

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-0117471

Owner: Advanced Disposal Services Maple Hill Landfill, Inc.
Address: 31226 Intrepid Road, Macon, MO 63552

Continuing Authority: Same as above
Address: Same as above

Facility Name: Maple Hill Landfill
Facility Address: 31226 Intrepid Road, Macon, MO 63552

Legal Description: SEE PAGE TWO
UTM Coordinates: SEE PAGE TWO

Receiving Stream: SEE PAGE TWO
First Classified Stream and ID: SEE PAGE TWO
USGS Basin & Sub-watershed No.: SEE PAGE TWO

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 TWO

Leachate cannot be discharged. Stormwater that comes into contact with the working face of the landfill or with leachate is considered leachate and cannot be discharged. Leachate and stormwater that has come into contact with leachate or the working face of the landfill must be managed in accordance with the provisions contained in the Missouri Solid Waste Management Laws, regulations and Sanitary Landfill Operating Permit; and Hazardous Waste Program (if applicable).

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.

April 18, 2012 July 21, 2016
Effective Date Modification Date


Sara Parker Pauley, Director, Department of Natural Resources

April 17, 2017
Expiration Date


John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (Continued)

Outfall #001 – Sanitary Landfill – SIC #4953

Stormwater runoff from closed sanitary landfill - Settling Basin

Design flow is 2.4 MGD.

Actual flow is dependent upon precipitation.

Legal Description: SE ¼, NE ¼, NW ¼, Sec. 24, T57N, R16W, Macon County
UTM Coordinates: X=540228.326, Y=4398494.009
Receiving Stream: Unnamed tributary to East Fork Little Chariton River (U)
First Classified Stream and ID: East Fork Little Chariton River (P) (00682)
USGS Basin & Sub-watershed No.: (10280203-0201)

Outfall #003 –Sanitary Landfill – SIC #4953

Stormwater runoff from closed sanitary landfill

Design flow is 2.54 MGD.

Actual flow is dependent upon precipitation.

Legal Description: NW ¼, NW ¼, NW ¼, Sec. 24, T57N, R16W, Macon County
UTM Coordinates: X=539551.542, Y=4398687.657
Receiving Stream: Unnamed tributary to Middle Fork Little Chariton River (U)
First Classified Stream and ID: Middle Fork Little Chariton River (C) (00698)
USGS Basin & Sub-watershed No.: (10280203-0403)

Outfall #004 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from sanitary landfill - Settling Basin

Design flow is 4.0 MGD.

Actual flow is dependent upon precipitation.

Legal Description: SW ¼, NE ¼, SW ¼, Sec. 13, T57N, R15W, Macon County
UTM Coordinates: X=540061.667, Y=4399411.904
Receiving Stream: Unnamed tributary to East Fork Little Chariton River (U)
First Classified Stream and ID: East Fork Little Chariton River (P) (00682)
USGS Basin & Sub-watershed No.: (10280203-0201)

Outfall #005 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from sanitary landfill, fuel storage area, parking lot

Design flow is 0.84 MGD.

Actual flow is dependent upon precipitation.

Legal Description: SW ¼, SW ¼, SW ¼, Sec. 13, T57N, R15W, Macon County
UTM Coordinates: X=539567.418, Y=4399018.386
Receiving Stream: Unnamed tributary to Middle Fork Little Chariton River (U)
First Classified Stream and ID: Middle Fork Little Chariton River (C) (00698)
USGS Basin & Sub-watershed No.: (10280203-0403)

Outfall #006 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from soil borrow area

Design flow is 2.13 MGD.

Actual flow is dependent upon precipitation.

Legal Description: NE ¼, NW ¼, NE ¼, Sec. 24, T57N, R16W, Macon County
UTM Coordinates: X=540564.899, Y=4398790.844
Receiving Stream: Unnamed tributary to East Fork Little Chariton River (U)
First Classified Stream and ID: East Fork Little Chariton River (P) (00682)
USGS Basin & Sub-watershed No.: (10280203-0201)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until one (1) year after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> (Note 1)						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Precipitation (Note 2)	Inches	*		*	once/day	measured
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	65		45	once/quarter***	grab
Total Suspended Solids	mg/L	80		60	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2012. 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 PART I, STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0117471

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OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> (Note 1)						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Dissolved	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 5 of 25	
					PERMIT NUMBER MO-0117471	
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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> (Note 1)						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Precipitation (Note 2)	inches	*		*	once/day	measured
Chemical Oxygen Demand	mg/L	90		60	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	45		30	once/quarter***	grab
Total Suspended Solids	mg/L	80		50	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2013</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.						

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> (Note 1)						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Total Recoverable	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	4000		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	65		45	once/quarter***	grab
Total Suspended Solids	mg/L	80		60	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003 (Note 1)</u>						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Dissolved	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	90		60	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	45		30	once/quarter***	grab
Total Suspended Solids	mg/L	80		50	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab
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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003 (Note 1)</u>						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Total Recoverable	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	4000		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

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					PERMIT NUMBER MO-0117471	
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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #004</u> (Note 1)						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	65		45	once/quarter***	grab
Total Suspended Solids	mg/L	80		60	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 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

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until one (1) year after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #004</u> (Note 1)						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Dissolved	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2012. 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 PART I, STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 13 of 25	
					PERMIT NUMBER MO-0117471	
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 one (1) year after the effective date of this 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 #004</u> (Note 1)						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	90		60	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	45		30	once/quarter***	grab
Total Suspended Solids	mg/L	80		50	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2013</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

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 one (1) year after the effective date of this 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 #004</u> (Note 1)						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Total Recoverable	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	4000		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2013. 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 PART I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0117471

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until one (1) year after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #005 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	65		45	once/quarter***	grab
Total Suspended Solids	mg/L	80		60	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab
Total Petroleum Hydrocarbons	mg/L	10		10	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

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The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until one (1) year after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #005 (Note 1)</u>						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Dissolved	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PART I, STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 17 of 25	
					PERMIT NUMBER MO-0117471	
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 one (1) year after the effective date of this 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 #005 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	90		60	once/quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	45		30	once/quarter***	grab
Total Suspended Solids	mg/L	80		50	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Nitrate as N	mg/L	*		*	once/quarter***	grab
Total Phosphorus	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Total Xylene	µg/L	*		*	once/quarter***	grab
Total Petroleum Hydrocarbons	mg/L	10		10	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2013</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

PERMIT NUMBER MO-0117471

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 one (1) year after the effective date of this 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 #005 (Note 1)</u>						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Total Recoverable	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	4000		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Manganese, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2013. 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 PART I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 19 of 25	
					PERMIT NUMBER MO-0117471	
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 #006 – Notes 1 & 3</u>						
Flow	MGD	*		*	twice/year****	24 hr. estimate
Settleable Solids	mL/L/hr	*		*	twice/year****	grab
Total Suspended Solids	mg/L	*		*	twice/year****	grab
pH – Units	SU	*		*	twice/year****	grab
Oil & Grease	mg/L	*		*	twice/year****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>TWICE PER YEAR</u> ; THE FIRST REPORT IS DUE <u>July 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.
- ** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- *** See table below for quarterly sampling:
- **** Sample discharge at least: once for the months of January, February, March, April, May, and June; and once for the months of July, August, September, October, November, and December. The reports are due July 28th and January 28th.

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

Note 1 – Storm water samples shall be collected within the first 60 minutes of storm events of 0.1 inches or greater, that result in a discharge. Storm events include rainfall as well as run-off from the melting of frozen precipitation.

Note 2 – Precipitation data can be submitted as one report for all outfalls and reported for Outfall #001.

Note 3 - The parameters for Outfall #006 have benchmark limitations. See Section C – Sampling Requirements, Benchmarks, and Reporting of Benchmark Exceedances for further information.

C. SAMPLING REQUIREMENTS, BENCHMARKS, AND REPORTING OF BENCHMARK EXCEEDANCES

1. The Department may require additional sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or evidence of offsite impacts from activities at the facility. If such an action is needed, the Department will specify in writing the sampling requirements, including such information as location and extent. It is a violation of this permit to fail to comply with said written notification.
2. This permit stipulates pollutant benchmarks applicable to the facility's discharge from Outfall #006. The benchmarks do not constitute direct numeric effluent limitations. A benchmark exceedance alone, therefore, is not a permit violation. If a sample exceeds an effluent limitation or a benchmark concentration, the permittee must review the facility's Stormwater Pollution Prevention Plan (SWPPP) and associated Best Management Practices (BMPs) to determine whether any improvements and/or additional controls are needed to reduce that pollutant in the facility's stormwater discharge(s). Failure to review the SWPPP and determine whether BMPs need to be improved and implement the necessary changes at the facility in order to achieve compliance with Effluent and/or Benchmark limits is a permit violation.

C. SAMPLING REQUIREMENTS, BENCHMARKS, AND REPORTING OF BENCHMARK EXCEEDANCES (continued)

3. The following Benchmarks are considered necessary to protect existing water quality. These shall be sampled as specified in "Table A" above. The BMPs at the facility shall be designed to meet these Benchmark limitations.

Parameter	Benchmark Limits
Settleable Solids	1.0 mL/L/hr
Total Suspended Solids	50 mg/L
Oil & Grease	10 mg/L
pH	The benchmark limit shall be a range of 6.5 to 9.0 standard units as an instantaneous grab sample. The resulting pH is not to be averaged. An exceedance would be outside this range.

4. If any of the sampling results from Outfall #006 show any exceedance of a numeric benchmark limitation listed within this permit, written notification shall be made to the Missouri Department of Natural Resources and submitted with the next Discharge Monitoring Report. Notification shall indicate the date(s) of sample collection, the analytical results, and permit number, and shall include a detailed statement concerning the revisions or modifications in BMPs that are being implemented to address the exceedance that occurred. Please also refer to Special Condition #21 for additional reporting concerning any event that may endanger health or the environment

D. 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. There shall be no discharge of toxic pollutants at levels which would cause an exceedance of water quality standards.
- 4. 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.
 - (c) That the effluent limit established in part A of the permit will be exceeded.
5. Report as no-discharge when a discharge does not occur during the report period.

D. 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. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
8. If the permittee accepts animal wastes, biosolids, septage, or any other form of domestic sewage in the landfill, these types of wastes shall be buried in the working face of the landfill and covered immediately upon receipt.
9. An individual shall be designated by the permittee as responsible for environmental matters. The individual responsible for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general. The individual responsible for environmental matters or a designated inspector knowledgeable in erosion, sediment, and stormwater control principles, shall periodically inspect all structures that function to prevent pollution of waters of the state. These inspections shall be conducted in accordance with Special Conditions #13.
10. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 60 days and implemented within 120 days of permit issuance. The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following documents:

Developing Your Stormwater Pollution Prevention Plan: A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009. **This manual is available at The USEPA internet site;** and

Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites, (Document number EPA 833-R-06-004) published by the United States Environmental Protection Agency (USEPA) in May 2007. **This manual is available at The USEPA internet site;** and

The latest version of ***Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri***, published by the Missouri Department of Natural Resources. 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.

The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of Best Management Practices in order to reduce the amount of sediment and other pollutants in storm water discharges associated with landfill activities; comply with the Missouri Water Quality Standards; and ensure compliance with the terms and conditions of this permit.

A copy of the SWPPP must be available on site at all times. The SWPPP must be made available to a Department representative upon request. The SWPPP should not be submitted to the Department unless it is requested. The SWPPP must incorporate Best Management Practices specific to site conditions and provide for maintenance and adherence to the plan.

D. SPECIAL CONDITIONS (continued)

This plan must be made available as specified in Special Condition #14 of this permit. The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this permit.

The SWPPP must include an analysis of the Best Management Practices (BMPs) for **Outfall #006**. This analysis is a structured evaluation of BMPs that are reasonable and cost effective. The evaluation should include practices that are designed to be 1) non-degrading 2) less degrading, or 3) degrading water quality. The chosen BMPs will be the most reasonable and cost effective while ensuring that the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The analysis must demonstrate why “no discharge” or “no exposure” is not a feasible alternative at the facility. This structured analysis of BMPs serves as the Antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(2).

11. SWPPP Requirements: The following information and practices shall be provided for in the SWPPP.

- (a) Site Description: In order to identify the site, the SWPPP shall include the facility and outfall information provided in the application form.
- (b) The SWPPP: The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs. Site boundaries and outfalls shall be marked on a site map included as part of the SWPPP.
- (c) Selection Of Temporary And Permanent Non-Structural BMPs: The permittee shall select appropriate non-structural BMPs for use at the site and list them in the SWPPP. For the soil borrow area, the SWPPP shall require existing vegetation to be preserved where practical. The time period for disturbed areas without vegetative cover for the soil borrow area shall be minimized to the maximum extent practicable. For soil borrow area sites that will be inactive six months or more, establishing a vegetative cover is a highly recommended choice for a proper BMP.
- (d) Selection Of Temporary And Permanent Structural BMPs: The permittee shall select appropriate structural BMPs for use at the site and list them in the SWPPP.
- (e) Description Of Best Management Practices: The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site. The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:
 - (1) Physical description of the BMP;
 - (2) Site and physical conditions that must be met for effective use of the BMP;
 - (3) BMP installation/construction procedures, including typical drawings; and
 - (4) Operation and maintenance procedures for the BMP.
- (f) The SWPPP shall provide the following information for each specific instance where a BMP is to be installed:
 - (1) Whether the BMP is temporary or permanent;
 - (2) Where, in relation to other site features, the BMP is to be located;
 - (3) When the BMP will be installed; and
 - (4) What site conditions must be met before removal of the BMP, if the BMP is not permanent.
- (g) Disturbed Areas: Where soil disturbing activities cease at the soil borrow area for 14 days or more, the permittee shall install BMPs to establish interim stabilization. Interim stabilization shall consist of well established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area than is normally used during daily operations. These BMPs may include, but is not limited to, a combination of sediment basins, check dams, sediment fences, and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (3 feet horizontal to 1 foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish interim stabilization within 7 days of ceasing operations on that part of the site.
- (h) Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Storm water discharges from soil borrow areas, which leave the site, shall pass through an appropriate impediment to sediment movement, such as a sedimentation basin, sediment traps, silt fences, etc. prior to leaving the site. The location of all BMPs must be indicated on a site map, included in the SWPPP.
- (i) Additional Site Management Requirements: The SWPPP shall address other BMPs and requirements, as required by site activities, to prevent contamination of storm water runoff. Such BMPs and requirements include:
 - (1) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
 - (2) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.

D. SPECIAL CONDITIONS (continued)

- (3) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 - (4) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (5) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted to the Department upon request.
12. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the permit. The permittee shall amend the SWPPP, at a minimum, whenever the:
 - (a) Design, operation, or maintenance of BMPs is changed;
 - (b) Design of the construction project is changed that could significantly affect the quality of the storm water discharges;
 - (c) Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
 - (d) MDNR notifies the permittee in writing of deficiencies in the SWPPP;
 - (e) SWPPP is determined to be ineffective in significantly minimizing or controlling pollutants (e.g., there is visual evidence, such as sediment deposits offsite or into waters of the state, or effluent limit violations);
 - (f) MDNR determines violations of Water Quality Standards may occur or have occurred.
13. Site Inspections and Reports: The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections at least once per week. These inspections shall be conducted by the person responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. All installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All storm water outfalls shall be inspected for evidence of erosion or sediment deposition. The petroleum storage tanks shall also be visually inspected to identify problem areas that could lead to a leak. Identified problems should be repaired immediately. Areas to inspect include tank foundations, connections, coatings, tank walls, and the piping system for corrosion, leaks, or other physical damage that may weaken the petroleum storage tank system. Any structural or maintenance problem shall be noted in an inspection report and corrected within seven calendar days of the inspection. If weather conditions make it impossible to correct the problem within seven days, a detailed report, including pictures, must be filed with the regular inspection reports. The permittee shall correct the BMP problem as soon as weather conditions allow. Any corrective measure that necessitates major construction may also need a construction permit.

A log of each inspection and copy of the inspection report must be retained onsite and made available to the Department upon request. The inspection report is to include the following minimum information: inspector's name, date of inspection, observations relative to the effectiveness of the BMPs, actions taken or necessary to correct the observed problem, and listing of areas where land disturbance operations have permanently or temporarily stopped. The inspection report shall be signed by the person designated in the SWPPP to conduct the inspections. Inspection reports must be kept on site with the SWPPP.
14. Records: The permittee shall retain copies of this permit, the SWPPP, all amendments to the SWPPP, results of monitoring and analysis, and all site inspection records required by this permit. The records shall be accessible during normal business hours. The records shall be retained for a period of five years. The permittee shall provide a copy of the SWPPP to MDNR, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties. The permittee shall provide those who are responsible for installation, operation, or maintenance of any BMP a copy of the SWPPP.
15. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
16. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.
17. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.

D. SPECIAL CONDITIONS (continued)

18. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERCLA.
19. Stormwater that comes into contact with the working face of the landfill or with leachate is considered leachate and cannot be discharged. Leachate and stormwater that has come into contact with leachate or the working face of the landfill must be managed in accordance with the provisions contained in the Missouri Solid Waste Management Laws, regulations and Sanitary Landfill Operating Permit; and Hazardous Waste Program (if applicable).
20. Before releasing water that has accumulated in secondary containment, the facility shall examine the water for hydrocarbon odor and presence of a sheen. If the presence of hydrocarbons is indicated it must be treated to meet all hydrocarbon parameters listed in Effluent Limitations and Monitoring Requirements before it is released or the water shall be removed and properly treated in accordance with applicable regulations. However, if the permittee so desires to use other approved testing methods (i.e. EPA 1664), they may do so.
21. In accordance with, and in addition to, Standard Conditions Part I, the permittee is to notify the department by telephone within 24 hours of becoming aware of any event that may endanger health or the environment. Leaving a message on a department staff member's voicemail does not satisfy this reporting requirement. During holidays, during the weekends, after normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the situation to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436. In addition, the permittee shall submit to the department a written report with five (5) days of the time the permittee becomes aware of the circumstances. The written report shall include a description of the discharge or situation and cause of any noncompliance, the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the non-complying discharge. These events include but are not limited to (a) any spill, of any material, that leaves the property of the facility and (b) any spill, of any material outside of secondary containment and exposed to precipitation, greater than 25 gallons or an equivalent volume of solid material.

Federal Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

22. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards. A method is "sufficiently sensitive" when (1) the method quantitation level is at or below the level of the applicable water quality criterion for the pollutant or (2) the method quantitation level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge. These methods are even required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established.

E. SCHEDULE OF COMPLIANCE

Effluent Limitations

1. The Final Effluent Limitations shall be met by **April 18, 2013**.
2. If the permittee determines that the new effluent limitations will not or can not be met by **April 18, 2013**, then the permittee shall submit a Compliance Report to the Northeast Regional Office by **March 18, 2013** for review. The Compliance Report shall include the following:
 - (a) Reason(s) that the new effluent limitation will not or can not be met for each specific pollutant.
 - (b) Steps taken or planned to be taken by the permittee to meet the new effluent limitations for each specific pollutant.
 - (c) A compliance schedule to be implemented by the permittee to meet the new effluent limitation for each specific pollutant.

REPORTING OF EFFLUENT VIOLATIONS

If any of the sampling results from any of the outfalls show any violation of the permit discharge limitations, written notification shall be made to the Department of Natural Resources within five (5) days of notification of analytical results. Notification shall indicate the date(s) of sample collection, the analytical results, and permit number, and shall include a statement concerning the revisions or modifications in management practices that are being implemented to address the violation of the limitations that occurred.

After a violation has been reported, a sample of storm water runoff resulting from the next precipitation shall be collected at outfall(s) for which the violation occurred. Analytical results of this sample shall be submitted in writing to the Department of Natural Resources (this paragraph supersedes Standard Conditions Part I, Section B: 2. A. Noncompliance Notification).

RECORDS, RETENTION AND RECORDING

Monitoring reports shall be submitted within 28 days after the end of each quarter. All sampling data shall be maintained by the permittee for a period of five (5) years and shall be supplied to the Department of Natural Resources upon request (supersedes Standard Conditions Part I, Section A: 7. Records Retention). A copy of all of the sampling data must be submitted with an application for reissuance of this permit.

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than 180 days prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

TERMINATION

In order to terminate this permit, the permittee shall notify the Department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the Department at the address noted in the cover letter of this permit. Proper closure of the landfill is required prior to permit termination. A closure plan shall be submitted to the Department and approved prior to initiating closure activities.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal. This permit authorizes only the activities described in this permit.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATEMENT OF BASIS
MO-0117471
ADVANCED DISPOSAL SERVICES MAPLE HILL LANDFILL

This Statement of Basis (Statement) gives pertinent information regarding modifications to the above listed operating permit. A Statement is not an enforceable part of a Missouri State Operating Permit.

Part I – Facility Information

Facility Type: Landfill, Categorical Industrial
Facility SIC Code(s): 4953

Facility Description:

Maple Hill Landfill has five active outfalls, #001, 003,004, 005, and 006. #001 and #003 receive water from closed sanitary landfill areas; #004 and #005 receive water from open sanitary landfill areas; outfall #006 receives water from the soil borrow area. All outfalls are treated with a sediment basin.

Part II – Modification Rationale

This operating permit is hereby modified to reflect a change the total recoverable iron effluent limitations of outfalls #001, #003, #004, and #005 at this facility from the previous limits to a daily maximum limit of 4000 µg/L, with monitoring only on the average monthly limit. Due to the sporadic nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined chronic standards are capricious measures of stormwater discharges. Chronic effluent limitations are based on the organism's ability to survive within the designated concentration for four days. Stormwater is rarely discharged continuously for four days. Conversely, acute water quality standards are applicable, but are non-existent for iron. After reviewing other sources of data, it is in the permit writer's professional judgment to adopt Kentucky's iron surface water quality standard for warm water aquatic habitat as a limit for this facility. In accordance with the department's current stormwater permitting it is the permit writer's professional judgment that an iron limit of 4000 µg/L is protective of acute and chronic water quality at this facility.

The following total recoverable iron effluent limitations have been removed from this permit:

Outfall #001 – daily maximum of 1637.3 µg/L, monthly average of 820.7 µg/L

Outfall #003 – daily maximum of 1642.7 µg/L, monthly average of 818.8 µg/L

Outfall #004 – daily maximum of 1819.1 µg/L, monthly average of 620.9 µg/L

Outfall #005 – daily maximum of 1642.7 µg/L, monthly average of 818.8 µg/L

No other changes were made at this time. The previous modification statement of basis and factsheet are included for reference to past actions within this permitting cycle and justification for all other conditions unchanged in this modification.

Part III – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. <http://dnr.mo.gov/env/wpp/permits/pn/index.html> Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed modification to an operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from 06/03/2016 to 07/05/2016. No responses were received.

DATE OF STATEMENT OF BASIS: 04/04/2016

COMPLETED BY:

**AMBERLY SCHULZ, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
INDUSTRIAL PERMITS UNIT
(573) 751-8049**

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATEMENT OF BASIS
INDUSTRIAL STORM WATER RUNOFF FROM LANDFILL ACTIVITIES
STANDARD INDUSTRIAL CLASSIFICATION (SIC): 4953
FOR THE PURPOSE OF MODIFICATION
OF
MO-0117471
MAPLE HILL LANDFILL

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 storm water 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 (MCWL)" 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 Fact Sheet 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 Fact Sheet is not an enforceable part of an operating permit.

Part A – Applicability & Facility Description

Landfill are to obtain a MSOP in accordance the MCWL, documented above, and its implementing regulations 10 CSR 20-6.010(1)(A); 10 CSR 20-6.010(5)(A); and 10 CSR 20-6.200(1)(A). Storm water runoff from landfills are considered Industrial activities in accordance with 10 CSR 20-6.200(2)(B)3.B. Closed landfills may also be required to maintain a MSOP in accordance with 10 CSR 20.600(1)(B)10.

Facility Description:

The Veolia Maple Hill Landfill is comprised of an active landfill, a capped closed landfill, and a soil borrow area.

Leachate must be handled in a manner where discharge is not allowed and in accordance with Hazardous Waste Program (if applicable) and Solid Waste Management Program Leachate cannot be discharged. Stormwater that comes into contact with the working face of the landfill or with leachate is considered leachate and cannot be discharged. Leachate and stormwater that has come into contact with leachate or the working face of the landfill must be managed in accordance with the provisions contained in the Missouri Solid Waste Management Laws, regulations and Sanitary Landfill Operating Permit; and Hazardous Waste Program (if applicable). requirements.

Permit modification: This modification is to reflect an ownership transfer to Advanced Disposal Services Maple Hill Landfill, Inc. *No other changes to this permit are proposed. Please see permit issued on April 18, 2012 for explanation of other permit conditions and effluent limits.*

Part B – Outfall Information & Descriptions

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (MGD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	2.4	BMP*	Industrial – Storm water runoff	~ 1.1
003	2.54	BMP*	Industrial – Storm water runoff	~ 4.27
004	4.0	BMP*	Industrial – Storm water runoff	~ 1.01
005	0.84	BMP*	Industrial – Storm water runoff	~ 4.25
006	2.13	BMP*	Industrial – Storm water runoff	~ 0.73

* - Best Management Practices

Outfall #001 – Sanitary Landfill – SIC #4953

Stormwater runoff from closed sanitary landfill

Settling Basin

Legal Description: SE ¼, NE ¼, NW ¼, Sec. 24, T57N, R16W, Macon County
UTM Coordinates: X=540228.326, Y=4398494.009
Receiving Stream: Unnamed tributary to East Fork Little Chariton River (U)
First Classified Stream and ID: East Fork Little Chariton River (P) (00682)
USGS Basin & Sub-watershed No.: (10280203-0201)

Outfall #003 –Sanitary Landfill – SIC #4953

Stormwater runoff from closed sanitary landfill

Legal Description: NW ¼, NW ¼, NW ¼, Sec. 24, T57N, R16W, Macon County
UTM Coordinates: X=539551.542, Y=4398687.657
Receiving Stream: Unnamed tributary to Middle Fork Little Chariton River (U)
First Classified Stream and ID: Middle Fork Little Chariton River (C) (00698)
USGS Basin & Sub-watershed No.: (10280203-0403)

Outfall #004 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from sanitary landfill

Settling Basin

Legal Description: SW ¼, NE ¼, SW ¼, Sec. 13, T57N, R15W, Macon County
UTM Coordinates: X=540061.667, Y=4399411.904
Receiving Stream: Unnamed tributary to East Fork Little Chariton River (U)
First Classified Stream and ID: East Fork Little Chariton River (P) (00682)
USGS Basin & Sub-watershed No.: (10280203-0201)

Outfall #005 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from sanitary landfill, fuel storage area, parking lot

Legal Description: SW ¼, SW ¼, SW ¼, Sec. 13, T57N, R15W, Macon County
UTM Coordinates: X=539567.418, Y=4399018.386
Receiving Stream: Unnamed tributary to Middle Fork Little Chariton River (U)
First Classified Stream and ID: Middle Fork Little Chariton River (C) (00698)
USGS Basin & Sub-watershed No.: (10280203-0403)

Outfall #006 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from soil borrow area

Legal Description: NE ¼, NW ¼, NE ¼, Sec. 24, T57N, R16W, Macon County
UTM Coordinates: X=540564.899, Y=4398790.844
Receiving Stream: Unnamed tributary to East Fork Little Chariton River (U)
First Classified Stream and ID: East Fork Little Chariton River (P) (00682)
USGS Basin & Sub-watershed No.: (10280203-0201)

Water Quality History:

The facility exceeded effluent limits for Total Suspended Solids for Outfall #005 on the 2nd Quarter 2009 Discharge Monitoring Report. The facility exceeded effluent limits for Total Suspended Solids and Chemical Oxygen Demand for Outfall #004 on the 2nd Quarter 2008 Discharge Monitoring Report and Settleable Solids and Total Suspended Solids for 2nd Quarter 2009 Discharge Monitoring Report. The facility exceeded effluent limits for Total Suspended Solids and Settleable Solids for Outfall #001 on the 2nd Quarter 2009 Discharge Monitoring Report and Total Suspended Solids for 3rd Quarter 2010 Discharge Monitoring Report.

Part C – 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 list 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.

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**
Unnamed tributary to Middle Fork Little Chariton River	U	NA	General Criteria	10280203	Central Plains/Grand/Chariton
Middle Fork Little Chariton River	C	00698	LWW, AWL, WBC-B***		
Unnamed tributary to East Fork Little Chariton River	U	NA	General Criteria		
East Fork Little Chariton River	P	00682	LWW, AQL, DWS, IRR, WBC-B***		

* - 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

*** - UAA conducted on DATE and approved on DATE or disapproved on DATE.

*** - UAA has not been conducted.

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

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.

- All limits in this Factsheet are at least as protective as those previously established; therefore, backsliding does not apply.

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.

- Renewal no degradation proposed and no further review necessary.

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.

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

FLOW BASED PERMITTING:

A standard mass-balance equation cannot be calculated for storm water from this facility because the flow from the facility and flow in the receiving stream cannot be determined for conditions on any given day. The amount of storm water discharged from the facility will vary based on previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on similar climactic conditions, size of watershed, amount of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc.

It is likely that sufficient rainfall to cause a discharge for four continuous days from a facility will also cause some significant amount of flow in the receiving stream. Chronic WQSs are based on a four-day exposure (except Ammonia, which is based on a thirty day exposure). In the event that discharge does occur from this facility for four continuous days, some amount of flow will occur in the receiving stream. This flow will dilute storm water discharges from a facility. For these reasons, most industrial storm water facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within mixing zones of class P streams [10 CSR 20-7.031(3) and (4)]. Therefore, industrial storm water facilities with toxic contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above that staff drafting this fact sheet are unable to perform statistical Reasonable Potential Analysis and calculate Wasteload Allocations via a mass-balance equation for effluent limit determination. However, staff may use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards. Effluent limitations are based on actual criteria that are subjected to Long Term Averages and then converted into Maximum Daily Limits or Average Monthly Limits.

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.

Applicable ;

The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations where established in accordance with [10 CSR 20-7.031(10)].

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* [EPA 832-R-92-006] (Storm Water Management), BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Applicable ; 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.

WLA MODELING:

Not Applicable ; A WLA study was either not submitted or determined not applicable by department staff.

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

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.

Not Applicable ; At this time, the permittee is not required to conduct WET test for this facility.

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.

Not Applicable ; This facility does not discharge to a 303(d) listed stream.

Part E – Effluent Limits Determination

Outfall #001 – Effluent Limitation Table:

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supercedes the terms and conditions, including effluent limitations, of this operating permit.

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	No	S
Precipitation	Inches	9	*		*	No	S
Chemical Oxygen Demand (Interim)	mg/L	9	120		90	No	S
Chemical Oxygen Demand (Final)	mg/L	9	90		60	YES	120/90
Biochemical Oxygen Demand ₅ (Interim)	mg/L	1/9	65		45	No	S
Biochemical Oxygen Demand ₅ (Final)	mg/L	1/9	45		30	YES	65/45
Total Suspended Solids (Interim)	mg/L	1	80		60	No	S
Total Suspended Solids (Final)	mg/L	1	80		50	YES	80/60
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 - 9.0
Settleable Solids	mL/L/hr	1/9	1.5		1.0	No	S
Oil & Grease	mg/L	1/2/9	15		10	No	S
Ammonia as N	mg/L	1/2/5/9	*		*	No	S
Nitrate as N	mg/L	1/2/9	*		*	YES	** Previously Nitrate + Nitrite
Total Phosphorus	mg/L	1/9	*		*	No	S
Chloride + Sulfate	mg/L	1/2/9	1000		*	No	S
Chloride	mg/L	1/2/9	*		*	YES	
Sulfate	mg/L	1/2/9	*		*	No	S
Fluoride	mg/L	1/2/9	*		*	No	S
Benzene	µg/L	1/2/9	*		*	YES	** Previously BETX
Ethylbenzene	µg/L	1/2/9	*		*	YES	** Previously BETX
Toluene	mg/L	1/2/9	*		*	YES	** Previously BETX
Total Xylene	mg/L	1/2/9	*		*	YES	** Previously BETX
Total hardness	mg/L	9	*		*	No	S
Antimony, TR	mg/L	1/2/9	*		*	No	S
Arsenic, TR	µg/L	1/2/9	*		*	No	S
Barium, TR	µg/L	1/2/9	*		*	No	S
Beryllium, TR	µg/L	1/2/9	*		*	No	S
Boron, TR	µg/L	1/2/9	*		*	No	S
Cadmium, TR	µg/L	1/2/9	*		*	No	S
Chromium (III), TR	µg/L	1/2/9	*		*	YES	** Previously Chromium, TR
Chromium (VI), Dissolved	µg/L	1/2/9	*		*	YES	** Previously Chromium, TR
Cobalt, TR	µg/L	1/2/9	*		*	No	S
Copper, TR	µg/L	1/2/9	*		*	No	S
Iron, TR (Interim)	µg/L	1/2/9	*		*	No	S
Iron, TR (Final)	µg/L	1/2/9	1637.3		820.7	YES	*
Lead, TR	µg/L	1/2/9	*		*	No	S
Manganese, TR	µg/L	1/2/9	*		*	No	S
Mercury, TR	µg/L	1/2/9	*		*	No	S
Nickel, TR	µg/L	1/2/9	*		*	No	S
Selenium, TR	µg/L	1/2/9	*		*	No	S
Silver, TR	µg/L	1/2/9	*		*	No	S
Thallium, TR	µg/L	1/2/9	*		*	No	S
Zinc, TR	µg/L	1/2/9	*		*	No	S
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.

TR – means Total Recoverable

S – Same as previous operating permit

Basis for Limitations Codes:

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** Monitoring only requirement 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 to determine an alternate location for flow monitoring.
- **Precipitation.** Monitoring only requirement. Precipitation data obtained from DMRs is used to aid in the determination of this facilities specific runoff coefficient and theoretical loading in the watershed. Precipitation data collected will be representative of all outfalls, therefore it will only be required to be reported on the report for Outfall #001.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a Daily Maximum and 60 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Biochemical Oxygen Demand (BOD₅).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Total Suspended Solids (TSS).** Effluent limitations of 80 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007. The guide gives effluent limitations for TSS as 100 mg/L for a daily maximum and 50 mg/L for a monthly average. As the previous permit contained a daily maximum of 80 mg/L, the daily maximum of 80 mg/L was kept in the permit to prevent backsliding.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(4)(E)]. pH is not to be averaged.
- **Settleable Solids.** Effluent limitations of 1.5 mL per L per hour as a Daily Maximum and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Ammonia as N.** Monitoring only requirement
- **Nitrate as N.** Monitoring only requirement.
- **Chlorides + Sulfate.** Effluent limitation of 1000 mg/L as a Daily Maximum is applicable as per [10 CSR 20-7.031(L)1.].
- **Chlorides.** Monitoring only requirement.
- **Sulfate.** Monitoring only requirement.
- **Fluoride.** Monitoring only requirement.
- **Benzene.** Monitoring only requirement.
- **Ethylbenzene.** Monitoring only requirement.

- **Toluene**. Monitoring only requirement.
- **Total Xylene**. Monitoring only requirement.

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 hardness of 193 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
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Chromium VI	0.982
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.978

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 = 193 mg/L.

- **Total Hardness**. Monitoring only requirement due to the fact that Metals toxicity varies by hardness.
- **Antimony, Total Recoverable**. Monitoring only requirement
- **Cadmium, Total Recoverable**. Monitoring only requirement
- **Selenium, Total Recoverable**. Monitoring only requirement
- **Antimony, Total Recoverable**. Monitoring only requirement
- **Arsenic, Total Recoverable**. Monitoring only requirement
- **Barium, Total Recoverable**. Monitoring only requirement
- **Beryllium, Total Recoverable**. Monitoring only requirement
- **Boron, Total Recoverable**. Monitoring only requirement
- **Cadmium, Total Recoverable**. Monitoring only requirement
- **Chromium (III), Total Recoverable**. Monitoring only requirement
- **Chromium (VI), Dissolved**. Monitoring only requirement
- **Cobalt, Total Recoverable**. Monitoring only requirement
- **Copper, Total Recoverable**. Monitoring only requirement
- **Iron, Total Recoverable**. Iron does not have an acute criteria at this time; therefore, the Protection of Aquatic Life Chronic

Criteria (CCC) of 1000 µg/L is applicable. No mixing allowed; therefore, the CCC = the WLA.

$$WLA_c = 1000 \mu\text{g/L}$$

$$LTA_c = 1000 \mu\text{g/L} (0.531) = 531 \mu\text{g/L}$$

$$MDL = 531 \mu\text{g/L} (3.0835) = \mathbf{1637.3} \mu\text{g/L}$$

$$AML = 531 \mu\text{g/L} (1.5455) = \mathbf{820.7} \mu\text{g/L}$$

$$[\text{CV} = 0.593, 99^{\text{th}} \text{ Percentile}]$$

$$[\text{CV} = 0.593, 99^{\text{th}} \text{ Percentile}]$$

$$[\text{CV} = 0.593, 95^{\text{th}} \text{ Percentile}, n = 4]$$

- **Lead, Total Recoverable.** Monitoring only requirement
- **Manganese, Total Recoverable.** Monitoring only requirement
- **Mercury, Total Recoverable.** Monitoring only requirement
- **Nickel, Total Recoverable.** Monitoring only requirement
- **Selenium, Total Recoverable.** Monitoring only requirement
- **Silver, Total Recoverable.** Monitoring only requirement
- **Thallium, Total Recoverable.** Monitoring only requirement
- **Zinc, Total Recoverable.** Monitoring only requirement

- Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Precipitation	once/day	once/quarter
Chemical Oxygen Demand	once/quarter	once/quarter
Biochemical Oxygen Demand ₅	once/quarter	once/quarter
Total Suspended Solids	once/quarter	once/quarter
pH	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Ammonia as N	once/quarter	once/quarter
Nitrate as N	once/quarter	once/quarter
Total Phosphorus	once/quarter	once/quarter
Chloride + Sulfate	once/quarter	once/quarter
Chloride	once/quarter	once/quarter
Sulfate	once/quarter	once/quarter
Fluoride	once/quarter	once/quarter
Benzene	once/quarter	once/quarter
Ethylbenzene	once/quarter	once/quarter
Toluene	once/quarter	once/quarter
Total Xylene	once/quarter	once/quarter
Total hardness	once/quarter	once/quarter
Antimony, TR	once/quarter	once/quarter
Arsenic, TR	once/quarter	once/quarter
Barium, TR	once/quarter	once/quarter
Beryllium, TR	once/quarter	once/quarter
Boron, TR	once/quarter	once/quarter
Cadmium, TR	once/quarter	once/quarter
Chromium (III), TR	once/quarter	once/quarter
Chromium (VI), Dissolved	once/quarter	once/quarter
Cobalt, TR	once/quarter	once/quarter
Copper, TR	once/quarter	once/quarter
Iron, TR	once/quarter	once/quarter
Lead, TR	once/quarter	once/quarter
Manganese, TR	once/quarter	once/quarter
Mercury, TR	once/quarter	once/quarter
Nickel, TR	once/quarter	once/quarter
Selenium, TR	once/quarter	once/quarter
Silver, TR	once/quarter	once/quarter
Thallium, TR	once/quarter	once/quarter
Zinc, TR	once/quarter	once/quarter

Outfall #003 – Effluent Limitation Table:

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supercedes the terms and conditions, including effluent limitations, of this operating permit.

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	NO	S
Chemical Oxygen Demand (Interim)	mg/L	9	120		90	NO	S
Chemical Oxygen Demand (Final)	mg/L	9	90		60	YES	120/90
Biochemical Oxygen Demand ₅ (Interim)	mg/L	1/9	65		45	NO	S
Biochemical Oxygen Demand ₅ (Final)	mg/L	1/9	45		30	YES	65/45
Total Suspended Solids (Interim)	mg/L	1	80		60	NO	S
Total Suspended Solids (Final)	mg/L	1	80		50	YES	80/60
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 - 9.0
Settleable Solids	mL/L/hr	1/9	1.5		1.0	NO	S
Oil & Grease	mg/L	1/2/9	15		10	NO	S
Ammonia as N	mg/L	1/2/5/9	*		*	NO	S
Nitrate as N	mg/L	1/2/9	*		*	YES	** PREVIOUSLY NITRATE + NITRITE
Total Phosphorus	mg/L	1/9	*		*	NO	S
Chloride + Sulfate	mg/L	1/2/9	1000		*	NO	S
Chloride	mg/L	1/2/9	*		*	YES	
Sulfate	mg/L	1/2/9	*		*	NO	S
Fluoride	mg/L	1/2/9	*		*	NO	S
Benzene	µg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Ethylbenzene	µg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Toluene	mg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Total Xylene	mg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Total hardness	mg/L	9	*		*	NO	S
Antimony, TR	mg/L	1/2/9	*		*	NO	S
Arsenic, TR	µg/L	1/2/9	*		*	NO	S
Barium, TR	µg/L	1/2/9	*		*	NO	S
Beryllium, TR	µg/L	1/2/9	*		*	NO	S
Boron, TR	µg/L	1/2/9	*		*	NO	S
Cadmium, TR	µg/L	1/2/9	*		*	NO	S
Chromium (III), TR	µg/L	1/2/9	*		*	YES	** PREVIOUSLY CHROMIUM, TR
Chromium (VI), Dissolved	µg/L	1/2/9	*		*	YES	** PREVIOUSLY CHROMIUM, TR
Cobalt, TR	µg/L	1/2/9	*		*	NO	S
Copper, TR	µg/L	1/2/9	*		*	NO	S
Iron, TR (Interim)	µg/L	1/2/9	*		*	NO	S
Iron, TR (Final)	µg/L	1/2/9	1642.7		818.8	YES	*
Lead, TR	µg/L	1/2/9	*		*	NO	S
Manganese, TR	µg/L	1/2/9	*		*	NO	S
Mercury, TR	µg/L	1/2/9	*		*	NO	S
Nickel, TR	µg/L	1/2/9	*		*	NO	S
Selenium, TR	µg/L	1/2/9	*		*	NO	S
Silver, TR	µg/L	1/2/9	*		*	NO	S
Thallium, TR	µg/L	1/2/9	*		*	NO	S
Zinc, TR	µg/L	1/2/9	*		*	NO	S
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.

TR – means Total Recoverable
S – Same as previous operating permit

Basis for Limitations Codes:

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

OUTFALL #003 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** Monitoring only requirement 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 to determine an alternate location for flow monitoring.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a Daily Maximum and 60 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Biochemical Oxygen Demand (BOD₅).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Total Suspended Solids (TSS).** Effluent limitations of 80 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007. The guide gives effluent limitations for TSS as 100 mg/L for a daily maximum and 50 mg/L for a monthly average. As the previous permit contained a daily maximum of 80 mg/L, the daily maximum of 80 mg/L was kept in the permit to prevent backsliding.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(4)(E)]. pH is not to be averaged.
- **Settleable Solids.** Effluent limitations of 1.5 mL per L per hour as a Daily Maximum and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Ammonia as N.** Monitoring only requirement
- **Nitrate as N.** Monitoring only requirement.
- **Chlorides + Sulfate.** Effluent limitation of 1000 mg/L as a Daily Maximum is applicable as per [10 CSR 20-7.031(L)1.].
- **Chlorides.** Monitoring only requirement.
- **Sulfate.** Monitoring only requirement.
- **Fluoride.** Monitoring only requirement.
- **Benzene.** Monitoring only requirement.
- **Ethylbenzene.** Monitoring only requirement.
- **Toluene.** Monitoring only requirement.
- **Total Xylene.** Monitoring only requirement.

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 hardness of 193 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
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Chromium VI	0.982
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.978

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 = 193 mg/L.

- **Total Hardness.** Monitoring only requirement due to the fact that Metals toxicity varies by hardness.
- **Antimony, Total Recoverable.** Monitoring only requirement
- **Cadmium, Total Recoverable.** Monitoring only requirement
- **Selenium, Total Recoverable.** Monitoring only requirement
- **Antimony, Total Recoverable.** Monitoring only requirement
- **Arsenic, Total Recoverable.** Monitoring only requirement
- **Barium, Total Recoverable.** Monitoring only requirement
- **Beryllium, Total Recoverable.** Monitoring only requirement
- **Boron, Total Recoverable.** Monitoring only requirement
- **Cadmium, Total Recoverable.** Monitoring only requirement
- **Chromium (III), Total Recoverable.** Monitoring only requirement
- **Chromium (VI), Dissolved.** Monitoring only requirement
- **Cobalt, Total Recoverable.** Monitoring only requirement
- **Copper, Total Recoverable.** Monitoring only requirement
- **Iron, Total Recoverable.** Iron does not have an acute criteria at this time; therefore, the Protection of Aquatic Life Chronic Criteria (CCC) of 1000 µg/L is applicable. No mixing allowed; therefore, the CCC = the WLA.

$$WLA_c = 1000 \mu\text{g/L}$$

$$LTA_c = 1000 \mu\text{g/L} (0.25083) = 250.83 \mu\text{g/L}$$

$$[CV = 0.6, 99^{\text{th}} \text{ Percentile}]$$

MDL = 250.83 $\mu\text{g/L}$ (7.2522) = **1819.1** $\mu\text{g/L}$
AML = 250.83 $\mu\text{g/L}$ (2.4753) = **620.9** $\mu\text{g/L}$

[CV = 0.6, 99th Percentile]
[CV = 0.6, 95th Percentile, n = 4]

- **Lead, Total Recoverable.** Monitoring only requirement
- **Manganese, Total Recoverable.** Monitoring only requirement
- **Mercury, Total Recoverable.** Monitoring only requirement
- **Nickel, Total Recoverable.** Monitoring only requirement
- **Selenium, Total Recoverable.** Monitoring only requirement
- **Silver, Total Recoverable.** Monitoring only requirement
- **Thallium, Total Recoverable.** Monitoring only requirement
- **Zinc, Total Recoverable.** Monitoring only requirement

- Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Chemical Oxygen Demand	once/quarter	once/quarter
Biochemical Oxygen Demand ₅	once/quarter	once/quarter
Total Suspended Solids	once/quarter	once/quarter
pH	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Ammonia as N	once/quarter	once/quarter
Nitrate as N	once/quarter	once/quarter
Total Phosphorus	once/quarter	once/quarter
Chloride + Sulfate	once/quarter	once/quarter
Chloride	once/quarter	once/quarter
Sulfate	once/quarter	once/quarter
Fluoride	once/quarter	once/quarter
Benzene	once/quarter	once/quarter
Ethylbenzene	once/quarter	once/quarter
Toluene	once/quarter	once/quarter
Total Xylene	once/quarter	once/quarter
Total hardness	once/quarter	once/quarter
Antimony, TR	once/quarter	once/quarter
Arsenic, TR	once/quarter	once/quarter
Barium, TR	once/quarter	once/quarter
Beryllium, TR	once/quarter	once/quarter
Boron, TR	once/quarter	once/quarter
Cadmium, TR	once/quarter	once/quarter
Chromium (III), TR	once/quarter	once/quarter
Chromium (VI), Dissolved	once/quarter	once/quarter
Cobalt, TR	once/quarter	once/quarter
Copper, TR	once/quarter	once/quarter
Iron, TR	once/quarter	once/quarter
Lead, TR	once/quarter	once/quarter
Manganese, TR	once/quarter	once/quarter
Mercury, TR	once/quarter	once/quarter
Nickel, TR	once/quarter	once/quarter
Selenium, TR	once/quarter	once/quarter
Silver, TR	once/quarter	once/quarter
Thallium, TR	once/quarter	once/quarter
Zinc, TR	once/quarter	once/quarter

Outfall #004 – Effluent Limitation Table:

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supercedes the terms and conditions, including effluent limitations, of this operating permit.

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	No	S
Chemical Oxygen Demand (Interim)	mg/L	9	120		90	No	S
Chemical Oxygen Demand (Final)	mg/L	9	90		60	YES	120/90
Biochemical Oxygen Demand ₅ (Interim)	mg/L	1/9	65		45	No	S
Biochemical Oxygen Demand ₅ (Final)	mg/L	1/9	45		30	YES	65/45
Total Suspended Solids (Interim)	mg/L	1	80		60	No	S
Total Suspended Solids (Final)	mg/L	1	80		50	YES	80/60
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 - 9.0
Settleable Solids	mL/L/hr	1/9	1.5		1.0	No	S
Oil & Grease	mg/L	1/2/9	15		10	No	S
Ammonia as N	mg/L	1/2/5/9	*		*	No	S
Nitrate as N	mg/L	1/2/9	*		*	YES	** PREVIOUSLY NITRATE + NITRITE
Total Phosphorus	mg/L	1/9	*		*	No	S
Chloride + Sulfate	mg/L	1/2/9	1000		*	No	S
Chloride	mg/L	1/2/9	*		*	YES	
Sulfate	mg/L	1/2/9	*		*	No	S
Fluoride	mg/L	1/2/9	*		*	No	S
Benzene	µg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Ethylbenzene	µg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Toluene	mg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Total Xylene	mg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Total hardness	mg/L	9	*		*	No	S
Antimony, TR	mg/L	1/2/9	*		*	No	S
Arsenic, TR	µg/L	1/2/9	*		*	No	S
Barium, TR	µg/L	1/2/9	*		*	No	S
Beryllium, TR	µg/L	1/2/9	*		*	No	S
Boron, TR	µg/L	1/2/9	*		*	No	S
Cadmium, TR	µg/L	1/2/9	*		*	No	S
Chromium (III), TR	µg/L	1/2/9	*		*	YES	** PREVIOUSLY CHROMIUM, TR
Chromium (VI), Dissolved	µg/L	1/2/9	*		*	YES	** PREVIOUSLY CHROMIUM, TR
Cobalt, TR	µg/L	1/2/9	*		*	No	S
Copper, TR	µg/L	1/2/9	*		*	No	S
Iron, TR (Interim)	µg/L	1/2/9	*		*	No	S
Iron, TR (Final)	µg/L	1/2/9	1819.1		620.9	YES	*
Lead, TR	µg/L	1/2/9	*		*	No	S
Manganese, TR	µg/L	1/2/9	*		*	No	S
Mercury, TR	µg/L	1/2/9	*		*	No	S
Nickel, TR	µg/L	1/2/9	*		*	No	S
Selenium, TR	µg/L	1/2/9	*		*	No	S
Silver, TR	µg/L	1/2/9	*		*	No	S
Thallium, TR	µg/L	1/2/9	*		*	No	S
Zinc, TR	µg/L	1/2/9	*		*	No	S
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.

TR – means Total Recoverable
S – Same as previous operating permit

Basis for Limitations Codes:

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

OUTFALL #004 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** Monitoring only requirement 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 to determine an alternate location for flow monitoring.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a Daily Maximum and 60 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Biochemical Oxygen Demand (BOD₅).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Total Suspended Solids (TSS).** Effluent limitations of 80 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007. The guide gives effluent limitations for TSS as 100 mg/L for a daily maximum and 50 mg/L for a monthly average. As the previous permit contained a daily maximum of 80 mg/L, the daily maximum of 80 mg/L was kept in the permit to prevent backsliding.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(4)(E)]. pH is not to be averaged.
- **Settleable Solids.** Effluent limitations of 1.5 mL per L per hour as a Daily Maximum and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Ammonia as N.** Monitoring only requirement
- **Nitrate as N.** Monitoring only requirement.
- **Chlorides + Sulfate.** Effluent limitation of 1000 mg/L as a Daily Maximum is applicable as per [10 CSR 20-7.031(L)1.].
- **Chlorides.** Monitoring only requirement.
- **Sulfate.** Monitoring only requirement.
- **Fluoride.** Monitoring only requirement.
- **Benzene.** Monitoring only requirement.
- **Ethylbenzene.** Monitoring only requirement.
- **Toluene.** Monitoring only requirement.
- **Total Xylene.** Monitoring only requirement.

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 hardness of 193 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
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Chromium VI	0.982
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.978

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 = 193 mg/L.

- **Total Hardness**. Monitoring only requirement due to the fact that Metals toxicity varies by hardness.
- **Antimony, Total Recoverable**. Monitoring only requirement
- **Cadmium, Total Recoverable**. Monitoring only requirement
- **Selenium, Total Recoverable**. Monitoring only requirement
- **Antimony, Total Recoverable**. Monitoring only requirement
- **Arsenic, Total Recoverable**. Monitoring only requirement
- **Barium, Total Recoverable**. Monitoring only requirement
- **Beryllium, Total Recoverable**. Monitoring only requirement
- **Boron, Total Recoverable**. Monitoring only requirement
- **Cadmium, Total Recoverable**. Monitoring only requirement
- **Chromium (III), Total Recoverable**. Monitoring only requirement
- **Chromium (VI), Dissolved**. Monitoring only requirement
- **Cobalt, Total Recoverable**. Monitoring only requirement
- **Copper, Total Recoverable**. Monitoring only requirement
- **Iron, Total Recoverable**. Iron does not have an acute criteria at this time; therefore, the Protection of Aquatic Life Chronic Criteria (CCC) of 1000 µg/L is applicable. No mixing allowed; therefore, the CCC = the WLA.

$$WLA_c = 1000 \mu\text{g/L}$$

$$LTA_c = 1000 \mu\text{g/L} (0.5274) = 527.4 \mu\text{g/L}$$

$$MDL = 527.4 \mu\text{g/L} (3.1145) = \mathbf{1819.1 \mu\text{g/L}}$$

$$[CV = 1.59, 99^{\text{th}} \text{ Percentile}]$$

$$[CV = 1.59, 99^{\text{th}} \text{ Percentile}]$$

$$\text{AML} = 527.4 \mu\text{g/L} (1.5524) = \mathbf{620.9 \mu\text{g/L}}$$

[CV = 1.59, 95th Percentile, n = 4]

- **Lead, Total Recoverable.** Monitoring only requirement
- **Manganese, Total Recoverable.** Monitoring only requirement
- **Mercury, Total Recoverable.** Monitoring only requirement
- **Nickel, Total Recoverable.** Monitoring only requirement
- **Selenium, Total Recoverable.** Monitoring only requirement
- **Silver, Total Recoverable.** Monitoring only requirement
- **Thallium, Total Recoverable.** Monitoring only requirement
- **Zinc, Total Recoverable.** Monitoring only requirement

- Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Chemical Oxygen Demand	once/quarter	once/quarter
Biochemical Oxygen Demand ₅	once/quarter	once/quarter
Total Suspended Solids	once/quarter	once/quarter
pH	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Ammonia as N	once/quarter	once/quarter
Nitrate as N	once/quarter	once/quarter
Total Phosphorus	once/quarter	once/quarter
Chloride + Sulfate	once/quarter	once/quarter
Chloride	once/quarter	once/quarter
Sulfate	once/quarter	once/quarter
Fluoride	once/quarter	once/quarter
Benzene	once/quarter	once/quarter
Ethylbenzene	once/quarter	once/quarter
Toluene	once/quarter	once/quarter
Total Xylene	once/quarter	once/quarter
Total hardness	once/quarter	once/quarter
Antimony, TR	once/quarter	once/quarter
Arsenic, TR	once/quarter	once/quarter
Barium, TR	once/quarter	once/quarter
Beryllium, TR	once/quarter	once/quarter
Boron, TR	once/quarter	once/quarter
Cadmium, TR	once/quarter	once/quarter
Chromium (III), TR	once/quarter	once/quarter
Chromium (VI), Dissolved	once/quarter	once/quarter
Cobalt, TR	once/quarter	once/quarter
Copper, TR	once/quarter	once/quarter
Iron, TR	once/quarter	once/quarter
Lead, TR	once/quarter	once/quarter
Manganese, TR	once/quarter	once/quarter
Mercury, TR	once/quarter	once/quarter
Nickel, TR	once/quarter	once/quarter
Selenium, TR	once/quarter	once/quarter
Silver, TR	once/quarter	once/quarter
Thallium, TR	once/quarter	once/quarter
Zinc, TR	once/quarter	once/quarter

Outfall #005 – Effluent Limitation Table:

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supercedes the terms and conditions, including effluent limitations, of this operating permit.

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	No	S
Chemical Oxygen Demand (Interim)	mg/L	9	120		90	No	S
Chemical Oxygen Demand (Final)	mg/L	9	90		60	YES	120/90
Biochemical Oxygen Demand ₅ (Interim)	mg/L	1/9	65		45	No	S
Biochemical Oxygen Demand ₅ (Final)	mg/L	1/9	45		30	YES	65/45
Total Suspended Solids (Interim)	mg/L	1	80		60	No	S
Total Suspended Solids (Final)	mg/L	1	80		50	YES	80/60
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 - 9.0
Settleable Solids	mL/L/hr	1/9	1.5		1.0	No	S
Oil & Grease	mg/L	1/2/9	15		10	No	S
Ammonia as N	mg/L	1/2/5/9	*		*	No	S
Nitrate as N	mg/L	1/2/9	*		*	YES	** PREVIOUSLY NITRATE + NITRITE
Total Phosphorus	mg/L	1/9	*		*	No	S
Chloride + Sulfate	mg/L	1/2/9	1000		*	No	S
Chloride	mg/L	1/2/9	*		*	YES	
Sulfate	mg/L	1/2/9	*		*	No	S
Fluoride	mg/L	1/2/9	*		*	No	S
Benzene	µg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Ethylbenzene	µg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Toluene	mg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Total Xylene	mg/L	1/2/9	*		*	YES	** PREVIOUSLY BETX
Total hardness	mg/L	9	*		*	No	S
Antimony, TR	mg/L	1/2/9	*		*	No	S
Arsenic, TR	µg/L	1/2/9	*		*	No	S
Barium, TR	µg/L	1/2/9	*		*	No	S
Beryllium, TR	µg/L	1/2/9	*		*	No	S
Boron, TR	µg/L	1/2/9	*		*	No	S
Cadmium, TR	µg/L	1/2/9	*		*	No	S
Chromium (III), TR	µg/L	1/2/9	*		*	YES	** PREVIOUSLY CHROMIUM, TR
Chromium (VI), Dissolved	µg/L	1/2/9	*		*	YES	** PREVIOUSLY CHROMIUM, TR
Cobalt, TR	µg/L	1/2/9	*		*	No	S
Copper, TR	µg/L	1/2/9	*		*	No	S
Iron, TR (Interim)	µg/L	1/2/9	*		*	No	S
Iron, TR (Final)	µg/L	1/2/9	1642.7		818.8	YES	*
Lead, TR	µg/L	1/2/9	*		*	No	S
Manganese, TR	µg/L	1/2/9	*		*	No	S
Mercury, TR	µg/L	1/2/9	*		*	No	S
Nickel, TR	µg/L	1/2/9	*		*	No	S
Selenium, TR	µg/L	1/2/9	*		*	No	S
Silver, TR	µg/L	1/2/9	*		*	No	S
Thallium, TR	µg/L	1/2/9	*		*	No	S
Zinc, TR	µg/L	1/2/9	*		*	No	S
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.

TR – means Total Recoverable
S – Same as previous operating permit

Basis for Limitations Codes:

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

OUTFALL #005 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** Monitoring only requirement 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 to determine an alternate location for flow monitoring.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a Daily Maximum and 60 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Biochemical Oxygen Demand (BOD₅).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007.
- **Total Suspended Solids (TSS).** Effluent limitations of 80 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limits were obtained from the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007. The guide gives effluent limitations for TSS as 100 mg/L for a daily maximum and 50 mg/L for a monthly average. As the previous permit contained a daily maximum of 80 mg/L, the daily maximum of 80 mg/L was kept in the permit to prevent backsliding.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(4)(E)]. pH is not to be averaged.
- **Settleable Solids.** Effluent limitations of 1.5 mL per L per hour as a Daily Maximum and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Ammonia as N.** Monitoring only requirement
- **Nitrate as N.** Monitoring only requirement.
- **Chlorides + Sulfate.** Effluent limitation of 1000 mg/L as a Daily Maximum is applicable as per [10 CSR 20-7.031(L)1.].
- **Chlorides.** Monitoring only requirement.
- **Sulfate.** Monitoring only requirement.
- **Fluoride.** Monitoring only requirement.
- **Benzene.** Monitoring only requirement.
- **Ethylbenzene.** Monitoring only requirement.
- **Toluene.** Monitoring only requirement.
- **Total Xylene.** Monitoring only requirement.

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 hardness of 193 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
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Chromium VI	0.982
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.978

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 = 193 mg/L.

- **Total Hardness.** Monitoring only requirement due to the fact that Metals toxicity varies by hardness.
- **Antimony, Total Recoverable.** Monitoring only requirement
- **Cadmium, Total Recoverable.** Monitoring only requirement
- **Selenium, Total Recoverable.** Monitoring only requirement
- **Antimony, Total Recoverable.** Monitoring only requirement
- **Arsenic, Total Recoverable.** Monitoring only requirement
- **Barium, Total Recoverable.** Monitoring only requirement
- **Beryllium, Total Recoverable.** Monitoring only requirement
- **Boron, Total Recoverable.** Monitoring only requirement
- **Cadmium, Total Recoverable.** Monitoring only requirement
- **Chromium (III), Total Recoverable.** Monitoring only requirement
- **Chromium (VI), Dissolved.** Monitoring only requirement
- **Cobalt, Total Recoverable.** Monitoring only requirement
- **Copper, Total Recoverable.** Monitoring only requirement
- **Iron, Total Recoverable.** Iron does not have an acute criteria at this time; therefore, the Protection of Aquatic Life Chronic Criteria (CCC) of 1000 µg/L is applicable. No mixing allowed; therefore, the CCC = the WLA.

$$WLA_c = 1000 \mu\text{g/L}$$

$$LTA_c = 1000 \mu\text{g/L} (0.25083) = 250.83 \mu\text{g/L}$$

$$MDL = 250.83 \mu\text{g/L} (7.2522) = \mathbf{1819.1} \mu\text{g/L}$$

$$[CV = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$[CV = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$\text{AML} = 250.83 \mu\text{g/L} (2.4753) = \mathbf{620.9 \mu\text{g/L}}$$

[CV = 0.6, 95th Percentile, n = 4]

- **Lead, Total Recoverable.** Monitoring only requirement
- **Manganese, Total Recoverable.** Monitoring only requirement
- **Mercury, Total Recoverable.** Monitoring only requirement
- **Nickel, Total Recoverable.** Monitoring only requirement
- **Selenium, Total Recoverable.** Monitoring only requirement
- **Silver, Total Recoverable.** Monitoring only requirement
- **Thallium, Total Recoverable.** Monitoring only requirement
- **Zinc, Total Recoverable.** Monitoring only requirement

- Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Chemical Oxygen Demand	once/quarter	once/quarter
Biochemical Oxygen Demand ₅	once/quarter	once/quarter
Total Suspended Solids	once/quarter	once/quarter
pH	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Ammonia as N	once/quarter	once/quarter
Nitrate as N	once/quarter	once/quarter
Total Phosphorus	once/quarter	once/quarter
Chloride + Sulfate	once/quarter	once/quarter
Chloride	once/quarter	once/quarter
Sulfate	once/quarter	once/quarter
Fluoride	once/quarter	once/quarter
Benzene	once/quarter	once/quarter
Ethylbenzene	once/quarter	once/quarter
Toluene	once/quarter	once/quarter
Total Xylene	once/quarter	once/quarter
Total hardness	once/quarter	once/quarter
Antimony, TR	once/quarter	once/quarter
Arsenic, TR	once/quarter	once/quarter
Barium, TR	once/quarter	once/quarter
Beryllium, TR	once/quarter	once/quarter
Boron, TR	once/quarter	once/quarter
Cadmium, TR	once/quarter	once/quarter
Chromium (III), TR	once/quarter	once/quarter
Chromium (VI), Dissolved	once/quarter	once/quarter
Cobalt, TR	once/quarter	once/quarter
Copper, TR	once/quarter	once/quarter
Iron, TR	once/quarter	once/quarter
Lead, TR	once/quarter	once/quarter
Manganese, TR	once/quarter	once/quarter
Mercury, TR	once/quarter	once/quarter
Nickel, TR	once/quarter	once/quarter
Selenium, TR	once/quarter	once/quarter
Silver, TR	once/quarter	once/quarter
Thallium, TR	once/quarter	once/quarter
Zinc, TR	once/quarter	once/quarter

Outfall #006 – Effluent Limitation Table:

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supercedes the terms and conditions, including effluent limitations, of this operating permit.

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	YES	**
Precipitation	Inches	9	*		*	YES	**
Settleable Solids	mL/L/hr	1/9	*		*	YES	**
Total Suspended Solids	mg/L	1	*		*	YES	**
pH	SU	1	*		*	YES	**
Oil & Grease	mg/L	1/2/9	*		*	YES	**
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.

TR – means Total Recoverable

S – Same as previous operating permit

Basis for Limitations Codes:

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

OUTFALL #006 – DERIVATION AND DISCUSSION OF LIMITS:

Discussion of Benchmarking as used for this outfall

The inclusion of benchmarking was taken from the MO-R23A general permit template for facilities engaged in chemical manufacturing. The benchmark limitations were set to the water quality standard, because this outfall discharges only stormwater, which may be contaminated with the listed pollutants. In this case, the establishing of non-numeric, technology-based effluent limits and other BMPs via a SWPPP are the primary treatment technology used for controlling stormwater discharges. The permitting authority is then required to consider whether TBEL are sufficient to maintain WQS. The inclusion of benchmark limits in this permit will require the facility to review their SWPPP and associated BMPs to see if a change is necessary when an exceedance occurs. The benchmarks were set, when possible, at the acute water quality standard.

The goal of the permittee should be to keep pollutants (potentially generated from any onsite operations/activities/handling or as a result of the storage of any material) from getting into the stormwater in the first place rather than treating stormwater after it has been contaminated (prior to discharge). This permit includes narrative non-numeric effluent limitations that are intended to serve this purpose. Numeric effluent limitations contained in the previous permit are being removed, since the imposed technology based, non-numeric effluent limits contained within this permit are considered sufficient.

- **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).** Monitoring only (benchmark limitation). This parameter is being required, since these are stormwater discharges that will likely pick up particulates as the water flows along the ground to the outfalls. Monitoring for this parameter with a benchmark limit will require the permittee to review and improve their BMPs in order to protect general water quality in the receiving stream. Monitoring is being required as a basis for monitoring BMP effectiveness. The BMPs should be designed so that they remove the majority of the solids prior to discharge. The benchmark limitation is set to 50 mg/L, which is based on the benchmark set in the landfill permit and consistent with the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007. In addition, there is no water quality standard for Total Suspended Solids except for General Criteria. This parameter should be re-evaluated at renewal.

- **Oil & Grease.** Monitoring only (benchmark limitation). The facility is being required to monitor for this pollutant with benchmark limits set for protection of aquatic life. Benchmark is set to 10 mg/L.
- **pH.** Monitoring only (benchmark limitation). This is deemed required, since pH is a common pollutant in almost every Missouri State Operating Permit and is a water quality standard. Benchmark range is from 6.5 to 9.0 standard pH units (SU) as per regulation [10 CSR 20 7.031(E), which is based on the benchmark set in the landfill permit and in the MO-R23A general permit.
- **Settleable Solids.** Monitoring only (benchmark limitation). This parameter is being required, since these are stormwater discharges that will likely pick up particulates as the water flows along the ground to the outfalls. Monitoring for this parameter with a benchmark limit will require the permittee to review and improve their BMPs in order to protect general water quality in the receiving stream. Monitoring is being required as a basis for monitoring BMP effectiveness. The BMPs should be designed so that they remove the majority of the solids prior to discharge. The benchmark limitation is set to 1.0 mL/L/hr, which is based on the benchmark, set in the landfill permit and is consistent with the Permit Writers Guide to Development of Industrial Stormwater Effluent Limits developed by the Department and last revised in 2007. In addition, there is no water quality standard for Settleable Solids except for General Criteria. This parameter should be re-evaluated at renewal.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	twice/year	twice/year
Settleable Solids	twice/year	twice/year
Total Suspended Solids	twice/year	twice/year
pH	twice/year	twice/year
Oil & Grease	twice/year	twice/year

Part F – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:

As per the Missouri Clean Water Law, the Missouri Clean Water Commission, and the federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits are directed to do so by a department approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

- Only the portions of this permit proposed for change as part of this public notice are subject to comment at this time.

DATE OF FACT SHEET: DECEMBER 7, 2011, MODIFIED FEBRUARY 1, 2013

COMPLETED BY:

Brant Farris, Environmental Specialist
 Northeast Regional Office
 (660) 385-8000
brant.farris@dnr.mo.gov

Joe Bowdish, Environmental Specialist
 Northeast Regional Office
 (660) 385-8000
joe.bowdish@dnr.mo.gov

Modified by

Thabit. H. Hamoud, P.E., EE III

Missouri Department of Natural Resources
 Water Protection Section
 7545 S. Lindbergh, Suite 210, St. Louis, Missouri 63125
 (314) 416-2453
thabit.hamoud@dnr.mo.gov

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION**

**Revised
October 1, 1980**

**PART I - GENERAL CONDITIONS
SECTION A - MONITORING AND REPORTING**

1. **Representative Sampling**
 - a. Samples and measurements taken as required herein shall be representative of the nature and volume, respectively, of the monitored discharge. All samples shall be taken at the outfall(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
 - b. Monitoring results shall be recorded and reported on forms provided by the Department, postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the respective Department Regional Office, the Regional Office address is indicated in the cover letter transmitting the permit.
2. **Schedule of Compliance**

No later than fourteen (14) calendar days following each date identified in the "Schedule of Compliance", the permittee shall submit to the respective Department Regional Office as required therein, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements, or if there are no more scheduled requirements, when such noncompliance will be corrected. The Regional Office address is indicated in the cover letter transmitting the permit.
3. **Definitions**

Definitions as set forth in the Missouri Clean Water Law and Missouri Clean Water Commission Definition Regulation 10 CSR 20-2.010 shall apply to terms used herein.
4. **Test Procedures**

Test procedures for the analysis of pollutant shall be in accordance with the Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015.
5. **Recording of Results**
 - a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 - (i) the date, exact place, and time of sampling or measurements;
 - (ii) the individual(s) who performed the sampling or measurements;
 - (iii) the date(s) analyses were performed;
 - (iv) the individual(s) who performed the analyses;
 - (v) the analytical techniques or methods used; and
 - (vi) the results of such analyses.
 - b. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.
 - c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
6. **Additional Monitoring by Permittee**

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monitoring Report Form. Such increased frequency shall also be indicated.

7. **Records Retention**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recording for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

SECTION B - MANAGEMENT REQUIREMENTS

1. **Change in Discharge**
 - a. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant not authorized by this permit or any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.
 - b. Any facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application at least sixty (60) days before each such change, or, if they will not violate the effluent limitations specified in the permit, by notice to the Department at least thirty (30) days before such changes.
2. **Noncompliance Notification**
 - a. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
 - (i) a description of the discharge and cause of noncompliance, and
 - (ii) the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
 - b. Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally with 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
3. **Facilities Operation**

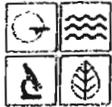
Permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. Operators or supervisors of operations at publicly owned or publicly regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 209.020(2) and any other applicable law or regulation. Operators of other wastewater treatment facilities, water contaminant source or point sources, shall, upon request by the Department, demonstrate that wastewater treatment equipment and facilities are effectively operated and maintained by competent personnel.
4. **Adverse Impact**

The permittee shall take all necessary steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit or set forth in the Missouri Clean Water Law and Regulations (hereinafter the Law and Regulations), including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

- a. Any bypass or shut down of a wastewater treatment facility and tributary sewer system or any part of such a facility and sewer system that results in a violation of permit limits or conditions is prohibited except:
 - (i) where unavoidable to prevent loss of life, personal injury, or severe property damages; and
 - (ii) where unavoidable excessive storm drainage or runoff would catastrophically damage any facilities or processes necessary for compliance with the effluent limitations and conditions of this permit;
 - (iii) where maintenance is necessary to ensure efficient operation and alternative measures have been taken to maintain effluent quality during the period of maintenance.
 - b. The permittee shall notify the Department in writing of all bypasses or shut down that result in a violation of permit limits or conditions. This section does not excuse any person from liability, unless such relief is otherwise provided by the statute.
6. **Removed Substances**
Solids, sludges, filter backwash, or any other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from entering waters of the state unless permitted by the Law, and a permanent record of the date and time, volume and methods of removal and disposal of such substances shall be maintained by the permittee.
 7. **Power Failures**
In order to maintain compliance with the effluent limitations and other provisions of this permit, the permittee shall either:
 - a. in accordance with the "Schedule of Compliance", provide an alternative power source sufficient to operate the wastewater control facilities; or,
 - b. if such alternative power source is not in existence, and no date for its implementation appears in the Compliance Schedule, halt or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.
 8. **Right of Entry**
For the purpose of inspecting, monitoring, or sampling the point source, water contaminant source, or wastewater treatment facility for compliance with the Clean Water Law and these regulations, authorized representatives of the Department, shall be allowed by the permittee, upon presentation of credentials and at reasonable times;
 - a. to enter upon permittee's premises in which a point source, water contaminant source, or wastewater treatment facility is located or in which any records are required to be kept under terms and conditions of the permit;
 - b. to have access to, or copy, any records required to be kept under terms and conditions of the permit;
 - c. to inspect any monitoring equipment or method required in the permit;
 - d. to inspect any collection, treatment, or discharge facility covered under the permit; and
 - e. to sample any wastewater at any point in the collection system or treatment process.
 9. **Permits Transferable**
 - a. Subject to Section (3) of 10 CSR 20-6.010 an operating permit may be transferred upon submission to the Department of an application to transfer signed by a new owner. Until such time as the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
 - b. The Department, within thirty (30) days of receipt of the application shall notify the new permittee of its intent to revoke and reissue or transfer the permit.
 10. **Availability of Reports**
Except for data determined to be confidential under Section 308 of the Act, and the Law and Missouri Clean Water Commission Regulation for Public Participation, Hearings and Notice to Governmental Agencies 10 CSR 20-6.020, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by statute, effluent data shall not be considered confidential. Knowingly making any false statement on any such report shall be subject to the imposition of criminal penalties as provided in Section 204.076 of the Law.
 - a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
 - (i) violation of any terms or conditions of this permit or the Law;
 - (ii) having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
 - (iii) a change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge, or
 - (iv) any reason set forth in the Law and Regulations.
 - b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
12. **Permit Modification - Less Stringent Requirements**
If any permit provisions are based on legal requirements which are lessened or removed, and should no other basis exist for such permit provisions, the permit shall be modified after notice and opportunity for a hearing.
 13. **Civil and Criminal Liability**
Except as authorized by statute and provided in permit conditions on "Bypassing" (Standard Condition B-5) and "Power Failures" (Standard Condition B-7) nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.
 14. **Oil and Hazardous Substance Liability**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, and the Law and Regulations. Oil and hazardous materials discharges must be reported in compliance with the requirements of the Federal Clean Water Act.
 15. **State Laws**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state statute or regulations.
 16. **Property Rights**
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of or violation of federal, state or local laws or regulations.
 17. **Duty to Reapply**
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit 180 days prior to expiration of this permit.
 18. **Toxic Pollutants**
If a toxic effluent standard, prohibition, or schedule of compliance is established, under Section 307(a) of the Federal Clean Water Act for a toxic pollutant in the discharge of permittee's facility and such standard is more stringent than the limitations in the permit, then the more stringent standard, prohibition, or schedule shall be incorporated into the permit as one of its conditions, upon notice to the permittee.
 19. **Signatory Requirement**
All reports, or information submitted to the Director shall be signed (see 40 CFR-122.6).
 20. **Rights Not Affected**
Nothing in this permit shall affect the permittee's right to appeal or seek a variance from applicable laws or regulations as allowed by law.
 21. **Severability**
The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

RECEIVED

MAR 24 2016



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
FORM A - APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

Note ▶ PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

An operating permit for a new or unpermitted facility:
Please indicate the original Construction Permit # _____

An operating permit renewal:
Please indicate the permit # MO- _____ Expiration Date 4-17-17

An operating permit modification:
Please indicate the permit # MO- MO-0117471 Modification Reason: natural background levels

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee) YES NO

2. FACILITY

NAME Advanced Disposal Services Maple Hill Landfill		TELEPHONE NUMBER WITH AREA CODE (660) 773-5459	
		FAX (660) 773-5547	
ADDRESS (PHYSICAL) 31226 Intrepid Road	CITY Macon	STATE MO	ZIP CODE 63552

3. OWNER

NAME Advanced Disposal Services, Inc.		TELEPHONE NUMBER WITH AREA CODE (660) 773-5459	
EMAIL ADDRESS		FAX (660) 773-5547	
ADDRESS (MAILING) 31226 Intrepid Road	CITY Macon	STATE MO	ZIP CODE 63552

3.1 Request review of draft permit prior to public notice? YES NO

4. CONTINUING AUTHORITY

NAME Advanced Disposal Services, Inc.		TELEPHONE NUMBER WITH AREA CODE (660) 773-5459	
EMAIL ADDRESS		FAX (660) 773-5547	
ADDRESS (MAILING) 31226 Intrepid Road	CITY Macon	STATE MO	ZIP CODE 63552

5. OPERATOR

NAME Advanced Disposal Services, Inc.		TELEPHONE NUMBER WITH AREA CODE (660) 773-5547	
CERTIFICATE NUMBER NA		FAX (660) 773-5547	
ADDRESS (MAILING) 31226 Intrepid Road	CITY Macon	STATE MO	ZIP CODE 63552

6. FACILITY CONTACT

NAME Tim Curry		TELEPHONE NUMBER WITH AREA CODE (636) 529-1974	
TITLE Midwest Region Landfill Manager		FAX (636) 529-1975	
E-MAIL ADDRESS tim.curry@advanceddisposal.com			

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

001 SE ¼ NW ¼ Sec 24 T 57N R R16W Macon County
 UTM Coordinates Easting (X): 540228.326 Northing (Y): 4398494.009
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

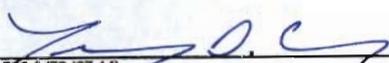
002~~3~~ NW ¼ NW ¼ Sec 24 T 57N R R16W Macon County
 UTM Coordinates Easting (X): 539551.542 Northing (Y): 4298687.657

003~~4~~ NE ¼ SW ¼ Sec 13 T 57N R 15W Macon County
 UTM Coordinates Easting (X): 540061.667 Northing (Y): 4399411.904

004~~5~~ SW ¼ SW ¼ Sec 13 T 57N R 15W Macon County
 UTM Coordinates Easting (X): 539567.418 Northing (Y): 4399018.386

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

001 - SIC 4953 and NAICS 562212 002~~3~~ SIC 4953 and NAICS 562212
 003~~4~~ SIC 4953 and NAICS 652212 004~~5~~ SIC 4953 and NAICS 562212

8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C or 2F. (2F is the U.S. EPA's Application for Storm Water Discharges Associate with Industrial Activity.)	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
B.	Is application for storm water discharges only? If yes, complete Form C or 2F.	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
C.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C or 2F and D.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
E.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
F.	If you are a Class IA CAFO, please disregard part D and E of this section. However, please attach any revision to your Nutrient Management Plan.		
F.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions. See attached map. (PLEASE SHOW LOCATION ON MAP SEE 8 D ABOVE).			
NAME Mike Teeter			
ADDRESS 806 Dogwood Drive		CITY Macon	STATE ZIP CODE MO 63552
10.	I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.		
NAME AND OFFICIAL TITLE (TYPE OR PRINT) Timothy D. Curry - Midwest Region Landfill Manager		TELEPHONE NUMBER WITH AREA CODE (636) 529-1974	
SIGNATURE 		DATE SIGNED 3-17-16	

MO 760-1479 (07-14)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C or 2F, if applicable?
- Form D, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?
- Revised Nutrient Management Plan, if applicable?

8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C or 2F. (2F is the U.S. EPA's Application for Storm Water Discharges Associate with Industrial Activity.)	YES <input type="checkbox"/>	NO <input type="checkbox"/>
B.	Is application for storm water discharges only? If yes, complete Form C or 2F.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
C.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C or 2F and D.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
D.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
E.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
F.	If you are a Class IA CAFO, please disregard part D and E of this section. However, please attach any revision to your Nutrient Management Plan.		
F.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions. See attached map. (PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).			
NAME Robert Buswell			
ADDRESS 27724 Sunset Drive		CITY Macon	STATE ZIP CODE MO 63552
10. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.			
NAME AND OFFICIAL TITLE (TYPE OR PRINT)		TELEPHONE NUMBER WITH AREA CODE	
SIGNATURE		DATE SIGNED	

MO 780-1479 (07-14)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C or 2F, if applicable?
- Form D, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?
- Revised Nutrient Management Plan, if applicable?

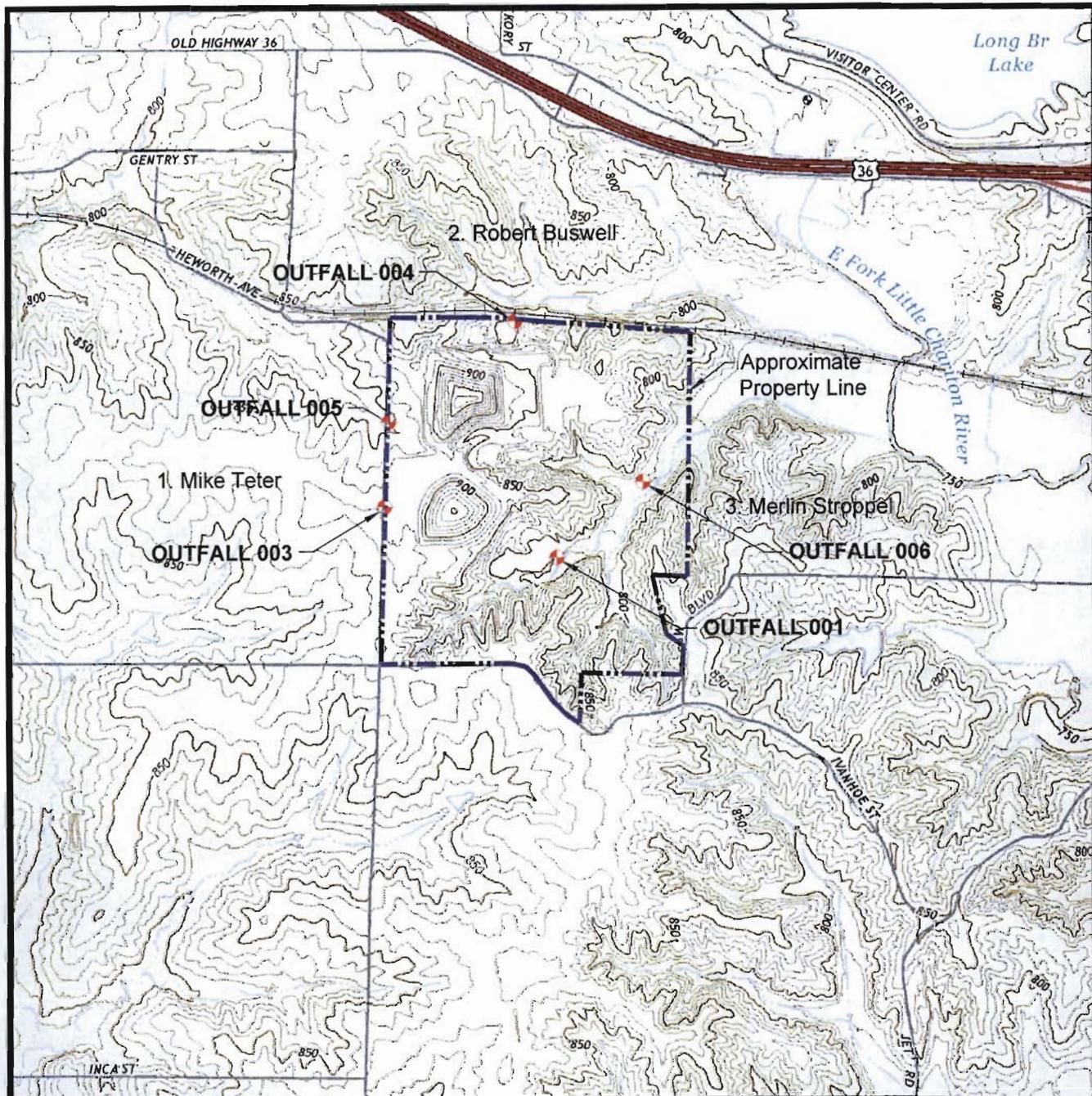
8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C or 2F. (2F is the U.S. EPA's Application for Storm Water Discharges Associate with Industrial Activity.)	YES <input type="checkbox"/>	NO <input type="checkbox"/>
B.	Is application for storm water discharges only? If yes, complete Form C or 2F.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
C.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C or 2F and D.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
D.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
E.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input type="checkbox"/>
F.	If you are a Class IA CAFO, please disregard part D and E of this section. However, please attach any revision to your Nutrient Management Plan.		
F.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions. See attached map. (PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).			
NAME Merlin Stroppel			
ADDRESS RR4		CITY Macon	STATE ZIP CODE MO 63552
10. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.			
NAME AND OFFICIAL TITLE (TYPE OR PRINT)		TELEPHONE NUMBER WITH AREA CODE	
SIGNATURE		DATE SIGNED	

MO 780-1479 (07-14)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.
Submittal of an incomplete application may result in the application being returned.

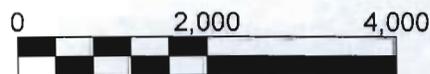
HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C or 2F, if applicable?
- Form D, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?
- Revised Nutrient Management Plan, if applicable?



NOTES

1. Plan adapted from 7.5 minute U.S.G.S. maps for Bevier South and Bevier North, Missouri quadrangles, last revised in 2014.



SCALE IN FEET

Drawn By: WAH	Ck'd By: KJH	App'vd By: KJH
Date: 2-23-16	Date: 2-25-16	Date: 2-25-16



Advanced Disposal Services
Maple Hill Landfill
Macon County, Missouri

**SITE LOCATION
AND TOPOGRAPHY**

Project Number
J004133.21

PLATE 1



Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
001	0.0 acre	47 acres			
003	0.1 acre	6 acres			
004	0.0 acre	96 acres			
005	<1 acre	<1 acre			
006	69 acres	69 acres			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Solid waste, miscellaneous fuel tanks, and operating equipment.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
001	Pond with gated discharge	1U
003	Rock-lined forebay	4A
004	Pond with gated discharge	1U
005	Rock-lined detention basin	1U
006	Rock-lined detention basin	4A

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
Timothy D. Curry, Midwest Reg. Mgr.		3-17-16

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Sample summary attached.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

NA

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

Yes (list all such pollutants below)

No (go to Section IX)

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

Yes (list all such pollutants below)

No (go to Section IX)

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Pace Analytical Services, Inc.	1241 Bellevue Street Suite 9 Green Bay, WI 54302	920-469-2436	See current permit

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (Type Or Print) Timothy D. Curry, Midwest Regional Landfill Manager	B. Area Code and Phone No. (636) 529-1974
C. Signature 	D. Date Signed 3-17-16

IRON CONCENTRATION SUMMARY
MAPLE HILL LANDFILL
MACON COUNTY, MISSOURI

DATE	OUTFALL			
	001	003	004	005
3Q12	ND	ND	ND	ND
4Q12	ND	ND	ND	ND
1Q13	200	ND	300	ND
2Q13	160	ND	ND	11,000
3Q13	ND	ND	ND	ND
4Q13	ND	ND	ND	ND
1Q14	ND	ND	ND	ND
2Q14	ND	ND	ND	ND
3Q14	114	ND	4,090	3,850
4Q14	1,770	1,630	4,310	5,910
1Q15	702	732	606	2,910
2Q15	1,620	1,000	5,300	4,730
3Q15	ND	ND	ND	ND
4Q15	655	714	3,880	ND
Minimum	114	714	300	2,910
Maximum	1,770	1,630	5,300	11,000

ND = No discharge

Concentrations in micrograms per liter ($\mu\text{g/L}$).