

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, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0003263

Owner: City of Kansas City, Missouri c/o Kansas City Aviation Dept.  
Address: 601 Brasilia Avenue, Kansas City, MO 64153

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Kansas City International Airport (MCI) Maintenance Base  
Facility Address: 9200 NW 112<sup>th</sup> St., Kansas City, MO 64153

Legal Description: See page two (2)  
Latitude/Longitude: See page two (2)

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

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

**FACILITY DESCRIPTION**

See page two (2)

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

September 5, 2008  
Effective Date

February 28, 2011  
Modification Date

  
Sara Parker Pauley, Director, Department of Natural Resources

September 4, 2013  
Expiration Date  
MO 780-0041 (10-93)

  
Dorothy Franklin, Acting Director, Kansas City Regional Office

**FACILITY DESCRIPTION (continued):**

**Outfall #003 - Outfall eliminated.**

**Outfall #004 – Industrial/storm water run-off – SIC #4581 – No Certified Operator Required.**

Lined spill containment pond / oil/water separator/ storm water run-off from West & Northwest portion of facility.

Actual Flow is variable

Design Flow is variable (8.4 MGD via oil/water separator)

Legal Description: SW ¼, SE ¼, Sec. 22, T52N, R34W, Platte County

Latitude/Longitude: +3917407/-09442059

Receiving Stream: Unnamed tributary to Todd Creek (U)

First Classified Stream and ID: Todd Creek (C) (00316)

USGS Basin & Sub-watershed No.: (10240012 – 120002)

**Outfall #006 – Storm water run-off – SIC #4581 – No Certified Operator Required.**

Storm water run-off from Northeast portion of facility.

Actual Flow is variable.

Design Flow is variable.

Legal Description: SW ¼, SW ¼, Sec. 23, T52N, R34W, Platte County

Latitude/Longitude: +3917514/-09441255

Receiving Stream: Unnamed tributary to Todd Creek (U)

First Classified Stream and ID: Todd Creek (C) (00316)

USGS Basin & Sub-watershed No.: (10240012 – 120002)

**Outfall #009 – Storm water run-off – SIC #4581 – No Certified Operator Required.**

Storm water run-off from Northwest and North Central portion of facility.

Actual Flow is variable.

Design Flow is variable.

Legal Description: SE ¼, SE ¼, Sec. 22, T52N, R34W, Platte County

Latitude/Longitude: +3917560/-09441502

Receiving Stream: Unnamed tributary to Todd Creek (U)

First Classified Stream and ID: Todd Creek (C) (00316)

USGS Basin & Sub-watershed No.: (10240012 – 120002)

**Outfall #010 - Outfall eliminated.**

**Outfall #011 - Outfall eliminated.**

**Outfall #012 – Industrial/storm water run-off – SIC #4581 – No Certified Operator Required.**

Lined spilled containment pond / oil/water separator/ storm water run-off from East portion of facility.

Actual Flow is variable.

Design Flow is variable (9.84 MGD via oil/water separator)

Legal Description: SE ¼, SW ¼, Sec. 23, T52N, R34W, Platte County

Latitude/Longitude: +3917492/-09441204

Receiving Stream: Unnamed tributary to Todd Creek (U)

First Classified Stream and ID: Todd Creek (C) (00316)

USGS Basin & Sub-watershed No.: (10240012 – 120002)

**Outfall #013 – Storm water run-off – SIC #4581 – No Certified Operator Required.**

Storm water run-off from the Southwest portion of facility.

Actual Flow is variable.

Design Flow is variable.

Legal Description: SW ¼, NE ¼, Sec. 27, T52N, R34W, Platte County

Latitude/Longitude: +3917288/-09442067

Receiving Stream: Unnamed tributary to Brush Creek (U)

First Classified Stream and ID: Brush Creek (C) (00276)

USGS Basin & Sub-watershed No.: (10240012 – 120002)

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 3 of 9	
					PERMIT NUMBER MO-0003263	
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>						
Flow (Note 1)	MGD	*		*	once/quarter**	24 hr. estimate
Chemical Oxygen Demand <sub>5</sub>	mg/L	90		60	once/quarter**	grab
Total Suspended Solids	mg/L	70		50	once/quarter**	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter**	grab
Total Petroleum Hydrocarbons	mg/L	20		15	once/quarter**	grab
Ethylbenzene	mg/L	*		*	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
Sulfate + Chloride	mg/L	*		*	once/quarter**	grab
Sulfate	mg/L	*		*	once/quarter**	grab
Copper, Total Recoverable	mg/L	0.064		0.064	once/quarter**	grab
Zinc, Total Recoverable	mg/L	*		*	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2009</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
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 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 4 of 9	
					PERMIT NUMBER MO-0003263	
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 from the effective date of this permit 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 #004</u>						
Flow (Note 1)	MGD	*		*	once/quarter**	24 hr. estimate
Chemical Oxygen Demand <sub>5</sub>	mg/L	90		60	once/quarter**	grab
Total Suspended Solids	mg/L	70		50	once/quarter**	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter**	grab
Total Petroleum Hydrocarbons	mg/L	20		15	once/quarter**	grab
Ethylbenzene	mg/L	*		*	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
Sulfate + Chloride	mg/L	1000		*	once/quarter**	grab
Sulfate	mg/L	*		*	once/quarter**	grab
Copper, Total Recoverable	mg/L	0.026		0.013	once/quarter**	grab
Zinc, Total Recoverable	mg/L	*		*	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2010</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Priority Pollutants Volatile Organic Compounds (Note 2)	mg/L	*			once/permit cycle in September of 4 <sup>th</sup> year.	grab
MONITORING REPORTS SHALL BE SUBMITTED BY THE 28 <sup>TH</sup> DAY OF THE FOLLOWING MONTH; THE FIRST REPORT IS DUE <u>October 28<sup>th</sup>, 2012.</u>						
<b>B. STANDARD CONDITIONS</b>						
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 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 5 of 9	
					PERMIT NUMBER MO-0003263	
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 #006, #009, #012, &amp; #013</u>						
Flow (Note 1)	MGD	*		*	once/quarter**	24 hr. estimate
Chemical Oxygen Demand <sub>5</sub>	mg/L	90		60	once/quarter**	grab
Total Suspended Solids	mg/L	70		50	once/quarter**	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter**	grab
Total Petroleum Hydrocarbons	mg/L	20		15	once/quarter**	grab
Ethylbenzene	mg/L	*		*	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
Copper, Total Recoverable	mg/L	0.064		0.064	once/quarter**	grab
Zinc, Total Recoverable	mg/L	*		*	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2009</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
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 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 6 of 9	
					PERMIT NUMBER MO-0003263	
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 from the effective date of this permit 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, #009, #012, &amp; #013</u>						
Flow (Note 1)	MGD	*		*	once/quarter**	24 hr. estimate
Chemical Oxygen Demand <sub>5</sub>	mg/L	90		60	once/quarter**	grab
Total Suspended Solids	mg/L	70		50	once/quarter**	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter**	grab
Total Petroleum Hydrocarbons	mg/L	20		15	once/quarter**	grab
Ethylbenzene	mg/L	*		*	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
Copper, Total Recoverable	mg/L	0.026		0.013	once/quarter**	grab
Zinc, Total Recoverable	mg/L	*		*	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2010</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Priority Pollutants Volatile Organic Compounds (Note 2)	mg/L	*			once/permit cycle in September of 4 <sup>th</sup> year.	grab
MONITORING REPORTS SHALL BE SUBMITTED BY THE 28 <sup>TH</sup> DAY OF THE FOLLOWING MONTH; THE FIRST REPORT IS DUE <u>October 28<sup>th</sup>, 2012</u> .						
<b>B. STANDARD CONDITIONS</b>						
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 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)**

\* Monitoring requirement only.

\*\* See table below for quarterly sampling:

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

\*\*\* 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.

Note 1 – Storm water flow estimates are to be made using a method based on total precipitation received on a site during a storm event and the runoff coefficient for surface characteristics in the watershed at each outfall.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 2 – Priority Pollutants

Benzene	Tetrachloroethene
Bromodichloromethane	Toluene
Bromoform	1,1,1-Trichloroethane
Carbon tetrachloride	1,1,2-Trichloroethane
Chlorobenzene	Trichloroethane
Chloroethane	Trichlorofluoromethane
2-Chloroethylvinyl ether	Vinyl Chloride
Chloroform	
Chloromethane	
1,2-Dichlorobenzene	
1,3-Dichlorobenzene	
1,4-Dichlorobenzene	
1,1-Dichloroethane	
1,2-Dichloroethane	
1,1-Dichloroethene	
1,2-Dichloroethene	
1,2-Dichloropropene	
1,3-Dichloropropene	
Methylene chloride	
1,1,2,2-Tetrachloroethane	

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. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.
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.

D. SPECIAL CONDITIONS (continued)

5. Report as no-discharge when a discharge does not occur during the report period.
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. 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.
8. Water that has accumulated in secondary containment areas must be examined for possible contamination and tested if necessary. When the presence of contaminants is indicated, water shall be treated before release or taken to a permitted treatment facility, if it does not meet permit effluent limitations or other Special Conditions.
9. This permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). **For existing facilities**, the SWPPP, including the assessments and evaluations noted below, must be revisited and revised (if necessary) within 30 days of reissuance of coverage under this operating permit. The SWPPP must be kept on-site and should not be sent to DNR 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 document:  
  
Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities, (Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992.  
  
The SWPPP must include the following:
  - (a) An assessment of all storm water discharges associated with aircraft vehicle and maintenance (including aircraft and vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), and equipment cleaning activities. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
  - (b) A listing of Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater.
  - (c) A schedule for implementing the BMPs, if necessary.
  - (d) The SWPPP must include a schedule for monthly site inspections and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days and the Department must be notified by letter. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
  - (e) A provision for designating an individual to be responsible for environmental matters.



D. SPECIAL CONDITIONS (continued)

10. 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 action means the facility took steps to eliminate the deficiency.
11. The discharge of deicing/anti-icing chemicals is not authorized. Dumping of unused, out of specification, rinsate or product directly into waters of the state or in areas that have potential to reach waters of the state is prohibited.
12. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that are transported, stored, or used for maintenance, cleaning or repair shall be managed according to the provisions of RCRA and CERCLA.

E. SCHEDULE OF COMPLIANCE

Submitted Quarterly Discharge Monitoring Reports, for this facility, have documented exceedances of Missouri's Water Quality Standards – Protection of Aquatic Life Acute Criteria. American Airlines (permittee) has indicated that the source of Total Residual Copper at this facility is unknown. This operating permit contains one (1) year Interim and Final Effluent Limitations Tables for all permitted outfalls to allow the permittee to locate and eliminate or control the source of Total Residual Copper. The below Schedule of Compliance shall be implemented by the permittee.

1. The permittee shall conduct a study to locate the source(s) of Total Residual Copper at this permitted facility. The permittee shall submit, to the Department's Water Protection Program, a report within six (6) months of the effective date of this operating permit. The report shall contain the following:
  - (a) A detailed explanation indicating the source(s) of the Total Residual Copper;
  - (b) Steps that the permittee is to implement to either control or eliminate the source of Total Residual Copper; and
  - (c) The Final Effluent Limitations shall be met within (1) year issuance of this operating permit.
2. If the permittee desires an extended allowance of time to either locate the source(s) of the Total Residual Copper, or to implement the steps needed to control or eliminate the source(s) of Total Residual Copper, then the permittee shall submit an Extension Request Letter. The Extension Request Letter shall include the following:
  - (a) A detailed explanation on why more time is needed;
  - (b) A reasonable time extension; and
  - (c) All appropriate applications for modification of this operating permit, including applicable modification fees.
3. No extension, for the Final Effluent Limitations, all outfalls, shall be granted for more than three (3) years from the issuance date of this operating permit, in accordance with [10 CSR 20-7.031(10)].

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0003263**  
**AMERICAN AIRLINES – MCI MAINTENANCE & ENGINEERING BASE**

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" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

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

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

This Factsheet is for a Major ☒, Minor ☐, Industrial Facility ☒; Variance ☐;  
Master General Permit ☐; General Permit Covered Facility ☐; and/or permit with widespread public interest ☐.

**Part I – Facility Information**

Facility Address: 9200 NW 112<sup>th</sup> Street  
Facility Type: IND  
Facility SIC Code(s): 4581 – Airports, Flying Fields, and Airport Terminals  
7622 – Radio & Television Repair  
7629 – Electrical & Electronic Repair Shops, Not-elsewhere classified  
7699 – Repair Shops and Related Services, Not-elsewhere classified

**Facility Description:**

Discharges from this facility consist of only storm water run-off from various areas of the property. All other industrial and/or domestic activities that generate wastewater (either industrial or domestic) are collected and/or treated at treatment facilities covered under separate operating permits (either state or local). Maintenance operations carried out include: metal fabrication, paint booths, chemical stripping, pneumatics, hydraulics, wheel and tire, landing gear, metal working, aircraft interiors, engine repair, inspections, and cleaning. Additionally, the facility consists of a hazardous waste storage building, chemical products storage building, and small support buildings. Also, facility and maintenance shops and support activities such as plumbing, electrical and wood crates fabrication and painting operations.

Deicing/Anti-icing activities is conducted within a bermed area and wastewater from this area is collected and treated at a treatment facility not covered under this operating permit.

Due to the size of this facility and the number of outfalls that are contained in this operating permit, each outfall will contain a more detailed description of treatment when applicable.

Application Date: April 24, 2007  
Expiration Date: November 26, 2007

#### Water Quality History:

Staff drafting this operating permit renewal and corresponding fact sheet reviewed the last five (5) years for any non-compliance; results as follows:

Quarterly Discharge Monitoring Reports (QDMRs) submitted by the permittee for **Outfall #003** yielded the following: pH violations in May 2003, March 2006, and March 2007; Oil & Grease (O&G) violations in March 2004 and May 2005.

QDMRs for **Outfall #004**: Total Suspended Solids (TSS) violation November 2003, O&G violation May 2005, and pH violation March 2007.

QDMRs for **Outfall #006**: O&G and TSS March 2004, O&G May 2005.

QDMRs for **Outfall #009**: O&G and TSS March 2004, TSS March 2005, O&G September 2005.

QDMRs for **Outfall #012**: TSS March 2004, O&G May 2005

QDMRs for **Outfall #013**: O&G May 2005 and pH March 2006.

#### **OUTFALL(S) TABLE:**

OUTFALL *	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
003	Eliminated – please see Appendix A			
004	Variable	Primary	Storm water runoff	1.3
006	Variable	BMP	Storm water runoff	1.6
009	Variable	BMP	Storm water runoff	1.6
010	Eliminated – please see Appendix A			
011	Eliminated – please see Appendix A			
012	Variable	Primary	Storm water runoff	1.6
013	Variable	BMP	Storm water runoff	5.0

BMP – Best Management Practices

\* - Outfalls #001, #002, #007, and #008 were eliminated during previous state operating permit cycles.

**Please See APPENDIX A – OUTFALL LOCATION, DESCRIPTION, AND REMOVAL DETERMINATION**

#### Comments:

Several of the outfalls in the previously permitted state operating permit have been eliminated and locational data for most has been modified. Please see **APPENDIX A – OUTFALL LOCATION, DESCRIPTION, AND REMOVAL DETERMINATION** for a more detailed explanation of locational data modification and justification for elimination.

## **Part II – Operator Certification Requirements**

As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Not Applicable ☒;

This facility is not required to have a certified operator.

### **Part III – Receiving Stream Information**

#### **APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category 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.

Please mark the correct designated waters of the state categories of the receiving stream.

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

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 1<sup>st</sup> 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 Todd Creek	U	---	General Criteria	10240012	Central Plains / Nishnabotna / Platte
Todd Creek***	C	00316	LWW, AQL		
Unnamed tributary to Brush Creek (Outfall #013 only)	U	---	General Criteria		
Brush Creek (Outfall #013 only)*****	C	00276	LWW, AQL, WBC****		

\* - 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

\*\*\* - A Use Attainable Analysis was conducted in March 2005 on Todd Creek, submitted to the Clean Water Commission on April 2005, was recommended that WBC use be removed, and the Commission removed the use on September 7, 2005.

\*\*\*\* - UAA conducted on 3/05/2005 and use was retained on September 7, 2005.

\*\*\*\*\* - The classified portion of Brush Creek is approximately 5.4 miles downstream from Outfall #013.

#### **RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed tributary to Todd Creek (U)	0.0	0.0	0.0
Unnamed tributary to Brush Creek (U)	0.0	0.0	0.0

#### **MIXING CONSIDERATIONS TABLE:**

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

#### **RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

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

### **ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

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

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

### **ANTI-BACKSLIDING:**

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

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

### **ANTIDEGRADATION:**

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

☒ - Renewal no degradation proposed and no further review necessary.

### **APPLICABLE PERMIT PARAMETERS:**

Effluent parameters contained in Factsheets and Missouri State Operating Permits are obtained from Technology Based Effluent Limit (TBEL), Missouri's Effluent Regulations [10 CSR 20-7.015], Missouri's Water Quality Standards [10 CSR 20-7.031], previous Missouri State Operating Permits, and from Operating Permit Applications.

### **BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:**

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

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

### **COMPLIANCE AND ENFORCEMENT:**

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

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

### **PRETREATMENT PROGRAM:**

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

☒ - At this time, the permittee is not required to implement and enforce a Pretreatment Program.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

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.

☒ - A modified RPA was conducted on appropriate parameters. This modified version of the RPA used submitted Discharge Monitoring Reports vs. Acute Criteria for appropriate pollutants at a hardness of 193 mg/L. The maximum concentration of the reported pollutant was compared with its appropriate Acute Criteria. Please see **APPENDIX B – RPA RESULTS** for a more detailed explanation.

**REMOVAL EFFICIENCY:**

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

☒ - This facility is not a POTW. Influent monitoring is not being required to determine percent removal.

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

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

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

### **SCHEDULE OF COMPLIANCE (SOC):**

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

☒ - 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)]. Due to the fact that this is storm water run-off and not treated wastewater, the time given will be one (1) year. If the permittee desires more time to be given, then the permittee shall request the additional time with reason needed for the additional time. The operating permit will contain a SOC to allow the permittee to address the Total Residual Copper, if desired. The SOC will also contain language indicating that if the permittee so chooses not to attempt to address the Copper permitted limits, then they are agreeing to the Copper Limitations as established in the Final Effluent Limitation Table of the operating permit.

### **STORM WATER POLLUTION PREVENTION PLAN (SWPPP):**

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

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

### **VARIANCE:**

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

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

### **WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

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

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

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

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

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

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

**WLA MODELING:**

☒ - A WLA study was either not submitted or determined not applicable by department staff.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

As per [10 CSR 20-7.031(1)(CC)], a toxicity test conducted under specified laboratory conditions on specific indicator organism; and as per [40 CFR Part 122.2], the aggregate toxic effect of an effluent measured directly by a toxicity test.

☒ - As required or recommended; requiring scheduled WET testing is reasonably appropriate to include in site-specific Missouri State Operating Permits for discharge to waters of the state issued under the National Pollutant Discharge Elimination System. WET testing requirements are established by the WET Test Policy, Section 308 of the Federal Water Pollution Control Act, and [40 CFR § 136]. WET test will be required by all facilities meeting the following criteria:

- All major (domestic & industrial) discharge facilities ☒
- Facilities that are exceeding or routinely exceed their design flow ☐
- Industrial dischargers or other dischargers that may alter their production processes throughout the year ☐
- Facilities that may handle large quantities of toxic substances, or substances that are toxic in large amounts ☐
- Facilities that have been granted seasonal relief of numeric limitations ☐
- Facilities that have WQBEL for toxic substances ☐
- Domestic dischargers  $\leq 22,500$  gpd ☐
- Municipal domestic  $\geq 22,500$  gpd ☐

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

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

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

☒ - This facility does not discharge to a 303(d) listed stream.



## **Part V – Effluent Limits Determination**

### ***Outfall #004***

#### **EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	
COD	MG/L	1	90		60	YES	**
TSS	MG/L	1	70		50	NO	
SETTLEABLE SOLIDS	mL/L/hr	1/9	1.5		1.0	YES	**
TOTAL PETROLEUM HYDROCARBONS	MG/L	1	20		15	NO	
ETHYLBENZENE	MG/L	2/8	*		*	YES	***
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 – 9.0
OIL & GREASE	MG/L	1	15		10	NO	
SULFATE + CHLORIDE	MG/L	2/8	1000		*	YES	**
SULFATE	MG/L	2/8	*		*	YES	**
COPPER, TOTAL RECOVERABLE	µG/L	2/3	25.8		12.9	YES	64/64 µG/L
ZINC, TOTAL RECOVERABLE	µG/L	2/3	*		*	YES	371/371 µG/L
PRIORITY POLLUTANTS – VOLATILE ORGANIC COMPOUNDS	Please see VOC in the Derivation and Discussion Section below.						
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

\*\*\* - Ethylbenzene has replaced the previous permitted effluent limitation BETX.

\*\*\*\* - Previous permit limitation was for Chromium, Total Recoverable at 0.12 mg/L as a MDL & AML.

#### **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 operating permits with stormwater runoff. Department staff drafting this fact sheet has reviewed the renewal applications and believe that this facility is able to meet this limitation upon issuance of this operating permit. Effluent limitations have been retained from previous state operating permit.
- **Total Suspended Solids (TSS)**. Effluent limitations have been retained from previous state operating permit and are believed to be protective of the receiving streams water quality standards.
- **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 operating permits with stormwater runoff.
- **Total Petroleum Hydrocarbons**. Effluent limitations have been retained from the previous state operating permit and are believed to be protective of the receiving stream water quality standards.

- **Ethylbenzene.** This parameter has replaced the parameter of BETX, which was in the previous state operating permit. Quarterly Discharge Monitoring Reports indicated that BETX samples results were below detection limitation. Due to this it is staff best professional judgment that this parameter have a monitoring only requirement rather than effluent limitations. Upon future renewals of this operating permit, department staff will conduct a statistical Reasonable Potential Analysis to determine the fate of this parameter.
- **pH.** Effluent limitation of 6.5 – 9.0 is applicable as per [10 CSR 20-7.031(4)(E)]. pH is to be measured in pH Standard Units and is not to be averaged.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Sulfate + Chloride.** 1000 mg/L as Daily Maximum as per [10 CSR 20-7.031(4)(L)]. As part of the renewal application Form C, Part A, Item K, Sulfate was sampled (one sample) and resulted in 87.8 mg/L. As per the TSD, staff multiplied 87.8 mg/L by 13.2 (multiplying factor) to determine the projected maximum concentration possible, equals 1,158.96 mg/L. At this time, Missouri Water Quality Standards do not have Sulfate criterion; however, there is a Sulfate plus Chloride criteria. It is staff best professional judgment that this limitation is needed in order to protect the receiving streams water quality. In addition to this parameter, it is staff best professional judgment that a Sulfate monitoring only requirement be added to determine the actual concentration of sulfate being discharged. Upon future renewals of this operating permit, department staff will conduct a statistical Reasonable Potential Analysis to determine the fate of this parameter.
- **Sulfate.** Monitoring only requirement, please see **Sulfate + Chloride** above for justification.

#### **Metals**

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and water hardness = 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	CHRONIC
Copper	0.960	N/A*

The source of the metals in Outfall #004 are due to storm water run-off; therefore, Chronic Criteria is not applicable.

- **Copper, Total Recoverable.** Staff drafting this operating permit and Fact Sheet conducted a Reasonable Potential Analysis (please see **Appendix B- RPA Outfall #004**) and determined that this pollutant does have potential to violate Missouri’s Water Quality Standards. Therefore, Protection of Aquatic Life Acute Criteria = 25 µg/L is applicable. This facility discharges to an unclassified tributary; therefore Mixing Considerations are not applicable. The default CV value is 0.6.

$$\text{Acute} = 25/0.960 = 26.0 \text{ } \mu\text{g/L}$$

$$\text{WLA}_a = 26.0 \text{ } \mu\text{g/L}$$

$$\text{LTA}_a = 26.0(0.321) = 8.3 \text{ } \mu\text{g/L}$$

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

$$\text{MDL} = 8.3(3.11) = 25.8 \text{ } \mu\text{g/L}$$

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

$$\text{AML} = 8.3(1.55) = 12.9 \text{ } \mu\text{g/L}$$

$$[\text{CV} = 0.6, 95^{\text{th}} \text{ Percentile, } n = 4]$$

- **Zinc, Total Recoverable.** Staff drafting this operating permit and Fact Sheet conducted a modified RPA and determined that this pollutant does not have potential to violate Missouri's Water Quality Standards. However, monitoring for this pollutant shall remain in the operating permit (please see **Appendix B- RPA Outfall #004**). For future renewals or modifications of this operating permit, staff will conduct additional RPAs to determine the fate of this pollutant.
- **Priority Pollutants – Volatile Organic Compounds.** Monitoring only requirement; however, due to the fact that this test has resulted in samples below detection limit, it is staffs best professional judgment that the monitoring frequency be reduced to once per permit cycle.
- **Minimum Sampling and Reporting Frequency Requirements.** Sampling and reporting frequency requirements of Once/quarter has been retained from previous state operating permit.

#### ***Outfall #006, #009, #012, & #013***

#### **EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	
COD	MG/L	1	90		60	YES	**
TSS	MG/L	1	70		50	NO	
SETTLEABLE SOLIDS	mL/L/hr	1/9	1.5		1.0	YES	**
TOTAL PETROLEUM HYDROCARBONS	MG/L	1	20		15	NO	
ETHYLBENZENE	MG/L	2/8	*		*	YES	***
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 – 9.0
OIL & GREASE	MG/L	1	15		10	NO	
COPPER, TOTAL RECOVERABLE	µG/L	2/3	25.8		12.9	YES	64/64 µG/L
ZINC, TOTAL RECOVERABLE	µG/L	2/3	*		*	YES	371/371 µG/L
PRIORITY POLLUTANTS – VOLATILE ORGANIC COMPOUNDS	Please see VOC in the Derivation and Discussion Section below.						
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

\*\*\* - Ethylbenzene has replaced the previous permitted effluent limitation BETX.

\*\*\*\* - Previous permit limitation was for Chromium, Total Recoverable at 0.12 mg/L as a MDL & AML.

#### **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               |                                    |

#### **OUTFALLS #006, #009, #012, #013 – 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 operating permits with stormwater runoff. Department staff drafting this fact sheet has reviewed the renewal applications and believe that this facility is able to meet this limitation upon issuance of this operating permit. Effluent limitations have been retained from previous state operating permit.

- **Total Suspended Solids (TSS).** Effluent limitations have been retained from previous state operating permit and are believed to be protective of the receiving streams water quality standards.
- **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 operating permits with stormwater runoff.
- **Total Petroleum Hydrocarbons.** Effluent limitations have been retained from the previous state operating permit and are believed to be protective of the receiving stream water quality standards.
- **Ethylbenzene.** This parameter has replaced the parameter of BETX, which was in the previous state operating permit. Quarterly Discharge Monitoring Reports indicated that BETX samples results were below detection limitation. Due to this it is staff best professional judgment that this parameter have a monitoring only requirement rather than effluent limitations. Upon future renewals of this operating permit, department staff will conduct a statistical Reasonable Potential Analysis to determine the fate of this parameter.
- **pH.** Effluent limitation of 6.5 – 9.0 is applicable as per [10 CSR 20-7.031(4)(E)]. pH is to be measured in pH Standard Units and is not to be averaged.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

### Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and water hardness = 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	CHRONIC
Copper	0.960	N/A *

\* - The source of the metals in Outfall #006 are due to storm water run-off; therefore, Chronic Criteria is not applicable.

- **Copper, Total Recoverable.** Staff drafting this operating permit and Fact Sheet conducted a Reasonable Potential Analysis (please see **Appendix B- RPA Outfall #004**) and determined that this pollutant does have potential to violate Missouri’s Water Quality Standards. Therefore, Protection of Aquatic Life Acute Criteria = 25 µg/L is applicable. This facility discharges to an unclassified tributary; therefore Mixing Considerations are not applicable. The default CV value is 0.6.

$$\text{Acute} = 25/0.960 = 26.0 \text{ } \mu\text{g/L}$$

$$\text{WLA}_a = 26.0 \text{ } \mu\text{g/L}$$

$$\text{LTA}_a = 26.0(0.321) = 8.3 \text{ } \mu\text{g/L}$$

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

$$\text{MDL} = 8.3(3.11) = 25.8 \text{ } \mu\text{g/L}$$

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

$$\text{AML} = 8.3(1.55) = 12.9 \text{ } \mu\text{g/L}$$

$$[\text{CV} = 0.6, 95^{\text{th}} \text{ Percentile, } n = 4]$$

- **Zinc, Total Recoverable.** Staff drafting this operating permit and Fact Sheet conducted a modified RPA and determined that this pollutant does not have potential to violate Missouri’s Water Quality Standards. However, monitoring for this pollutant shall remain in the operating permit (please see **Appendix B** for a more detailed rationale of RPA for each outfall). For future renewals or modifications of this operating permit, staff will conduct additional RPAs to determine the fate of this pollutant.

- **Priority Pollutants – Volatile Organic Compounds**. Monitoring only requirement; however, due to the fact that this test has resulted in samples below detection limit, it is staffs best professional judgment that the monitoring frequency be reduced to once per permit cycle.
- **Minimum Sampling and Reporting Frequency Requirements**. Sampling and reporting frequency requirements of Once/quarter has been retained from previous state operating permit.

## **Part VI – 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.

☒ - The initial Public Notice period for this operating permit was from April 4, 2008, to May 7, 2008. Due to comments sent in from the permittee and several items (i.e. limitations, parameters, and terms and conditions of the permit) have been modified. Due to the amount of modification an additional Public Notice period for this operating permit is tentatively schedule to begin on June 27, 2008.

**DATE OF FACT SHEET:** MARCH 11, 2008

**REVISED:** JUNE 20, 2008

### **COMPLETED BY:**

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## **Part VII – Appendices**

### **APPENDIX A – OUTFALL LOCATION, DESCRIPTION, AND REMOVAL DETERMINATION**

#### **Outfall #003 - Removed:**

This outfall is being removed based on the fact that it is not an actual outfall, but rather it flows by constructed means to Outfall #012. Therefore, any additional parameters or more stringent requirements that Outfall #003 would have in addition to Outfall #012 will be implemented in the operating permit. However, it is the best professional judgment of department staff drafting this operating permit and Fact Sheet that the locational data remain, only in the Fact Sheet. This determination is due to the fact that Outfall #003 may be determined to be an internal monitoring location if so required by the department (e.g., violations at Outfall #012 that could be due to Outfall #003's contribution). If that does happen, then a new outfall number will need to be assigned.

Outfall #003 is comprised of industry storm water run-off from the South and Southeast portion of this facility and primary treated wastewater from a containment point. Primary treatment is in the form of a lined spill containment pond, an Oil/Water separator/ with sludge retained in the SPCC pond.

Legal Description: W ½, NW ¼, Sec. 26, T52N, R34W, Platte County  
Latitude/Longitude: +3917333/-09441382  
Receiving Stream: Unnamed Tributary to Todd Creek (U)  
First Classified Stream and ID: Todd Creek (C) (00316)  
USGS Basin & Sub-watershed No: (10240012 - 120002)

#### **Outfall #004**

The department's Interactive Map Viewer program, which obtained the data from WQIS has an incorrect location. Outfall #004 is comprised of storm water run-off from the West and Northwest portion of this facility and primary treated wastewater from the SPCC pond on Copper Road. Primary treatment is in the form of a spill containment pond and an Oil/Water separator. Actual locational data for this outfall was obtained from a site map from the Kansas City Aviation Department with measurements made from the department's Interactive Map Viewer program.

Legal Description: SW ¼, SE ¼, Sec. 22, T52N, R34W, Platte County  
Latitude/Longitude: +3917407/-0944059  
Receiving Stream: Unnamed Tributary to Todd Creek (U)  
First Classified Stream and ID: Todd Creek (C) (00316)  
USGS Basin & Sub-watershed No: (10240012 - 120002)

#### **Outfall #006**

The department's Interactive Map Viewer program, which obtained the data from WQIS, has an incorrect location. Outfall #006 is comprised of storm water run-off from the Northeast Central and Northeast portion of this facility. Actual locational data for this outfall was obtained from a site map from the Kansas City Aviation Department with measurements made from the department's Interactive Map Viewer program.

Legal Description: SE ¼, SW ¼, Sec. 23, T52N, R34W, Platte County  
Latitude/Longitude: +3917514/-09441255  
Receiving Stream: Unnamed Tributary to Todd Creek (U)  
First Classified Stream and ID: Todd Creek (C) (00316)  
USGS Basin & Sub-watershed No: (10240012 - 120002)

#### **Outfall #009**

The department's Interactive Map Viewer program, which obtained the data from WQIS, has an incorrect location. Outfall #009 is comprised of storm water run-off from the Northwest Central portion of this facility. Actual locational data for this outfall was obtained from a site map from the Kansas City Aviation Department with measurements made from the department's Interactive Map Viewer program.

Legal Description: SE ¼, SE ¼, Sec. 22, T52N, R34W, Platte County  
Latitude/Longitude: +3917560/-09441502  
Receiving Stream: Unnamed Tributary to Todd Creek (U)  
First Classified Stream and ID: Todd Creek (C) (00316)  
USGS Basin & Sub-watershed No: (10240012 - 120002)

**APPENDIX A (CONTINUED):**

Outfall #010 - Removed

This outfall is also being removed based on the fact that it is not an actual outfall. Stormwater from this previously permitted area (capped & closed Hazardous Waste Landfill) flows to a collection ditch, which then flows to the already permitted Outfall #012.

Outfall #011 - Removed

This outfall is being eliminated. Industrial wastewater from the Utility Building and Electrical Substation has been determined the responsibility of City of Kansas City, Kansas City Aviation Department. The permittee concurs with this agreement.

Outfall #012

The department's Interactive Map Viewer program, which obtained the data from WQIS, has an incorrect location. Outfall #012 is comprised of storm water run-off from the East portion of this facility and Industrial/storm water run-off from the previously permitted Outfall #003, which contains a lined spill containment pond, oil/water separator, and sludge retained in the SPCC pond. Actual locational data for this outfall was obtained from a site map from the Kansas City Aviation Department with measurements made from the department's Interactive Map Viewer program.

In addition to Outfall #012 receiving Outfall #003 effluent, it also receives storm water run-off from a capped Hazardous Waste landfill. It is staff best professional judgment that this landfill has been properly capped and is not exposed to the elements as well as not allowing leachate to discharge to Outfall #012.

Legal Description: SE ¼, SW ¼, Sec. 23, T52N, R34W, Platte County  
Latitude/Longitude: +3917492/-09441204  
Receiving Stream: Unnamed Tributary to Todd Creek (U)  
First Classified Stream and ID: Todd Creek (C) (00316)  
USGS Basin & Sub-watershed No: (10240012 - 120002)

Outfall #013

The department's Interactive Map Viewer, which obtained the data from WQIS, has incorrect location. Outfall #012 is comprised of storm water run-off from the Southwest portion of this facility. Actual locational data for this outfall was obtained from a site map from Kansas City Aviation Department with measurements made from the department's Interactive Map Viewer program.

This outfall has been requested by the permittee to be removed; however, due to the fact that this outfall has had effluent violations and discharges to an unclassified tributary to Brush Creek (waters of the state), it can not be removed at this time.

Legal Description: SW ¼, NE ¼, Sec. 27, T52N, R34W, Platte County  
Latitude/Longitude: +3917288/-09442067  
Receiving Stream: Unnamed Tributary to Brush Creek (U)  
First Classified Stream and ID: Brush Creek (C) (00276)  
USGS Basin & Sub-watershed No: (10240012 - 120002) Initially  
(10240011 – 100001) by man made conveyance (ditch & culvert)

## APPENDIX B – RPA RESULTS:

For purposes of the below RPAs for all outfalls

CMC = Criterion Maximum Concentration – used for Acute Criteria

MRC = Maximum Reported Concentration – obtained from either renewal application or from submitted Discharge Monitoring Reports.

ND = Non-detects or rather the samples concentration was below the detection limit.

S = The number of samples with a reportable concentration vs ND limits is considered sufficient to keep the applicable parameter as a monitoring only requirement.

### OUTFALL #004

CONSTITUENT	CMC*	MRC*	# OF SAMPLES	# OF ND	REASONABLE POTENTIAL	REMOVE (Y/N)
CHROMIUM (III), TR	976	8	19	18	NO	Y
CYANIDE, AMENABLE TO CHLOR.	22	ND	19	19	NO	Y
COPPER, TR	25	<b>50</b>	19	--	<b>YES</b>	N
LEAD, TR	131	7	19	17	NO	Y
NICKEL, TR	817	7	19	18	NO	Y
ZINC, TR	205	51	19	S	NO	N

N/A – Not Applicable

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

### OUTFALL #006

CONSTITUENT	CMC*	MRC*	# OF SAMPLES	# OF ND	REASONABLE POTENTIAL	REMOVE (Y/N)
CHROMIUM (III), TR	976	8	19	17	NO	Y
CYANIDE, AMENABLE TO CHLOR.	22	ND	19	19	NO	Y
COPPER, TR	25	<b>58</b>	19	--	<b>YES</b>	N
LEAD, TR	131	20	19	16	NO	Y
NICKEL, TR	817	14	19	16	NO	Y
ZINC, TR	205	112	19	S	NO	N

N/A – Not Applicable

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

### OUTFALL #009

CONSTITUENT	CMC*	MRC*	# OF SAMPLES	# OF ND	REASONABLE POTENTIAL	REMOVE (Y/N)
CHROMIUM (III), TR	976	10	18	16	NO	Y
CYANIDE, AMENABLE TO CHLOR.	22	ND	18	18	NO	Y
COPPER, TR	25	<b>50</b>	18	--	<b>YES</b>	N
LEAD, TR	131	8	18	17	NO	Y
NICKEL, TR	817	8	18	16	NO	Y
ZINC, TR	205	103	18	S	NO	N

N/A – Not Applicable

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



**APPENDIX B – RPA RESULTS (CONTINUED):**

***OUTFALL #012***

CONSTITUENT	CMC*	MRC*	# OF SAMPLES	# OF ND	REASONABLE POTENTIAL	REMOVE (Y/N)
CHROMIUM (III), TR	976	8	19	16	NO	Y
CYANIDE, AMENABLE TO CHLOR.	22	ND	19	19	NO	Y
COPPER, TR	25	<b>41</b>	19	--	<b>YES</b>	N
LEAD, TR	131	12	19	18	NO	Y
NICKEL, TR	817	10	19	14	NO	Y
ZINC, TR	205	93	19	S	NO	N

N/A – Not Applicable

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

***OUTFALL #013***

CONSTITUENT	CMC*	MRC*	# OF SAMPLES	# OF ND	REASONABLE POTENTIAL	REMOVE (Y/N)
CHROMIUM (III), TR	976	8	19	14	NO	Y
CYANIDE, AMENABLE TO CHLOR.	22	ND	19	19	NO	Y
COPPER, TR	25	<b>49</b>	19	--	<b>YES</b>	N
LEAD, TR	131	20	19	18	NO	Y
NICKEL, TR	817	ND	19	19	NO	Y
ZINC, TR	205	69	19	S	NO	N

N/A – Not Applicable

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