

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-0113891

Owner: Lemons Landfill Corporation, LLC
Address: 1700 Holzer Dr. Arnold MO. 63010

Continuing Authority: Republic Services, Inc.
Address: 18500 North Allied Way #100 Phoenix AZ. 85054

Facility Name: Lemons Landfill East
Facility Address: 15250 Old Bloomfield Rd. Dexter MO. 63841

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

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

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

FACILITY DESCRIPTION

Outfall #001 SEE PAGE TWO

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

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Sections 640.013, 621.250, and 644.051.6 of the Law.

February 10, 2012
Effective Date

March 17, 2016
Modification Date

Sara Parker Pauley, Director, Department of Natural Resources

February 9, 2017
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued):

Outfall #001- Landfill/Stormwater Runoff- SIC 4953 - No Certified Operator Required.

Sediment pond/stormwater runoff/sediment retained in basin.

Design flow is 4.2 MGD.

Actual flow is dependent upon precipitation.

Legal Description: SE ¼, SE ¼, Sec. 2, T25N, R10E, Stoddard County

UTM Coordinates: X=773664, Y=4080894

Receiving Stream: Unnamed Tributaries to Lateral Main Ditch #2 (U)

First Classified Stream and ID: Lateral Main Ditch #2 (C) (3106) 303(d) list

USGS Basin & Sub-watershed No.: (08020204-0502)

Outfall #002- Landfill/Stormwater Runoff- SIC 4953 - No Certified Operator Required.

Sediment pond/stormwater runoff/sediment retained in basin.

Design flow is 4.1 MGD.

Actual flow is dependent upon precipitation.

Legal Description: SW ¼, NE ¼, Sec. 11, T25N, R10E, Stoddard County

UTM Coordinates: X=773064, Y=4079862

Receiving Stream: Unnamed Tributaries to Lateral Main Ditch #2 (U)

First Classified Stream and ID: Lateral Main Ditch #2 (C) (3106) 303(d) list

USGS Basin & Sub-watershed No.: (08020204-0502)

Outfall #003- Landfill/Stormwater Runoff- SIC 4953 - No Certified Operator Required.

Sediment pond/stormwater runoff/sediment retained in basin.

Design flow is 6.2 MGD.

Actual flow is dependent upon precipitation.

Legal Description: NE ¼, NE ¼, Sec. 11, T25N, R10E, Stoddard County

UTM Coordinates: X=773639, Y= 4080420

Receiving Stream: Unnamed Tributaries to Lateral Main Ditch #2 (U)

First Classified Stream and ID: Lateral Main Ditch #2 (C) (3106) 303(d) list

USGS Basin & Sub-watershed No.: (08020204-0502)

| A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS | | | | | PAGE NUMBER 3 of 8 | |
|--|---------|----------------------------|----------------|-----------------|--------------------------|-------------|
| | | | | | PERMIT NUMBER MO-0113891 | |
| 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 |
| Outfalls #001, #002 & #003 | | | | | | |
| Flow | MGD | * | | * | once/quarter* | 24 hr. est. |
| Rainfall (Note 1) | inches | * | | * | daily | measurement |
| Biochemical Oxygen Demand ₅ | mg/L | 45 | | 30 | once/quarter** | grab |
| Chemical Oxygen Demand | mg/L | 90 | | 60 | once/quarter** | grab |
| Total Suspended Solids | mg/L | 72 | | 54 | once/quarter** | grab |
| pH – Units | SU | *** | | *** | once/quarter** | grab |
| Settleable Solids | mL/L/hr | 1.5 | | 1.0 | once/quarter** | grab |
| Ammonia as N | mg/L | * | | * | once/quarter** | grab |
| Oil & Grease | mg/L | 15 | | 10 | once/quarter** | grab |
| Nitrate as N | mg/L | * | | * | once/quarter** | grab |
| Total Phosphorus | mg/L | * | | * | once/quarter** | grab |
| Fluoride | mg/L | * | | * | once/quarter** | grab |
| Benzene | mg/L | * | | * | once/quarter** | grab |
| Ethylbenzene | mg/L | * | | * | once/quarter** | grab |
| Toluene | mg/L | * | | * | once/quarter** | grab |
| Total Xylene | mg/L | * | | * | once/quarter** | grab |
| Temperature | °C | * | | * | once/quarter** | grab |
| Total Hardness | mg/L | * | | * | once/quarter** | grab |
| Parameters continued on next page | | | | | | |

Note 1 – Rainfall can be collected at a single location, monitoring results should be reported with Outfall #001.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 4 of 8

PERMIT NUMBER MO-0113891

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 |
| Outfalls #001, #002 & #003 | | | | | | |
| Antimony, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Arsenic, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Barium, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Beryllium, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Boron, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Cadmium, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Chromium (III), Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Chromium (VI), Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Cobalt, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Copper, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Lead, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Manganese, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Mercury, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Nickel, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Selenium, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Silver, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Thallium, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Zinc, Total Recoverable | µg/L | * | | * | once/quarter** | grab |

Parameters continued on next page

| A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS | | | | | PAGE NUMBER 5 of 8 | |
|--|---------|----------------------------|----------------|-----------------|--------------------------|-------------|
| | | | | | PERMIT NUMBER MO-0113891 | |
| 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 |
| Outfall #001 | | | | | | |
| Total Suspended Solids | lbs/day | 2537 | | 1900 | once/quarter** | grab |
| Iron, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Outfall #002 | | | | | | |
| Total Suspended Solids | lbs/day | 2477 | | 1855 | once/quarter** | grab |
| Iron, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| Outfall #003 | | | | | | |
| Total Suspended Solids | lbs/day | 3746 | | 2805 | once/quarter** | grab |
| Iron, Total Recoverable | µg/L | * | | * | once/quarter** | grab |
| MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE NEXT REPORT IS DUE <u>JANUARY 28, 2015</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. | | | | | | |

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** See table below for quarterly sampling.

| Minimum Sampling Requirements | | | |
|-------------------------------|-----------------------------|--|------------------------|
| Quarter | Months | Influent Parameters | Report is Due |
| First | January, February, March | Sample at least once during any month of the quarter | April 28 th |
| Second | April, May, June | Sample at least once during any month of the quarter | July 28th |
| Third | July, August, September | Sample at least once during any month of the quarter | October 28th |
| Fourth | October, November, December | Sample at least once during any month of the quarter | January 28th |

*** 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.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated November 1, 2013, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.
3. Changes in Discharges of Toxic Substances

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

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
 - (c) That the effluent limit established in part A of the permit will be exceeded.
4. Report as no-discharge when a discharge does not occur during the report period.
 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.

C. SPECIAL CONDITIONS- (continued)

6. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities, (Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992.

The SWPPP must include the following:

- (a) A listing of specific 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 storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #7 below.
- (b) The SWPPP must include a schedule for a bi-monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. 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 (5) years. These must be made available to DNR personnel upon request.
- (c) A provision for designating an individual to be responsible for environmental matters.
- (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.

7. Permittee shall adhere to the following minimum Best Management Practices:

- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
- (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
- (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
- (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.

8. This permit stipulates pollutant benchmarks applicable to your discharge. The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce that pollutant in your stormwater discharge(s).

| Outfall #001, #002 and #003 | |
|------------------------------------|-----------------------|
| Parameter | Benchmark |
| Total Recoverable Iron | 4.0 mg/L (4,000 µg/L) |

C. SPECIAL CONDITIONS- (continued)

Any time a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and available to the department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.

9. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
10. 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.
11. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of a sheen. When the presence of hydrocarbons is indicated, and at a minimum of once/quarter, this water must be tested for Total Petroleum Hydrocarbons (TPH). The suggested analytical method for testing TPH is non-Halogenated Organic by Gas Chromatography method 8015 (also known as OA1 and OA2). However, if the permittee so desires to use other approved testing methods (i.e. EPA 1664), they may do so. If the concentration for TPH exceeds 10mg/L, the water shall be taken to a permitted wastewater treatment plant for treatment.
12. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERLA.

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.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATEMENT OF BASIS
MO-0113891
LEMONS LANDFILL EAST

This Statement of Basis (Statement) gives pertinent information regarding minor modification(s) to the above listed operating permit without the need for a public comment process.

A Statement is not an enforceable part of a Missouri State Operating Permit.

Part I – Facility Information

Facility Type: Landfill
Facility SIC Code(s): 4953

Facility Description:

Please see the factsheet below for a full description of the facility.

Part II – Modification Rationale

This operating permit is hereby modified to remove the following condition from the permit.

“In support of the alternative iron benchmark implemented in this permit, the facility shall submit the following items:

- (a) No later than one year from effective date of this permit; the facility shall submit a practicable work plan to identify accessible, and representative sampling locations to evaluate iron concentrations in the receiving water body as well as background storm event iron concentrations upstream of the facility or in a representative watershed, if there is no upstream flow. The work plan is expected to include one background and one downstream monitoring site. The work plan shall be submitted to the Operating Permits Section at P.O. Box 176, Jefferson City, MO 65102 and the Southeast Regional Office at 2155 N. Westwood Blvd., Poplar Bluff, MO 63901.
- (b) If sufficient background and receiving water iron data already exists, the facility may submit these data, in a report, as a potential alternative to watershed monitoring requirements. Such data report shall be submitted within the work plan required in Item 1(a).
- (c) Results of the approved iron study shall be submitted with the renewal application 180 prior expiration of this permit.”

At the time of permit issuance the department was interested in collecting data to alleviate uncertainty related to the new 4 mg/L stormwater benchmark for iron. Since issuance, the department’s knowledge of stormwater permitting, and iron, has advanced and we are confident that the 4 mg/L iron benchmark placed in this permit is protective of the chronic water quality standard developed for uses at 7Q10 low flow. Therefore, the department no longer sees the merit in the prescribed study. In addition, due to the sporadic and inconsistent nature of stormwater, establishing a relationship between stormwater discharges and receiving stream concentrations would be difficult.

This is a minor modification to the permit that will not impact pollutant monitoring at the discharge points, and thus will have no bearing on the facilities obligations to comply with the CWA and Missouri Clean Water Law. A public comment period is not required for this revision.

No other changes were made at this time.

Part III – Administrative Requirements

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

DATE OF STATEMENT OF BASIS: DECEMBER 9, 2015

COMPLETED BY:

**LOGAN COLE, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-5827
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MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATEMENT OF BASIS
FOR MODIFICATION OF
MO-0113891
LEMONS LANDFILL EAST

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

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Statement of Basis 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 Statement of Basis is not an enforceable part of an operating permit. This Statement of Basis is for an industrial facility.

Part I – Facility Information

Facility Type: Landfill – Active Site
Facility SIC Code(s): #4953

Facility Description:

Stormwater runoff from an active landfill collects in one of three sediment ponds prior to discharge through one of three outfalls. Leachate is not authorized to discharge under this permit.

Part II – Modification Rationale

This operating permit is hereby modified to remove the effluent limitation for total recoverable iron. This effluent limitation has been replaced with monitoring only associated with a benchmark value of 4 mg/L. This new benchmark value has been determined to be more appropriate for stormwater runoff from landfill sites. This value is still protective of water quality, while also being a feasible target for maintaining best management practices for stormwater pollution prevention and control. The discussion below briefly summarizes the rationale submitted by the permittee that provided justifiable evidence to the applicability of a 4 mg/L benchmark value for stormwater runoff from landfill activities.

- **Iron, Total Recoverable.** The only water quality standard Missouri has for iron is the chronic AQL WQS = 1,000 µg/L. Current department policy implements acute water quality standards as a benchmark or effluent limit when it is available and in some cases the chronic criterion is applied if feasible and necessary to protect designated uses. In the case of iron, the state has no acute criteria. The permittee submitted with the application the Geosyntec Consultants review of pertinent literature and other state's regulations to justify the implementation of an alternative iron target. This review is in the form of a memorandum titled Acute Iron Target Assessment, dated March 6, 2015. A summary of that review follows.

Tidball et al. (1984) conducted an element analysis of Missouri's agricultural soils and found that iron was between 0.7% and 5.5% of soil content in Missouri. There is a strong correlation between the concentration of TSS and iron in landfill stormwater discharges. It is common for stormwater discharges to comply with stringent TSS limitations while still exceeding total recoverable iron limitations. If the native soils or soils being applied as cover at a landfill are in the upper range of natural iron soil content of 5.5%, the discharge can be expected to contain approximately 4 mg/L of iron when discharging 50 mg/L of TSS. Further reduction of TSS and iron may require mechanical treatment or land application of the stormwater.

Only twenty states have adopted any iron criterion. Many of those standards are based on the 1.0 mg/L chronic criterion that was recommended by EPA in the 1976 "Red Book" (EPA 1976). In the Red Book, EPA reviewed studies that showed aquatic life effects over a wide range of iron concentrations and justified the 1.0 mg/L chronic value based on a Colorado stream study that observed the presence of trout and other fish increased when iron concentrations were below 1.0 mg/L. Of the 20 states with iron criteria, Kentucky, West Virginia and Montana have varied from the EPA recommended criteria. Ohio EPA removed iron criteria in 2004 and no longer issues iron limits in NPDES permits.

Toxicity studies cited by the Electric Power Resources Institute's (EPRI) 2004 technical report "Water Quality Criteria Development for Iron" and EPA's ECOTOX database (ECOTOX 2014) indicate that the geometric mean acute values (GMAV) when exposed to iron is 12.6 mg/L for *Ceriodaphnia dubia* and 18.7 mg/L for *Pimephales promelas*. The University of Kentucky also conducted an iron toxicity study to support the establishment of chronic and acute state water quality standards (Birge 1985). Regarding acute iron toxicity, the study concluded that for protection of aquatic life, the maximum iron concentration should not exceed 4 mg/L and the concentration may be between 1 mg/L and 4 mg/L for up to 96 hours. Kentucky is the only state to have developed an acute iron criterion.

EPRI also calculated GMAVs for rainbow trout, 18.3 mg/L and brook trout, 0.917 mg/L. Neither of these coldwater fishes is native to Missouri water ways. Rainbow trout are stocked in certain fisheries, but the permit writer is unaware of any brook trout populations in Missouri. The GMAV for brook trout indicates that alternative iron targets for stormwater may not be appropriate for cold water fisheries.

The permit writer reviewed available iron data for hydrologic unit 08020204. The United States Geological Survey (USGS) collected 30 total recoverable iron samples in the Little River Ditches near Kennett, Missouri. The Department collected 4 total recoverable iron samples in the Old Channel Little River upstream of the Lilbourn Lagoon discharge near Lilbourn, Missouri and 2 total recoverable iron samples from the Little River Ditch No. 1 near Morehouse, Missouri. The Kennett location is approximately within 40 miles of the Lemons East Landfill, the Lilbourn location is approximately within 25 miles and the Morehouse location is within approximately 15 miles. The average iron concentration found was 4.6 mg/L with a range of 0.02 mg/L to 31 mg/L and with 86% of the samples exceeding the 1 mg/L. This data set seems to support the determination that application of a 1 mg/L chronic standard to the discharge is more stringent than natural conditions for this geographic area.

40 CFR 122.44(k) indicates that a BMP-based approach is appropriate where numeric effluent limitations are infeasible. In accordance with the department's current stormwater permitting strategy and EPA stormwater permitting guidance, it is the permit writer's best professional judgment that an iron benchmark of 4 mg/L is both feasible and protective of water quality at this facility. This benchmark is accompanied by a TSS limit of 72 mg/L as a daily maximum limit and 54 mg/L as a monthly average limit, and combined; it is the permit writer's best professional judgment that all numeric and general criteria are protected. This benchmark may not be acceptable in a coldwater fishery where trout species could be affected. Additionally, the permit requires the permittee to collect site specific data to verify that the 4 mg/L benchmark is sufficiently protecting water quality.

Benchmark = 4 mg/L

- Birge, W.J., Black, J.A., Westerman, A.G., Short, T.M., Taylor, S.B. Bruser, D.M. and Wallingford E.D. 1985. *Recommendations on Numerical Values for Regulating Iron and Chloride Concentrations for the Purpose of Protecting Warmwater Species of Aquatic Life in the Commonwealth of Kentucky*. MOU 5429.
- ECOTOX Release 4.0 U.S. Environmental Protection Agency, accessed December 2014. <http://cfpub.epa.gov/ecotox/>
- Electric Power Resources Institute (EPRI). 2004. *Water Quality Criteria Development for Iron*.
- Tidball, Ronald, R. 1984. *Geography of Soil Geochemistry of Missouri Agricultural Soils*. Geological Survey Professional Paper 9 54 -H, I.
- USEPA. 1976. *Quality Criteria for Water*. EPA PB-263 943.

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

Outfall #001 – daily maximum limit of 1,802 µg/L, monthly average of 747 µg/L

Outfall #002 – daily maximum limit of 1,851 µg/L, monthly average of 699 µg/L

Outfall #003 – daily maximum limit of 1,639 µg/L, monthly average of 817 µg/L

These effluent limitations have been replaced with monitoring only. Additionally, special condition #8 was added to address the new benchmark value of 4.0 mg/L for total recoverable iron and requirements associated with benchmarks. Special condition #9 was also added. This requirement addresses instream sampling of the receiving stream. There are no studies available documenting the quality of the receiving water body as it relates to total recoverable iron. Special condition #9 requires the permittee to assess background concentrations of iron in the watershed for comparison to receiving water body iron concentrations. Instead of establishing sampling locations in the permit, the permittee is given time to develop and propose a work plan to collect local data. This data will be used to determine whether the alternative iron target of 4 mg/L is sufficiently protective of water quality standards instream.

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

Part III – Administrative Requirements

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

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. 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 began on July 02, 2015 and ended on August 03, 2015. No comments were received during the Public Notice period.

DATE OF STATEMENT OF BASIS: JUNE 9, 2015

COMPLETED BY:

LOGAN COLE
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-5827
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Missouri Department of Natural Resources
Statement of Basis
For the Modification of
MO-0113891
LEMONS LANDFILL EAST

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 Statement of Basis 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 Statement of Basis is not an enforceable part of a Missouri State Operating Permit.

Part I – Facility Information

Facility Type: Landfill Active
 Facility SIC Code(s): #4953

Outfall #003- New added outfall- Landfill/Stormwater Runoff- SIC 4953 - No Certified Operator Required.

Sediment pond/stormwater runoff/sediment retained in basin.

Design flow is 25.92 MGD.

Actual flow is dependent upon precipitation.

Legal Description: NE ¼, NE ¼, Sec. 11, T25N, R10E, Stoddard County

UTM Coordinates: X=773639, Y=4080420

Receiving Stream: Unnamed Tributaries to Lateral Main Ditch #2 (U)

First Classified Stream and ID: Lateral Main Ditch #2 (C) (3106) 303 (d) list

USGS Basin & Sub-watershed No.: (08020204-0502)

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

Part II – Modification Rationale

Lemons Landfill East is adding outfall #003 to their existing permit #MO-0113891. This outfall is covered under Missouri State Operating Land Disturbance #MO-RA00408 which will be terminated once this permit modification becomes effective.

OUTFALL(S) TABLE:

| OUTFALL | DESIGN FLOW (CFS) | TREATMENT LEVEL | EFFLUENT TYPE | DISTANCE TO CLASSIFIED SEGMENT (MI) |
|---------|-------------------|-----------------|---------------------------------|-------------------------------------|
| 003 | Variable | Primary/BMP* | Industrial – Storm water runoff | 2.30 |

* Best Management Practices

Comments:

In order for this facility to add a new outfall, the wasteload allocations for outfalls #001 & #002 must be reconfigured to meet the TMDL allocations for this watershed. Please see the newly calculated limits for Lemons Landfill East. Due to the comments that the Missouri Department of Natural Resources received on June 16, 2014 concerning the draft for the proposed modification, the wasteload allocations are reconfigured from the first draft. The facility had submitted supporting documents reducing the design flow at outfall #002 from 8.9 MGD to 4.1 MGD and the design flow at outfall #003 from 25.92 MGD to 6.2 MGD. Lemons Landfill East is proposing improvements at both outfalls in helping them achieve the reduction in the design flow.

Recalculated WLAs for Lemons Landfill East in the Lateral #2 Main Ditch Watershed

| Facility | Permit number | WLA (tons per day) d/w/m* |
|--|-------------------|------------------------------|
| Dexter, East Lagoon | MO-0023213 | NA/0.339/0.226 (1.8 MGD) |
| Bernie Municipal WWTF | MO-0048054 | NA/0.066/0.045 |
| Vaughn's Gaslight Village | MO-0048895 | NA/0.0015/0.001 |
| Lemons Landfill West | MO-0106895 | No discharge |
| Lemons Landfill East (Outfall 01) | MO-0113891 | 1.27/NA/ 0.95 |
| Lemons Landfill East (Outfall 02) | MO-0113891 | 1.247/NA/0.93 |
| Lemons Landfill East (Outfall 03) | MO-0113891 | 1.87/NA/1.4 |
| Tyson Foods Inc. Dexter Plant | MO-0129798 | Varies (stormwater) |

*Permit limits based on current design loads where d=daily, w=weekly, m=monthly average.

WLA Calculations & Justification:

Wasteload Allocation (WLA) = (flow in cfs) (concentration in mg/L) (0.0026975 [a conversion factor]) = tons per day

The TMDL that is listed on table 5 in the permit, can be viewed at www.dnr.mo.gov/env/wpp/tmdl/3105-lat2-main-ditch-record.htm
It gave this facility a daily maximum loading of 4.38 tons/day or **8,760** lbs/day and a monthly average of 3.28 tons/day or **6,560** lbs/day.

Daily Maximum

| Outfall | DESIGN FLOW MGD | % OF TOTAL FLOW | Mass Loading lbs/day | Mass Loading tons/day | Concentration limits [^] mg/L |
|--------------|-----------------|-----------------|----------------------|-----------------------|--|
| 001 | 4.2 | 29 | 2537 | 1.2687 | 72 |
| 002 | 4.1 | 28 | 2477 | 1.2385 | 72 |
| 003 | 6.2 | 43 | 3746 | 1.8728 | 72 |
| TOTAL | 14.5 | 100 | 8760 | 4.38 | |

Mass loading = % Total flow/Total design flow.

[^] See calculations below

Monthly Average

| Outfall | DESIGN FLOW MGD | % OF TOTAL FLOW | Mass Loading lbs/day | Mass Loading tons/day | Concentration limits ^{^^} mg/L |
|--------------|-----------------|-----------------|----------------------|-----------------------|---|
| 001 | 4.2 | 29 | 1900 | 0.9501 | 54 |
| 002 | 4.1 | 28 | 1855 | 0.9274 | 54 |
| 003 | 6.2 | 43 | 2805 | 1.4025 | 54 |
| TOTAL | 14.5 | 100 | 6560 | 3.28 | |

Mass loading = % Total flow/Total design flow.

^{^^} See calculations below

New Effluent Limits Determination:

- **Total Suspended Solids (TSS).** Per the TMDL Lateral Main Ditch #2, “The Lemons Landfill East facility (MO-0113891) discharges to unclassified tributaries of Lateral #2 Main Ditch above the impaired segment.”

Outfall #001- Waste Load Allocation (WLA)

Design flow is 4.2 MGD

Daily Maximum = 1.2687 tons/day = 2537 lbs/day (new calculated values)

Monthly Average 0.9501 tons/day = 1900 lbs/day (new calculated values)

Conversion from lbs/day to mg/L:

8.34 (lb/million gallons)/(mg/L) is the conversion equation from lbs/day to mg/L.

[Concentration (mg/L)] = [Load (lbs/day)] ÷ [Flow (MGD)] * 8.34 (lbs/MG)/(mg/L)

MDL = [(2537 lbs/day) ÷ (4.2 MGD x 8.34)] = **72 mg/L** (2,537 LBS/DAY)

AML = [(1900 lbs/day) ÷ (4.2 MGD x 8.34)] = **54mg/L** (1,900 LBS/DAY)

Outfall #002- Waste Load Allocation (WLA)

Design flow is 4.1 MGD

Daily Maximum 1.2385 tons/day = 2,477 lbs/day (new calculated values)

Monthly Average 0.9274 tons/day = 1855 lbs/day (new calculated values)

Conversion from lbs/day to mg/L:

8.34 (lbs/million gallons)/(mg/L) is the conversion equation from lbs/day to mg/L.

[Concentration (mg/L)] = [Load (lbs/day)] ÷ [Flow (MGD)] * 8.34 (lbs/MG)/(mg/L)

MDL = [(2,477 lbs/day) ÷ (4.1 MGD x 8.34)] = **72 mg/L** (2,477 LBS/DAY)

AML = [(1,855 lbs/day) ÷ (4.1 MGD x 8.34)] = **54 mg/L** (1,855 LBS/DAY)

Outfall #003- Waste Load Allocation (WLA)

Design flow is 6.2 MGD

Daily Maximum 1.8728 tons/day = 3,746 lbs/day (new calculated values)

Monthly Average 1.4025 tons/day = 2,805 lbs/day (new calculated values)

Conversion from lbs/day to mg/L:

8.34 (lbs/million gallons)/(mg/L) is the conversion equation from lbs/day to mg/L.

[Concentration (mg/L)] = [Load (lbs/day)] ÷ [Flow (MGD)] * 8.34 (lbs/MG)/(mg/L)

MDL = [(3,746 lbs/day) ÷ (6.2 MGD x 8.34)] = **72 mg/L** (3,746 LBS/DAY)

AML = [(2,805 lbs/day) ÷ (6.2 MGD x 8.34)] = **54 mg/L** (2,805 LBS/DAY)

- **Iron, Total Recoverable.**

Outfall #003 Since this is a new outfall and no DMRs data is available. The permit writer will utilize default coefficient of variation to calculate the limit. Iron does not have acute criteria, therefore the chronic criteria for the protection of aquatic life Chronic Criteria = 1000 µg/L from 10 CSR 20-7.031 Table A.

WLA_c = 1000 µg/L

LTA_c = 1000 (0.527) = 527 µg/L

[CV = 0.6, 99th Percentile]

MDL = 527 (3.11) = **1639 µg/L**

[CV = 0.6, 99th Percentile]

AML = 527 (1.55) = 816.9 µg/L rounded up to **817 µg/L**

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

Part III – Administrative Requirements

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

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 was from May 16, 2014 to June 16, 2014. Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. The facility is proposing modifications to its first submittal. These modifications will include the addition of sediment basins/retention basins, sprinkler system and redirecting the flow in order to reduce the design flow at outfalls #002 & #003, this operating permit is to be placed on Public Notice again, which is tentatively scheduled to begin in July, 2014. Please see attached comments from the permittee at the end of the factsheet.

- The second Public Notice period for this operating permit was from 07/11/2014 to 08/11/2014. No responses were received.

Date of Statement of Basis:

Modified date: June 19, 2014

By:

Thabit H. Hamoud, P.E, EE III
Missouri Department of Natural Resources
Water Protection Section
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**MISSOURI DEPARTMENT OF NATURAL RESOURCES
 FACT SHEET
 INDUSTRIAL STORM WATER RUNOFF FROM LANDFILL ACTIVITIES
 STANDARD INDUSTRIAL CLASSIFICATION (SIC): 4953
 FOR THE PURPOSE OF MODIFICATION
 OF
 MO-0113891
 LEMONS LANDFILL EAST**

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

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

A Fact Sheet is not an enforceable part of an operating permit.

Part A – Applicability & Facility Description

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

Facility Description:

Sediment pond/stormwater runoff/sediment retained in basin.

Design flow is 4.2 MGD

Outfall #002 - Landfill/Stormwater Runoff- SIC 4953 - No Certified Operator Required.

Sediment pond/stormwater runoff/sediment retained in basin.

Design flow is 8.9 MGD

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

Facility contact: Doug Ticer (573) 624-2412

Part B – Outfall Information & Descriptions

OUTFALL(S) TABLE:

| OUTFALL # | DESIGN FLOW (CFS) | TREATMENT LEVEL | EFFLUENT TYPE | DISTANCE TO CLASSIFIED SEGMENT (MI) |
|-----------|-------------------|--------------------|--------------------------------|-------------------------------------|
| 001 | Variable | Settling Pond/BMP* | Industrial – Stormwater runoff | 4.25 |
| 002 | Variable | Settling Pond/BMP* | Industrial – Stormwater runoff | 2.25 |
| 003 | Variable | Settling Pond/BMP* | Industrial – Stormwater runoff | 2.30 |

* Best Management Practices

Water Quality History:

The Lateral Main Ditch #2 (WBID # 03105) is listed on the 1998 & 2002 Missouri 303(d) List for Sediment and on the 2006 303 (d) list for Low DO from non-point source runoff and on the 2008 303 (d) list for Temperature from Channelization. A Total Maximum Daily Load for Lateral Main Ditch #2 (TMDL) has been developed and limitations included in this permit. The facilities outfall's are upstream of the impaired water listing. The TMDL can be viewed at www.dnr.mo.gov/env/wpp/tmdl/3105-lat2-main-ditch-record.htm

Part C – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

- 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 Lateral Main Ditch #2 | U | --- | General Criteria | 08020204 | Little River Drainage |
| Lateral Main Ditch #2 | C | 03106 | LWW, AQL, 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 was conducted on 12/22/2005 and can be viewed at www.dnr.mo.gov/env/wpp/wqstandards/uaa/pdf/3105-lateral-ditch-2-uaa-122205.pdf.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

| RECEIVING STREAM (U, C, P) | LOW-FLOW VALUES (CFS) | | |
|--|-----------------------|------|-------|
| | 1Q10 | 7Q10 | 30Q10 |
| Unnamed Tributary to Lateral Main Ditch #2 (U) | 0 | 0 | 0 |

MIXING CONSIDERATIONS TABLE

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

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part D – 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.

As per [10 CSR 20-7.031(2)(D)], the three (3) levels of protection provided by the antidegradation policy in subsections (A), (B), and (C) of this section shall be implemented according to procedures developed by the department. On April 20, 2007, the Missouri Clean Water Commission approved *Missouri Antidegradation Rule and Implementation Procedure* (Antidegradation Rule), which is applicable to new or upgraded/expanded facilities. The implementation of the Antidegradation Rule occurred on August 31, 2008. Any construction permit application or other applicable permit applications (i.e. renewals, etc...) submitted prior to August 31, 2008, will not be required to have an Antidegradation Review. Renewals are not subject to the Antidegradation Rule.

- Renewal no degradation proposed and no further review necessary.

COMPLIANCE AND ENFORCEMENT:

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

Not Applicable .

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

FLOW BASED PERMITTING:

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

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

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

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.

When this permit was initially issued and became effective February 10, 2010, it had a schedule of compliance that expired in February of 2014.

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.

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.

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.

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).

WLA MODELING:

Not Applicable ;

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

WATER QUALITY STANDARDS:

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

Not Applicable ;

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

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

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

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

Applicable ;

The Lateral Main Ditch #2 (WBID # 03105) is listed on the 1998 & 2002 Missouri 303(d) List for Sediment and on the 2006 303 (d) list for Low DO from non-point source runoff and on the 2008 303 (d) list for Temperature from Channelization. A Total Maximum Daily Load for Lateral Main Ditch #2 (TMDL) has been developed and limitations included in this permit to accommodate the addition of outfall #003. The facilities outfall's are upstream of the impaired water listing. The TMDL can be viewed at www.dnr.mo.gov/env/wpp/tmdl/3105-lat2-main-ditch-record.htm

– Per the Total Maximum Daily Load for Lateral Main Ditch #2 (TMDL), this facility is considered to be a source of or has the potential to contribute to the above listed sediment pollutant(s).

Lateral Main Ditch #2 is listed on 1998 303(d) list and on the 2002 303(d) list for impairment of sediment. Sediment results from soil erosion or erosion of waste materials or stockpiles and includes silt, sand and gravel. Missouri has no numeric standard for sediment for industry. Excessive deposits of sediment in waters of the state are interpreted as violations of the general (narrative) criteria of the Water Quality Standards found at 10 CSR 20-7.031(3). A waste load allocation has been derived in the TMDL.

Per the TMDL, The Lemons Landfill East facility (MO-0113891) discharges to unclassified tributaries of Lateral #2 Main Ditch above the impaired segment. According to discharge monitoring reports, the facility discharges in response to storm events and is not anticipated to discharge during critical low-flow conditions (95 percent flow exceedence). However, during and immediately following storm events the facility has reasonable potential to cause or contribute to the sediment impairment in Lateral #2 Main Ditch. The amount and extent of impact on Lateral #2 Main Ditch depends on the volume of sediment discharged, in-stream assimilative capacity and any settling that may occur on-site or downstream of the facility. At the permitted facility design flow and TSS maximum daily limit, the combined TSS daily loading from Outfall #001 (1.4 tons/day) & Outfall #2 (2.98 tons/day) is 4.4 tons/day and is greater than the 50th percentile flow LC value of 1.64 tons/day(TMDL report-Figure 2 of the TMDL curve for Lateral#2 Main ditch Sediment Load). Reductions in TSS loading are necessary to ensure the load capacity of Lateral #2 Main Ditch is not exceeded during this and other stream flows.

During critical low-flow conditions, it is reasonable to allocate the entire loading capacity of a pollutant as wasteload allocations due to the lack of pollutant contributions from precipitation induced surface water runoff. The loading capacity for TSS during critical low-flow conditions (95 percent flow exceedence) can therefore be allocated among point sources within the Lateral #2 Main Ditch watershed, less a margin of safety to account for uncertainty. A WLA of 0.42 tons/day [0.466 tons/day – 10 percent MOS] will ensure permitted facilities will not cause or contribute to the sediment impairment of Lateral #2 Main Ditch during critical low-flow conditions. To account for point source storm water loading at flow conditions greater than critical low-flow (90 percent flow exceedence and greater), a WLA of 0.50 tons/day will ensure permitted facilities within the watershed do not collectively cause or contribute to the sediment impairment.

The WLAs listed in this TMDL do not preclude the establishment of future point sources of sediment loading in the watershed. Any future point sources should be evaluated in light of the TMDL established and the range of flows into which any additional load will impact.

WLA = (flow in cfs)(concentration in mg/L)(0.0026975 [a conversion factor]) = tons per day

Table 5 – WLAs for Site Specific Permitted Facilities in the Lateral #2 Main Ditch Watershed

| Facility | Permit number | WLA (tons per day) d/w/m* |
|-----------------------------------|---------------|------------------------------|
| Dexter, East Lagoon | MO-0023213 | NA/0.339/0.226 (1.8 MGD) |
| Bernie Municipal WWTF | MO-0048054 | NA/0.066/0.045 |
| Vaughn's Gaslight Village | MO-0048895 | NA/0.0015/0.001 |
| Lemons Landfill West | MO-0106895 | No discharge |
| Lemons Landfill East (Outfall 01) | MO-0113891 | 1.4/NA/1.05 |
| Lemons Landfill East (Outfall 02) | MO-0113891 | 2.98/NA/2.23 |
| Tyson Foods Inc. Dexter Plant | MO-0129798 | Varies (storm water) |

*Permit limits based on current design loads where d=daily, w=weekly, m=monthly average.

Part E – Effluent Limits Determination

Outfalls #001 #002 & #003 – Effluent Limitation Table:

| PARAMETER | UNIT | BASIS FOR LIMITS | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MODIFIED | PREVIOUS PERMIT LIMITATIONS |
|-------------------------|--|------------------|---------------|----------------|-----------------|----------|-----------------------------|
| FLOW | Mgd | 1 | * | | * | NO | S |
| RAINFALL | Inches | 9 | * | | * | NO | S |
| COD | mg/L | 9 | 90 | | 60 | YES | 120-90 |
| BOD | mg/L | 9 | 45 | | 30 | YES | 60-45 |
| TSS | mg/L | 1/10 | 27 | | 20 | YES | 80/60 |
| TSS(OUTFALL#001) | Ibs/day | 1/10 | 964 | | 722 | YES | NA |
| TSS(OUTFALL#002) | Ibs/day | 1/10 | 2015 | | 1509 | YES | NA |
| TSS(OUTFALL#003) | Ibs/day | 1/10 | 5782 | | 4330 | YES | NA |
| pH | SU | 1 | 6.5 – 9.0 | | 6.5 – 9.0 | YES | 6-9 |
| SETTLABLE SOLIDS | mL/L/hr | 1/9 | 1.5 | | 1.0 | NO | S |
| OIL & GREASE | mg/L | 1/2/9 | 15 | | 10 | NO | S |
| TOTAL AMMONIA AS N | mg/L | 1/5/9 | * | | * | NO | S |
| TEMPERATURE | °C | 9 | * | | * | YES | ** |
| NITRATE AS N | mg/L | 1/9 | * | | * | NO | S |
| TOTAL PHOSPHORUS | mg/L | 1/9 | * | | * | NO | S |
| FLUORIDE | mg/L | 1/9 | * | | * | NO | S |
| BENZENE | µg/L | 1/9 | * | | * | YES | TOTAL BETX |
| ETHYLBENZENE | µg/L | 1/9 | * | | * | YES | TOTAL BETX |
| TOLUENE | µg/L | 1/9 | * | | * | YES | TOTAL BETX |
| TOTAL XYLENE | µg/L | 1/9 | * | | * | YES | TOTAL BETX |
| TOTAL HARDNESS | mg/L | 9 | * | | * | NO | S |
| ANTIMONY, TR | µg/L | 1/9 | * | | * | NO | S |
| ARSENIC, TR | µg/L | 1/9 | * | | * | NO | S |
| BARIUM, TR | µg/L | 1/9 | * | | * | NO | S |
| BERYLLIUM, TR | µg/L | 1/9 | * | | * | NO | S |
| BORON, TR | µg/L | 1/9 | * | | * | NO | S |
| CADMIUM, TR | µg/L | 1/9 | * | | * | NO | S |
| CHROMIUM (III), TR | µg/L | 1/9 | * | | * | YES | TOTAL CHROMIUM |
| CHROMIUM (VI), TR | µg/L | 1/9 | * | | * | YES | TOTAL CHROMIUM |
| COBALT, TR | µg/L | 1/9 | * | | * | NO | S |
| COPPER, TR | µg/L | 1/9 | * | | * | NO | S |
| IRON, TR (OUTFALL #001) | µg/L | 1/2/3 | 1802 | | 747 | YES | * |
| IRON, TR (OUTFALL #002) | µg/L | 1/2/3 | 1851 | | 699 | YES | * |
| IRON, TR (OUTFALL #003) | µg/L | 1/2/3 | 1639 | | 817 | NA | NA |
| LEAD, TR | µg/L | 1/9 | * | | * | NO | S |
| MANGANESE, TR | µg/L | 1/9 | * | | * | NO | S |
| MERCURY, TR | µg/L | 1/9 | * | | * | NO | S |
| NICKEL, TR | µg/L | 1/9 | * | | * | NO | S |
| SELENIUM, TR | µg/L | 1/9 | * | | * | NO | S |
| SILVER, TR | µg/L | 1/9 | * | | * | NO | S |
| THALLIUM, TR | µg/L | 1/9 | * | | * | NO | S |
| ZINC, TR | µg/L | 1/9 | * | | * | NO | S |
| MONITORING FREQUENCY | Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below. | | | | | | |

* - Monitoring requirement only

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

TR – means Total Recoverable

BETX – means that the parameter of BETX has been speciated into each individual parameter of Benzene, Ethylbenzene, Toluene, and Total Xylene. The previous BETX limit was 0.75 µg/L.

Basis for Limitations Codes:

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

OUTFALLS #001 AND #002 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** Monitoring only requirement in accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification to determine an alternate location for flow monitoring. Monitoring frequency is being retained from the previous permit.
- **Rainfall.** Monitoring only requirement. Precipitation data obtained from DMRs is used to aid in the determination of this facilities specific runoff coefficient and theoretical loading in the watershed. Data is also useful in correlating effectiveness of Best Management Practices. Monitoring frequency is being retained from the previous permit.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a Daily Maximum and 60 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Monitoring frequency is being retained from the previous permit.
- **Biochemical Oxygen Demand (BOD₅).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Monitoring frequency is being retained from the previous permit.
- **Total Suspended Solids (TSS).** Per the TMDL Lateral Main Ditch #2, “The Lemons Landfill East facility (MO-0113891) discharges to unclassified tributaries of Lateral #2 Main Ditch above the impaired segment.”

Outfall #001- Waste Load Allocation (WLA)

Design flow is 4.2 MGD

Daily Maximum 1.4 tons/day = 2800 lbs/day (per the TMDL)

Monthly Average 1.05 tons/day = 2100 lbs/day (per the TMDL)

Conversion from lbs/day to mg/L:

8.34 (lb/million gallons)/(mg/L) is the conversion factor from lbs/day to mg/L.

$[\text{Concentration (mg/L)}] = [\text{Load(lbs/day)}] \div [\text{Flow(MGD)} * 8.34 \text{ (lb/MG)}] / (\text{mg/L})$

MDL = $[(2800 \text{ lbs/day}) \div (4.2 \text{ MGD} * 8.34)] = 79.9 \text{ mg/L}$ rounded up to **80 mg/L** (2,800 LBS/DAY)

AML = $[(2100 \text{ lbs/day}) \div (4.2 \text{ MGD} * 8.34)] = 59.9 \text{ mg/L}$ rounded up to **60 mg/L** (2,100 LBS/DAY)

Outfall #002- Waste Load Allocation (WLA)

Design flow is 8.9 MGD

Daily Maximum 2.98 tons/day = 5960 lbs/day (per the TMDL)

Monthly Average 2.23 tons/day = 4460 lbs/day (per the TMDL)

Conversion from lbs/day to mg/L:

8.34 (lb/million gallons)/(mg/L) is the conversion factor from lbs/day to mg/L.

$[\text{Concentration (mg/L)}] = [\text{Load(lbs/day)}] \div [\text{Flow(MGD)} * 8.34 \text{ (lb/MG)}] / (\text{mg/L})$

MDL = $[(5960 \text{ lbs/day}) \div (8.9 \text{ MGD} * 8.34)] = 80.3 \text{ mg/L}$ rounded down to **80 mg/L** (5,960 LBS/DAY)

AML = $[(4460 \text{ lbs/day}) \div (8.9 \text{ MGD} * 8.34)] = 60.1 \text{ mg/L}$ rounded down to **60 mg/L** (4,460 LBS/DAY)

Monitoring frequency is being retained from the previous permit.

- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(4)(E)]. pH is not to be averaged. Monitoring frequency is being retained from the previous permit.
- **Settleable Solids.** Effluent limitations of 1.5 mL per L per hour as a Daily Maximum and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits. Monitoring frequency is being retained from the previous permit.

- **Chlorides + Sulfate**. Parameter removed. See Appendix for Reasonable Potential Analysis.
- **Sulfate**. Parameter removed. See Appendix for Reasonable Potential Analysis.
- **Chlorides**. Parameter removed. Reasonable potential analysis for Chlorides + Sulfate and for Sulfate have indicated that Chlorides would not be an issue.
- **Benzene**. Monitoring of Total BETX is to be performed for the individual components of Benzene, Ethylbenzene, Toluene, and Xylene so that a direct comparison of results can be made to the water quality standards. Monitoring is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Monitoring frequency is being retained from the previous permit.
- **Ethylbenzene**. Monitoring of Total BETX is to be performed for the individual components of Benzene, Ethylbenzene, Toluene, and Xylene so that a direct comparison of results can be made to the water quality standards. Monitoring is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Monitoring frequency is being retained from the previous permit.
- **Toluene**. Monitoring of Total BETX is to be performed for the individual components of Benzene, Ethylbenzene, Toluene, and Xylene so that a direct comparison of results can be made to the water quality standards. Monitoring is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Monitoring frequency is being retained from the previous permit.
- **Total Xylene**. Monitoring of Total BETX is to be performed for the individual components of Benzene, Ethylbenzene, Toluene, and Xylene so that a direct comparison of results can be made to the water quality standards. Monitoring is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Monitoring frequency is being retained from the previous permit.
- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. Monitoring frequency is being set to quarterly to be consistent with the rest of the parameters in the permit. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Total Ammonia Nitrogen, Temperature**. Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for temperature and ammonia are included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Nitrate as N**. Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for Nitrate as N is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Phosphorous**. Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for phosphorus is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Fluoride**. Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for fluoride is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.

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 200 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). In the absence of a listed conversion factor, the Department has chosen to use 1.0 as a default in accordance with the guidance. This assumes the dissolved fraction is equal to total recoverable. If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the department, partitioning evaluations may be considered and site-specific translators developed.

| METAL | CONVERSION FACTORS |
|--------------|--------------------|
| | ACUTE |
| Arsenic | 1.0 |
| Cadmium | 0.916 |
| Chromium III | 0.316 |
| Chromium VI | 0.982 |
| Copper | 0.960 |
| Lead | 0.690 |
| Mercury | 0.85 |
| Nickel | 0.998 |
| Silver | 0.85 |
| Zinc | 0.978 |

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 200 mg/L. Sufficient hardness data is not available for actual site conditions and monitoring for hardness will continue in the permit.

- Iron, Total Recoverable.** Submitted DMRs from this facility document exceedances of the Protection of AQL Iron criteria for each outfall. Therefore, this facility has a reasonable potential to cause or contribute to exceedances of the receiving stream’s water quality. Thus effluent limitations are applicable. Protection of AQL Chronic Criteria = 1000 µg/L, no Acute Criteria. No mixing allowed – please see Part D – Flow Based Permitting. No conversion factor is listed in the metals translator for Iron from dissolved to total recoverable and is being set at 1.0 as a default in accordance with the guidance. See discussion above. The CCC = WLA. Monitoring frequency is being retained from the previous permit.

Outfall #001

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

$LTA_c = 1000 \mu\text{g/L} (0.404) = 404 \mu\text{g/L}$

[CV = 0.9, 99th Percentile]

$MDL = 404 \mu\text{g/L} (4.46) = 1802 \mu\text{g/L}$

[CV = 0.9, 99th Percentile]

$AML = 404 \mu\text{g/L} (1.85) = 747 \mu\text{g/L}$

[CV = 0.9, 95th Percentile, n = 4]

Outfall #002

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

$LTA_c = 1000 \mu\text{g/L} (0.3) = 300 \mu\text{g/L}$

[CV = 1.3, 99th Percentile]

$MDL = 300 \mu\text{g/L} (6.17) = 1851 \mu\text{g/L}$

[CV = 1.3, 99th Percentile]

$AML = 300 \mu\text{g/L} (2.23) = 699 \mu\text{g/L}$

[CV = 1.3, 95th Percentile, n = 4]

- **Zinc, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for zinc is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Total Hardness.** Monitoring only requirement due to the fact that Metals toxicity varies by hardness. Monitoring frequency is being increased to quarterly from the previous permit. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Antimony, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for antimony is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Arsenic, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for arsenic is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Barium.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for barium is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Beryllium.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for beryllium is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Boron.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for boron is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Cadmium, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for Cadmium is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Chromium (III), Total Recoverable.** The previous permit contained a monitoring requirement for Total Chromium; however, in December 2005, the department promulgated the revised Missouri Water Quality Standards. This revision included the speciation of Total Chromium to Chromium (III) and Chromium (VI). A monitoring only requirement will be established in the operating permit to determine the fate of this pollutant for future operating permits for this facility. Monitoring is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.

- **Chromium (VI), Total Recoverable.** The previous permit contained a monitoring requirement for Total Chromium; however, in December 2005, the department promulgated the revised Missouri Water Quality Standards. This revision included the speciation of Total Chromium to Chromium (III) and Chromium (VI). A monitoring only requirement will be established in the operating permit to determine the fate of this pollutant for future operating permits for this facility. Monitoring is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Cobalt, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for cobalt is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Copper, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be retained to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for copper is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Lead, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for lead is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Manganese, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for manganese is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Mercury, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for mercury is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Nickel, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for nickel is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Selenium, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream’s water quality. Monitoring for selenium is included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.

- **Silver, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for silver is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Thallium, Total Recoverable.** Monitoring only requirement is being retained for this operating permit. Insufficient DMR data for all outfalls to determine if limitations or removal of this pollutant parameter is appropriate. Therefore, the monitoring frequency shall be increased to quarterly to determine the fate of this pollutant and if it is causing or contributing to exceedances of the receiving stream's water quality. Monitoring for thallium is included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.
- **Total Dissolved Solids, Total Organic Carbon, Calcium, Conductivity, Magnesium, and Vanadium.** No numeric water quality standards in 10 CSR 20-7.031. Parameters are being removed from the permit.
- **Minimum Sampling and Reporting Frequency Requirements.** The previous state operating permit contained once per quarter and once per year sampling. Pollutant parameters with the once per quarter minimum sampling requirement will retain this frequency. The pollutant parameters with once per year sampling will be modified to once per quarter minimum sampling requirement to determine the fate of each given pollutant parameter. Quarterly sampling is the minimum frequency to yield sufficient data points to perform a reasonable potential analysis at the end of the permit cycle.

Part F – Administrative Requirements

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

PUBLIC NOTICE:

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

DATE OF FACT SHEET: DECEMBER 5, 2011

COMPLETED IN COOPERATION WITH CENTRAL OFFICE WATER POLLUTION CONTROL PERMITTING STAFF AND BY:

**MICHAEL HEFNER,
ENVIRONMENTAL ENGINEER
SOUTHEAST REGIONAL OFFICE
MISSOURI DEPARTMENT OF NATURAL RESOURCES
(573)840-9750**

APPENDIX # – RPA RESULTS:

| Parameter | CMC | RWC Acute | CCC | RWC Chronic | n** | Range max/min | CV*** | MF | RP Yes/No |
|-------------------------------------|----------------------|--------------|------|----------------|-----|------------------|-------|------|--------------|
| Outfall #001- Iron µg/L | No Acute Criteria | 32000 | 1000 | 32000 | 21 | 10200/210 | 0.89 | 3.09 | YES |
| Outfall #002- Iron µg/L | | 185000 | 1000 | 185000 | 17 | 36000/205 | 1.34 | 5.12 | YES |
| Outfall #001-Sulfate mg/L | 250* | 7 | 250* | 7 | 10 | 4.3/1.69 | .27 | 1.69 | NO |
| Outfall #002-Sulfate mg/L | 250* | 47 | 250* | 47 | 9 | 15/1.64 | .6 | 3.16 | NO |
| Outfall #001-Chlorides+Sulfate mg/L | 1000 | 138 | 1000 | 138 | 17 | 50.5/2.12 | .69 | 2.74 | NO |
| Outfall #002-Chlorides+Sulfate mg/L | 1000 | 985 | 1000 | 985 | 13 | 186.4/3.07 | 1.17 | 5.28 | NO |
| | | | | | | | | | |

N/A – Not Applicable

* - Drinking Water Standard Used for Comparison.

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

Comments:

June 16, 2014
Project # 0120-139-10-30

Ms. Amanda Sappington
Water Protection Program
Industrial Permits Unit Chief
P.O. Box 176
Jefferson City, MO 65102
Re: Lemons Landfill East

Missouri State Operating Permit Response to Draft Permit
NPDES Permit MO-0113891, Stoddard County

Dear Ms. Sappington:

On behalf of Lemons Landfill, LLC, (Lemons Landfill) Weaver Boos Consultants (Weaver Boos) has prepared this response to the May 16, 2014 draft National Pollution Discharge Elimination System Missouri State Operating Permit Number MO-0113891 (Permit MO-0113891) for the Lemons Landfill East. This submittal includes updated design flow for Outfalls #002 and #003 based on improvements to be completed in the summer 2014.

The calculations were made using standard practices for drainage area, runoff, stage-storage relations in ponds and submerged culvert sizing. The following criteria were input into the Autodesk Storm and Sanitary Analysis program, 2013 Edition. The drainage areas have been revised taking into account the tributary areas to be installed in the summer 2014 and the current conditions on the site. These vary from the prior calculations based on excluding these additional retention basins. The enclosed runoff calculation uses the 25-year 24-hr storm with an SCS Type II distribution over a 24-hr period. Existing and proposed designs for the sedimentation ponds for Outfalls #002 and #003 were used to produce stage-storage curves for each pond. An initial size was selected for each outfall pipe and the simulation run to calculate the design flow. The pipe size for each outfall was iterated based on the desired design flow and checked to ensure the sedimentation ponds did not surcharge with the culvert configuration. The summary results of the Autodesk Storm and Sanitary Analysis program are attached.

It is proposed to reduce the maximum daily flow to Outfall 002 to 4.1 million gallons per day from 8.9 million gallons per day through the installation of a retention pond (Cell 10 retention pond) upgradient of the southeast sedimentation pond as proposed on the attached site drawing. In addition, the horizontal expansion located east of this retention pond will be developed in phases over the next 30 years with the first phase, Cell 11 North, being constructed in 2015. Storm water will be directed to a temporary retention pond southeast of the cell boundary and pumped into the Cell 10 retention pond which discharges into the southeast sedimentation pond and ultimately Outfall 002. Based on current waste acceptance rates the airspace gained with the construction of Cell 11 North will provide enough available airspace for waste disposal through 2019. The Cell 11 North phase development drawing is included as an attachment.

The next cell to be constructed, Cell 12 North, is scheduled to be constructed in 2019. Storm water will be directed to a temporary retention pond southeast of the cell boundary and pumped into the Cell 10 retention pond. These temporary retention ponds are adequately sized to manage a 25-year, 24-hour storm event. Based on current waste acceptance rates the airspace gained with the construction of Cell 12 North will provide enough available airspace for waste disposal through 2026. The attached summary calculations support the reduction in flow discharging to Outfall 002 for at least ten years.

For the next ten years all storm water in contact with the solid waste disposal unit will be routed through currently permitted Outfalls 001 and 002. As such, it is proposed to maintain proposed Outfall 003 as a land disturbance permitted outfall (MORA00408 Outfall 001) and not incorporate this outfall into NPDES Permit MO-0113891. As the landfill constructs additional cells it will expand the disposal area to the east. At that time the storm water may need to be routed through the currently permitted land disturbance Outfall 001. It is anticipated to be at least ten years in the future that this may occur. Prior to this occurring, the Lemons Landfill will obtain the modification to add this discharging location to the site specific NPDES permit. In the interim it is proposed to maintain this discharging point under the current land disturbance permit MORA00408.

In addition, Weaver Boos has re-evaluated the maximum daily flow to MORA00408 Outfall 001 taking into account the temporary retention pond slated to be installed in the summer 2014. It is proposed to reduce the maximum daily flow of MORA00408 Outfall 001 to 6.2 million gallons per day from 25.92 million gallons per day. This takes into account the entire 31.6-acre expansion area that currently discharges to this outfall. This area will decrease over the duration of the permit as each cell of the landfill is constructed to receive solid waste. As discussed above, with the construction of a new phase a temporary retention pond will be constructed adjacent to the cell where the storm water will be pumped into Cell 10 retention pond.

We appreciate your consideration of our propose changes to the draft permit for the Lemons East Landfill. If you need any additional information or supporting calculations please do not hesitate to contact Mr. Dave Vasbinder, the Environmental Manager for the Lemons Landfill East, at (636) 287-3995 or Michele Clark of Weaver Boos at (573) 289-3379.

Very truly yours,



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These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. 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 in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum 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, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
 - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Twenty-Four Hour Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Sanitary Sewer Overflow Reporting.** The following requirements solely reflect reporting obligations, and reporting does not necessarily reflect noncompliance, which may depend on the circumstances of the incident reported.
- a. **Twenty-Four Hour (24-Hour) Reporting.** The permittee or owner shall report any incident in which wastewater escapes the collection system such that it reaches waters of the state or it may pose an imminent or substantial endangerment to the health or welfare of persons. Relevant information shall be provided orally or via the current electronic method approved by the Department within 24 hours from the time the permittee becomes aware of the incident. A written submission shall also be provided within five (5) business days of the time the permittee or owner becomes aware of the incident. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The five (5) day reports may be provided via the current electronic method approved by the Department.
 - b. **Incidents Reported via Discharge Monitoring Reports (DMRs).** The permittee or owner shall report any event in which wastewater escapes the collection system, which does not enter waters of the state and is not expected to pose an imminent or substantial endangerment to the health or welfare of persons, which occur typically during wet weather events. Relevant information shall be provided with the permittee's or owner's DMRs.
4. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
5. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
6. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, 4, and 7 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
7. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
8. **Discharge Monitoring Reports.**
- a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
 - b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.



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Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
 - c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
 - d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
 - a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
 - b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
 - c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
 - a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
 - i. Violations of any terms or conditions of this permit or the law;
 - ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
 - iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
 - iv. Any reason set forth in the Law or Regulations.
 - b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.



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7. **Permit Transfer.**
 - a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
 - b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
 - c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

APR 21 2011



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
**FORM A - APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT
 UNDER MISSOURI CLEAN WATER LAW**

| FOR AGENCY USE ONLY | |
|---------------------|----------|
| CHECK NUMBER | 7154316 |
| DATE RECEIVED | 4/21/11 |
| FEE SUBMITTED | \$100.00 |

SFA

Note PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

- An operating permit and antidegradation review public notice
- A construction permit following an appropriate operating permit and antidegradation review public notice
- A construction permit and concurrent operating permit and antidegradation review public notice
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- An operating permit for a new or unpermitted facility Construction Permit # _____
- An operating permit renewal: permit # MO- _____ Expiration Date _____
- An operating permit modification: permit # MO- 0113891 Reason: Request to eliminate Fe limit

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

2. FACILITY

| | | | |
|---|--|--|----------------------------|
| NAME Lemons Landfill East | | TELEPHONE WITH AREA CODE (573) 624-8135 | |
| ADDRESS (PHYSICAL) 15250 Old Bloomfield Road | | CITY Dexter | STATE ZIP CODE MO 63841 |

3. OWNER

| | | | |
|--|--|----------------|--|
| NAME Lemons Landfill Corporation, LLC | | E-MAIL ADDRESS | TELEPHONE WITH AREA CODE (636) 287-3995 |
| ADDRESS (MAILING) 1700 Holzer Drive | | CITY Arnold | STATE ZIP CODE MO 63010 |

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

4. CONTINUING AUTHORITY

| | | | |
|--|--|--|----------------------------|
| NAME Republic Services, Inc. | | TELEPHONE WITH AREA CODE (480) 627-2700 | |
| ADDRESS (MAILING) 18500 North Allied Way #100 | | CITY Phoenix | STATE ZIP CODE AZ 85054 |

5. OPERATOR

| | | |
|--------------------------|---------------------------|--------------------------|
| NAME N/A | CERTIFICATE NUMBER N/A | TELEPHONE WITH AREA CODE |
| ADDRESS (MAILING) N/A | CITY N/A | STATE ZIP CODE |

6. FACILITY CONTACT

| | | |
|-------------------------|--------------------------------|--|
| NAME David Vasbinder | TITLE Environmental Manager | TELEPHONE WITH AREA CODE (636) 287-3995 |
| | | FAX (636) 287-3989 |

7. ADDITIONAL FACILITY INFORMATION

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

001 SE 1/4 SE 1/4 Sec 2 T 25N R 10E _____ County
 UTM Coordinates Easting (X): 773664 Northing (Y): 4080894
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 SW 1/4 NE 1/4 Sec 11 T 25N R 10E _____ County
 UTM Coordinates Easting (X): 773064 Northing (Y): 4079862

003 NE 1/4 NE 1/4 Sec 11 T 25N R 10E _____ County
 UTM Coordinates Easting (X): 773638.9 Northing (Y): 4080420.5

004 _____ 1/4 _____ 1/4 Sec _____ T _____ R _____ County
 UTM Coordinates Easting (X): _____ Northing (Y): _____

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

001 - SIC 4953 _____ and NAICS 562212 _____ 002 - SIC 4953 _____ and NAICS 562212 _____
 003 - SIC 4953 _____ and NAICS 562212 _____ 004 - SIC _____ and NAICS _____

| | | | |
|---|---|---|--|
| 8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.) | | | |
| A. | Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below). | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| B. | Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D. | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| C. | Is application for storm water discharges only? If yes, complete EPA Form 2F. | YES <input checked="" type="checkbox"/> | NO <input type="checkbox"/> |
| D. | Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale. | | |
| E. | Is wastewater land applied? If yes, complete Form I. | YES <input type="checkbox"/> | NO <input checked="" type="checkbox"/> |
| F. | Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R. | YES <input type="checkbox"/> | NO <input checked="" type="checkbox"/> |

9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions.
(PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).

| | | | |
|-----------------------|----------------|-------------|-------------------|
| NAME Delta Asphalt | | | |
| ADDRESS PO Box 880 | CITY Dexter | STATE MO | ZIP CODE 63841 |

10. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.

| | |
|--|--|
| NAME AND OFFICIAL TITLE (TYPE OR PRINT) Tim Trost, Area President | TELEPHONE WITH AREA CODE (314) 744-8109 |
| SIGNATURE  | DATE SIGNED 04-16-15 |

MO 780-1479 (01-09)

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

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

HAVE YOU INCLUDED:

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