

Missouri Clean Water Commission
Truman Hotel and Conference Center
1510 Jefferson Street
Jefferson City, Missouri 65109

September 5, 2012

**Administrative Hearing Commission's Recommended Decision Regarding City of
Columbia Permit Appeal No. 12-1496 CWC**

Issue: The City of Columbia filed an appeal of the Permit that the Department of Natural Resources issued for the Columbia Municipal Power Plant. The Administrative Hearing Commission dismissed the case for lack of jurisdiction because the appeal was not filed in a timely manner.

Background: On July 6, 2012 the Department issued and mailed a permit to the City of Columbia for the Municipal Power Plant. On August 9, 2012, the Water Protection Program received an appeal of conditions in the permit. The Program forwarded the appeal and it was received by the Administrative Hearing Commission on August 13, 2012. Both August 9, 2012 and August 13, 2012 were more than thirty days after July 6, 2012.

Recommended Action: Staff recommends that the Commission adopt the Administrative Hearing Commission's recommendation to dismiss the case for lack of jurisdiction because it was not filed in a timely manner. The Commission may 1) adopt the Administrative Hearing Commission's recommendation, 2) change findings of fact or conclusions of law, or 3) vacate or modify the recommended decision. If the Commission either changes findings of fact or conclusions of law or vacates or modifies the recommended decision, it must state the specific reason(s) in writing for the change(s).

Suggested Motion Language: "I move that the Commission adopt the Administrative Hearing Commission's Recommended Decision."

Attachments:

- Administrative Hearing Commission's Recommended Decision, Case No. 12-1496 CWC
- City of Columbia's letter dated August 3, 2012

Before the
Administrative Hearing Commission
State of Missouri



RECEIVED

AUG 23 2012

MISSOURI
ATTORNEY GENERAL

CITY OF COLUMBIA,

Petitioner,

vs.

DEPARTMENT OF NATURAL
RESOURCES,

Respondent

No. 12-1496 CWC

RECOMMENDED DECISION

We recommend that the Missouri Clean Water Commission ("CWC") dismiss this case for lack of jurisdiction because the complaint was untimely filed.

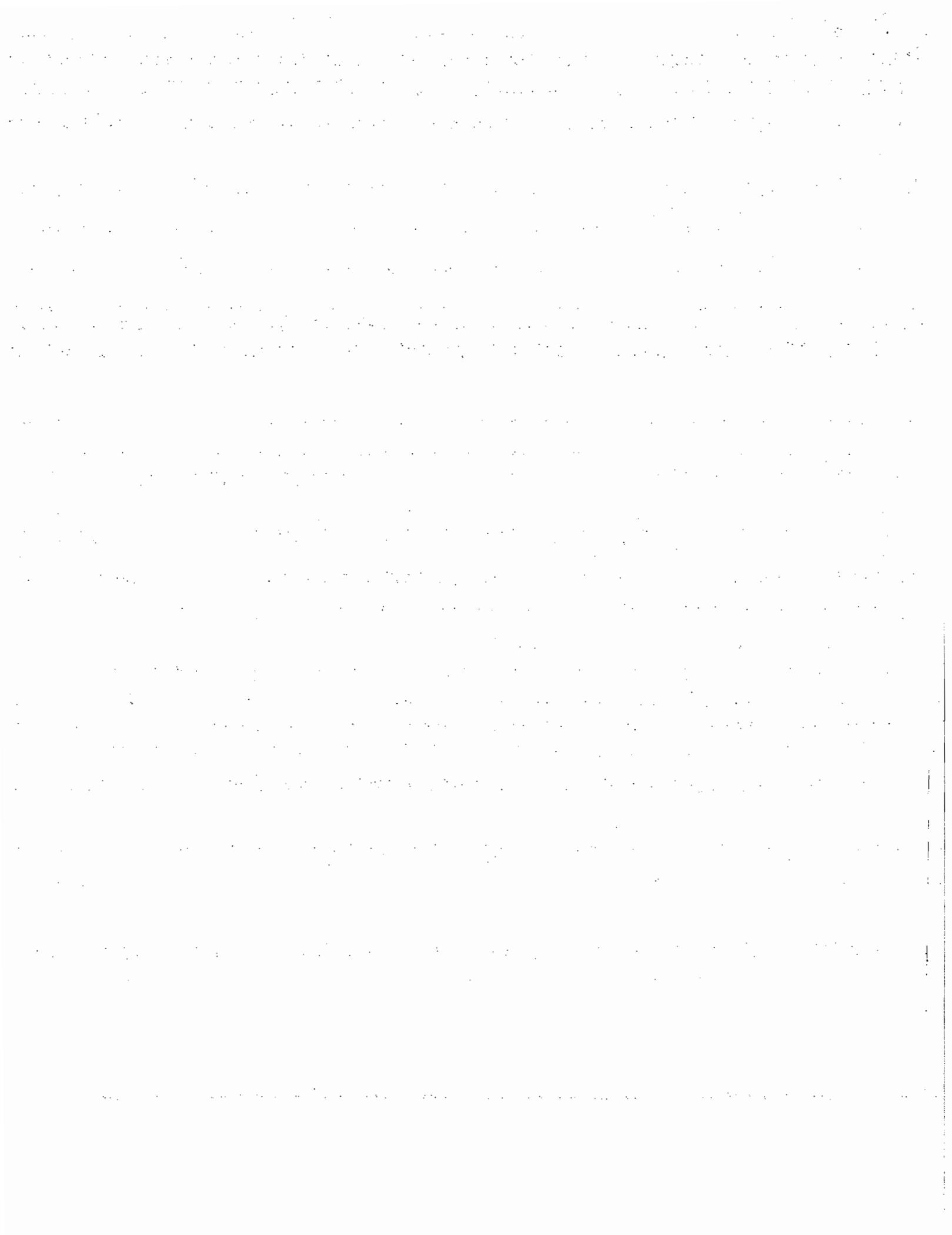
Procedure

On August 13, 2012,¹ the City of Columbia ("the City") filed a complaint appealing a decision by the Missouri Department of Natural Resources ("DNR") issuing it a permit with conditions to which it objects. We issued our notice of complaint/notice of hearing on August 13, 2012. We set the hearing for September 19, 2012. On August 17, 2012, DNR filed an answer and motion to dismiss.

Findings of Fact

1. On July 6, 2012, DNR mailed/issued a permit to the City.

¹The appeal was received by the "Water Protection Program" on August 9, 2012, and forwarded it to us. Therefore, it was filed when we received it, on August 13, 2012.



2. On August 9, 2012, the Water Protection Program received a complaint appealing DNR's decision issuing the City a permit with conditions to which it objects. The complaint had been mailed to the following address:

Secretary of the Missouri Clean Water Commission
Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102

3. On August 13, 2012, the City's complaint was received by this Commission. It was not mailed to us by certified or registered mail.

4. August 9 and August 13, 2012 were more than thirty days after July 6, 2012.

Conclusions of Law

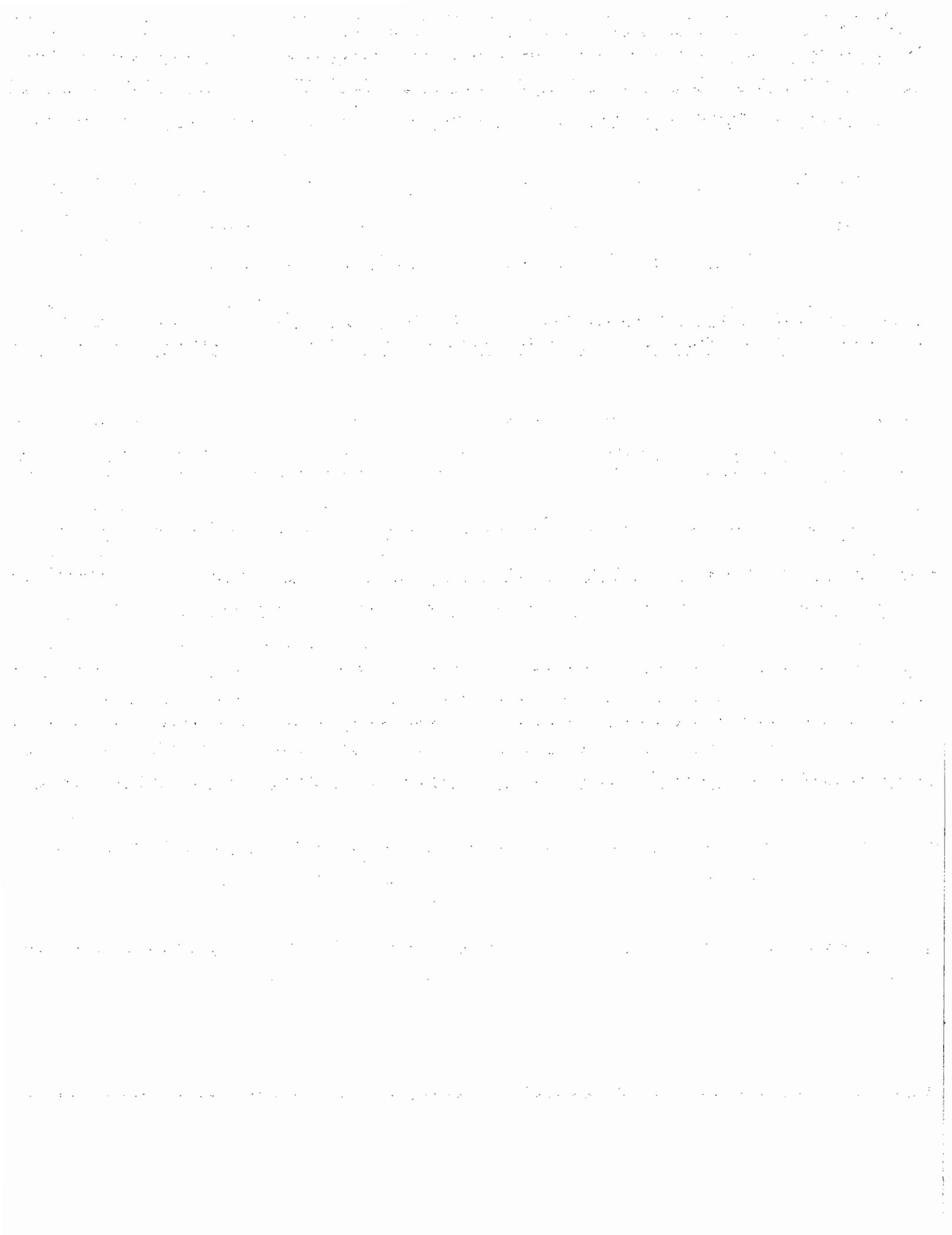
We have jurisdiction over this type of case.² Section 644.051 states:

6. The director shall promptly notify the applicant in writing of his or her action and if the permit is denied state the reasons therefore. The applicant may appeal to the commission from the denial of a permit or from any condition in any permit by filing notice of appeal with the commission **within thirty days of the notice of denial or issuance of the permit.**

Section 621.250 also refers to the filing deadline:

3. Any decision by the director of the department of natural resources that may be appealed as provided in subsection 1 of this section shall contain a notice of the right of appeal in substantially the following language: "If you were adversely affected by this decision, you may appeal to have the matter heard by the administrative hearing commission. To appeal, you must file a petition with the administrative hearing commission **within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier.** If any such petition is sent by registered or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered

²Section 621.250. Statutory references, unless otherwise noted, are to RSMo Supp. 2011.



mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission.”

(Emphasis added.)³

Because the complaint was not mailed to us by certified or registered mail, it was filed the date we received it.⁴ The complaint was filed beyond the statutory thirty-day deadline. It was untimely filed.

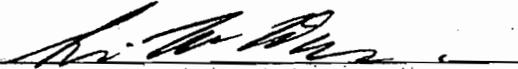
An administrative agency has no jurisdiction to hear a petition filed out of time.⁵ If an agency has no jurisdiction to hear the petition, it cannot reach the merits of the case and can only exercise the inherent power to dismiss.⁶

We recommend that the CWC dismiss this case.

Summary

We recommend that the CWC dismiss this case because the complaint was untimely filed.

SO ORDERED on August 23, 2012.

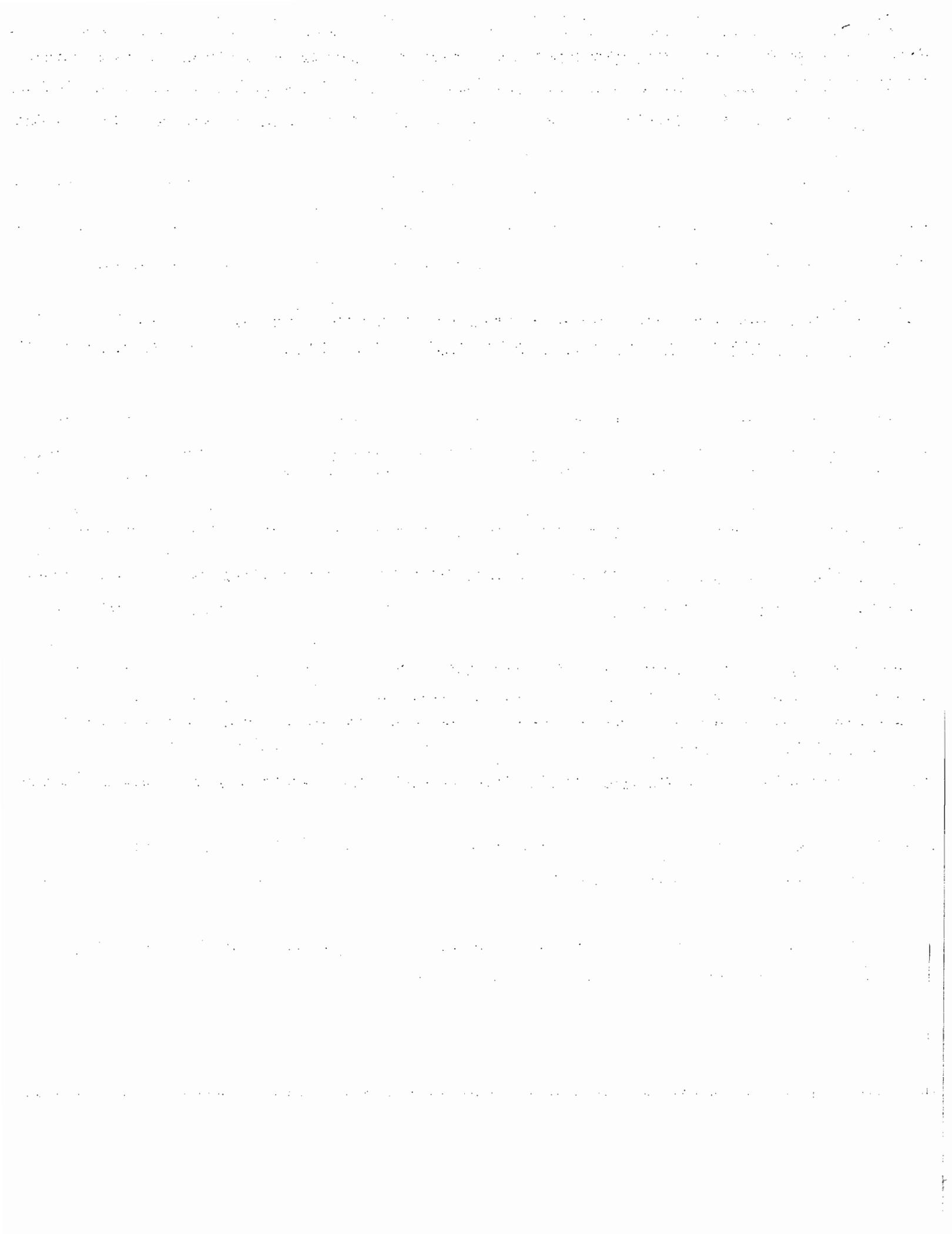

SREENIVASA RAO DANDAMUDI
Commissioner

³We equate “issuance of the permit” with “the date this decision was mailed or the date it was delivered, whichever date was earlier” as the date that starts the deadline.

⁴Section 621.205, RSMo. 2000.

⁵*Community Fed. Sav. & Loan Assoc. v. Director of Revenue*, 752 S.W.2d 794, 799 (Mo. banc), cert. denied, 488 U.S. 893 (1988).

⁶*Oberreiter v. Fullbright Trucking*, 24 S.W.3d 727, 729 (Mo. App., E.D. 2000).





CITY OF COLUMBIA, MISSOURI

WATER AND LIGHT DEPARTMENT
COLUMBIA TERMINAL RAILROAD

August 3, 2012

AUG - 9 2012

WATER PROTECTION PROGRAM

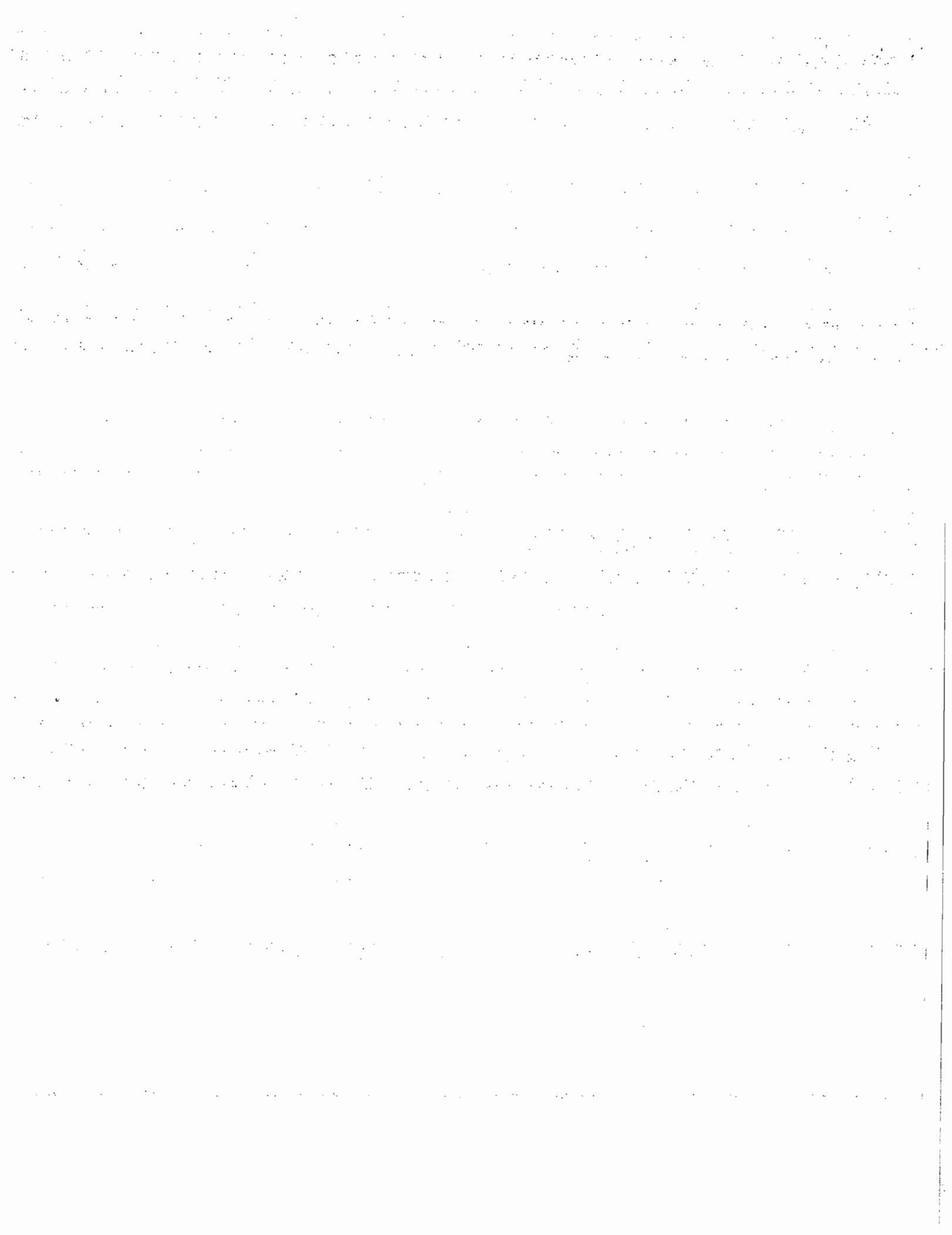
Secretary of the Missouri Clean Water Commission
Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102

Subject: Statement of Reasons for Appealing the July 6, 2012 Operating Permit for the
Columbia Municipal Power Plant

Dear Secretary of the Clean Water Commission:

The City of Columbia (City) has reviewed the July 6, 2012 operating permit for the Columbia Municipal Power Plant (MO-0004979) and finds there is sufficient cause for appeal. The permit includes several updates and revisions that significantly increase the regulatory burden for the City. The City contends not all conditions within the final permit are regulatory requirements or are necessary. Although the City disputes some conditions within the permit, we commend the Missouri Department of Natural Resources (MDNR or 'Department') for their cooperative efforts to date. We note that the Department has already made significant permit revisions per the City's request, addressed two rounds of comments, and held a meeting with the City prior to the public notice period.

Irrespective of the Department's commendable efforts, the City disagrees with the necessity of some permit conditions. Therefore, in accordance with Section 644.051.6 of the Missouri Clean Water Law, the City is appealing the permit by filing this notice of appeal with the Missouri Clean Water Commission within thirty days of issuance of the permit.



Secretary of the Missouri Clean Water Commission

August 3, 2012

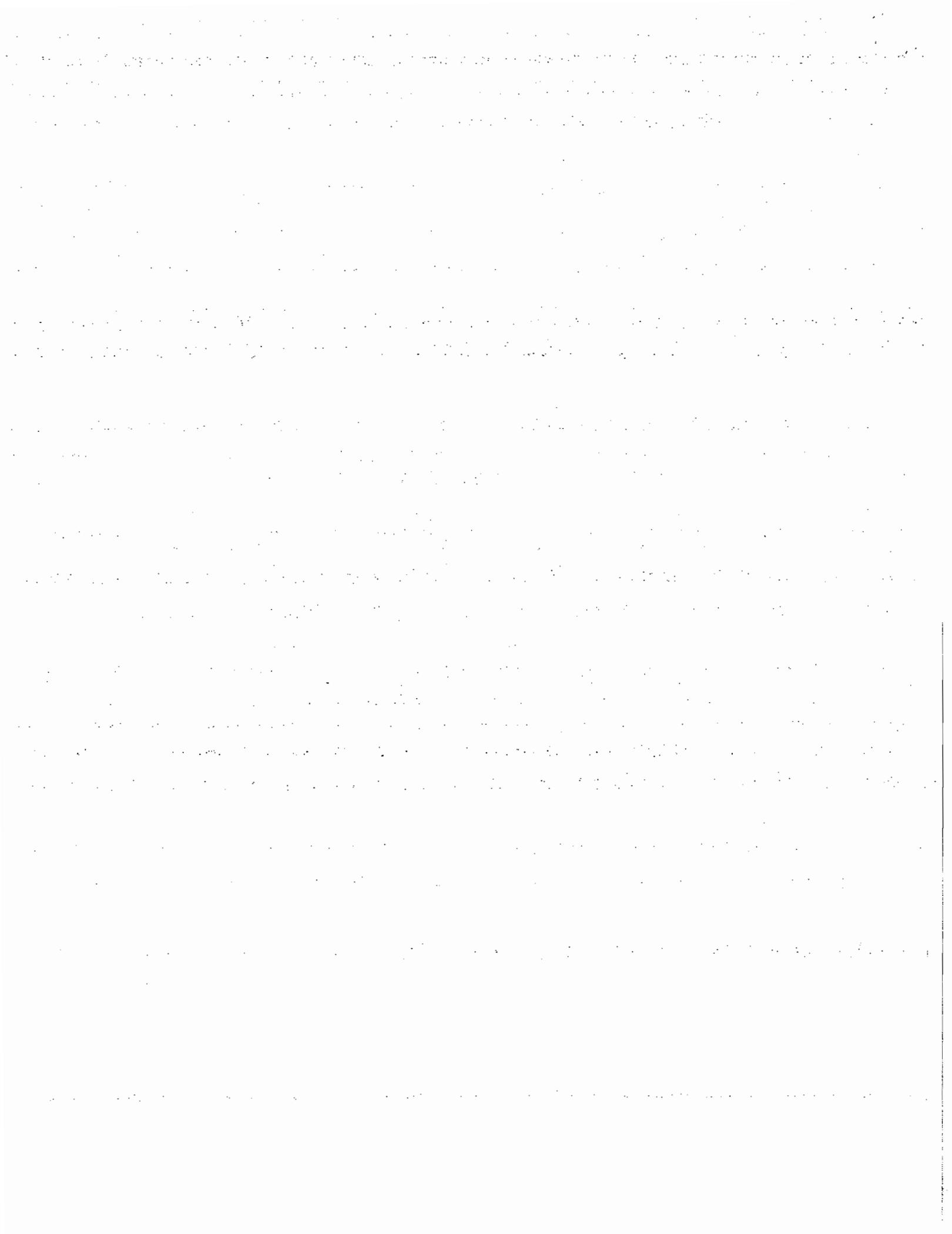
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The following serves as the statement of reasons for the appeal.

Statement 1. MDNR provided no response to the City's February 21, 2012 comment letter. On February 21, 2012, the City provided MDNR comments on the January 20, 2012 draft permit (i.e., within the permit comment period), but received no response from the Department. Additionally, the final permit, issued July 6, 2012, did not address any of the City's comments (summarized in Statements 2-4 below). Therefore, there is cause for the City to request a hearing before the commission to address these outstanding issues.

Statement 2. Stormwater Pollution Prevention Plan (SWPPP) requirements included under Special Condition 12 are not consistently applied by the Department to other industrial permits nor is it a regulatory requirement they be included as permit conditions. Although there is a regulatory basis for requiring a SWPPP, there is flexibility with regards to its contents. The required elements of a SWPPP can be site-specific and is subject to guidance. Therefore, the City should be afforded the opportunity to develop the contents of the SWPPP outside the confines of permit special conditions 12(a) through 12(f). Additionally, we note that the Department does not consistently apply special conditions 12(a) through 12(f) to other coal power plant permits, further suggesting it is not a regulatory requirement to include elements of a SWPPP in a permit.

Statement 3. Consistent with other permits, the Department should add flexibilities to special condition #15 regarding priority pollutants in the cooling tower blowdown. Special condition #15 is impractical for the City to comply with and regulations (i.e., 40 CFR 423.15(j)(1) authorize additional flexibilities. The intent of 40 CFR 423.15(j)(1) is to prevent the introduction of toxics and biocides into the waste stream from cooling tower maintenance chemicals. As written, special condition #15 provides zero flexibility for addressing pollutants introduced to the waste stream outside the cooling towers (i.e., there shall be *no detectable amounts* of the 126 Priority Pollutants). It is unlikely the City will be able to demonstrate non-detectable concentrations for all priority pollutants in the cooling town blowdown (e.g., copper), regardless of what maintenance chemicals are or are not used. Therefore, additional flexibilities as afforded by 40 CFR 423.15(j)(3) should be included in the permit. Additionally, we note that the Department has already applied such flexibilities to other power plant permits.



Secretary of the Missouri Clean Water Commission

August 3, 2012

Page 3

Statement 4. Special condition #16 regarding reporting requirements for the disposal of CCRs is not a regulatory requirement and is not consistently applied to other similar permits. Special condition #16 regarding reporting requirements for the disposal coal combustion residuals (CCR) is not a regulatory requirement. While we recognize that CCRs are potential water quality contaminants, we respectfully suggest this issue is best addressed in the Fact Sheet as the Department has done so with other permits. The U.S. Environmental Protection Agency is developing the first-ever national rules on the disposal of CCRs and there is currently no regulatory requirement to include this special condition in the permit. Given that the Department has not included special condition #16 in other recently issued power plant permits and there is currently no regulatory requirement to do so, the City is justified in requesting its removal from the permit.

Again, the City would like to acknowledge the Department's commendable effort to date in working with the City on the Columbia Municipal Power Plant permit. However, we respectfully suggest that some conditions within the permit are unwarranted and serve as the basis for our permit appeal. Please forward any future correspondence concerning this appeal to my attention.

Sincerely,



Christian Johanningsmeier, PE
Power Production Superintendent

Enclosure

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-0004979
Owner: City of Columbia
Address: 701 East Broadway, Columbia, MO 65201
Continuing Authority: Same as above
Address: Same as above
Facility Name: Columbia Municipal Power Plant
Facility Address: 1501 Business Loop 70 East, Columbia, MO 65201
Legal Description: SEE PAGE TWO
Latitude/Longitude: 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

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.

July 6, 2012
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

July 5, 2017
Expiration Date

John Madros, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall #001 – POTW/Power Plant – SIC #4911

East and West Cooling Towers blowdown and overflow / coal pile stormwater runoff overflow
Design flow is 0.075 MGD

Legal Description: Landgrant 2753, Boone County
UTM Coordinates: X=559181.565, Y=4313015.557

Receiving Stream: Unnamed tributary to Bear Creek (U)
First Classified Stream and ID: Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.: (10300102-0706)

Outfall #002 – POTW/Power Plant – SIC #4911

Boiler Blowdown / zeolite water softener / reverse osmosis / ash pit sump / ash sluice / coal pile runoff / miscellaneous water uses
through plant drains/ settling basin
Design flow is 0.87 MGD

Legal Description: Landgrant 2753, Boone County
UTM Coordinates: X=559024.113, Y=4313222.076

Receiving Stream: Unnamed tributary to Bear Creek (U)
First Classified Stream and ID: Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.: (10300102-0706)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 3 of 17

PERMIT NUMBER MO-0004979

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 three (3) years from the date of issuance 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/month | 24 hr. estimate |
| Total Suspended Solids | mg/L | 50 | | 50 | once/month | grab |
| Biochemical Oxygen Demand ₅ | mg/L | * | | * | once/month | grab |
| Chemical Oxygen Demand | mg/L | * | | * | once/month | grab |
| pH – Units | SU | ** | | ** | once/month | grab |
| Oil & Grease | mg/L | 20 | | 15 | once/month | grab |
| Total Residual Chlorine | mg/L | * | | * | once/month | grab |
| Free Available Chlorine | mg/L | 0.5 | | 0.2 | once/month | grab |
| Chloride + Sulfate | mg/L | * | | * | once/month | grab |
| Chloride | mg/L | * | | * | once/month | grab |

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 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 4 of 17

PERMIT NUMBER MO-0004979

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 three (3) years from the date of issuance 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) | | | | | | |
| Aluminum, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Antimony, Total Recoverable | mg/L | * | | * | once/quarter*** | grab |
| Arsenic, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Beryllium, 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 |
| Copper, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Cyanide, Amenable to Chlorination | µg/L | * | | * | once/quarter*** | grab |
| Iron, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Lead, 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 |
| Hardness, Total | mg/L | * | | * | once/quarter*** | grab |

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

| | | | | | | |
|---------------------------|------|------|--|------|-----------|------|
| Polychlorinated Biphenyls | µg/L | **** | | **** | once/year | grab |
|---------------------------|------|------|--|------|-----------|------|

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2013

B. STANDARD CONDITIONS

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 5 of 17

PERMIT NUMBER MO-0004979

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 two (2) years before the date of expiration 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 |
| Outfall #001 (Note 1) | | | | | | |
| Flow | MGD | * | | * | once/month | 24-hr. estimate |
| Total Suspended Solids | mg/L | 50 | | 50 | once/month | grab |
| Biochemical Oxygen Demand ₅ | mg/L | * | | * | once/month | grab |
| Chemical Oxygen Demand | mg/L | * | | * | once/month | grab |
| pH - Units | SU | ** | | ** | once/month | grab |
| Oil & Grease | mg/L | 15 | | 10 | once/month | grab |
| Total Residual Chlorine (Note 2) | mg/L | 0.017 (0.13ML) | | 0.008 (0.13ML) | once/month | grab |
| Free Available Chlorine | mg/L | 0.5 | | 0.2 | once/month | grab |
| Chloride + Sulfate | mg/L | 1000 | | 1000 | once/month | grab |
| Chloride | mg/L | 377.8 | | 188.3 | once/month | grab |

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2015. 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 6 of 17

PERMIT NUMBER MO-0004979

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 two (2) years before the date of expiration 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 |
| Outfall #001 (Note 1) | | | | | | |
| Aluminum, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Antimony, Total Recoverable | mg/L | * | | * | once/quarter*** | grab |
| Arsenic, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Beryllium, 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 |
| Copper, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Cyanide, Amenable to Chlorination (Note 3) | µg/L | * | | * | once/quarter*** | grab |
| Iron, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Lead, 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 |
| Hardness, Total | mg/L | * | | * | once/quarter*** | grab |

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

| | | | | | | |
|---------------------------|------|------|--|------|-----------|------|
| Polychlorinated Biphenyls | µg/L | **** | | **** | once/year | grab |
|---------------------------|------|------|--|------|-----------|------|

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2012.

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 7 of 17

PERMIT NUMBER MO-0004979

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 three (3) years from the date of issuance 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 #002</u> | | | | | | |
| Flow | MGD | * | | * | once/month | 24 hr. estimate |
| Total Suspended Solids | mg/L | 50 | | 50 | once/month | grab |
| Biochemical Oxygen Demand ₅ | mg/L | * | | * | once/month | grab |
| Chemical Oxygen Demand | mg/L | * | | * | once/month | grab |
| pH - Units | SU | ** | | ** | once/month | grab |
| Oil & Grease | mg/L | 20 | | 15 | once/month | grab |
| Total Residual Chlorine | mg/L | * | | * | once/month | grab |
| Free Available Chlorine | mg/L | 0.5 | | 0.2 | once/month | grab |
| Chloride + Sulfate | mg/L | * | | * | once/month | grab |
| Chloride | mg/L | * | | * | once/month | grab |
| Copper, Total Recoverable | mg/L | 1.0 | | 1.0 | once/month | grab |
| Iron, Total Recoverable | µg/L | * | | * | once/month | grab |

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 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 Parts I, II, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 8 of 17

PERMIT NUMBER MO-0004979

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 three (3) years from the date of issuance 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 #002</u> | | | | | | |
| Aluminum, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Antimony, Total Recoverable | mg/L | * | | * | once/quarter*** | grab |
| Arsenic, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Beryllium, 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 |
| Cyanide, Amenable to Chlorination | µg/L | * | | * | once/quarter*** | grab |
| Lead, 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 |
| Hardness, Total | mg/L | * | | * | once/quarter*** | grab |

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

| | | | | | | |
|------------------------------------|------------|---------------------------|--|------|-----------|-------------|
| Whole Effluent Toxicity (WET) test | % Survival | SEE SPECIAL CONDITION #17 | | | once/year | Composite** |
| Polychlorinated Biphenyls | µg/L | **** | | **** | once/year | grab |

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2012.

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 9 of 17

PERMIT NUMBER MO-0004979

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 two (2) years before the date of expiration 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 |
| Outfall #002 | | | | | | |
| Flow | MGD | * | | * | once/month | 24 hr. estimate |
| Total Suspended Solids | mg/L | 50 | | 50 | once/month | grab |
| Biochemical Oxygen Demand, | mg/L | * | | * | once/month | grab |
| Chemical Oxygen Demand | mg/L | * | | * | once/month | grab |
| pH - Units | SU | ** | | ** | once/month | grab |
| Oil & Grease | mg/L | 15 | | 10 | once/month | grab |
| Total Residual Chlorine (Note 2) | mg/L | 0.017 (0.13ML) | | 0.008 (0.13ML) | once/month | grab |
| Free Available Chlorine | mg/L | 0.5 | | 0.2 | once/month | grab |
| Chloride + Sulfate | mg/L | 1000 | | 1000 | once/month | grab |
| Chloride | mg/L | 377.8 | | 188.3 | once/month | grab |
| Copper, Total Recoverable | µg/L | 40.6 | | 15.8 | once/month | grab |
| Iron, Total Recoverable | µg/L | 1825.6 | | 627.6 | once/month | grab |

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2015. 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 Parts I, II, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, 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 two (2) years before the date of expiration 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 |
| Outfall #002 | | | | | | |
| Aluminum, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Antimony, Total Recoverable | µg/L | * | | * | once/quarter*** | grab |
| Arsenic, Total Recoverable | mg/L | * | | * | once/quarter*** | grab |
| Beryllium, 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 |
| Cyanide, Amenable to Chlorination (Note 3) | µg/L | * | | * | once/quarter*** | grab |
| Lead, 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 |
| Hardness, Total | mg/L | * | | * | once/quarter*** | grab |

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

| | | | | | | |
|------------------------------------|------------|---------------------------|--|------|-----------|-------------|
| Whole Effluent Toxicity (WET) test | % Survival | SEE SPECIAL CONDITION #17 | | | once/year | Composite** |
| Polychlorinated Biphenyls | µg/L | **** | | **** | once/year | grab |

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2013.

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 (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

**** There shall be no discharge of polychlorinated biphenyl compounds per the applicable section of 40 CFR 423.13. A sufficiently sensitive test method must be used.

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 1 - A representative grab sample shall be collected within the first 60 minutes of storm events that result in a discharge from Outfall #001. Storm events include rainfall as well as run-off from the melting of frozen precipitation.

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- (b) Do not chemically dechlorinate if it is not needed to meet the limits in your permit.

Note 3 - This permit contains a Cyanide, Amenable to Chlorination monitoring requirement. The permittee will conduct analyses in accordance with Cyanide by Automated Colorimetric Method #335.3 from the U.S. EPA National Exposure Research Laboratory, or equivalent, and report actual analytical values

Note 4 - Test procedures for the analysis of pollutants shall be in accordance with the references methods listed in Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015(9)(A) 2. unless alternates are approved by the Department. The facility shall ensure that the testing lab uses an approved test method with a detection limit below water quality criteria for any sampling conducted, even for parameters that are listed as monitoring only, as the data collected will be used to determine if limitations need to be established.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.
The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. Report as no-discharge when a discharge does not occur during the report period.
3. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
4. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate that the units in a particular location cannot operate at or below this level of chlorination.

C. SPECIAL CONDITIONS (continued)

5. 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.

6. 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.

7. Report as no-discharge when a discharge does not occur during the report period.

8. Effluent shall not elevate or depress the temperature of the first classified receiving stream more than five degrees Fahrenheit.

9. 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.

10. 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.

11. 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.

C. SPECIAL CONDITIONS (continued)

12. The permit requires development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 60 days and implemented within 90 days of the permit issuance. 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:

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.

The SWPPP must include the following:

- (a) An assessment of all stormwater discharges associated with the facility. 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.
 - (d) Provisions for preventing the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehousing activities and prevent the contamination of stormwater from these substances.
 - (e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of areas having materials exposed to stormwater. Proof of training shall be submitted on request of the Department.
 - (f) The SWPPP must include a schedule for twice per month site inspections and brief written reports. At least one of the monthly inspections must be conducted after a precipitation event that causes runoff to occur onsite, including snow melt. If runoff does not occur during the month, the facility shall conduct an inspection on the last business day of the month regardless of precipitation. The inspections must include observations and evaluations of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days and the actions taken to correct the deficiencies shall be included with the written report. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five years. These must be made available to the Department upon request.
 - (g) A provision for designating an individual to be responsible for environmental matters. The provision shall also include alternates in the event that the primary responsible person is not available.
 - (h) Inspection reports must be kept on site with the SWPPP and retained in accordance with the Records, Retention, and Recording section listed below. These must be made available to DNR personnel upon request.
 - (i) Provisions to reduce or control the tracking of ash and residue from ash loading areas. This shall include housekeeping procedures such as dust suppression, containment, or clearing loading areas, floors, and roadways of ash.
 - (j) Provisions for inspecting all residue-hauling (e.g. ash, etc) vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body, and how these vehicles will be repaired, including timelines, if found inadequate.
 - (k) Provisions that prevent contamination of stormwater runoff from delivery vehicles/railcars that carry significant materials (e.g. coal, biomass, etc) to and from the facility, and how the facility will deal with leakage or spillage from vehicles/railcars or containers.
13. The purpose of the SWPPP and the BMPs listed therein 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.
14. 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.
15. APPENDIX A TO 40 CFR PART 423—126 PRIORITY POLLUTANTS – The facility must designate an internal sample point for each cooling tower blowdown and sample the locations at least once per year. There shall be no detectable amount (see Special Condition #14) of the 126 Priority Pollutants as listed in Appendix A to Part 423 [40 CFR 423.15(j)(1)], except as allowed in the regulation for Total Chromium (0.2 mg/L) and zinc (1.0 mg/L). The sample results shall be included in an annual report submitted to the Department by January 28th of each year, and shall be for the reporting period of January 1st to December 31st.

126 PRIORITY POLLUTANTS

| | | |
|---|---|--|
| 001 Acenaphthene | 045 Methyl chloride (dichloromethane) | 090 Dieldrin |
| 002 Acrolein | 046 Methyl bromide (bromomethane) | 091 Chlordane (technical mixture and metabolites) |
| 003 Acrylonitrile | 047 Bromoform (tribromomethane) | 092 4,4-DDT |
| 004 Benzene | 048 Dichlorobromomethane | 093 4,4-DDE (p,p-DDX) |
| 005 Benzidine | 051 Chlorodibromomethane | 094 4,4-DDD (p,p-TDE) |
| 006 Carbon tetrachloride (tetrachloromethane) | 052 Hexachlorobutadiene | 095 Alpha-endosulfan |
| 007 Chlorobenzene | 053 Hexachloromyclopentadiene | 096 Beta-endosulfan |
| 008 1,2,4-trichlorobenzene | 054 Isophorone | 097 Endosulfan sulfate |
| 009 Hexachlorobenzene | 055 Naphthalene | 098 Endrin |
| 010 1,2-dichloroethane | 056 Nitrobenzene | 099 Endrin aldehyde |
| 011 1,1,1-trichloroethane | 057 2-nitrophenol | 100 Heptachlor |
| 012 Hexachloroethane | 058 4-nitrophenol | 101 Heptachlor epoxide (BHC-hexachlorocyclohexane) |
| 013 1,1-dichloroethane | 059 2,4-dinitrophenol | 102 Alpha-BHC |
| 014 1,1,2-trichloroethane | 060 4,6-dinitro-o-cresol | 103 Beta-BHC |
| 015 1,1,2,2-tetrachloroethane | 061 N-nitrosodimethylamine | 104 Gamma-BHC (lindane) |
| 016 Chloroethane | 062 N-nitrosodiphenylamine | 105 Delta-BHC (PCB-polychlorinated biphenyls) |
| 018 Bis(2-chloroethyl) ether | 063 N-nitrosodi-n-propylamin | 106 PCB-1242 (Arochlor 1242) |
| 019 2-chloroethyl vinyl ether (mixed) | 064 Pentachlorophenol | 107 PCB-1254 (Arochlor 1254) |
| 020 2-chloronaphthalene | 065 Phenol | 108 PCB-1221 (Arochlor 1221) |
| 021 2,4, 6-trichlorophenol | 066 Bis(2-ethylhexyl) phthalate | 109 PCB-1232 (Arochlor 1232) |
| 022 Parachlorometa cresol | 067 Butyl benzyl phthalate | 110 PCB-1248 (Arochlor 1248) |
| 023 Chloroform (trichloromethane) | 068 Di-N-Butyl Phthalate | 111 PCB-1260 (Arochlor 1260) |
| 024 2-chlorophenol | 069 Di-n-octyl phthalate | 112 PCB-1016 (Arochlor 1016) |
| 025 1,2-dichlorobenzene | 070 Diethyl Phthalate | 113 Toxaphene |
| 026 1,3-dichlorobenzene | 071 Dimethyl phthalate | 114 Antimony |
| 027 1,4-dichlorobenzene | 072 1,2-benzanthracene (benzo(a) anthracene) | 115 Arsenic |
| 028 3,3-dichlorobenzidine | 073 Benzo(a)pyrene (3,4-benzo-pyrene) | 116 Asbestos |
| 029 1,1-dichloroethylene | 074 3,4-Benzofluoranthene (benzo(b) fluoranthene) | 117 Beryllium |
| 030 1,2-trans-dichloroethylene | 075 11,12-benzofluoranthene (benzo(b) fluoranthene) | 118 Cadmium |
| 031 2,4-dichlorophenol | 076 Chrysene | 119 Chromium |
| 032 1,2-dichloropropane | 077 Acenaphthylene | 120 Copper |
| 033 1,2-dichloropropylene (1,3-dichloropropene) | 078 Anthracene | 121 Cyanide, Total |
| 034 2,4-dimethylphenol | 079 1,12-benzoperylene (benzo(ghi) perylene) | 122 Lead |
| 035 2,4-dinitrotoluene | 080 Fluorene | 123 Mercury |
| 036 2,6-dinitrotoluene | 081 Phenanthrene | 124 Nickel |
| 037 1,2-diphenylhydrazine | 082 1,2,5,6-dibenzanthracene (dibenzo(h) anthracene) | 125 Selenium |
| 038 Ethylbenzene | 083 Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene) | 126 Silver |
| 039 Fluoranthene | 084 Pyrene | 127 Thallium |
| 040 4-chlorophenyl phenyl ether | 085 Tetrachloroethylene | 128 Zinc |
| 041 4-bromophenyl phenyl ether | 086 Toluene | 129 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD) |
| 042 Bis(2-chloroisopropyl) ether | 087 Trichloroethylene | |
| 043 Bis(2-chloroethoxy) methane | 88 Vinyl chloride (chloroethylene) | |
| 044 Methylene chloride (dichloromethane) | 089 Aldrin | |

16. An annual operating report must be submitted to the Northeast Regional Office by October 28 of each year that details the date and time, volume and methods of removal and offsite disposal of coal combustion residuals.

C. SPECIAL CONDITIONS (continued)

17. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

| SUMMARY OF WET TESTING FOR THIS PERMIT | | | | |
|--|----------|-----------|-------------|-------|
| OUTFALL | A.E.C. % | FREQUENCY | SAMPLE TYPE | MONTH |
| #002 | 100 % | ONCE/YEAR | COMPOSITE | ANY |

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
 - a. For discharges of storm water, samples shall be collected within three hours from when discharge first occurs.
 - b. Samples submitted for analysis of storm water discharges shall be collected as a grab.
 - c. For discharges of non-storm water, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for storm water samples.
 - d. A twenty-four hour composite sample shall be submitted for analysis of non-storm water discharges.
 - e. Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
 - f. Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - g. Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
 - h. Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
 - i. All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
 - j. Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
 - k. Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
 - l. Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - m. All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.
- (2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
- (3) If the effluent fails the test, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur) until one of the following conditions are met:
 - a. THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - b. A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
- (4) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
- (5) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

C. SPECIAL CONDITIONS (continued)

- (6) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
 - (7) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
 - (8) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
 - (9) Submit a concise summary in tabular format of all WET test results with the annual report.
- (b) **PASS/FAIL procedure and effluent limitations:**
- (1) To pass a multiple-dilution test:
 - a. For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC) OF 30% OR LESS, the AEC must be less than three-tenths (0.3) of the LC₅₀ concentration for the most sensitive of the test organisms; **OR,**
 - b. For facilities with an AEC greater than 30%, the LC₅₀ concentration must be greater than 100%; **AND,**
 - c. all effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.
- (c) **Test Conditions**
- (1) Test Type: Acute Static non-renewal
 - (2) All tests, including repeat tests for previous failures, shall include both test species listed below.
 - (3) Test species: *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
 - (4) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
 - (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
 - (6) Multiple-dilution tests will be run with:
 - a. 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
 - b. 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
 - c. reconstituted water.
 - (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
 - (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

D. SCHEDULE OF COMPLIANCE

1. The final daily maximum and monthly average limits for Outfall #001 and Outfall #002 shall become effective three (3) years after the issue date of the permit. The Effluent Regulation, 10 CSR 20-7.031(10) allows the permittee up to three (3) years from the issuance date of this permit to comply with new or revised National Pollutant Discharge Elimination System (NPDES) or Missouri operating permit limitations based on criteria in the Clean Water Commission Regulations. It states that such compliance "shall be achieved with all deliberate speed and no later than three (3) years from the date of issuance of the permit." Therefore modifications to the facility must be made if they are required for the discharge from the facility to meet the final effluent limits of this permit.
2. The City of Columbia shall submit a letter to the Department by **July 6, 2013** detailing how the facility plans on meeting the final effluent limitations.
3. The City of Columbia shall submit interim progress reports every 12 months from **July 6, 2012**.
4. The Columbia Municipal Power Plant will meet final effluent limits by **July 6, 2015**.

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 resulting from the next discharge event 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 section supersedes Standard Conditions Part I, Section B: Noncompliance Notification).

RECORDS, RETENTION, AND RECORDING

Monitoring reports shall be submitted within 28 days after the end of each quarter. All sampling data and inspection reports 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 six (6) months 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 any storage structure 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
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0004979
COLUMBIA MUNICIPAL POWER PLANT**

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 an Industrial Facility

Part I – Facility Information

Facility Type: IND
Facility SIC Code(s): 4911

Facility Description:

The Columbia Municipal Power Plant has been in service since approximately 1914. The plant currently has 86 megawatts of capacity using two solid fuel boilers, one natural gas boiler, and a natural gas fired combustion turbine. For the last 5 years (2006-2010) the plant has produced an average of 81,588 net megawatt-hours, accounting for about 7-8 % of the total energy used by the City of Columbia.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

- No

Application Date: 03/12/2009
Expiration Date: 03/17/2009
Last Inspection: 01/14/2009

Non-Compliance - The facility was in non-compliance due to failing to submit the renewal application 180 days prior to the expiration date of the permit, failing to test for pH, Temperature, Free Available Chlorine, and Total Residual Chlorine at the time the sample was taken, and failing to sample before the effluent joins or is diluted by any other body of water or substance.

OUTFALL(S) TABLE:

| OUTFALL | DESIGN FLOW (GPD) | TREATMENT LEVEL | EFFLUENT TYPE | DISTANCE TO CLASSIFIED SEGMENT (MI) |
|---------|-------------------|-----------------|------------------------|-------------------------------------|
| #001 | 75,000 | Primary, BMPs* | Industrial, Stormwater | ~ 1.2 |
| #002 | 870,000 | Primary, BMPs* | Industrial, Stormwater | ~ 0.91 |

* – Best Management Practices

Outfall #001
Legal Description: Landgrant 2753, Boone County
UTM Coordinates: X=559181.565, Y=4313015.557
Receiving Stream: Unnamed tributary to Bear Creek (U)
First Classified Stream and ID: Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.: (10300102-0706)

Outfall #002

Legal Description: Landgrant 2753, Boone County
UTM Coordinates: X=559024.113, Y=4313222.076
Receiving Stream: Unnamed tributary to Bear Creek (U)
First Classified Stream and ID: Bear Creek (C) (01015)
USGS Basin & Sub-watershed No.: (10300102-0706)

Receiving Water Body's Water Quality & Facility Performance History:

No stream surveys have been conducted for this facility. Outfall #001 - The facility failed to meet effluent limitations for Free Available Chlorine for January, February, April, and December 2008, January, February, June, July, and August 2010. The facility failed to meet effluent limitations for pH for December 2006 and January 2007. The facility failed to meet effluent limitations for Total Suspended Solids for July and August 2008. The facility also failed to submit Sulfate for March 2009 and December 2009, and Flow, Free Available Chlorine, Oil & Grease, pH, Temperature, and Total Suspended Solids for August 2006. Outfall #002 - The facility failed to meet effluent limitations for Iron and Total Suspended Solids for December 2007, and Total Suspended Solids for March 2009, April 2009, and June 2010. The facility also failed to submit Flow, Total Suspended Solids, Oil & Grease, Iron, pH, Temperature, Copper for August 2006, Total Residual Chlorine and Sulfate for March 2009, Total Residual Chlorine and Sulfate for December 2009, Free Available Chlorine for March 2010 and May 2010.

Comments:

Effluent Limitations for Temperature was removed from the permit as 10 CSR 20-7.031(4)(D) only applies to classified streams and not discharges to unclassified streams. Iron, Dissolved was removed from the permit as effluent limitations have been established for Iron, Total Recoverable. Section 316(a) of the CWA is not applicable to the facility as the facility discharges into a large holding basin which allows for the water temperature to decrease before discharge. In addition, the facility's discharge is approximately one mile from the first classified stream which allows for further reduction of water temperature. The facility has not reported any discharges that have exceeded 90° F. Also, Section 316(b) of the CWA is not applicable to the facility as the facility receives its water from the City of Columbia and onsite wells. The ash basin is approximately 4.5 acres and is dredged approximately every week. The facility is currently making arrangements to haul ash to Kansas for disposal. The City is also looking into other potential uses of the ash. The ash basin was constructed over 100 years ago and believed to be constructed of clay. As the facility removes the ash on a routine demand, groundwater monitoring is not being required for the facility, however an annual report that details the date and time, volume and methods of removal and offsite disposal of coal combustion residuals is required.

Pollutants Typically Associated with Stream Electric Industry Discharges:

Additionally, staff has reviewed the renewal applications Form C and D for each of the outfalls for this operating permit with exception to Outfall #007. Effluent testing results contained in Form C and D for each outfall were compared directly with pollutants associated with the various waste streams for each of the outfalls as established in the United States EPA document, *Interim Detailed Study Report for the Steam Electric Power Generating Point Source Category* (Interim Study Report). Pollutants contained in the Interim Study Report are based on data previously collected by the EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by the Utility Water Act Group (UWAG) and Electric Power Research Institute (EPRI). Below is the list of pollutants based on process waste streams:

- Cooling Water: Once-through or Cooling Tower Blowdown.
Chlorine, Iron, Copper, Nickel, Aluminum, Boron, Chlorinated Organic Compounds, Suspended Solids, Brominated Compounds, and Non-oxidizing Biocides.
- Ash Handling: Bottom or Fly Ash.
TSS, Sulfate, Chloride, Magnesium, Nitrate, Aluminum, Antimony, Arsenic, Boron, Cadmium, Chromium, Copper, Cyanide, Iron, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc
- Coal Pile Runoff:
Acidity, COD, Chloride, Sulfate, TSS, Aluminum, Antimony, Arsenic, Boron, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.
- Other Low-Volume Waste Streams:
Suspended solids, Dissolved Solids, Oil & Grease, Phosphates, Surfactants, Acidity, Methylene Chloride, Phthalates, BOD₅, COD, Fecal Coliform, and Nitrates.

For the above pollutants, staff drafting this operating permit only compared the applicable pollutants based on Missouri's Water Quality Standards criteria and designated uses.

For discussion on BPJ TBEL determination, please see Appendix B - TBEL Determination.

Part II – Operator Certification Requirements

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 lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

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

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

RECEIVING STREAM(S) TABLE:

| WATERBODY NAME | CLASS | WBID | DESIGNATED USES* | 8-DIGIT HUC | EDU** |
|---------------------------------|-------|-------|-------------------------|-------------|---------------------|
| Unnamed tributary to Bear Creek | U | NA | General Criteria | 10300102 | Ozark/Moreau/Loutre |
| Bear Creek | C | 01015 | LWW, AQL, SCR, 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 in 2005, 2006, and 2007. The Missouri Department of Natural Resources' Use Attainability Analysis Internal Review Committee recommended retaining Whole Body Contact (WBC) use designation to the receiving stream. As the date of writing this permit, the Clean Water Commission has not made a decision regarding the WBC use designation.

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.

Not Applicable ; 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.

- Limitations in this operating permit 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.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

COAL COMBUSTION RESIDUALS (CCR):

Coal Combustion Residuals (CCR), often referred to as coal ash, is currently considered exempt wastes under an amendment to RCRA, the Resource Conservation and Recovery Act. Coal ash is residues from the combustion of coal in power plants and captured by pollution control technologies, like scrubbers. Potential environmental concerns from coal ash pertain to pollution from impoundment and landfills leaching into ground water and structural failures of impoundments.

The US EPA is currently proposing the first-ever national rules to ensure the safe disposal and management of coal ash from coal-fired power plants under RCRA, the nation's primary law for regulating solid waste. The EPA is putting forward two (2) proposals that reflect different approaches to managing the disposal of coal ash and both are to ensure the safe management of coal ash that is disposed in surface impoundments and/or landfills.

The Columbia Municipal Power Plant has one ash pond that provides treatment for fly ash and bottom ash sluice water in addition to receiving stormwater runoff and cooling tower blowdown and backwash.

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.

REASONABLE POTENTIAL DETERMINATION:

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

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Applicable ; A Reasonable Potential Determination was conducted on appropriate parameters. Please see APPENDIX A.

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 were established in accordance with [10 CSR 20-7.031(10)].

STORMWATER 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 stormwater 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 *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], 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 Stormwater 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 stormwater 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. As Columbia Municipal Power Plant is a large industrial site, in the development of the SWPPP, they may want to use the draft SWPPP template provided by EPA and consult the Industrial Stormwater Fact Sheets developed by EPA (<http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm>) to ensure the SWPPP is as comprehensive as possible. Fact sheets of interest may include the Sector O: Steam Electric Power Generating Facilities, Including Coal Handling Areas, Sector H: Coal Mines and Coal Mining-Related Facilities and Sector P: Motor Freight Transportation Facilities, and Rail Transportation Facilities. The fact sheets provide further references and resources for developing the SWPPP.

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.

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

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

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

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

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

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

Number of Samples "n":

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used.

WLA MODELING:

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

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.

Applicable ; Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)

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

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

Part V – Effluent Limits Determination

Outfall #001 – INTERIM EFFLUENT LIMITATIONS TABLE:

| PARAMETER | UNIT | BASIS FOR LIMITS | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MODIFIED | PREVIOUS PERMIT LIMITATIONS |
|-----------------------------------|--|------------------|---------------|----------------|-----------------|----------|-----------------------------------|
| Flow | MGD | 1 | * | | * | NO | S |
| Total Suspended Solids | mg/L | 1 | 50 | | 50 | NO | S |
| Chemical Oxygen Demand | mg/L | 9 | * | | * | YES | ** |
| Biochemical Oxygen Demand | mg/L | 9 | * | | * | YES | ** |
| pH | SU | 1 | 6.5–9.0 | | 6.5–9.0 | YES | 6.0-9.0 |
| Oil & Grease | mg/L | 1 | 20 | | 15 | NO | S |
| Total Residual Chlorine | mg/L | 2/9 | * | | * | NO | S |
| Free Available Chlorine | mg/L | 2/9 | 0.5 | | 0.2 | NO | S |
| Chloride + Sulfate | mg/L | 2/9 | * | | * | YES | Previously monitoring for sulfate |
| Chloride | mg/L | 2/9 | * | | * | YES | ** |
| Aluminum, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Antimony, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Arsenic, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Beryllium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Cadmium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Chromium (III), Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Chromium (VI), Dissolved | µg/L | 2/9 | * | | * | YES | ** |
| Cyanide, Amenable to Chlorination | µg/L | 2/9 | * | | * | YES | ** |
| Copper, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Iron, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Lead, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Mercury, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Nickel, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Selenium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Silver, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Thallium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Zinc, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Hardness, Total | µg/L | 2/9 | * | | * | YES | ** |
| Polychlorinated Biphenyls | µg/L | 2/9 | 0 | | 0 | YES | ** |
| MONITORING FREQUENCY | Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below. | | | | | | |

Outfall #001 - FINAL EFFLUENT LIMITATIONS TABLE:

| PARAMETER | UNIT | BASIS FOR LIMITS | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MODIFIED | PREVIOUS PERMIT LIMITATIONS |
|-----------------------------------|--|------------------|-------------------|----------------|--------------------|----------|-----------------------------|
| Flow | MGD | 1 | * | | * | NO | S |
| Total Suspended Solids | mg/L | 1 | 50 | | 50 | NO | S |
| Chemical Oxygen Demand | mg/L | 9 | * | | * | NO | * |
| Biochemical Oxygen Demand | mg/L | 9 | * | | * | NO | S |
| pH | SU | 1 | 6.5 – 9.0 | | 6.5 – 9.0 | NO | * |
| Oil & Grease | mg/L | 1 | 15 | | 10 | YES | 20/15 |
| Total Residual Chlorine | mg/L | 2/9 | 0.017 (0.13ML) | | 0.008 (0.13 ML) | YES | * |
| Free Available Chlorine | mg/L | 2/9 | 0.5 | | 0.2 | NO | S |
| Chloride + Sulfate | mg/L | 2/9 | 1000 | | 1000 | YES | * |
| Chloride | mg/L | 2/9 | 377.8 | | 188.3 | YES | * |
| Aluminum, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Antimony, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Arsenic, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Beryllium, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Cadmium, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Chromium (III), Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Chromium (VI), Dissolved | µg/L | 2/9 | * | | * | NO | * |
| Cyanide, Amenable to Chlorination | µg/L | 2/9 | * | | * | NO | * |
| Copper, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Iron, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Lead, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Mercury, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Nickel, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Selenium, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Silver, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Thallium, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Zinc, Total Recoverable | µg/L | 2/9 | * | | * | NO | * |
| Hardness, Total | µg/L | 2/9 | * | | * | NO | * |
| Polychlorinated Biphenyls | µg/L | 2/9 | 0 | | 0 | NO | 0/0 |
| MONITORING FREQUENCY | Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below. | | | | | | |

* - Monitoring requirement only.

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

N/A – Not applicable

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 | 12. Antidegradation Review |

OUTFALLS #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Chemical Oxygen Demand (BOD₅).** Monitoring requirement only as this is a pollutant typically found in coal pile runoff. Additional monitoring is being required to determine if limits are applicable.
- **Biochemical Oxygen Demand (BOD₅).** Monitoring requirement only as the facility stores biomass outside and exposed to precipitation. Additional monitoring is being required to determine if limits are applicable.

TECHNOLOGY-BASED EFFLUENT LIMITS (TBEL) TBELs are compared to QBEL below.

- **pH.** In accordance with 40 CFR 423.13, pH shall be maintained in the range of 6.0 – 9.0.
- **Total Suspended Solids (TSS).** 50 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average. This limit is applied to the facility based on the effluent guidelines set forth in 40 CFR 423.13
- **Free Available Chlorine.** 0.5 mg/L as a Daily Maximum and 0.2 mg/L as a Monthly Average per the applicable section of 40 CFR 423.13
- **Total Residual Chlorine (TRC).** 0.2 mg/L as a Daily Maximum per the applicable section of 40 CFR 423.13.
- **Polychlorinated Biphenyls.** There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid per the applicable section of 40 CFR 423.13.

WATER QUALITY-BASED EFFLUENT LIMITS - TBELs are compared to QBEL below.

- **pH.** Effluent limitation range is 6.5 to 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH 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.
- **Total Residual Chlorine (TRC).** Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

Chronic WLA: $C_e = ((0.116 + 0.0)10 - (0.0 * 0.0))/0.116$

$C_e = 10 \mu\text{g/L}$

Acute WLA: $C_e = ((0.116 + 0.0)19 - (0.0 * 0.0))/0.116$

$C_e = 19 \mu\text{g/L}$

$LTA_c = 10 (0.290) = 2.9 \mu\text{g/L}$

[CV = 1.35, 99th Percentile]

$LTA_a = 19 (0.157) = 3.0 \mu\text{g/L}$

[CV = 1.35, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 2.9 (6.36) = 18 µg/L

[CV = 1.35, 99th Percentile]

AML = 2.9 (2.27) = 7 µg/L

[CV = 1.35, 95th Percentile, n = 4]

- **Chloride + Sulfate.** 1000 mg/L as a Daily Maximum and 1000 mg/L as a Monthly Average as per Table A which references 10 CSR 20-7.031(4)(L).
- **Chloride.** The permit writers has established effluent limits as chloride is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Date as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.
- **Polychlorinated Biphenyls.** 0.00045 µg/L for Human Health Protection-Fish Consumption.

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 |
| Copper | 0.960 |
| Lead | 0.695 |
| Mercury | 0.85 |
| Nickel | 0.998 |
| Silver | 0.85 |
| Zinc | 0.980 |

Conversion factors for Cadmium, Chromium (III), Copper, Lead, Nickel, Silver, and Zinc are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L.

- **Aluminum, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Antimony, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Arsenic, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Beryllium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Cadmium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Chromium (III), Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Chromium (VI), Dissolved.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Cyanide, Amenable to Chlorination.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Copper, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Iron, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Lead, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Mercury, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.

- **Nickel, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Selenium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Silver, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Thallium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Zinc, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality standards.
- **Total Hardness.** Monitoring only requirement due to the fact that Metals toxicity varies by hardness.

WQBEL vs. TBEL

| Pollutant | TBEL | | WQBEL | |
|---------------------------|---------------|-----------------|-----------------|-----------------|
| | Daily Maximum | Monthly Average | Daily Maximum | Monthly Average |
| TSS | 50 mg/L | 50 mg/L | NA | NA |
| pH | 6.0 - 9.0 | 6.0 - 9.0 | 6.5 - 9.0 | 6.5 - 9.0 |
| Oil & Grease | NA | NA | 15 | 10 |
| Total Residual Chlorine | 0.2 | | 0.017 (0.13 ML) | 0.008 (0.13 ML) |
| Free Available Chlorine | 0.5 | 0.2 | NA | NA |
| Chloride + Sulfate | NA | NA | 1000 | 1000 |
| Chloride | NA | NA | 377.8 | 188.3 |
| Polychlorinated Biphenyls | 0.0 | 0.0 | 0.000045 (HHF) | 0.000045 (HHF) |

HHF - Human Health Protection-Fish Consumption

• Minimum Sampling and Reporting Frequency Requirements:

| PARAMETER | SAMPLING FREQUENCY | REPORTING FREQUENCY |
|-----------------------------------|--------------------|---------------------|
| Flow | once/month | once/month |
| TSS | once/month | once/month |
| COD | once/month | once/month |
| BOD | once/month | once/month |
| pH | once/month | once/month |
| Oil & Grease | once/month | once/month |
| Total Residual Chlorine | once/month | once/month |
| Free Available Chlorine | once/month | once/month |
| Chloride + Sulfate | once/month | once/month |
| Chloride | once/month | once/month |
| Aluminum, Total Recoverable | once/quarter | once/quarter |
| Antimony, Total Recoverable | once/quarter | once/quarter |
| Arsenic, Total Recoverable | once/quarter | once/quarter |
| Beryllium, Total Recoverable | once/quarter | once/quarter |
| Cadmium, Total Recoverable | once/quarter | once/quarter |
| Chromium III, Total Recoverable | once/quarter | once/quarter |
| Chromium VI, Dissolved | once/quarter | once/quarter |
| Cyanide, Amenable to Chlorination | once/quarter | once/quarter |
| Copper, Total Recoverable | once/quarter | once/quarter |
| Iron, Total Recoverable | once/quarter | once/quarter |
| Lead, Total Recoverable | once/quarter | once/quarter |
| Mercury, Total Recoverable | once/quarter | once/quarter |
| Nickel, Total Recoverable | once/quarter | once/quarter |
| Selenium, Total Recoverable | once/quarter | once/quarter |
| Silver, Total Recoverable | once/quarter | once/quarter |
| Thallium, Total Recoverable | once/quarter | once/quarter |
| Zinc, Total Recoverable | once/quarter | once/quarter |
| Hardness, Total | once/quarter | once/quarter |
| Polychlorinated Biphenyls | once/year | once/year |

Outfall #002 – INTERIM EFFLUENT LIMITATIONS TABLE:

| PARAMETER | UNIT | BASIS FOR LIMITS | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MODIFIED | PREVIOUS PERMIT LIMITATIONS |
|-----------------------------------|--|------------------|---------------|----------------|-----------------|----------|-----------------------------------|
| Flow | MGD | 1 | * | | * | NO | S |
| Total Suspended Solids | mg/L | 1 | 50 | | 50 | YES | 100/30 |
| Chemical Oxygen Demand | mg/L | 9 | * | | * | YES | ** |
| Biochemical Oxygen Demand | mg/L | 9 | * | | * | YES | ** |
| pH | SU | 1 | 6.5 – 9.0 | | 6.5 – 9.0 | YES | 6.0-9.0 |
| Oil & Grease | mg/L | 1 | 20 | | 15 | NO | S |
| Total Residual Chlorine | mg/L | 2/9 | * | | * | NO | S |
| Free Available Chlorine | mg/L | 2/9 | 0.5 | | 0.2 | NO | S |
| Chloride + Sulfate | mg/L | 2/9 | * | | * | YES | Previously monitoring for sulfate |
| Chloride | mg/L | 2/9 | * | | * | YES | ** |
| Aluminum, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Antimony, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Arsenic, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Beryllium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Cadmium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Chromium (III), Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Chromium (VI), Dissolved | µg/L | 2/9 | * | | * | YES | ** |
| Cyanide, Amenable to Chlorination | µg/L | 2/9 | * | | * | YES | ** |
| Copper, Total Recoverable | µg/L | 2/9 | 1.0 | | 1.0 | NO | S |
| Iron, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Lead, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Mercury, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Nickel, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Selenium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Silver, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Thallium, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Zinc, Total Recoverable | µg/L | 2/9 | * | | * | YES | ** |
| Hardness, Total | µg/L | 2/9 | * | | * | YES | ** |
| Polychlorinated Biphenyls | µg/L | 2/9 | 0.0 | | 0.0 | YES | ** |
| MONITORING FREQUENCY | Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below. | | | | | | |

Outfall #002 - FINAL EFFLUENT LIMITATIONS TABLE:

| PARAMETER | UNIT | BASIS FOR LIMITS | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MODIFIED | PREVIOUS PERMIT LIMITATIONS |
|-----------------------------------|--|------------------|-------------------|----------------|--------------------|----------|-----------------------------|
| Flow | MGD | 1 | * | | * | NO | S |
| Total Suspended Solids | mg/L | 1 | 50 | | 50 | NO | S |
| Chemical Oxygen Demand | mg/L | 9 | * | | * | NO | * |
| Biochemical Oxygen Demand | mg/L | 9 | * | | * | NO | S |
| pH | SU | 1 | 6.5 - 9.0 | | 6.5 - 9.0 | NO | * |
| Oil & Grease | mg/L | 1 | 15 | | 10 | YES | 20/15 |
| Total Residual Chlorine | mg/L | 2/9 | 0.017 (0.13ML) | | 0.008 (0.13 ML) | YES | * |
| Free Available Chlorine | mg/L | 2/9 | 0.5 | | 0.2 | NO | S |
| Chloride + Sulfate | mg/L | 2/9 | 1000 | | 1000 | YES | * |
| Chloride | mg/L | 2/9 | 377.8 | | 188.3 | YES | * |
| Aluminum, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Antimony, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Arsenic, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Beryllium, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Cadmium, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Chromium (III), Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Chromium (VI), Dissolved | µg/L | 2/9 | * | | * | YES | * |
| Cyanide, Amenable to Chlorination | µg/L | 2/9 | * | | * | YES | * |
| Copper, Total Recoverable | µg/L | 2/9 | 40.6 | | 15.8 | YES | 1.0 mg/L |
| Iron, Total Recoverable | µg/L | 2/9 | 1825.6 | | 627.6 | YES | * |
| Lead, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Mercury, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Nickel, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Selenium, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Silver, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Thallium, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Zinc, Total Recoverable | µg/L | 2/9 | * | | * | YES | * |
| Hardness, Total | µg/L | 2/9 | * | | * | NO | * |
| Polychlorinated Biphenyls | µg/L | 2/9 | 0.0 | | 0.0 | NO | 0/0 |
| MONITORING FREQUENCY | Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below. | | | | | | |

* - Monitoring requirement only.

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

N/A - Not applicable

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 | 12. Antidegradation Review |

OUTFALLS #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Chemical Oxygen Demand (BOD₅).** Monitoring requirement only as this is a pollutant typically found in coal pile runoff. Additional monitoring is being required to determine if limits are applicable.
- **Biochemical Oxygen Demand (BOD₅).** Monitoring requirement only as the facility stores biomass outside and exposed to precipitation. Additional monitoring is being required to determine if limits are applicable.

TECHNOLOGY-BASED EFFLUENT LIMITS (TBEL) TBELs are compared to WQBEL below.

- **pH.** In accordance with 40 CFR 423.13, pH shall be maintained in the range of 6.0 – 9.0.
- **Total Suspended Solids (TSS).** 50 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average. This limit is applied to the facility based on the effluent guidelines set forth in 40 CFR 423.13. The previous permit established a daily maximum of 100 mg/L and a monthly average of 30 mg/L, however, the effluent limits was established in error as there are no effluent limitations other than the TBELs for this parameter.
- **Free Available Chlorine.** 0.5 mg/L as a Daily Maximum and 0.2 mg/L as a Monthly Average per the applicable section of 40 CFR 423.13
- **Total Residual Chlorine (TRC).** 0.2 mg/L as a Daily Maximum per the applicable section of 40 CFR 423.13.
- **Polychlorinated Biphenyls.** There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid per the applicable section of 40 CFR 423.13.

WATER QUALITY-BASED EFFLUENT LIMITS - TBELs are compared to WQBEL below.

- **pH.** Effluent limitation range is 6.5 to 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH 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.
- **Total Residual Chlorine (TRC).** Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

Chronic WLA: $C_e = ((0.116 + 0.0)10 - (0.0 * 0.0))/0.116$
 $C_e = 10 \mu\text{g/L}$

Acute WLA: $C_e = ((0.116 + 0.0)19 - (0.0 * 0.0))/0.116$
 $C_e = 19 \mu\text{g/L}$

$LTA_c = 10 (0.290) = 2.9 \mu\text{g/L}$

[CV = 1.35, 99th Percentile]

$LTA_a = 19 (0.157) = 3.0 \mu\text{g/L}$

[CV = 1.35, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

$MDL = 2.9 (6.36) = 18 \mu\text{g/L}$

[CV = 1.35, 99th Percentile]

$AML = 2.9 (2.27) = 7 \mu\text{g/L}$

[CV = 1.35, 95th Percentile, n = 4]

- **Chloride + Sulfate.** 1000 mg/L as a Daily Maximum and 1000 mg/L as a Monthly Average as per Table A which references 10 CSR 20-7.031(4)(L).
- **Chloride.** The permit writer has established effluent limits for chloride. Chloride is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.
- **Polychlorinated Biphenyls.** 0.000045 µg/L for Human Health Protection-Fish Consumption.

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. The facility provided hardness data which showed a hardness of 310 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 |
| Copper | 0.960 |
| Lead | 0.695 |
| Mercury | 0.85 |
| Nickel | 0.998 |
| Silver | 0.85 |
| Zinc | 0.980 |

Conversion factors for Cadmium, Chromium, Copper, Lead, Nickel, Silver, and Zinc are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 310 mg/L.

- **Aluminum, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Antimony, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Arsenic, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Beryllium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Cadmium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Chromium (III), Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Chromium (VI), Dissolved.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Cyanide, Amenable to Chlorination.** Monitoring only requirement to determine if the facility has the potential to violate water quality.

- **Copper, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 23.5 µg/L, Acute Criteria = 39 µg/L with hardness of 310 mg/L.

Chronic = $23.5/0.960 = 24.53 \mu\text{g/L}$
 Acute = $39/0.960 = 40.64 \mu\text{g/L}$

Chronic WLA: $C_c = ((0.886 + 0.0)24.53 - (0.0 * 0.0))/0.886$
 $C_c = 24.53 \mu\text{g/L}$

Acute WLA: $C_c = ((0.886 + 0.0)39 - (0.0 * 0.0))/0.886$
 $C_c = 39 \mu\text{g/L}$

$LTA_c = 24.53 (0.359) = 8.80 \mu\text{g/L}$

$LTA_a = 39(0.195) = 7.9 \mu\text{g/L}$

Use most protective number of LTA_c or LTA_a .

[CV = 1.049, 99th Percentile]

[CV = 1.049, 99th Percentile]

MDL = $7.9 (5.12) = 40.6 \mu\text{g/L}$

AML = $7.9 (1.99) = 15.8 \mu\text{g/L}$

CV = 1.049, 99th Percentile]

[CV = 1.049, 95th Percentile, n = 4]

- **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.

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

$LTA_c = 1000 \mu\text{g/L} (0.25736) = 257.36 \mu\text{g/L}$

[CV = 1.545, 99th Percentile]

MDL = $257.36 \mu\text{g/L} (7.0936) = 1825.67 \mu\text{g/L}$

AML = $257.36 \mu\text{g/L} (2.4385) = 627.6 \mu\text{g/L}$

[CV = 1.545, 99th Percentile]

[CV = 1.545, 95th Percentile, n = 4]

- **Lead, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Mercury, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Nickel, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Selenium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Silver, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Thallium, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Zinc, Total Recoverable.** Monitoring only requirement to determine if the facility has the potential to violate water quality.
- **Total Hardness.** Monitoring only requirement due to the fact that Metals toxicity varies by hardness.

WQBEL vs. TBEL

| Pollutant | TBEL | | WQBEL | |
|---------------------------|---------------|-----------------|-----------------|-----------------|
| | Daily Maximum | Monthly Average | Daily Maximum | Monthly Average |
| TSS | 50 mg/L | 50 mg/L | NA | NA |
| pH | 6.0 - 9.0 | 6.0 - 9.0 | 6.5 - 9.0 | 6.5 - 9.0 |
| Oil & Grease | NA | NA | 15 | 10 |
| Total Residual Chlorine | 0.2 | | 0.017 (0.13 ML) | 0.008 (0.13 ML) |
| Free Available Chlorine | 0.5 | 0.2 | NA | NA |
| Chloride + Sulfate | NA | NA | 1000 | 1000 |
| Chloride | NA | NA | 377.8 | 188.3 |
| Copper, TR | NA | NA | 26 | 13 |
| Iron, TR | NA | NA | 1642.7 | 818.8 |
| Polychlorinated Biphenyls | 0.0 | 0.0 | 0.000045 (HHF) | 0.000045 (HHF) |

HHF = Human Health Protection-Fish Consumption

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

| PARAMETER | SAMPLING FREQUENCY | REPORTING FREQUENCY |
|-----------------------------------|--------------------|---------------------|
| Flow | once/month | once/month |
| TSS | once/month | once/month |
| COD | once/month | once/month |
| BOD | once/month | once/month |
| pH | once/month | once/month |
| Oil & Grease | once/month | once/month |
| Total Residual Chlorine | once/month | once/month |
| Free Available Chlorine | once/week | once/month |
| Chloride + Sulfate | once/month | once/month |
| Chloride | once/month | once/month |
| Aluminum, Total Recoverable | once/quarter | once/quarter |
| Antimony, Total Recoverable | once/quarter | once/quarter |
| Arsenic, Total Recoverable | once/quarter | once/quarter |
| Beryllium, Total Recoverable | once/quarter | once/quarter |
| Cadmium, Total Recoverable | once/quarter | once/quarter |
| Chromium III, Total Recoverable | once/quarter | once/quarter |
| Chromium VI, Dissolved | once/quarter | once/quarter |
| Cyanide, Amenable to Chlorination | once/quarter | once/quarter |
| Copper, Total Recoverable | once/month | once/month |
| Iron, Total Recoverable | once/month | once/month |
| Lead, Total Recoverable | once/quarter | once/quarter |
| Mercury, Total Recoverable | once/quarter | once/quarter |
| Nickel, Total Recoverable | once/quarter | once/quarter |
| Selenium, Total Recoverable | once/quarter | once/quarter |
| Silver, Total Recoverable | once/quarter | once/quarter |
| Thallium, Total Recoverable | once/quarter | once/quarter |
| Zinc, Total Recoverable | once/quarter | once/quarter |
| Hardness, Total | once/quarter | once/quarter |
| Polychlorinated Biphenyls | once/year | once/year |

Test procedures for the analysis of pollutants shall be in accordance with the references methods listed in Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015(9)(A) 2. unless alternates are approved by the Department. The facility shall ensure that the testing lab uses an approved test method with a detection limit below water quality criteria for any sampling conducted, even for parameters that are listed as monitoring only, as the data collected will be used to determine if limitations need to be established.

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:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. 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 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 is tentatively schedule to begin on September 30, 2011 or is in process.

- The Public Notice period for this operating permit was from (DATE) to (DATE). Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. (Please explain). (Also if applicable – Due to the major modifications of this permit, this operating permit is to be placed on Public Notice again, which is tentatively scheduled to begin on (DATE) or is in process.

- The Public Notice period for this operating permit was from (DATE) to (DATE). No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: DECEMBER 7, 2011

DATE OF FACT SHEET REVISION: MAY 24, 2012

Submitted by

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Part VII – Appendices

APPENDIX A

Outfall #002

| Parameter | CMC* | RWC Acute* | CCC* | RWC Chronic* | n** | Range max/min | CV*** | MF | RP Yes/No |
|----------------------------------|------|------------|-------|--------------|-----|---------------|-------|-------|-----------|
| Copper, Total Recoverable (µg/L) | 26 | 229.78 | 16.36 | 229.78 | 73 | 123/2.5 | 1.049 | 1.868 | Yes |
| Iron, Total Recoverable (µg/L) | NA | NA | 1000 | 16651.71 | 73 | 7030/10 | 1.545 | 2.369 | Yes |

N/A – Not Applicable

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

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

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

RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

n – Is the number of samples.

MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Determination is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this determination is available upon request.

APPENDIX B – TBEL DETERMINATION

The EPA in 2009 published the “Steam Electrical Power Generating Point Source Category: Final Detailed Study Report (2009 Final Report). The 2009 Final Report summarizes data collected and analyzed from the EPA to review discharges from steam electrical power generating industry and to determine whether the current effluent guidelines for this industry and to determine whether current Effluent Limit Guidelines (ELGs) for this industry should be revised. From the 2009 Final Report, it determined a need existed to update the current effluent regulations specific to Steam Electrical Power Generating Point Sources [40 CFR Part 423]. The 2009 Final Report also concluded that the last updated version of this 1982 regulation does not adequately address the pollutants being discharged and have not kept pace with changes that have occurred in the power industry.

The 2009 Final Report identified pollutants that are commonly associated with the power industry (i.e., Flue Gas Desulfurization [FGD] & Coal Combustion Residuals [CCR]). The 2009 Final Report does not address how to determine a Pollutant of Concern (POC), but (as stated above) determined a need for the EPA to revise the current ELG 40 CFR 423. The EPA expects to complete this rulemaking and promulgate revised effluent guidelines in late 2013.

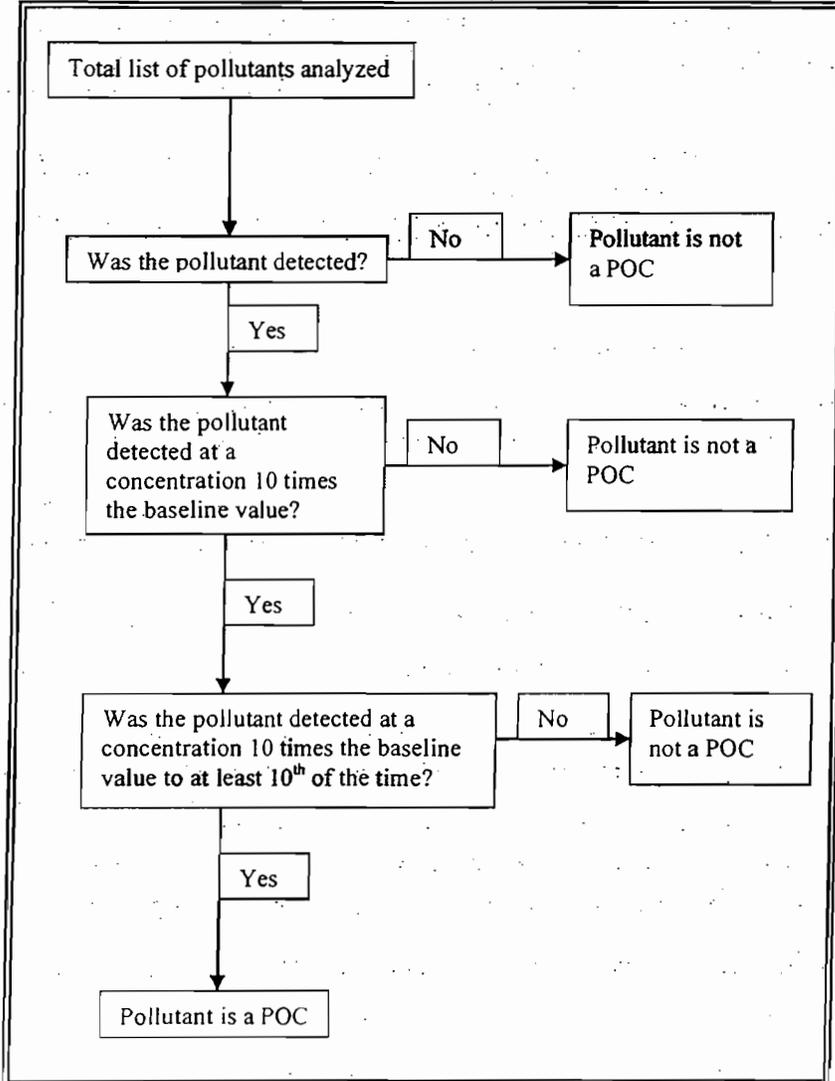
On June 7, 2010, the EPA’s Office of Wastewater Management sent a memorandum with the purpose to provide interim guidance to assist permitting authorities to appropriately establish permit requirements for wastewater discharges from FGD systems and CCR impoundments at steam power plants. The 2010 EPA memo contained two (2) attachments: Appendix A – provided permitting authorities with information on how to establish TBELs for FGD; and Appendix B – was intended to assist permitting authorities to better address water quality impacts associated with discharges from coal ash impoundments. The 2010 EPA memo does not demonstrate how to determine if a pollutant needs to have TBEL limits.

Federal regulation 40 CFR Part 125.3(c) and 40 CFR Part 125.3(d) are the basis for establishing technology-based effluent limits and BPJ TBELs. To better understand these regulations, the EPA’s Permit Writers Manual 5.2.3.2 discusses how to identify the need for case-by-case TBELs. In this section of the EPA Permit Writers Manual, it is the fourth bullet point that is specific to power plant industries with regard to the 2009 Final Report and the 2010 EPA memo. It states, “When effluent guidelines are available for the industry category, but no effluent guidelines requirements are available for the pollutant of concern (e.g., a facility is regulated by the effluent guidelines for Pesticide Chemicals [Part 455] but discharges a pesticide that is not regulated by these effluent guidelines). The permit writer should make sure that the pollutant of concern is not already controlled by the effluent guideline and was not considered by the EPA when the Agency developed the effluent guideline.”

Appendix B – TBEL Determination (continued):

In order to develop BPJ TBEL, POC should be determined first. The EPA Permit Writers Manual 5.2.1.2 informs staff to review the *Central Wastewater Treatment Category Technical Development Document*, Chapter 6, Figure 6-1 Pollutant of Concern Methodology (CWT Document). From the CWT Document, Figure 1 – How to Determine a POC has been created.

Figure 1 – How to Determine a POC



Baseline Values for the CWT Document are established in Chapter 15 of the same document. The baseline values for the potential POCs is located below. In accordance to Figure 1 and Chapter 6 of the CWT document, the baseline is multiplied by 10 prior to comparing with analyzed pollutants.

Appendix B – TBEL Determination (continued):

The below table documents the effluent samples from each of the applicable outfalls and the baseline values (x10) from Chapter 15.

Table 1

| Pollutant | #001 mg/L | #002 mg/L | Baseline mg/L (x10) | Background mg/L |
|------------|--------------|--------------|------------------------|--------------------|
| Aluminum | X | X | 2.0 | NR |
| Antimony | ND | ND | 0.2 | NR |
| Arsenic | 0.00419 | 0.015 | 0.1 | NR |
| Boron | X | X | 1.0 | NR |
| Cadmium | ND | ND | 0.05 | NR |
| Chromium | ND | ND | 0.1 | NR |
| Cobalt | X | X | 0.5 | NR |
| Copper | ND | 0.12 | 0.25 | NR |
| Iron | 0.62 | 5.8 | 1.0 | NR |
| Lead | ND | ND | 0.5 | NR |
| Mercury | ND | ND | 0.002 | NR |
| Molybdenum | X | X | 0.1 | NR |
| Nickel | ND | ND | 0.4 | NR |
| Nitrogen* | X | X | 0.5 | NR |
| Phosphorus | 0.11 | 0.17 | 10 | NR |
| Selenium | 0.00358 | 0.0211 | 0.05 | NR |
| Thallium | ND | ND | 0.1 | NR |
| Zinc | 0.087 | <0.093 | 0.2 | NR |

* = Nitrogen did not have a baseline, but nitrate/nitrite does

X = believe absent – do not use

ND = Not Detected

NR = Not required

Table 1 above clearly documents that the above pollutants do not meet the initial determination of being POCs. Table 1 does; however, document that Total Iron for Outfall #002 exceeds the Baseline value (x10); however, Water Quality Based Effluent Limitations were established for Iron in the permit. Water Quality Based Effluent Limitations for Copper for Outfall #002 was also established in the permit.

Therefore, it is staff's BPJ that effluent from this facility does not contain pollutants in levels to trigger Technology-based Effluent Limitations.

