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-0137014
Owner:	Lange-Stegmann Co.
Address:	One Angelica Street, St. Louis, MO 63147
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Lange-Stegmann
Facility Address:	One Angelica Street, St. Louis, MO 63147
Legal Description:	Landgrant 1342, St. Louis City
UTM Coordinates:	See page 2
Receiving Stream:	Mississippi River (P)
First Classified Stream and ID:	Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.:	(07140101-0403)

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

FACILITY DESCRIPTION

Fertilizer Storage and Distribution; SIC #5191
Storm water only
Actual Flow is dependent on precipitation

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

March 1, 2013
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2017
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued):

Outfall 001

4.34 acres combined total of roof and yard area.
UTM Coordinates: X = 744454, Y = 4283657

Outfall 002

1.66 acres railroad yard area.
UTM Coordinates: X = 744339, Y = 4283469

OUTFALL #001 & 002	TABLE A-1. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 3 of 8
		PERMIT NUMBER MO-0137014

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:

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	GPD	*		*	once/month	24 hr. estimate
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
Nitrate as N	mg/L	*		*	once/month	grab
Total Ammonia Nitrogen	mg/L	*		*	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
pH	SU	**		**	once/month	grab
Total Phosphorus (as P)	mg/L	*		*	once/month	grab
Total Suspended Solids	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE April 28, 2013. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions	once /permit cycle IN APRIL OF THE FIRST YEAR	grab

MONITORING REPORTS SHALL BE SUBMITTED MAY 28, 2013.

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I Standard Conditions dated October 1, 1980 and hereby incorporated as though fully set forth herein.

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. 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.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established by the Director in accordance with 40 CFR 122.44(f).

C. SPECIAL CONDITIONS (continued)

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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

6. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

7. The following Benchmarks are considered necessary to protect existing water quality and should not be exceeded during discharges resulting from a precipitation event exceeding 0.1 inches during a 24 hour period. **Storm water samples shall be collected within the first 60 minutes of storm events of 0.1 inches or greater, that result in a discharge. Storm events include rainfall as well as run-off from the melting of frozen precipitation.** The BMPs at the facility should be designed to meet these Benchmarks during rainfall event up to the 1-in-10 year, 24 hour rain event. The Benchmark does not constitute numeric effluent limitations. **A benchmark exceedance alone, therefore, is not a permit violation**. If a sample exceeds a benchmark concentration a review of the facilities SWPPP and BMPs shall take place to determine whether any improvement or additional controls are needed to reduce that pollutant in the storm water discharge. The facility may demonstrate via a Corrective Action Report that the benchmark cannot be achieved through the application of BMPs representing the available technology and the benchmark is not feasible because no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice. This evaluation must be kept on file with the SWPPP. Failure to evaluate and improve BMPs to address a Benchmark exceedance is a permit violation.

Parameter	**Benchmark**
Chemical Oxygen Demand	90 mg/L
Total Phosphorus (as P)	105 mg/L
Total Suspended Solids	100 mg/L

8. The permittee shall implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented upon 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:

   Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.
   The SWPPP must include the following:

   a. 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.
   b. The SWPPP must include a schedule for twice per month site inspections and brief written reports. 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.

C. SPECIAL CONDITIONS (continued)

9. 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.

10. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.

11. 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.

12. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERCLA.

13. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001, 002	10%	once /permit cycle IN APRIL OF THE FIRST YEAR	grab	April 2013

Dilution Series						
40% effluent	20% effluent	10% effluent	5% effluent	2.5% effluent	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements
   (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
      (i) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

C. SPECIAL CONDITIONS (continued)

(ii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.

(iii) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.

(2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is significantly different (at the 95% confidence level; p = 0.05) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.

(3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.

(i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.

(ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(5) Follow-up tests do not negate an initial failed test.

(6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

(7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.

(11) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

(1) Test Type: Acute Static non-renewal

(2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.

(3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

(4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.

(5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.

C. SPECIAL CONDITIONS (continued)

(6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.
(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF ISSUANCE – NEW PERMIT
OF
MO-0137014
LANGE - STEGMANN

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

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

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

This Factsheet is for a Minor ☒

Part I – Facility Information

Facility Type: Bulk Fertilizer Distribution SIC #5191

Facility Description:

Fertilizer is received by barge and rail, stored on-site and transferred to rail and truck for distribution. Outfall 001 encompasses 4.34 acres and outfall 002 encompasses 1.66 acres.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?
☒ - No.

Application Date: 02/23/2012
Expiration Date: N/A

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	Varies	BMPs	Stormwater	0
002	Varies	BMPs	Stormwater	0

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

New permit.

Part II – Receiving Stream Information

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:

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*
Mississippi River	P	1707.02	AQL, DWS, IND, IRR, LWW, SCR

* - 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).

RECEIVING STREAM(S) LOW-FLOW VALUES: It isn't necessary to calculate a 7Q10 because no WQBELs are included in this permit.

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUE (CFS)
	7Q10
Mississippi River	> 20

Part III – 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.

☒ - New permit, backsliding does not apply.

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

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

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

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

Not Applicable ☒; An RPA was not conducted for this facility.

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 an SOC.

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

Applicable ☒; At this time, the permittee is required to develop and implement a SWPPP.

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

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

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

Not Applicable ☒; Waste load allocations were not calculated.

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

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

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

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

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

☐ Facility is a designated Major.
☐ Facility continuously or routinely exceeds its design flow.
☐ Facility (industrial) that alters its production process throughout the year.
☒ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
☐ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)
☐ Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.

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

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

Part IV – Effluent Limits Determination

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

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

OUTFALL #001& 002 – DERIVATION AND DISCUSSION:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Chemical Oxygen Demand.** This Benchmark is consistent with General Permit R23A: Chemical manufacturing. This benchmark has been demonstrated to be attainable with SWPPPs & existing technology and is deemed protective of in-stream water quality.

- **Nitrate as N**. Pollutant of concern associated with fertilizer storage. Monitoring only, a reasonable potential analysis will be performed at renewal to determine if the facility's discharge has the potential to violate Water Quality Standards.

- **Total Ammonia Nitrogen.** Pollutant of concern associated with fertilizer storage. Monitoring only, a reasonable potential analysis will be performed at renewal to determine if the facility's discharge has the potential to violate Water Quality Standards.

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **pH**. Effluent limitation range is 6.5 – 9.0 Standard pH Units (SU), as per 10 CSR 20-7.015. pH is not to be averaged.

- **Total Phosphorus (as P)**. Benchmark consistent with the EPA Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), Table 8.C-2: Runoff from fertilizer manufacturing facilities that comes into contact with any raw materials, finished product, by-products or waste products.

- **Total Suspended Solids**. Benchmark is demonstrated to be attainable and is consistent with the MSGP for Stormwater Discharges Associated with Industrial Activity.

- **WET Test**. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring.* It is recommended that WET testing be conducted during the period of lowest stream flow.
  ☒ Acute

  ☒ No less than **ONCE/PERMIT CYCLE:**

  ☒ WET testing is required to determine the effectiveness of BMPs at this facility. WET Tests are a means to evaluate the ability of the facility to meet narrative water quality criteria.

Given the small size of this storm water flow compared to the flow of the Mississippi River, and the fact that a diffuser is not being used, this facility has an Allowable Effluent Concentration of 10%.

Sampling Frequency Justification:

This is a new permit. Sampling set at monthly based on BPJ to effectively characterize a newly permitted stormwater discharge. The sampling frequency is such to effectively evaluate any newly implemented BMPs on the site.

Sampling Type Justification

Due to the discharge being stormwater only, a grab sample is appropriate.

Part V – 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.

PERMIT SYNCHRONIZATION:
The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. **Permit Synchronization date is June 30, 2017.**

PUBLIC NOTICE:

☒ - The Public Notice period for this operating permit was from January 4, 2013 to February 4, 2013. A response to the Public Notice of this operating permit **did not** warrant the modification of effluent limits and/or the terms and conditions of this permit.

On January 9, 2013, Newman, Comley & Ruth P.C. submitted 3 comments on behalf of the Lange-Stegmann Company. These comments addressed inconsistencies between the permit, the fact sheet, and their permit application. The permit and fact sheet were changed as requested in accordance with their comments.

DATE OF FACT SHEET: JANUARY 17, 2013

COMPLETED BY:

ALAN MOREAU, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL WASTEWATER UNIT
(573) 522-2553
alan.moreau@dnr.mo.gov

AP10292

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 86865	
DATE RECEIVED 2/23/12	FEE SUBMITTED $1350.00

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- _____ — Reason: _____

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

2. FACILITY

NAME		TELEPHONE WITH AREA CODE	
Lange-Stegmann		(314) 236-4113 FAX (314) 241-5225	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
One Angelica Street	St. Louis	MO	63147

3. OWNER

NAME	E-MAIL ADDRESS	TELEPHONE WITH AREA CODE	
Lange-Stegmann Co.		(314) 236-4113 FAX (314) 241-5225	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
One Angelica Street	St. Louis	MO	63147

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

4. CONTINUING AUTHORITY

NAME		TELEPHONE WITH AREA CODE	
Lange-Stegmann Co.		(314) 236-4113 FAX (314) 241-5225	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
One Angelica St.	St. Louis	MO	63147

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE	
Lange-Stegmann Co.		(314) 236-4113 FAX (314) 241-5225	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
One Angelica St.	St. Louis	MO	63147

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE WITH AREA CODE
Louis Baggett	Director of EH&S	(314) 236-4113 FAX (314) 241-5225

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.) See Form C, Section 2.10

001 ____¼ ____¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 ____¼ ____¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

003 ____¼ ____¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

004 ____¼ ____¼ 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 5191 and NAICS 424910 002 – SIC _____ and NAICS _____
003 – SIC _____ and NAICS _____ 004 – SIC _____ and NAICS _____

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 ☐	NO ☑
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES ☐	NO ☑
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES ☑	NO ☐
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 ☐	NO ☑
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES ☐	NO ☑

NAME			
TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS			
ADDRESS	CITY	STATE	ZIP CODE
1000 UNION STATION, SUITE 200	ST LOUIS	MO	63103

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE WITH AREA CODE
Louis Burney Baggett, Director of Environmental, Health and Safety	(314) 236-4113
SIGNATURE: Louis Burney Baggett	DATE SIGNED: 2.13.2012

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:

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

Project #4463

Environmental Operations, Inc.

North

0 1000 2000 4000

Approximate Scale, feet

Legend

Property Boundary (approximate)

Watershed Area

Site Location Map

Lange Stegmann Co.
One Angelica Street
Saint Louis, Missouri

Figure 1

marcus 2/6/2012 9:26:38 AM M:\Eng\4463 Lange stegman Storm Sewer\463 Site Location Map.dgn

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)

FORM C – APPLICATION FOR DISCHARGE PERMIT – MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY

LANGE-STEGMANN ~~COMPANY~~ Co.

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

EXISTING UNPERMITTED FACILITY

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).

EXISTING FACILITY PART OF WHICH CONSTRUCTED UNDER CPAG00011

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 5191 B. SECOND

C. THIRD D. FOURTH

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) ____ ¼ ____ ¼ SEC ____ T ____ R ____ SAINT LOUIS CITY County

001 - 38° 40' 04" N; 90° 11' 25" W

002 - 38° 39' 58" N; 90° 11' 30" W

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER.

OUTFALL NUMBER (LIST)	RECEIVING WATER
001	MISSISSIPPI RIVER
002	MISSISSIPPI RIVER

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS:

LANGE-STEGMANN RECEIVES FERTILIZERS BY BARGE AND RAIL, STORES THESE MATERIALS ON-SITE UNDER ROOF, AND TRANSFERS THEM TO RAIL AND TRUCK FOR DISTRIBUTION.

2.40

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of 1. All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water and storm water runoff. 2. The average flow contributed by each operation. 3. The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO.	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
(LIST)	A. OPERATION (LIST)	B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)	A. DESCRIPTION	B. LIST CODES FROM TABLE A
001	UNLOADING OF DRY FERTILIZER FROM	STORMWATER ONLY	GRASSY SWALES SURROUNDING	4A
	RAILCARS; FERTILIZER TRANSFER VIA CONVEYOR		INLETS	
	SYSTEM; CLEANOUT OF RAILCARS; UNLOADING OF			
	DRY FERTILIZER FROM TRUCKS AT COVERED			
	STATION; RUNOFF FROM STORAGE PROCESSING			
	BUILDING; VEHICLE TRAFFIC.			
002	VEHICLE TRAFFIC	STORMWATER ONLY	GRASSY SWALES SURROUNDING	4A
			INLETS.	

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS, OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

☐ **YES** *(COMPLETE THE FOLLOWING TABLE)* ☑ **NO** *(GO TO SECTION 2.50)*

1. OUTFALL NUMBER *(list)*	2. OPERATION(S) CONTRIBUTING FLOW *(list)*	3. FREQUENCY		4. FLOW				
		A. DAYS PER WEEK *(specify average)*	B. MONTHS PER YEAR *(specify average)*	A. FLOW RATE *(in mgd)*		B. TOTAL VOLUME *(specify with units)*		C. DURATION *(in days)*
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

☐ **YES** *(COMPLETE B.)* ☑ **NO** *(GO TO SECTION 2.60)*

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINE EXPRESSED IN TERMS OF PRODUCTION *(OR OTHER MEASURE OF OPERATION)*?

☐ **YES** *(COMPLETE C.)* ☑ **NO** *(GO TO SECTION 2.60)*

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS *(list outfall numbers)*
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.

☐ **YES** *(COMPLETE THE FOLLOWING TABLE)* ☑ **NO** *(GO TO 3.00)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS *(OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY EFFECT YOUR DISCHARGES)* YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

☐ **MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.**

3.00 INTAKE AND EFFLUENT CHARACTERISTICS

A. & B. SEE INSTRUCTIONS BEFORE PROCEEDING – COMPLETE ONE TABLE FOR EACH OUTFALL – ANNOTATE THE OUTFALL NUMBER IN THE SPACE PROVIDED.
NOTE: TABLE 1 IS INCLUDED ON SEPARATE SHEETS NUMBERED FROM PAGE 6 TO PAGE 7.

C. USE THE SPACE BELOW TO LIST ANY OF THE POLLUTANTS LISTED IN PART B OF THE INSTRUCTIONS, WHICH YOU KNOW OR HAVE REASON TO BELIEVE IS DISCHARGED OR MAY BE DISCHARGED FROM ANY OUTFALL. FOR EVERY POLLUTANT YOU LIST, BRIEFLY DESCRIBE THE REASONS YOU BELIEVE IT TO BE PRESENT AND REPORT ANY ANALYTICAL DATA IN YOUR POSSESSION.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
OIL & GREASE	VEHICLE USE AND MAINTENANCE		
NITROGEN - ALL FORMS	FERTILIZER HANDLING AND TRANSPORT		
PHOSPHOROUS	FERTILIZER HANDLING AND TRANSPORT		
BOD	FERTILIZER HANDLING AND TRANSPORT		
TOC	FERTILIZER HANDLING AND TRANSPORT		
COD	FERTILIZER HANDLING AND TRANSPORT		
TSS	YARD RUNOFF		

3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON A RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

☐ **YES** *(IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.)* ☑ **NO** *(GO TO 3.20)*

3.20 CONTRACT ANALYSIS INFORMATION

WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

☐ **YES** *(LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.)* ☐ **NO** *(GO TO 3.30)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code and number)*	D. POLLUTANTS ANALYZED *(list)*
TEKLAB, INC.	5445 HORESHOE LAKE RD. COLLINSVILLE, IL 62234-7425	618-344-1004	OIL & GREASE N, AMMONIA N, TOTAL N, NITRATE PHOSPHOROUS, TOTAL COD TSS N, ORGANIC N, NITRITE BOD TOC

3.30 CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER (AREA CODE AND NUMBER
LOUIS BAGGETT, DIRECTOR OF ENVIRONMENTAL SAFETY & HEALTH	(314) 236-4116
SIGNATURE (SEE INSTRUCTIONS) Louis Baggett	DATE SIGNED 2.13.2012

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages.
SEE INSTRUCTIONS.

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 001

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand *(BOD)*	<5	3.18					1	mg/L	LBS			
B. Chemical Oxygen Demand *(COD)*	<50	31.8					1	mg/L	LBS			
C. Total Organic Carbon *(TOC)*	156	99					1	mg/L	LBS			
D. Total Suspended Solids *(TSS)*	37	23					1	mg/L	LBS			
E. Ammonia *(as N)*	45.4	29					1	mg/L	LBS			
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature *(winter)*	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature *(summer)*	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BE-LIEVED PRE-SENT	B. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)		X												
B. Chlorine Total Residual		X												
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
* F. Nitrate–Nitrite *(as N)*	X		25.25	16					1	mg/L	LBS			

* PART B #1.F - NOTE: ANALYSES FOR NITRATE AND NITRITE WERE DONE SEPARATELY (EPA 600 353.2 R2.0 & SM4500-NO_2B) AND THE RESULTS ADDED TOGETHER.

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen Total Organic *(as N)*	X		308	196					1	mg/L	LBS			
H. Oil and Grease	X		<6	<3.81					1	mg/L	LBS			
I. Phosphorus *(as P)* Total (7723-14-0)	X		3.73	2.36					1	mg/L	LBS			
J. RADIOACTIVITY														
(1) Alpha Total														
(2) Beta Total														
(3) Radium Total														
(4) Radium 226 Total														
K. Sulfate *(as SO^4)* (14808-79-8)														
L. Sulfide *(as S)*														
M. Sulfite *(as SO^3)* (14265-45-3)														
N. Surfactants														
O. Aluminum Total (7429-90-5)														
P. Barium Total (7440-39-3)														
Q. Boron Total (7440-42-8)														
R. Cobalt Total (7440-48-4)														
S. Iron total (7439-89-6)														
T. Magnesium Total (7439-95-4)														
U. Molybdenum Total (7439-98-7)														
V. Manganese Total (7439-96-5)														
W. Tin Total (7440-31-5)														
X. Titanium Total (7440-32-6)														

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages.
SEE INSTRUCTIONS.

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 002

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand *(BOD)*	<5	<0.592					1	mg/L	LBS			
B. Chemical Oxygen Demand *(COD)*	<50	<5.92					1	mg/L	LBS			
C. Total Organic Carbon *(TOC)*	47	5.56					1	mg/L	LBS			
D. Total Suspended Solids *(TSS)*	15	1.8					1	mg/L	LBS			
E. Ammonia *(as N)*	3.96	0.5					1	mg/L	LBS			
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature *(winter)*	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature *(summer)*	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

	1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
		A. BE-LIEVED PRE-SENT	B. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
	A. Bromide (24959-67-9)		X												
	B. Chlorine Total Residual		X												
	C. Color		X												
	D. Fecal Coliform		X												
	E. Fluoride (16984-48-8)		X												
*	F. Nitrate–Nitrite *(as N)*	X		6.17	0.73					1	mg/L	LBS			

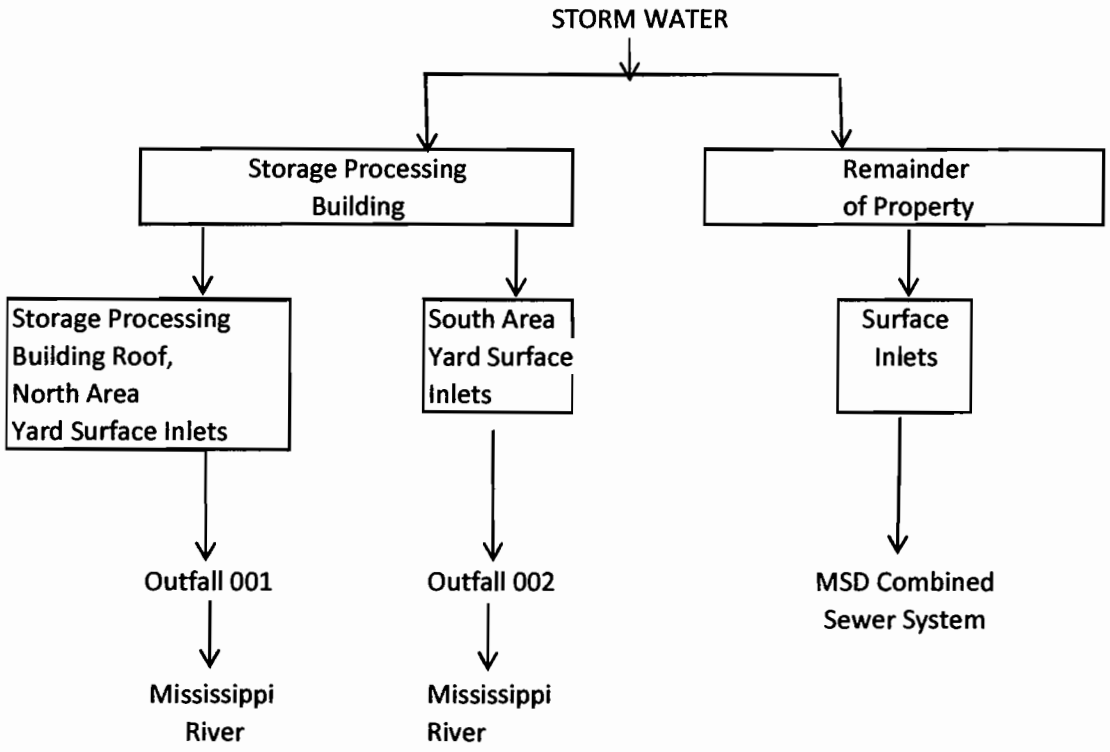
* PART B #1.F - NOTE: ANALYSES FOR NITRATE AND NITRITE WERE DONE SEPARATELY (EPA 600 353.2 R2.0 & SM4500-NO_2B) AND THE RESULTS ADDED TOGETHER.

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen Total Organic *(as N)*	X		78.5	9.29					1	mg/L	LBS			
H. Oil and Grease	X		12	1.42					1	mg/L	LBS			
I. Phosphorus *(as P)* Total (7723-14-0)	X		0.404	0.05					1	mg/L	LBS			
J. RADIOACTIVITY														
(1) Alpha Total														
(2) Beta Total														
(3) Radium Total														
(4) Radium 226 Total														
K. Sulfate *(as SO^4)* (14808-79-8)														
L. Sulfide *(as S)*														
M. Sulfite *(as SO^3)* (14265-45-3)														
N. Surfactants														
O. Aluminum Total (7429-90-5)														
P. Barium Total (7440-39-3)														
Q. Boron Total (7440-42-8)														
R. Cobalt Total (7440-48-4)														
S. Iron total (7439-89-6)														
T. Magnesium Total (7439-95-4)														
U. Molybdenum Total (7439-98-7)														
V. Manganese Total (7439-96-5)														
W. Tin Total (7440-31-5)														
X. Titanium Total (7440-32-6)														

LANGE-STEGMANN STORMWATER PERMIT APPLICATION

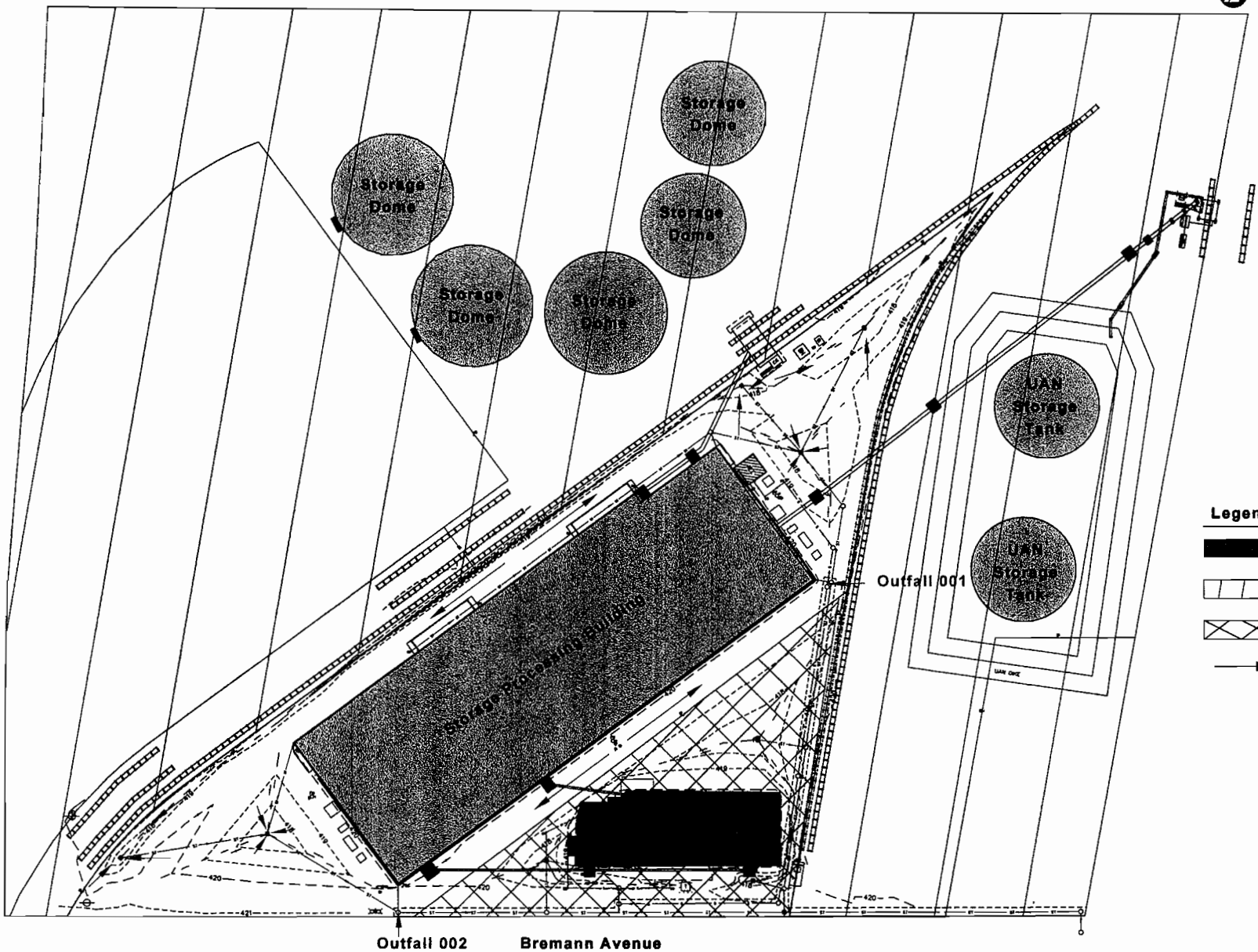
FORM C Section 2.40.A
LINE DRAWING



One Angelica St.
St. Louis, MO
Jan-12

Project #4463

Environmental Operations, Inc.



0 55 110 220

Approximate Scale, feet

Legend

- Impervious Surface
- Lange Stergmann Property Drainage to MSD
- Koch Industries Property
- Storm Water flow Direction

Site Location
Large Stegmann Stormwater
One Angelica Street
St. Louis, Missouri

M:\3_Eng\4463 Lange stegmen Storm Site\4463 Figure 02 Site Location.dgn
12/14/2011 8:31:06 AM
gabriel

Stormwater Runoff Calculations

By Rational Method

Outfall drainage areas:

Outfall 001 = 100% of drainage from storage processing building roof and runoff from north yard

= 2.68 acres + 1.66 acres = 4.34 acres

Outfall 002 = Runoff from south yard only

= 1.66 acres

Calculation of stormwater flow

Q = Runoff Rate (cfs) = (C) (i) (A), where:

C = Weighted Runoff Coefficient

i = average intensity of rainfall, inches per hour

A = area in acres

Outfall 001

A_R = Roof Area = 2.68 acres

A_Y = Yard Area = 1.66 acres

A_T = Total Area = 4.34 acres

C_R for roof runoff = 0.9

(MO DNR "Review of permit application for site-specific industrial stormwater permits", assumed for roof runoff)

C_Y for yard area = 0.7

(Goldman, Erosion and Sediment Control Handbook 1986, mid-range for light industrial area)

$$C = \text{Weighted Runoff Coefficient} = \frac{(C_R \times A_R) + (C_Y \times A_Y)}{A_T} = \frac{(0.9 \times 2.68) + (0.7 \times 1.66)}{4.34} = 0.824$$

i for the 24 hour sample period = 0.8 inches/day = 0.033 inches/hour

(National Weather Service Forecast Office-St. Louis, MO, Climate Report for December 20, 2011)

Outfall 001

Discharge during sample event:

Q = (C) (*i*) (A) = 0.824 x 0.033 x 4.34 = 0.118 cfs = 10,196 cfd = **76,279 gpd**

Sample Mass Loading Calculation

Discharge of TOC from Outfall 001 in pounds/day (day of sample event)

Discharge flow in 24 hours = 76,279 gal/day

TOC analysis from 24-hour composite sample = 156 mg/L

76,279 gal/day x 3.78 L/gal = 288,335 L/day

288,335 L/day x 156 mg/L x g/1000 mg x lbs/454 g = 99 lbs/day TOC from Outfall 001

Outfall 002

A_Y = Yard Area = 1.66 acres

C_Y for yard area = 0.4

(Goldman, Erosion and Sediment Control Handbook 1986, maximum value for railroad yard)

i for the 24 hour sample period = 0.8 inches/day = 0.033 inches/hour

(National Weather Service Forecast Office-St. Louis, MO, Climate Report for December 20, 2011)

Outfall 002

Discharge during sample event:

Q = (C) (*i*) (A) = 0.4 x 0.033 x 1.66 = 0.022 cfs = 1,900 cfd = **14,220 gpd**

Sample Mass Loading Calculation

Discharge of TOC from Outfall 002 in pounds/day (day of sample event)

Discharge flow in 24 hours = 14,220 gal/day

TOC analysis from 24-hour composite sample = 47 mg/L

14,220 gal/day x 3.78 L/gal = 53,752 L/day

53,752 L/day x 47 mg/L x g/1000 mg x lbs/454 g = 5.56 lbs/day TOC from Outfall 002

Lange-Stegmann Co.

Addendum to Stormwater Permit Application

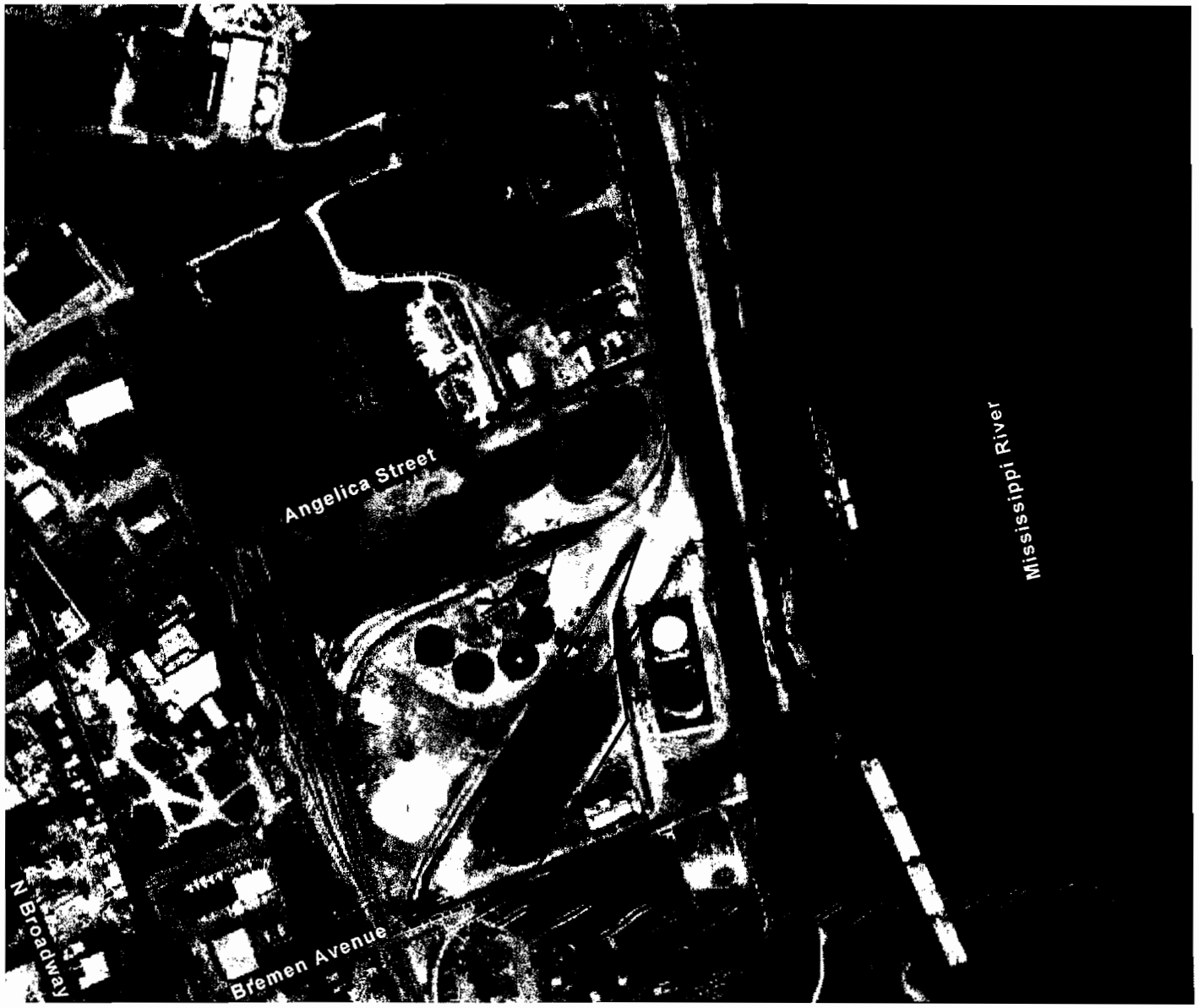
February 2012

Areas not specifically covered in permit application:

1) UAN (urea ammonium nitrate) tank farm: This tank farm consists of two – 3 million gallon tanks surrounded by concrete secondary containment walls, and was installed in 2011. See Site Map for tank farm location. Stormwater accumulation from this containment area is tested prior to discharge to the St Louis MSD combined sewer system, and has no connection to surface water discharge; therefore it is not included in the stormwater permit application.
2) Barge unloading operation: Dry fertilizer, salt, aggregate or other dry bulk commodities are off-loaded from barges on the Mississippi River and loaded onto a conveyor system using excavating "scoops" (conveyor system is pictured on the northeast corner of the Site Map). The conveyor system transports the fertilizer to shore and over land to the Urea Warehouse or is trans-loaded into trucks or railcars on the company property. Spillage is minimized through training of equipment operators. Fertilizer spilled onto the barge unloading deck is recovered by company employees using a bobcat as well as shovels and brooms. The bike path below the conveyor belt is swept on an as-needed basis to recover fertilizer that may have fallen from the conveyor system.

Project #4463

Environmental Operations, Inc.



North

0 1000 2000 4000

Approximate Scale, feet

Legend

Property Boundary (approximate)

Watershed Area

Site Location Map

Lange Stegmann Co.
One Angelica Street
Saint Louis, Missouri

Figure 1

NEWMAN, COMLEY & RUTH P.C.

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THOMAS C. SMITH
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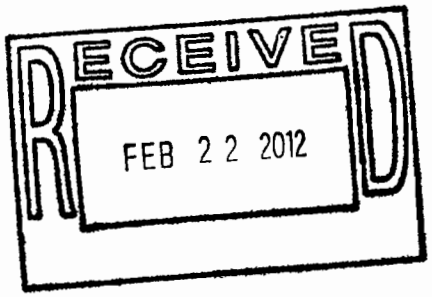
ALICIA EMBLEY TURNER

February 22, 2012



HAND-DELIVERED

Mr. Keith Forck
Agricultural Unit Chief
Water Protection Program
Department of Natural Resources
P O Box 176
Jefferson City, MO 65102-0176

RE: Lange-Stegmann Co.

Dear Mr. Forck:

Please find enclosed an application for a Missouri State Operating Permit for the Lange-Stegmann facility in St. Louis.

Sincerely,

NEWMAN, COMLEY & RUTH P.C.

By: Robert J Brundage

Robert J. Brundage

Enclosures – Forms A and C
c: Louis B. Baggett, Lange-Stegmann Co. (w/encls.)