW ¹/₄, Sec. 12, T60N, R39W, Holt Co.

UTM Coordinates: X= 309362, Y= 4433753

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00251)

USGS Basin & Sub-watershed No.: 10240005-2300

Outfall #003 – Stormwater from Stormwater Treatment System (Piped to Missouri River)

Precipitation, coagulation, filter press

Design flow is 0.138 MGD. Average flow is 0.098MGD.

Actual flow is dependent upon precipitation.

Sampled prior to mixing with Outfall #001 in surge tank at pump station for combined pumping to Missouri River.

Legal Description: SW¹/₄, NE¹/₄, Sec. 10, T59N, R39W, Holt County

UTM Coordinates: X= X= 306619, Y= 4426487

Receiving Stream: Missouri River (P)

First Classified Stream and ID: Missouri River (P) (00226)

USGS Basin & Sub-watershed No.: 10240005-1003

Outfall #004 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek

Legal Description: NW¹/₄, SW¹/₄, Sec. 12, T60N, R39W, Holt County

UTM Coordinates: X= 309588, Y= 4433846

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00262)

USGS Basin & Sub-watershed No.: 10240005-1103

Outfall #005 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek.

Legal Description: NW¹/₄, SW¹/₄, Sec. 12, T60N, R39W, Holt County

UTM Coordinates: X= 309445, Y= 4433850

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00262)

USGS Basin & Sub-watershed No.: 10240005-1103

Outfall #006 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek.

Legal Description: NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T60N, R39W, Holt County

UTM Coordinates: X= 309276, Y= 4433699

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00262)

USGS Basin & Sub-watershed No.: 10240005-1103

Outfall #007 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek.

Legal Description: SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T60N, R39W, Holt County

UTM Coordinates: X= 309265, Y= 4433384

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00262)

USGS Basin & Sub-watershed No.: 10240005-1103

Outfall S1 – Instream Monitoring

Canon Creek upstream of the small west flowing drainage just north of plant site.

Legal Description: NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T60N, R39W, Holt County

UTM Coordinates: X= 309517, Y= 4433977

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00262)

USGS Basin & Sub-watershed No.: 10240005-1103

Outfall S2 – Instream Monitoring

Canon Creek downstream at the railroad bridge.

Legal Description: SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T60N, R39W, Holt County

UTM Coordinates: X= 309225, Y= 4433258

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00262)

USGS Basin & Sub-watershed No.: 10240005-1103

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 4 of 12	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> - Process Wastewater - Samples to be taken prior to mixing with Outfall #003 in surge tank at pump station for combined pumping to Missouri River.						
Flow	MGD	*		*	once/day	24 hr. total
Total Suspended Solids	lbs/day	36.4		17.3	once/week	24 hr. comp.
Lead, Total Recoverable	lbs/day	0.249		0.115	once/week	24 hr. comp.
Arsenic, Total Recoverable	lbs/day	1.23		0.51	once/week	24 hr. comp.
Zinc, Total Recoverable	lbs/day	0.91		0.37	once/week	24 hr. comp.
Antimony, Total Recoverable	lbs/day	1.71		0.76	once/week	24 hr. comp.
Selenium, Total Recoverable	mg/L	39		20	once/week	24 hr. comp.
Ammonia as N	mg/L	*		*	once/month	24 hr. comp.
Sulfate as SO ₄ plus Chlorides	mg/L	*		*	once/month	24 hr. comp.
Cadmium, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Chromium VI, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Copper, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
pH - Units (Note pH-1)	Minutes of pH - Excursion per month			446	continuous	continuous
pH - Units (Note pH-1)	Number of pH-Excursion incidents lasting more than 60 minutes per month			0	continuous	continuous
<u>Note pH-1</u> - an excursion occurs anytime the pH is outside of the 6.5 to 9.0 range.						
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>SEPTEMBER 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions			once/quarter**	24 hr. comp.
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2012</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

Please note that Missouri River concentration based limits are in mg/L not µg/L.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 5 of 12	
					PERMIT NUMBER MO-0101702	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003</u> - Stormwater - Samples to be taken prior to mixing with Outfall #001 in surge tank at pump station for combined pumping to Missouri River.						
Flow	MGD	*		*	once/day	24 hr. total
Total Suspended Solids	mg/L	41		16	once/month	24 hr. comp.
Sulfate as SO4 plus Chlorides	mg/L	*		*	once/month	24 hr. comp.
Lead, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Antimony, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Arsenic, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Cadmium, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Chromium VI, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Copper, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Zinc, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
Ammonia as N	mg/L	*		*	once/month	24 hr. comp.
Selenium, Total Recoverable	mg/L	*		*	once/month	24 hr. comp.
pH - Units (Note pH-1)	Minutes of pH - Excursion per month			446	continuous	continuous
pH - Units (Note pH-1)	Number of pH-Excursion incidents lasting more than 60 minutes per month			0	continuous	continuous
<u>Note pH-1</u> - an excursion occurs anytime the pH is outside of the 6.5 to 9.0 range.						
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>SEPTEMBER 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) Test	%Survival	(See Special Conditions)			once/quarter**	24 hr. comp.
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2012</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

Please note that Missouri River concentration based monitoring units are in mg/L not µg/L.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 6 of 12	
					PERMIT NUMBER MO-0101702	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #004, 005, 006, and 007</u> - Stormwater only (Note 2)						
Flow	MGD	*		*	once/ quarter**	grab
Total Suspended Solids	mg/L	*		*	once/ quarter**	grab
Lead, Total Recoverable	µg/L	*		*	once/ quarter**	grab
Zinc, Total Recoverable	µg/L	*		*	once/ quarter**	grab
Settleable Solids	mL/L/hr	*		*	once/ quarter**	grab
<u>Instream Monitoring</u> – S1 Canon Creek, Upstream (upstream of the small west flowing drainage just north of the plant site) and S2 Downstream (At the railroad bridge).						
Flow	MGD	*		*	once/ quarter**	grab
Total Suspended Solids	mg/L	*		*	once/ quarter**	grab
Lead, Total Recoverable	µg/L	*		*	once/ quarter**	grab
Zinc, Total Recoverable	µg/L	*		*	once/ quarter**	grab
Temperature	°C	*		*	once/ quarter**	grab
Hardness	mg/L	*		*	once/ quarter**	grab
pH – Units	SU	*		*	once/ quarter**	grab
Selenium, Total Recoverable (Note 1)	µg/L	*		*	once/ quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** See table below for quarterly sampling

Sample discharge at least once for the months of:	Report is due:
January, February, March (1st Quarter)	April 28
April, May, June (2nd Quarter)	July 28
July, August, September (3rd Quarter)	October 28
October, November, December (4th Quarter)	January 28

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Continued)

NOTE 1 – Selenium

The permittee must conduct analyses in accordance with the method specified below and must utilize a standard equivalent to the concentration of the threshold specified below:

Parameter	Analytical Method	Threshold
Selenium	Perkin - Elmer Zeeman 5000 graphite furnace AA	0.0026 mg/L

All analytical values at or above the threshold shall be reported as the measured value. The Permittee shall report the lowest calibration standard used and the number of analytical results below the threshold in the comment section on the DMR.

The average monthly effluent values for selenium will be determined by assuming the “non-detection” values from the set of maximum daily values are equivalent to zero when calculating the average monthly value.

NOTE 2 – The stormwater discharges from Outfall #004, 005, 006, and 007 are to be sampled once per quarter during a runoff event. The samples must be collected during the first hour of discharge. Each outfall is to be sampled and the results reported separately. If a runoff event did not occur during the quarter, it shall be stated so on the DMR form submitted for the quarter.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri’s Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri’s list of waters of the state not fully achieving the state’s water quality standards, also called the 303(d) list.
 The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Changes in Discharges of Toxic Substances
 The permittee shall notify the Director as soon as it knows or has reason to believe:
 - (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
4. Report as no-discharge when a discharge does not occur during the report period.
5. Sludge from the process and stormwater filter presses, along with sludge from the scrubber and slag from the lead smelting operation are mixed with Portland Cement (stabilized) and disposed of in the landfill on site. (EPA Report of the Compliance of Biomonitoring inspection June 4-5, 2001.)

C. SPECIAL CONDITIONS (continued)

6. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Receiving Water Monitoring Conditions

- (a) In the event that a safe, accessible location is not present at this location, a suitable location can be negotiated with the department. Samples should be taken at least four feet from the bank or from the middle of the stream (whichever is less) and 6-inches below the surface. The upstream receiving water sample should be collected at a point upstream from any influence of the effluent, where the water is visibly flow down stream.
- (b) When conducting in-stream monitoring, the permittee shall record observations that include: the time of day, weather conditions, unusual stream/lake characteristics (e.g., septic conditions, algae growth, etc.), the stream segment (e.g., riffle, pool or run) or the lake depth from where the sample was collected. These observations shall be submitted with the sample results.
- (c) Samples shall not be collected from areas with especially turbulent flow, still water or from the stream bank, unless these conditions are representative of the stream reach or no other areas are available for sample collection. Sampling should not be made when significant precipitation has occurred recently. The sampling event should be terminated and rescheduled if any of the following conditions occur:
 - If turbidity in the stream increases notably; or
 - If rainfall over the past two weeks exceeds 2.5 inches or exceeds 1 inch in the last 24 hours
- (d) Always use the correct sampling technique and handling procedure specified for the parameter of interest. Please refer to the latest edition of Standard Methods for the Examination of Water and Wastewater for further discussion of proper sampling techniques. All analyses must be conducted in accordance with an approved EPA method. Meters shall be calibrated immediately (within 1 hour) prior to the sampling event.
- (e) To obtain accurate measurements, D.O., temperature and pH analyses should be performed on-site in the receiving stream where possible. However, due to high flow conditions, access, etc., it may be necessary to collect a sample in a bucket or other container. When this is necessary, care must be taken not to aerate the sample upon collection. If for any reason samples must be collected from an alternate site from the one listed in the permit, the permittee shall report the location with the sample results.

8. Continuously Monitored pH Effluent Limitations

Notwithstanding Part I of this permit, where the permittee continuously measures the pH of water and wastewater discharges pursuant to a requirement or option in this permit, excursions from the range provided in Part I are permitted, provided:

- (a) The pH limitation in Part I of this permit is based upon a requirement imposed under 40 CFR Part 401, Subpart N.
- (b) The total time during which the pH values are outside the required range of pH values shall not exceed 446 minutes in any calendar month.
- (c) No individual excursions from the range of pH values shall exceed 60 minutes.
- (d) For purpose of this section, an "excursion" is an unintentional and temporary incident in which the pH value of the discharge exceeds the range set forth in Part I of this permit. The number of individual excursions exceeding 60 minutes and the total accumulated excursion time in minutes occurring in any calendar month shall be reported.

C. SPECIAL CONDITIONS (continued)

9 Develop and implement of a Storm Water Pollution Prevention Plan (SWPPP) within sixty days of issuance of this permit. A copy of the SWPPP must be retained at the site and made available to a department representative upon request. The SWPPP shall incorporate erosion control practices specific to the site. The permittee shall fully implement the provisions of the SWPPP. The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of Best Management Practices (BMPs) in order to reduce the amount of sediment and other pollutants in storm water discharges associated with the activities; comply with the Missouri Water Quality Standards; and ensure compliance with the terms and conditions of this permit. The permittee shall select, install, use, operate, and maintain appropriate BMPs for the site. The following manuals are acceptable resources for the selection of appropriate BMPs:

- (a) ***Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices***, (Document number EPA 832-R-92-005) published by the United States Environmental Protection Agency (USEPA) in 1992. This manual is available at The USEPA internet site <http://cfpub1.epa.gov/npdes/stormwater/swppp.cfm>.
- (b) ***Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities***, (Document number EPA 832-R-92-006) published by the USEPA in September 1992.
- (c) The latest version of ***Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri***. This manual is available on the department’s internet site at: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP. EPA and DNR continue to update BMP information on their web sites. It is recommended that the permittee review this information when developing a SWPPP.

10. The SWPPP must include the following:

- (a) A listing of Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater.
- (b) A schedule for implementing the BMPs, if necessary.
- (c) The SWPPP must include a schedule for monthly site inspections and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
- (d) A provision for designating an individual to be responsible for environmental matters.

11. Whole Effluent Toxicity Tests will be conducted as follows:

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	A.E.C. %	FREQUENCY	SAMPLE TYPE	REPORT MONTH
001	9%	Quarterly	24 hr. composite	January, April, July , October – “for example, test in Jan, Feb, or March, report result in April”
003	9%	Quarterly	24 hr. composite	

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a SINGLE-dilution test in the months and at the frequency specified above. For tests which are successfully passed, submit test results USING THE DEPARTMENT’S WET TEST REPORT FORM #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
 - (a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.
 - (b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.
 - (c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.

C. SPECIAL CONDITIONS (continued)

11. Whole Effluent Toxicity Tests (continued):

- (d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.
 - (e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
 - (f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - (g) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
 - (h) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
 - (i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
 - (j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
 - (k) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
 - (l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - (m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.
- (2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
 - (3) If the effluent fails the test, a multiple dilution test shall be performed within 30 calendar days and biweekly thereafter, until one of the following conditions are met:
 - (a) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - (b) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
 - (4) Failure of at least two multiple-dilution tests during any period of accelerated monitoring violates the permit narrative requirement for aquatic life protection.
 - (5) The permittee shall submit a concise summary of all test results for the test series to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
 - (6) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
 - (7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
 - (8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
 - (9) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
 - (10) Submit a concise summary in tabular format of all test results with the annual report.

C. SPECIAL CONDITIONS (continued)

11. Whole Effluent Toxicity Tests (continued):

(b) PASS/FAIL procedure and effluent limitations:

- (1) To pass a single-dilution test, mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other Federal guidelines as appropriate or required.
- (2) To pass a multiple-dilution test:
 - (a) For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC), OF 30% OR LESS THE AEC must be less than three-tenths (0.3) of the LC_{50} concentration for the most sensitive of the test organisms; **OR**,
 - (b) For facilities with an AEC greater than 30% the LC_{50} concentration must be greater than 100%; **AND**,
 - (c) All effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.

(c) Test Conditions

- (1) Test Type: Acute Static non-renewal
- (2) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS.
- (3) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
- (4) When dilutions are required, upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
- (5) Single-dilution tests will be run with:
 - (a) Effluent at the AEC concentration;
 - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
 - (c) reconstituted water.
- (6) Multiple-dilution tests will be run with:
 - (a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
 - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
 - (c) reconstituted water.
- (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
- (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

SUMMARY OF TEST METHODOLOGY FOR WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test acceptability criterion:	90% or greater survival in controls

Test conditions for (Pimephales promelas):

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test Acceptability criterion:	90% or greater survival in controls

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF REISSUANCE
OF
MO-0101702
EXIDE TECHNOLOGIES, CANON HOLLOW SMELTER

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Industrial Facility.

Part I – Facility Information

Facility Type: IND
 Facility SIC Code(s): 3341

Facility Description:

Lead acid batteries are crushed and the lead is recovered and cast into ingots.

Application Date: August 15, 2008

Expiration Date: July 31, 2013 administratively changed to July 31, 2017

Last Inspection: 04/09/03 In Compliance ; Non-Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.121	Lime precipitation, pH adjustment, coagulation, filter press	Process water	0 miles
002	eliminated		closed	
003	precipitation	Precipitation, coagulation, filter press	stormwater	0 miles
004, 005, 006, 007	precipitation	none	stormwater	5.8-6.2 miles
upstream	NA	NA	NA	6.3 miles
down stream	NA	NA	NA	5.7 miles

Outfall #001 – Process Wastewater & Stormwater from Lead Recycling Operation - SIC #3341 (Piped to Missouri River)

Lime precipitation, pH adjustment, coagulation, filter press

Design flow is 0.078 MGD. Average flow is 0.040 MGD.

Sampled prior to mixing with Outfall #003 in surge tank at pump station for combined pumping to Missouri River.

Legal Description: SW¼, NE¼, Sec. 10, T59N, R39W, Holt Co.

UTM Coordinates: X= 306619, Y= 4426487

Receiving Stream: Missouri River (P)

First Classified Stream and ID: Missouri River (P) (00226)

USGS Basin & Sub-watershed No.: 10240005-220003

Outfall #002 – Eliminated

Was sanitary wastewater – now officially closed.
Design flow was 20,000 gallons per day.
Legal Description: SW ¼, Sec. 12, T60N, R39W, Holt Co.
UTM Coordinates: X= 309362, Y= 4433753
Receiving Stream: Canon Creek (U)
First Classified Stream and ID: Kimsey Branch (P) (00262)
USGS Basin & Sub-watershed No.: 10240005-2300

Outfall #003 – Stormwater from Stormwater Treatment System (Piped to Missouri River)

Precipitation, coagulation, filter press
Design flow is 0.138 MGD. Average flow is 0.098MGD.
Actual flow is dependent upon precipitation.
Sampled prior to mixing with Outfall #001 in surge tank at pump station for combined pumping to Missouri River.
Legal Description: SW¼, SW¼, Sec. 12, T60N, R39W, Holt County
UTM Coordinates: X= 306619, Y= 4426487
Receiving Stream: Missouri River (P)
First Classified Stream and ID: Missouri River (P) (00226)
USGS Basin & Sub-watershed No.: 10240005-2200

Outfall #004 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek
Legal Description: NW¼, SW¼, Sec. 12, T60N, R39W, Holt County
UTM Coordinates: X= 309588, Y= 4433846
Receiving Stream: Canon Creek (U)
First Classified Stream and ID: Kimsey Branch (P) (00262)
USGS Basin & Sub-watershed No.: 10240005-2300

Outfall #005 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek.
Legal Description: NW¼, SW¼, Sec. 12, T60N, R39W, Holt County
UTM Coordinates: X= 309445, Y= 4433850
Receiving Stream: Canon Creek (U)
First Classified Stream and ID: Kimsey Branch (P) (00262)
USGS Basin & Sub-watershed No.: 10240005-2300

Outfall #006 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek.
Legal Description: NW¼, SW¼, Sec. 12, T60N, R39W, Holt County
UTM Coordinates: X= 309276, Y= 4433699
Receiving Stream: Canon Creek (U)
First Classified Stream and ID: Kimsey Branch (P) (00262)
USGS Basin & Sub-watershed No.: 10240005-2300

Outfall #007 – Stormwater

Actual flow is dependent upon precipitation. Sampled at each outfall prior to discharge to Canon Creek.
Legal Description: SW¼, SW¼, Sec. 12, T60N, R39W, Holt County
UTM Coordinates: X= 309265, Y= 4433384
Receiving Stream: Canon Creek (U)
First Classified Stream and ID: Kimsey Branch (P) (00262)
USGS Basin & Sub-watershed No.: 10240005-2300

Outfall S1 – Instream Monitoring

Canon Creek upstream of the small west flowing drainage just north of plant site.
Legal Description: NW¼, SW¼, Sec. 12, T60N, R39W, Holt County
UTM Coordinates: X= 309517, Y= 4433977
Receiving Stream: Canon Creek (U)
First Classified Stream and ID: Kimsey Branch (P) (00262)
USGS Basin & Sub-watershed No.: 10240005-2300

Outfall S2 – Instream Monitoring

Canon Creek downstream at the railroad bridge.

Legal Description: SW¼, SW¼, Sec. 12, T60N, R39W, Holt County

UTM Coordinates: X= 309225, Y= 4433258

Receiving Stream: Canon Creek (U)

First Classified Stream and ID: Kimsey Branch (P) (00262)

USGS Basin & Sub-watershed No.: 10240005-2300

Water Quality History:

Facility has evaluated the past several years of monthly discharge monitoring data for Outfalls #001 and 003. Due to this evaluation of the monitoring results, the facility has expressed concern about its ability to achieve the proposed water quality effluent limitations for Outfalls #001 and #003 if it continues discharging wastewater to Canon Creek. Therefore, the facility is proposing to extend a pipeline to the Missouri River for Outfall #001 and #003.

Comments:

Receiving stream concentration (Cs) was obtained from the USGS water quality sampling station 06818000 – Missouri River at St. Joesph, MO (Years 2003 – 2008). See Appendix #2

Part II – Operator Certification Requirements

This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]:
- Lake or Reservoir [10 CSR 20-7.015(3)]:
- Losing [10 CSR 20-7.015(4)]:
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]:
- Special Stream [10 CSR 20-7.015(6)]:
- Subsurface Water [10 CSR 20-7.015(7)]:
- All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission water quality objectives in terms of “water uses to be maintained and the criteria to protect those uses.” The receiving stream and/or 1st classified receiving stream’s beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with 10 CSR 20-7.031(3).

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Canon Creek	U		none	10240005	Central Plains/ Nishnabotna/Platte
Kimsey Creek	P	0262	AQL, LWW, WBC-B		
Missouri River	P	0226	IRR, AQL, LWW, DWS, WBC-B, SCR, IND	01240005	Central Plains/ Nishnabotna/Platte

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Canon Creek (U)	0.0	0.0	0.0
Kimsey Creek (P)	0.1	0.1	1.0
Missouri River (P)	9,000*	9000*	10,000*

* - Low flow data for the Missouri River's 1Q10, 7Q10, and 30Q10 was obtained from the proposed Corp of Engineer's management of the Gavin's Point Dam.

MIXING CONSIDERATIONS TABLE:

Missouri River					
MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)4.B.(III)(a)]			ZONE OF INITIAL DILUTION (CFS) {OUTFALL #001} [10 CSR 20-7.031(4)(A)4.B.(III)(b)]		
1Q10	7Q10	30Q10	1Q10	7Q10	30Q10
2,250	2,250	2,500	1.21	1.21	1.21

Zone of Initial Dilution (ZID): One-tenth (0.1) of the mixing zone volume of flow, not to exceed 10 times the effluent design flow. [10 CSR 20-7.031(4)(A)4.B.(III)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

Monitoring requirements have been retained from previous state operating permit. Monitoring for Hardness and Total Recoverable Selenium has been added to the requirements.

Site S1.

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Flow MGD	Once/quarter	24 hr estimate	Canon Creek – Upstream of the small west flowing drainage just north of plant site.
Total Suspended Solids	“	grab	
Lead, Total Recoverable	“	grab	
Zinc, Total Recoverable	“	grab	
Temperature (°C)	“	grab	
Hardness	“	grab	
pH Units	“	grab	
Selenium, Total Recoverable	“	grab	

Site S2.

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Flow MGD	Once/quarter	24 hr estimate	Canon Creek – Downstream at the railroad bridge.
Total Suspended Solids	“	grab	
Lead, Total Recoverable	“	grab	
Zinc, Total Recoverable	“	grab	
Temperature (°C)	“	grab	
Hardness	“	grab	
pH Units	“	grab	
Selenium, Total Recoverable	“	grab	

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

Backsliding proposed in this Factsheet for the modification of this permit conforms to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

ANTIDEGRADATION:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

As per [10 CSR 20-7.031(2)(D)], the three (3) levels of protection provided by the antidegradation policy in subsections (A), (B), and (C) of this section shall be implemented according to procedures developed by the department. On April 20, 2007, the Missouri Clean Water Commission approved *Missouri Antidegradation Rule and Implementation Procedure* (Antidegradation Rule), which is applicable to new or upgraded/expanded facilities. Because the construction permit for this facility was received before August 31, 2008, an antidegradation review is not required.

BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

This condition is not applicable to the permittee for this specific facility.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

A RPA was conducted on appropriate parameters. Please see **APPENDIX #1 – RPA RESULTS**.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm.

This wastewater treatment facility is not a POTW. Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSOs), AND INFLOW & INFILTRATION (I&I):

Collection systems are a critical element in the successful performance of the wastewater treatment process. Under certain conditions, poorly designed, built, managed, operated, and/or maintained systems can pose risks to public health, the environment, or both. Causes of SSOs include, but are not limited to, the following: high levels of I&I during wet weather; blockages; structural, mechanical, or electrical failures; collapsed or broken sewer pipes; insufficient conveyance capacity; and vandalism. Effective and continuous management, operation, and maintenance, as well as ensuring adequate capacity and rehabilitation when necessary are critical to maintaining collection system capacity and performance while extending the life of the system.

This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

This permit does not contain a SOC.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the department to release into a given stream after the department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration
Cs = upstream concentration
Qs = upstream flow
Ce = effluent concentration
Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

A WLA model was either not submitted or determined not applicable by department staff. Barr Engineering submitted an August 2, 2007 letter with enclosed tables indicating potential water quality and technology based effluent limits for Outfalls #001 and #003.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

In accordance with the Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System. Furthermore, WET testing is a means by which the department determines that [10 CSR 20-7.031(3)(D, F, & G)] are being met by the permitted facility. In addition to justification for the WET testing, WET tests are required under [10 CSR 20-6.010(8)(A)4] to be performed by specialists who are properly trained in conducting the test according to the methods prescribed by the Federal Government as referenced in [40 CFR Part 136]. WET test will be required by all facilities meeting the following criteria:

Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Missouri River is listed on the 2002 Missouri 303(d) List for Chlordane, and PCBs.

This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of Missouri River.

Part V – Effluent Limits Determination

Outfall #001 – Main Facility Outfall – Discharge location moved to Missouri River.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	No	*
TSS	lb/day	1	36.4		17.3	Yes	38.73/18.42
Lead, Total Recoverable	lb/day	1	0.249		0.115	Yes	0.089/0.041
Arsenic, Total Recoverable	lbs/day	1	1.23		0.51	Yes	0.06/0.045
Zinc, Total Recoverable	lbs/day	1	0.91		0.37	Yes	0.708/0.284
Antimony, Total Recoverable	lbs/day	1	1.71		0.76	Yes	1.826/0.813
Ammonia as N	mg/L	3	*		*	Yes	3/2
Selenium, Total Recoverable	mg/L	8	39		20	Yes	*/*
Lead, Total Recoverable	mg/L	removed	N/A		N/A	Yes	72/48 µg/L
Arsenic, Total Recoverable	mg/L	removed	N/A		N/A	Yes	72/48 µg/L
Zinc, Total Recoverable	mg/L	removed	N/A		N/A	Yes	1.24/0.827
Antimony, Total Recoverable	mg/L	removed	N/A		N/A	Yes	*/*
Nickel, Total Recoverable	lbs/day	removed	N/A		N/A	Yes	**
Nickel, Total Recoverable	mg/L	removed	N/A		N/A	Yes	150/100 µg/L
Sulfate as SO ₄ plus Chlorides	mg/L	3	*		*	Yes	3600/2400
Chlorides	mg/L	removed	N/A		N/A	Yes	690/460
Mercury, Total Recoverable	mg/L	removed	N/A		N/A	Yes	1.8/1.2 µg/L
Cadmium, Total Recoverable	mg/L	3	*		*	Yes	47/32 µg/L
Chromium, Total Recoverable		removed	N/A		N/A	Yes	75/50 µg/L
Chromium VI, Total Recoverable	mg/L	3	*		*	Yes	**
Copper, Total Recoverable	mg/L	3	*		*	Yes	53/35 µg/L
pH	See pH discussion below						
Whole Effluent Toxicity (WET) Test	Please see WET Test in the Derivation and Discussion Section below.						
Monitoring Frequency	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only

** - Parameter not previously established in previous state operating permit.

N/A – Not applicable

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Dissolved Oxygen Policy
7. Antidegradation Policy
8. Water Quality Model
9. Best Professional Judgment
10. TMDL or Permit in lieu of TMDL
11. WET Test Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with 40 CFR Part 122.44(i)(1)(ii), the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.
- **Total Suspended Solids (TSS).** In accordance with 40 CFR 421.132, the best practicable technology currently available effluent limitations apply for this facility. The loading is based on the May 14, 2007 calculations from Barr Engineering Company.
- **pH.** pH shall be maintained in the range from 6.5 to 9.0 standard units in accordance with 10 CSR 20-7.031(4)(E). According to November 3, 2008 letter from Spencer, Fane, Britt & Browne, the facility adds carbon dioxide following metals precipitation as part

of the treatment process. The letter says that the current more advanced treatment system provides additional treatment than the outdated treatment of Best Practicable Treatment technology limits of 40 CFR 421.132. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month in accordance to 40 CFR 401.17(1). No individual excursion from the range of pH values shall exceed 60 minutes in accordance to 40 CFR 401.17(2).

- **Total Ammonia Nitrogen.** In accordance with 40 CFR 421.133, the best available technology economically achievable effluent limitations apply for this facility of 0 pounds per day of Ammonia (as N). According to the May 14, 2007 letter from Barr Engineering Company, this effluent limit guideline does not apply. Because Exide Canon Hollow Plant does not use ammonia for pH control, monitoring only will be required to measure the ammonia generated from nitrogen reduction and captured by the scrubbers.

Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and “The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and water hardness = 162 mg/L.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the department, partitioning evaluations may be considered and site-specific translators developed.

Metal	Conversion Factors	
	Acute	Chronic
Cadmium	0.915	0.880
Chromium III	0.316	0.860
Chromium VI	0.982	0.962
Copper	0.960	0.960
Lead	0.690	0.690
Nickel	0.998	0.997
Zinc	0.978	0.986

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 200 mg/L.

- **Total Recoverable Lead, Total Recoverable Arsenic, Total Recoverable Zinc, and Total Recoverable Antimony.** In accordance with 40 CFR 421.133, the best available technology economically achievable effluent limitations apply for this facility. The loading is based on the May 14, 2007 calculations from Barr Engineering Company. These technology based limits are significantly less than the water quality based discharge limits for a discharge to the Missouri River.

- **Selenium, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 5 µg/L

Chronic WLA: $C_c = ((2250+0.121)5 - (2250*3.7))/0.121$
 $C_c = 24180 \mu\text{g/L}$ or 24.18 mg/L
 $LTA_c = 24.18(0.539) = 13.0 \text{ mg/L}$ [CV = 0.577, 99th Percentile]

MDL = $13.0(3.01) = 39.2 \text{ mg/L}$ [CV = 0.577, 99th Percentile]
 AML = $13.0(1.53) = 20.0 \text{ mg/L}$ [CV = 0.577, 95th Percentile, n = 87]

- **WET Test.** WET Testing schedules and intervals are established in accordance with the department’s Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

Acute WET test to be conducted at least **ONCE/QUARTER** as facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

Allowable Effluent Concentration (AEC) calculations determine if the facility is to conduct single dilution or multiple dilution WET testing. Facilities that discharge to unclassified or Class C receiving streams, the AEC% is 100%. Facilities with less than 100% for an AEC% will have multiple dilution WET testing. Facilities that discharge to Lakes and have Acute WET testing, the AEC% is 100% due to [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] ZID not allowed for Lakes.

$$\text{Acute AEC\%} = ((0.121 + 1.21) / 0.121)^{-1} \times 100 = 9\%$$

- **Total Recoverable Nickel.** No technology based effluent limit guideline. No reasonable potential for violating water quality criteria exists.
- **Total Recoverable Chromium.** No technology based effluent limit guideline.
- **Chlorides, Total Recoverable Mercury.** No reasonable potential for violating water quality criteria exists.
- **Sulfate as SO₄ plus Chlorides, Total Recoverable Cadmium, Total Recoverable Chromium VI, and Total Recoverable Copper.** Monitoring only requirements. A RPA was conducted on each pollutant and was compared with the applicable designated uses for the Missouri River (IRR, LWW, AQL, DWS, IND). The RPA indicates that these pollutants do not have the potential or are not causing violations of Missouri’s Water Quality Standards. However, it is staff’s best professional judgment that these pollutants remain as monitoring only requirements due to the fact that this facility receives industrial wastewater. Please see **Appendix B – RPA Results** for each individual pollutants results.

- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/DAY	ONCE/MONTH
PH	CONTINUOUS	CONTINUOUS
TSS	ONCE/WEEK	ONCE/MONTH
LEAD, TOTAL RECOVERABLE	ONCE/WEEK	ONCE/MONTH
ARSENIC, TOTAL RECOVERABLE	ONCE/WEEK	ONCE/MONTH
ZINC, TOTAL RECOVERABLE	ONCE/WEEK	ONCE/MONTH
ANTIMONY, TOTAL RECOVERABLE	ONCE/WEEK	ONCE/MONTH
SELENIUM, TOTAL RECOVERABLE	ONCE/WEEK	ONCE/MONTH
AMMONIA AS N	ONCE/MONTH	ONCE/MONTH
SULFATE AS SO ₄ PLUS CHLORIDES	ONCE/MONTH	ONCE/MONTH
CADMIUM, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
CHROMIUM VI, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
COPPER, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH

In accordance with 10 CSR 20-7.015(2)(D)1., the department reduced the monitoring frequency to once per month for those parameters that are monitoring only.

Outfall #003 –Stormwater Outfall – Discharge location moved to Missouri River.

EFFLUENT LIMITATIONS TABLE: THESE MONITORING RESULTS WILL BE RE-EVALUATED UPON RENEWAL.

Parameter	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	8	*		*	No	S
TSS	mg/L	8	41		16	No	S
Sulfate as SO ₄ plus Chlorides	mg/L	8	*		*	Yes	3600/2400
Lead, Total Recoverable	mg/L	8	*		*	Yes	130/* µg/L
Antimony, Total Recoverable	mg/L	8	*		*	Yes	820/410 µg/L
Arsenic, Total Recoverable	mg/L	8	*		*	Yes	100/50 µg/L
Cadmium, Total Recoverable	mg/L	8	*		*	Yes	72/* µg/L
Chromium VI, Total Recoverable	mg/L	8	*		*	Yes	N/A
Copper, Total Recoverable	mg/L	8	*		*	Yes	67/* µg/L
Zinc, Total Recoverable	mg/L	8	*		*	No	S
Ammonia as N	mg/L	8	*		*	Yes	3/2
Selenium, Total Recoverable	mg/L	8	*		*	No	S
pH	<u>See pH discussion below</u>						
Whole Effluent Toxicity (WET) Test	<u>Please see WET Test in the Derivation and Discussion Section below.</u>						
Monitoring Frequency	<u>Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.</u>						

- * - Monitoring requirement only
- N/A – Not applicable
- S – Same as previous operating permit

Basis for Limitations Codes:

- | | |
|--|-----------------------------------|
| 1. State or Federal Regulation/Law | 6. Antidegradation Policy |
| 2. Water Quality Standard (includes RPA) | 7. Water Quality Model |
| 3. Water Quality Based Effluent Limits | 8. Best Professional Judgment |
| 4. Lagoon Policy | 9. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy | 10. WET test Policy |

- **Flow.** In accordance with 40 CFR Part 122.44(i)(1)(ii), the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations.
- **pH.** pH shall be maintained in the range from 6.5 to 9.0 standard units in accordance with 10 CSR 20-7.031(4)(E). According to November 3, 2008 letter from Spencer, Fane, Britt & Browne, the facility adds carbon dioxide following metals precipitation as part of the treatment process. The letter says that the current more advanced treatment system provides additional treatment than the outdated treatment of Best Practicable Treatment technology limits of 40 CFR 421.132. The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month in accordance to 40 CFR 401.17(1). No individual excursion from the range of pH values shall exceed 60 minutes in accordance to 40 CFR 401.17(2).
- **Total Suspended Solids (TSS).** Effluent limitations have been retained from previous state operating permit.
- **Sulfate as SO₄ plus Chlorides, Total Recoverable Lead, Total Recoverable Antimony, Total Recoverable Arsenic, Total Recoverable Cadmium, Total Recoverable Chromium VI, Total Recoverable Copper, Total Recoverable Zinc, Total Recoverable Selenium, and Ammonia as N.** It is staff’s best professional judgment that these pollutants be included as monitoring only requirements. These pollutants are also monitored for at Outfall #001.
- **WET Test.** WET Testing schedules and intervals are established in accordance with the department’s Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.
 - Acute WET test to be conducted at least **ONCE/QUARTER** as facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

Allowable Effluent Concentration (AEC) calculations determine if the facility is to conduct single dilution or multiple dilution WET testing. Facilities that discharge to unclassified or Class C receiving streams, the AEC% is 100%. Facilities with less than 100% for an AEC% will have multiple dilution WET testing. Facilities that discharge to Lakes and have Acute WET testing, the AEC% is 100% due to [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] ZID not allowed for Lakes.

$$\text{Acute AEC\%} = ((0.67 + 6.7) / 0.67)^{-1} \times 100 = 9\%$$

• **Outfall #003 Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/DAY	ONCE/MONTH
TOTAL SUSPENDED SOLIDS	ONCE/MONTH	ONCE/MONTH
SULFATE PLUS CHLORIDE	ONCE/MONTH	ONCE/MONTH
LEAD, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
ANTIMONY, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
ARSENIC, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
CADMIUM, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
CHROMIUM VI, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
COPPER, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
ZINC, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
AMMONIA AS N	ONCE/MONTH	ONCE/MONTH
SELENIUM, TOTAL RECOVERABLE	ONCE/MONTH	ONCE/MONTH
WET TEST	ONCE/QUARTER	ONCE/QUARTER
PH	CONTINUOUS	CONTINUOUS

In accordance with 10 CSR 20-7.015(2)(D)1., the department reduced the monitoring frequency to once per month.

Outfall #004, #005, #006, #007 –Stormwater outfalls

FINAL EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	8	*		*	YES	N/A
TSS	MG/L	8	*		*	NO	S
LEAD, TOTAL RECOVERABLE	UG/L	8	*		*	NO	S
ZINC, TOTAL RECOVERABLE	UG/L	8	*		*	YES	N/A
SETTLABLE SOLIDS	M ^L /L/HR	8	*		*	NO	S
LEAD, DISSOLVED	UG/L	REMOVED	N/A		N/A	YES	*/*

* - Monitoring requirement only

N/A – Not applicable

S – Same as previous operating permit

Basis for Limitations Codes:

- | | |
|--|-----------------------------------|
| 1. State or Federal Regulation/Law | 6. Antidegradation Policy |
| 2. Water Quality Standard (includes RPA) | 7. Water Quality Model |
| 3. Water Quality Based Effluent Limits | 8. Best Professional Judgment |
| 4. Lagoon Policy | 9. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy | 10. WET test Policy |

- **Flow.** In accordance with 40 CFR Part 122.44(i)(1)(ii), the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations.
- **Total Suspended Solids (TSS), Total Recoverable Lead, and Settleable Solids.** Monitoring only requirements have been retained from previous state operating permit.
- **Total Recoverable Zinc.** Monitoring only requirement for comparison with in-stream monitoring results.
- **Dissolved Lead.** Monitoring only requirement removed due to no applicable water quality criteria.

- **Outfall #004, #005, #006, and #007 – Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	ONCE/QUARTER
TOTAL SUSPENDED SOLIDS	ONCE/QUARTER	ONCE/QUARTER
LEAD, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
ZINC, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
SETTLABLE SOLIDS	ONCE/QUARTER	ONCE/QUARTER

The department reduced the monitoring frequency to once per quarter as the parameters are monitoring only.

Part VI – Administrative Requirements

The public comment period for this permit is closed. No comments were received, except from Exide during the applicable comment period. Exide and the Department entered into negotiations to resolve Exide’s appeal, culminating in the re-issued final operating permit. The Public Notice period for this operating permit ran from November 14, 2008 through December 14, 2008.

DATE OF FACT SHEET: JULY 23, 2012

APPENDIX #1 – RPA RESULTS (FOR OUTFALL #001):

CONSTITUENT	CMC*	RWC ACUTE*	CCC*	RWC CHRONIC*	REASONABLE POTENTIAL	# OF SAMPLES**	CV***
Total Recoverable Nickel	844	7.1	94	3	NO	103	1.025
Sulfate as SO ₄ plus Chlorides	N/A	497,800	186,500	185,680	NO	103	0.497
Chlorides	860000	78,800	230,000	24,630	NO	103	0.412
Total Recoverable Mercury	2.4	0.2	0.5	0.04	NO	103	1.101
Total Recoverable Cadmium	10.2	1.0	0.5	0.14	NO	103	0.966
Total Recoverable Chromium VI ¹	15	4.7	10	0.5	NO	103	0.829
Total Recoverable Copper	27	5.7	14	1.8	NO	103	0.891

N/A – Not Applicable

* - Units are (µg/L) unless otherwise noted.

** - If the number of samples is greater than 10, then the CV value must be used in the WQBEL for the applicable constituent.

*** - Coefficient of Variation (CV) is calculated by dividing the Mean of the sample by the Standard Deviation of the sample.

¹ – Receiving water calculation is based on Total Recoverable Chromium.

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2).

A more detailed version including calculations of this RPA is available upon request.

**ADDENDUM TO FACT SHEET
FOR THE PURPOSE OF REISSUANCE
OF
MO-0101702
EXIDE TECHNOLOGIES, CANON HOLLOW SMELTER**

REASON(S) FOR REISSUANCE:

The Missouri Department of Natural Resources (Department) issued an operating permit renewal for Permit No. MO-0101702 to the Exide Technologies Canon Hollow Smelter (Exide) on August 1, 2008. Exide filed a notice of appeal for the permit on August 25, 2008, and the Department and Exide subsequently jointly filed Stipulations for Modification and Stay of the Permit, which had the effect of allowing the 2008 operating permit to become effective, except as modified and stayed by the terms and conditions in the stipulation.

During the negotiation process for resolution of the permit appeal, Exide proposed to construct an approximate six-mile pipeline for conveyance of treated wastewater from the facility for discharge to the Missouri River in lieu of the current practice of discharging to nearby Canon Creek. Exide filed a construction permit application and engineering report with the Department on August 13, 2008 for construction of the aforementioned pipeline. Subsequently, on November 14, 2008, the Department issued for public notice a draft operating permit for Exide to discharge the facility's treated wastewater to the Missouri River. No comments were received during the public comment period other than comments prepared by Exide. The comment period is closed. The draft operating permit established new effluent limitations and monitoring requirements for discharge to the Missouri River. The Department issued Construction Permit #21-8817 for construction of the pipeline, with an effective date of April 16, 2009. The construction permit stipulated that upon completion and certification of the pipeline, a final operating permit would be issued by the Department as public noticed on November 14, 2008, with the minor corrections as noted in the Department's March 2009 response to the public notice comments received.

The original schedule for commencing discharge to the Missouri River was August 1, 2011. The scheduled deadline for construction of the pipeline and discharge to the Missouri River through the pipeline was extended by the Department to August 1, 2012 due to extenuating and uncontrollable circumstances resulting in major delays. The first major delay was due to extended negotiations for access to construct the pipeline under the Burlington Northern Santa Fe (BNSF) Railroad. Between April 2010 and August 2011, Exide and BNSF went through a series of contract negotiations to find an agreement acceptable to both parties. The second major delay was due to the historic flooding of the Missouri River in the spring of 2011, which overtopped the levee along the pipeline and scoured a hole 500-foot wide along the levee to an approximate 40-foot depth, which in turn displaced a significant length of the constructed pipeline. The U.S. Army Corps of Engineers was not able to complete repair of the levee until May 2012, and Exide completed repair and replacement of the pipeline in June 2012 with submittal of the construction certification in early July 2012.

The Department and Exide have negotiated a settlement agreement for resolution of the permit appeal filed in 2008, and the settlement agreement is being finalized in conjunction with issuance of the final operating permit. The final operating permit is being issued for a five-year period from the effective date of the permit.

The fact sheet originally issued with the draft Operating Permit No. MO-0101702 public noticed on November 14, 2008 has been revised and continues on the next page.