



Exhibit G Dearborn

105 West Capitol Avenue  
P.O. Box 270  
Jefferson City, Missouri 65102

Missouri Department of Transportation  
Kevin Keith, Director

573.751.2551  
Fax: 573.751.6555  
1.888.ASK MODOT (275.6636)

November 20, 2012

Department of Natural Resources  
Division of Environmental Quality  
Kansas City Region Office  
500 NE Colbern Road  
Lee's Summit, MO 64086-4710

Attn: Mr. Aaron Bleibaum Water Pollution Control Unit

Dear Mr Bleibaum,

Attached is the plan for closure of lagoons at the MoDOT north bound Dearborn Rest Area at I-29 mile marker 27. Permit number MO 0129453. The rest area is scheduled to be connected to the City of Dearborn waste water treatment system. The lagoons will then lay dormant until closure.

Land disturbance permit and permit termination form J will be submitted after the water is removed from the lagoons and they're ready to be closed and seeded.

Sincerely,

Kevin Wideman  
Sr. Environmental Specialist

Copies: General Services-1gs  
Joey Hinton KC General Services

enclosures



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Closure Plan for Wastewater Treatment Lagoon  
Missouri Department of Transportation  
Dearborn Rest Area

Permit No. MO-0129453  
Owner: Missouri Department of Transportation

I Facility Description

A Type: two cell lagoon  
B Location; Interstate 29, & Mile Marker 27 North Bound, Camden Point, Mo 64018  
C Size:  
    Dimensions: Total 1.08 acres lagoon surface area 2.0 acres inside fenced area  
    Capacity: 8,900 gallons per day  
    Pop. Equiv.: 162  
D Age: Put in service 1989

II Waste water

A Quantity Total operating volume approximately 1,362,315.1 gallons  
B Quality Pumped at a rate no greater than 8,900 gallons per day  
discharge to waters of the state within permit limits  
C Method of Disposal Pumped at a rate no more than 26,700 gpd from cell one to  
cell two.  
Leave six inches of water above sludge layer in cell two  
which would need to be pumped to the POTW  
D Alternate Method After connection to the POTW, pump at a rate agreed upon  
with the city to the POTW.

III Sludge

A Quantity approximately 49.11 CY in cell one, 8.91 CY in Cell two  
B Quality Sludge in cell one 44.2 dry tons (605.54 lbs of PAN)  
Sludge in cell two 12.96 dry tons (8.02 lbs of PAN)  
Total Total 58.02 CY, 57.16 dry tons, 613.56 lbs of PAN  
C Method of Disposal Sludge will be left in place since lagoons are more than 15  
years old.  
Lagoons and area equal 2 plus acres of area to be mixed  
with the sludge

IV Structure

The lagoons are to be destroyed by filling in. Sludge left in place and the berms turned in  
and mixed with the sludge on a 1:1 ratio. Smoothed over and seeded to grass. There is no  
mechanical plant with these lagoons.

Note: Laboratory analysis attached

#### Existing Facility Information

Land use adjacent properties – roads, wooded, residential farm homes to the north, south and east – Aerial photograph attached.

Average daily usage – 20 cars, 15 trucks and RVs

Design Flow – 8,900 GPD

Population Equivalent – 162 per day

No measurement of influent flow

2 cell facultative (non-aerated) lagoon system

Total surface area – 2+ acres

Total lagoon depth – 5 ft.

Normal operating depth – 3 ft.

Operating surface area – 1.08 acres

Average detention time – 417 days

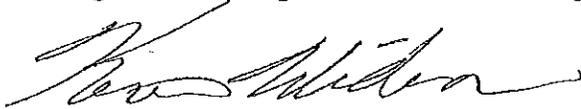
Effective storage volume – 1,362,315 + gallons

Discharge to Unnamed tributary to Owl Creek (U) then Owl Creek (C)

All material in the lagoons including the sand, gravel and rock will not be removed, but mixed with the soil and sludge, smoothed over and seeded to grass.

In calculating the sludge levels and samples, a sludge judge was used to take readings throughout the lagoons and averaged. The sludge judge was also used to take samples of the sludge for testing;

Lagoon one averaged 10 to 12 inches of sludge blanket. 12 inches was used in the calculations  
Lagoon two averaged 4 to 6 inches of sludge blanket. 6 inches was used in the calculations.



Kevin Wideman

Sr. Environmental Specialist

Design Environmental

Missouri Department of Transportation

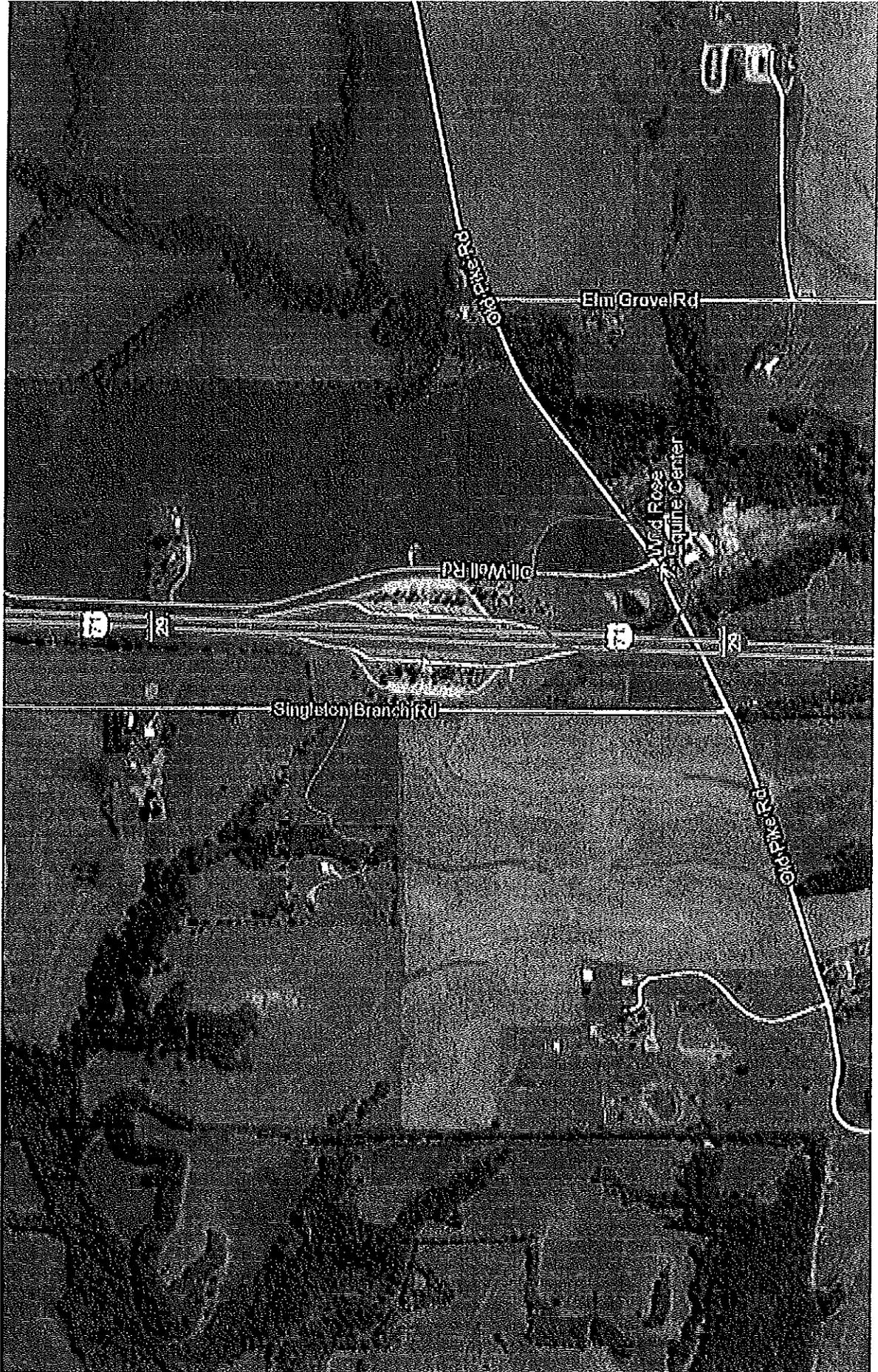
573-526-4171

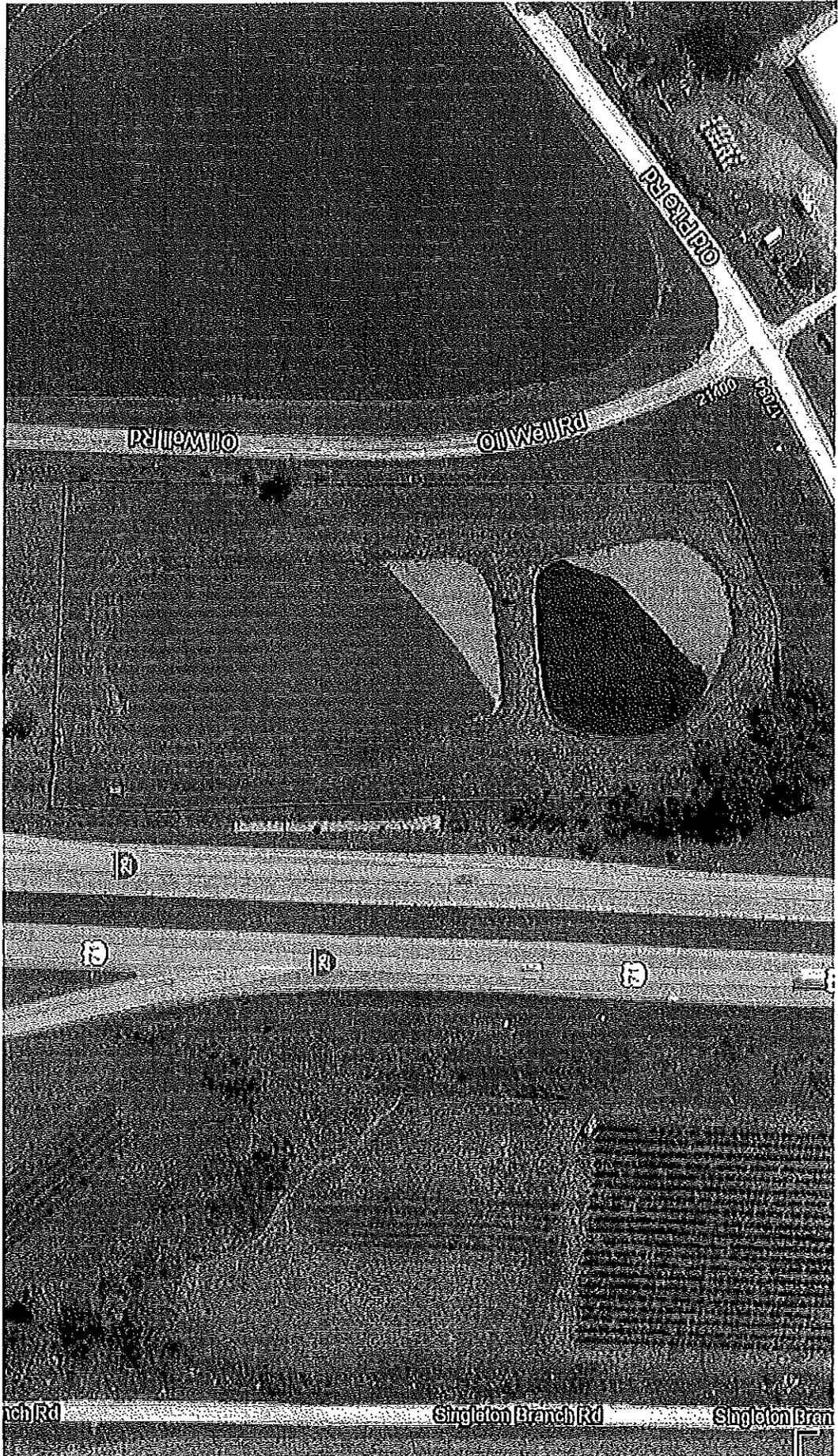
Cell: 573-291-1586

fax 573-522-1973

kevin.wideman@modot.mo.gov

# Dearborn Rest Area Lagoons







120 East Davis Street  
 P.O. Box 30  
 Fayette, MO 65248-0030

Phone: (660) 248-1911  
 Fax: (660) 248-1921  
<http://www.inovafia.com>

ANALYSIS REPORT

Chain of Custody Number: 12-1064  
 Project Name / Number: N/A / N/A  
 Date Collected: 10-24  
 Time Collected: 11:15

Sample Number: 2DKRW404  
 Lab Number: 125222  
 Sample Matrix: Sludge  
 Sample Type: Grab

| Analysis                  | Result | Units                | Reporting Limit | Analysis Method | Date - Analyst   |
|---------------------------|--------|----------------------|-----------------|-----------------|------------------|
| Nitrogen, Ammoniacal      | 85     | mg/Kg                | 1               | SM 4500-NH3 C   | 10/30/2012 - MWL |
| Nitrogen, Total Kjeldahl  | 667    | mg/Kg                | 2.5             | PAI-DK 01       | 10/31/2012 - MWL |
| Nitrogen, Nitrate-Nitrite | <0.2   | mg/Kg                | 0.2             | EPA 353.2       | 10/31/2012 - MWL |
| Percent Solids            | 2.95   | %                    | 0.01            | SM 2540 G       | 10/29/2012 - MWL |
| Plant Available Nitrogen  | 13.7   | lb/ton of dry sludge | N/A             | Calculation     | 11/2/2012 - MWL  |

Notes:

Report Date: 11/02/12  
 Page Number: 5 of 6

This report has been produced for the exclusive and confidential use of our clients. Reference to the analyses, the results, or the company in any news releases, advertising, or other public announcement is prohibited without obtaining prior written consent.



120 East Davis Street  
 P.O. Box 30  
 Fayette, MO 65248-0030

Phone: (660) 248-1911  
 Fax: (660) 248-1921  
<http://www.inovatia.com>

ANALYSIS REPORT

Chain of Custody Number: 12-1064  
 Project Name / Number: N/A / N/A  
 Date Collected: 10-24  
 Time Collected: 11:30

Sample Number: 2DKRW405  
 Lab Number: 125223  
 Sample Matrix: Sludge  
 Sample Type: Grab

| Analysis                  | Result | Units                | Reporting Limit | Analysis Method | Date - Analyst   |
|---------------------------|--------|----------------------|-----------------|-----------------|------------------|
| Nitrogen, Ammoniacal      | 24     | mg/Kg                | 1               | SM 4500-NH3 C   | 10/30/2012 - MWL |
| Nitrogen, Total Kjeldahl  | 226    | mg/Kg                | 2.5             | PAI-DK 01       | 10/31/2012 - MWL |
| Nitrogen, Nitrate-Nitrite | < 0.2  | mg/Kg                | 0.2             | EPA 353.2       | 10/31/2012 - MWL |
| Percent Solids            | 2.37   | %                    | 0.01            | SM 2540 G       | 10/29/2012 - MWL |
| Plant Available Nitrogen  | 5.43   | lb/ton of dry sludge | N/A             | Calculation     | 11/2/2012 - MWL  |

Notes:

Report Date: 11/02/12  
 Page Number: 6 of 6

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**CHAIN OF CUSTODY RECORD**

INOVATIA LABORATORIES, LLC  
 120 EAST DAVIS STREET • P.O. BOX 30  
 FAYETTE, MO 65248-0030  
 www.inovatia.com

CHAIN NUMBER: 12-1064  
 DATE REPORTED: 11/2/12  
 INVOICE NUMBER: \_\_\_\_\_

Contact Name: Kevyn Wideman Phone Number: 573 526 4171 Project Due Date: \_\_\_\_\_  
 Company Name: Mo DOT Fax Number: \_\_\_\_\_ Comments: \_\_\_\_\_  
 Address: P.O. Box 270 Project Name / Number: \_\_\_\_\_  
 City, State, Zip: Jefferson City, MO 64501 Quote Number: \_\_\_\_\_  
 E-Mail: kevin.wideman@mo.gov Purchase Order Number: \_\_\_\_\_

DISPOSITION INFORMATION  
 STORE WITHIN HOLD TIME  
 STORE LONG TERM  
 RETURN AT CUSTOMER EXPENSE  
 DISPOSE OF SAMPLE AT INOVATIA  
 OTHER  
 NOTES: \_\_\_\_\_

DELIVERY METHOD: Hand  
 CUSTODY SEALS:  YES  NO  INTACT  BROKEN  
 COOLANT: ICE  ICE BACK  NONE  
 PACKAGE TYPE: 500ml  
 ARRIVAL TEMPERATURE: 10.7 °C  
 MEASURED BY:  TEMPERATURE BLANK  SAMPLE  COOLER / CONTAINER

Method Number →  
 NUMBER REPRESENTATIVE  
 HCl HNO<sub>3</sub> NaOH H<sub>2</sub>SO<sub>4</sub> TSP Other: Other:  
 No. of Containers Grab / Composite

| LAB NUMBER | Customer Sample Number | Date Collected | Time Collected | Matrix Soil / Water / Sludge / Other | Grab / Composite | No. of Containers | Method Number | Other: | Other: |
|------------|------------------------|----------------|----------------|--------------------------------------|------------------|-------------------|---------------|--------|--------|
| 1          | 175219 2DKRW 401       | 10/29/12       | 8:30           | Sludge                               | ✓                | 1                 |               |        |        |
| 2          | 175220 2DKRW 402       | 10/29/12       | 8:40           |                                      | ✓                | 1                 |               |        |        |
| 3          | 175221 2DKRW 403       | 10/29/12       | 9:20           |                                      | ✓                | 1                 |               |        |        |
| 4          | 175222 2DKRW 404       | 10/29/12       | 11:15          |                                      | ✓                | 1                 |               |        |        |
| 5          | 175223 2DKRW 405       | 10/29/12       | 11:30          |                                      | ✓                | 1                 |               |        |        |
| 6          |                        |                |                |                                      |                  |                   |               |        |        |
| 7          |                        |                |                |                                      |                  |                   |               |        |        |
| 8          |                        |                |                |                                      |                  |                   |               |        |        |
| 9          |                        |                |                |                                      |                  |                   |               |        |        |
| 10         |                        |                |                |                                      |                  |                   |               |        |        |

Please include any information that may be useful in the analysis of the sample, such as: expected concentrations, required detection limits, and method of collection.  
 Comments: \_\_\_\_\_

Relinquished By: [Signature] Date: 10/29/12 Time: 15:40  
 Received By: Amber Vandewort Date: 10/24/12 Time: 15:40  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Unless otherwise governed under separate contract, by signing this form, the client accepts Inovatia's standard terms and conditions for service, pricing, and payment as published on the reverse side of this form. Prior, written notification of regulatory compliance requirements (GLP/GMP) is mandatory and may result in additional fees.  
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STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

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

Permit No. MO-0129453

Owner: Missouri Department of Transportation  
Address: 600 NE Colbern Road, Lee's Summit, MO 64086

Continuing Authority: Same as above  
Address: Same as above

Facility Name: MoDOT, I-29 Dearborn Rest Area  
Address: 21205 I-29 North bound, Camden Point, MO 64018

Legal Description: NW ¼, SW ¼, Sec. 24, T34N, R35W, Platte County  
Latitude/Longitude: +3928215/-09447104

Receiving Stream: Unnamed tributary to Owl Creek (U)  
First Classified Stream and ID: Owl Creek (C) (03572)  
USGS Basin & Sub-watershed No.: (10240011-080003)  
is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

Outfall #001 – Rest Area - SIC #9621- No certified operator required, however a level "D" operator is recommended.

Two-cell lagoon/Sludge is retained in the lagoon.

Design population equivalent is 162.

Design flow is 8,900 gallons per day.

Actual flow is 3,263 gallons per day.

Design sludge production is 1.0 dry tons/year.

Actual sludge production is 0.36 dry tons/year.

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.

November 21, 2008

Effective Date

Doyle Childers, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

November 20, 2013

Expiration Date  
MO 389.0241 (10-93)

Karl Felt, Director, Kansas City Regional Office

| <b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>   |       |                            |                |                 | PAGE NUMBER 2 of 3       |                 |
|--|-------|----------------------------|----------------|-----------------|--------------------------|-----------------|
|  |       |                            |                |                 | PERMIT NUMBER MO-0129453 |                 |
| The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below: |       |                            |                |                 |                          |                 |
| OUTFALL NUMBER AND EFFLUENT PARAMETER(S)   | UNITS | FINAL EFFLUENT LIMITATIONS |                |                 | MONITORING REQUIREMENTS  |                 |
|  |       | DAILY MAXIMUM              | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY    | SAMPLE TYPE     |
| <u>Outfall #001</u>  |       |                            |                |                 |                          |                 |
| Flow   | MGD   | *                          |                | *               | once/quarter**           | 24 hr. estimate |
| Biochemical Oxygen Demand <sub>5</sub>   | mg/L  |                            | 65             | 45              | once/quarter**           | grab            |
| Total Suspended Solids   | mg/L  |                            | 120            | 80              | once/quarter**           | grab            |
| pH - Units   | SU    | ***                        |                | ***             | once/quarter**           | grab            |
| Temperature  | °C    | *                          |                | *               | once/quarter**           | grab            |
| Ammonia as N   | mg/L  | *                          |                | *               | once/quarter**           | grab            |
| MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE, <u>April 28, 2009</u> THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.  |       |                            |                |                 |                          |                 |
| <b>B. STANDARD CONDITIONS</b>  |       |                            |                |                 |                          |                 |
| IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> and <u>August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.   |       |                            |                |                 |                          |                 |

MO 760-0016 (8/91)

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

- \* Monitoring requirement only.
- \*\* Sample once per quarter in any month when there is a discharge. See table below for quarterly sampling

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

\*\*\* pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.

**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.

C. SPECIAL CONDITIONS (continued)

2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.
  6. Water Quality Standards
    - (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
    - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      - (5) There shall be no significant human health hazard from incidental contact with the water;
      - (6) There shall be no acute toxicity to livestock or wildlife watering;
      - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
  7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
    - (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
    - (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

**Missouri Department of Natural Resources**  
**Statement of Basis**  
**MODOT, I-29 Dearborn Rest Area**  
**NPDES #: MO-0129453**  
**Platte County**

A Statement of Basis (Statement) gives pertinent information regarding the applicable regulations and rationale for the development of the NPDES Missouri State Operating Permit (operating permit). This Statement includes Wasteload Allocations, Water Quality Based Effluent Limitations, and Reasonable Potential Analysis calculations as well as any other calculations that effect the effluent limitations of this operating permit. This Statement does not pertain to operating permits that include sewage sludge land application plans and variance procedures, and does not include the public comment process for this operating permit.

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

**Part I – Facility Information**

Facility Type: Rest Area  
 Facility SIC Code(s): 9621

**Facility Description:**

Three cell lagoon/ sludge is retained in the lagoon

**OUTFALL(S) TABLE:**

| OUTFALL | DESIGN FLOW (CFS) | TREATMENT LEVEL         | EFFLUENT TYPE | DISTANCE TO CLASSIFIED SEGMENT (MI) |
|---------|-------------------|-------------------------|---------------|-------------------------------------|
| 001     | .0137             | Equivalent to secondary | Domestic      | 0.24                                |

**Water Quality History:**

2005 one exceedance for BOD (46mg/L)

**Part II – Operator Certification Requirements**

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

- Owned or operated by or for:
  - Municipalities
  - Public Sewer District:
  - County
  - Public Water Supply Districts:
  - Private sewer company regulated by the Public Service Commission:
  - State or Federal agencies:

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or fifty (50) or more service connections.

Not Applicable ; This facility is not required to have a certified operator.

**Part III – Receiving Stream Information**

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

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

- 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 1<sup>st</sup> classified receiving stream’s beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

**RECEIVING STREAM(S) TABLE:**

| WATERBODY NAME | CLASS | WBID | DESIGNATED USES* | 8-DIGIT HUC | EDU**                               |
|----------------|-------|------|------------------|-------------|-------------------------------------|
| Owl Creek      | C     | 3572 | LWW, AQL         | 10240011    | Central Plains / Nishnabotna/Platte |
|                |       |      | ***              |             |                                     |

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

\*\* - Ecological Drainage Unit

\*\*\* - UAA conducted on May 29, 2007 and was approved on November 9, 2007. The committee recommendation was to remove use for whole body contact recreation due to it not meeting the depth criteria; which also supported the previous 2005 UAA data.

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

| RECEIVING STREAM (U, C, P) | LOW-FLOW VALUES (CFS) |      |       |
|----------------------------|-----------------------|------|-------|
|                            | 1Q10                  | 7Q10 | 30Q10 |
| Owl Creek (C)              | 0.0                   | 0.0  | 0.1   |

**MIXING CONSIDERATIONS TABLE:**

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

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

**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.

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

**Part III – Receiving Stream Information**

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

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

- 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 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

**RECEIVING STREAM(S) TABLE:**

| WATERBODY NAME | CLASS | WBID | DESIGNATED USES* | 8-DIGIT HUC | EDU**                               |
|----------------|-------|------|------------------|-------------|-------------------------------------|
| Owl Creek      | C     | 3572 | LWW, AQL         | 10240011    | Central Plains / Nishnabotna/Platte |
|                |       |      | ***              |             |                                     |

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

\*\* - Ecological Drainage Unit

\*\*\* - UAA conducted on May 29, 2007 and was approved on November 9, 2007. The committee recommendation was to remove use for whole body contact recreation due to it not meeting the depth criteria; which also supported the previous 2005 UAA data.

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

| RECEIVING STREAM (U, C, P) | LOW-FLOW VALUES (CFS) |      |       |
|----------------------------|-----------------------|------|-------|
|                            | 1Q10                  | 7Q10 | 30Q10 |
| Owl Creek (C)              | 0.0                   | 0.0  | 0.1   |

**MIXING CONSIDERATIONS TABLE:**

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

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

**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.

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

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

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

Not Applicable ;

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

**SCHEDULE OF COMPLIANCE (SOC):**

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

Not Applicable ;

This permit does not contain a SOC.

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

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

Not Applicable ;

At this time, the permittee is not required to develop and implement a SWPPP.

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

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

Not Applicable ;

Wasteload allocations were not calculated.

**WLA MODELING:**

Not Applicable ;

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

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

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

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

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility (industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH<sub>3</sub>)
- Facility is a municipality or domestic discharger with a Design Flow  $\geq$  22,500 gpd.
- Other -- please justify.

Not Applicable ;

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

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

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

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 – Main Facility Outfall**

**EFFLUENT LIMITATIONS TABLE:**

| PARAMETER            | UNIT   | BASIS FOR LIMITS | DAILY MAXIMUM   | WEEKLY AVERAGE | MONTHLY AVERAGE | MODIFIED | PREVIOUS PERMIT LIMITATIONS |
|----------------------|--|------------------|---|----------------|-----------------|----------|-----------------------------|
| FLOW                 | OPD  | 1                | *   |                | *               | NO       | S                           |
| BOD <sub>5</sub>     | MG/L   | 1                |   | 65             | 45              | NO       | S                           |
| TSS                  | MG/L   | 1                |   | 120            | 80              | NO       | S                           |
| pH (S.U.)            | SU   | 1                | ≥6  |                | ≥6              | NO       | S                           |
| TEMPERATURE (°C)     | °C   | 1/8              | *   |                | *               | YES      | ****                        |
| AMMONIA AS N         | MG/L   | 2/3/5            | *   |                | *               | YES      | ****                        |
| ESCHERICHIA COLI     | **   | 1/2              | Please see Escherichia Coli (E. coli) in the Derivation and Discussion Section below. |                |                 |          |                             |
| MONITORING FREQUENCY | Minimum Sampling is ONCE/QUARTER and Reporting Frequency Requirements is QUARTERLY |                  |   |                |                 |          |                             |

\* - Monitoring requirement only

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

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 Judgement     |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET test Policy                |
| 6. Dissolved Oxygen Policy               |                                    |

**OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** 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.
- **Biochemical Oxygen Demand (BOD<sub>5</sub>).** Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.
- **Total Suspended Solids (TSS).** Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.
- **pH.** Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.

- Temperature. Monitoring requirement due to the toxicity of Ammonia varies by temperature.
- Total Ammonia Nitrogen. Monitoring requirement only. Monitoring for temperature and ammonia are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.
- Escherichia coli (E. coli). This facility may be required to have *E. coli* effluent limitations when Missouri adopts the implementation of the *E. coli* standards, as per [10 CSR 20-7.031(4)(A)].

## 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.

Date of Factsheet: October 6, 2008

Sunny Wellesley  
Water Protection Program

