Missouri Clean Water Commission
Department of Natural Resources
Lewis and Clark State Office Building
LaCharrette/Nightingale Conference Rooms
1101 Riverside Drive
Jefferson City, Missouri 65102

January 11, 2017

Clean Water Commission Adoption of the Order of Rulemaking for 10 CSR 20-8.500 Design Requirements for Agrichemical Facilities

Issue: The Department is presenting the proposed Order of Rulemaking for 10 CSR 20-8.500 Design Requirements for Agrichemical Facilities, for adoption by the Commission.

Background: These regulations set forth criteria for the design of primary, secondary, and operational containment at agrichemical facilities. The primary purpose of the rule revision is to retain and clarify existing specific design criteria for agrichemical activities and to remove the construction permitting requirement for these projects from the rule. The rulemaking is in response to the 2013 legislative revision to RSMo 644.051. The requirement for a construction permit will remain for the construction of earthen basins in accordance with the legislation. The amendment adds a requirement for mixing and loading pads for dry, bulk fertilizer; qualifies the applicability of this rule to only new construction or modifications; clarifies what constitutes a deviation; adds to the requirements in an engineering report; and adds that all new operations shall be designed as no-discharge.

The proposed rule was published in the *Missouri Register* on September 1, 2016. A public hearing was held before the Commission on October 5, 2016, and the public comment period for this rulemaking closed on November 17, 2016.

Written comments were provided by Robert Brundage (Newman, Comley & Ruth P.C., Missouri Agribusiness Association) and Josh Wilson (Cady Aquastore, Inc). Several wording changes were made to the rule as a result of these comments.

The response to comments follows.

Recommended Action: Adoption of the proposed Order of Rulemaking amending 10 CSR 20-8.500 Design Requirements for Agrichemical Facilities.

Suggested Motion Language: I move the Commission adopt the proposed Order of Rulemaking for 10 CSR 20-8.500.

List of Attachments:

- Order of Rulemaking with Response to Comments
- Proposed rule as published in *Missouri Register,* September 1, 2016

Title 10–DEPARTMENT OF NATURAL RESOURCES
Division 20–Clean Water Commission
Chapter 8–Design Guides

ORDER OF RULEMAKING

By the authority vested in the Clean Water Commission under section 644.02 RSMo 2011, the Clean Water Commission amends a rule as follows:

10 CSR 20– 8.500 is amended

A notice of proposed rulemaking containing the text of the proposed amendment was published in the *Missouri Register* on September 1, 2016 (41 MoReg 1070-1077). Those sections with changes are reprinted here. This proposed amendment would become effective thirty (30) days after publication in the *Code of State Regulations.*

SUMMARY OF COMMENTS: A public hearing was held on the proposed amendment on October 5, 2016. The public comment period ended on November 17, 2016. At the public hearing the Missouri Department of Natural Resources (department) staff explained the proposed amendment. Comments were provided by Robert Brundage (Newman, Comley & Ruth P.C., Missouri Agribusiness Association (Mo-Ag)) and Josh Wilson (Cady Aquastore, Inc).

COMMENT #1:
Mo-Ag suggests the term "environment" be removed from subsection (2). There is no definition for "environment" within the statue or the regulation.
RESPONSE AND EXPLANATION OF CHANGE: The words "to the environment" have been taken out of this rule. The reference to a discharge to the waters of the state is sufficient.

COMMENT #2:
Mo-Ag suggests that subsection (5) be revised to make clear that engineering reports are only required to be prepared when a construction permit is required.
RESPONSE AND EXPLANATION OF CHANGE:
Language was revised in Section (5) to make it clear that engineering reports are required when facilities are submitting an application for a construction permit. Engineering reports are recommended, but not required, for other changes not requiring a construction permit.

COMMENT #3:
Mo-Ag suggest an exemption to the requirement in subsection (3)(B) that a liner be installed under all liquid fertilizer tanks with a capacity of over 40,000 gallons that existed prior to the new effective date of this rule.
RESPONSE: This rule addresses all design and construction of facilities. Only tanks of this size constructed after January 13, 1992 would have been required to have secondary containment as outlined in the Secondary Containment rule that initially became effective on that date. The rule has not been changed.

COMMENT #4: Mo-Ag suggested that the requirement in subsection (9)(D) be changed to eliminate the requirement for immediate cleanup of spilled product and require cleanup on a daily basis or immediately after unloading occurs in the event precipitation in the area is likely.
RESPONSE AND EXPLANATION OF CHANGE:
The requirement for immediate cleanup of spills of dry fertilizer and pesticides has been removed from this amendment. This is an operational requirement and daily cleanup is required as stated in the operating permit.

COMMENT #5: MO-AG has concerns about any requirement to enclose the entire length of a conveyor or to require a concrete pad underneath the entire length of the conveyor. This comment applies to subsection (7)(C)8. and (7)(D)7.
RESPONSE AND EXPLANATION OF CHANGE:
The requirement for a concrete pad under loading and unloading areas applies only to the areas at the actual transfer points. It was not the department's intent to require enclosing the entire conveyor or having a pad extend below all of the exterior portions of a conveyance system. Language in Section (7) has been clarified so that mixing and loading pads are required only under exterior transfer points.

COMMENT #6: Mo-Ag suggested that the reference to "to humans or" in subsection (12) be removed as human safety is not under the jurisdiction of MDNR.
RESPONSE: The department believes that safety must be inherent in engineering designs for the protection of the human environment. No change has been made to this section.

COMMENT #7: Mo-Ag requested a definition for "modification" be added to this rule, and provided several examples of projects with questions about applicability.
RESPONSE AND EXPLANATION OF CHANGE: This rule applies to the construction of containment systems at new facilities. It also applies when new containment systems are being constructed at existing facilities and when existing containment systems are being replaced. It applies to all new construction or replacements. The rule does not apply to existing containment systems if they are being retained and will not be modified. For instance, if the scope of a project is limited to the replacement of a certain containment system, say a replacement tank or conveyor, the rule would only apply to that individual piece of equipment. To clarify rule applicability, minor changes to language in sections (5), (6), (7), (8), (9), (14), and (15) have been made to eliminate the reference to "modifications."

COMMENT #8: Mo-Ag requested a clarification to the intent of subsection (7). Their interpretation is that it allows facilities to discharge stormwater from secondary and primary containments so long as spilled product is properly cleaned up and/or recovered prior to discharge of any stormwater.
RESPONSE: Stormwater discharges that will comply with the general permit for agrichemical facilities (MOR 240, modified September 1, 2016) and specifically with item 3 of the applicability section of the permit are allowed. Section (7) of the regulation serves to summarize the purpose of the design requirements for secondary and operational containment areas. They are used to prevent discharges of spilled products and contaminated stormwater until cleanup and recovery is complete. Stormwater discharges from these operation containment areas are allowed. This section has been modified to clarify that these containment areas should be designed to contain any spilled product to prevent a discharge of water contaminants.

COMMENT #9: Mo-Ag suggests the rule state a specific effective date six months after the rule becomes effective to address concerns about facilities that may have already been designed.
RESPONSE: New design requirements will be effective thirty (30) days after publication in the Code of State Regulations, which would occur about forty-five days after the Clean Water Commission's decision, so there should be adequate notice for changes. The department will consider justifiable deviations as the changes to this rule are not extensive.

COMMENT #10: Josh Wilson with Cady Aquastore, Inc. questioned why the use of a liner as a primary containment for liquid fertilizer and the tank as the secondary containment was not added to the amendment. Several tank representatives had attended the public hearing and made this request.
RESPONSE: This is outside of the scope of this rulemaking. This change can be considered in future revisions when the department has more experience with this type of construction. The department has reviewed two projects that use liners as primary containment and they have been approved as deviations. Applications in the near future can be reviewed and approved in the same manner.

10 CSR 20-8.500 Design Requirements for Agrichemical Facilities

(2) General. A facility need only to comply with these rules when they come within the definition of an agrichemical facility. Any construction after the effective date of this rule shall be in compliance with all of these rules before the commencement of any operational activities or any storage or use of agrichemicals. Any existing agrichemical facility that has a discharge of agrichemicals or process generated wastewater is required to take immediate steps to implement the secondary and operational containment requirements contained in this rule in addition to any other remedy required. All new operations shall be designed to be no discharge.

(5) Engineering Report. An engineering report is required for all facilities required to submit an application for a construction permit and is recommended for all facilities. The engineering report assembles basic information, presents design criteria and assumptions, examines alternate projects with preliminary layouts and cost estimates, offers a conclusion with a proposed project for client consideration, and outlines official actions and procedures to implement the project. Engineering reports shall contain the following information and other pertinent information and may be combined with other engineering documentation:

(C) Existing conditions at the agrichemical facility and proposed construction at the facility shall be discussed;

(6) Primary Containment for Bulk Agrichemicals for new construction. Containers and appurtenances used as the primary containment in the storage and handling of bulk agrichemicals shall be constructed, installed, and maintained to prevent a discharge and shall be of materials and construction compatible with the specifications of the product stored.

(7) Secondary Containment for Bulk Agrichemicals for new construction. Secondary containment for nonmobile bulk pesticides and nonmobile bulk fertilizers shall be designed to contain any spilled product to prevent a discharge.

(C) Nonmobile Bulk Dry Fertilizer Storage.

7. A mixing and loading pad shall be constructed under any exterior transfer area of a conveyance system.

(D) Nonmobile Bulk Dry Pesticide Storage.

6. A mixing and loading pad shall be constructed under any exterior transfer area of a conveyance system.

(8) Operational Containment for bulk liquid pesticides and bulk liquid fertilizers for new construction. The operational containment area for bulk liquid pesticides and bulk liquid fertilizers shall be designed to contain any product discharged or collected precipitation for the amount of time required for proper cleanup and recovery.

(9) Operational Containment Area for bulk dry pesticides and bulk dry fertilizers for new construction. The operational containment area for bulk dry pesticides and bulk dry fertilizers shall be sized and designed to contain any spillage or leakage of dry materials that occurs from the loading and unloading of hauling or spreading equipment and from the mixing and blending equipment or precipitation that comes in contact with the operational containment area for the amount of time required for proper cleanup and recovery.

(D) For unloading dry pesticides and dry fertilizers from rail cars, a catchment basin or concrete pad that can effectively contain the dry fertilizer or pesticide that may be discharged during the unloading process shall be used.

(14) Plans.

(A) General. All plans for primary, secondary, and operational containment structures for new construction at agrichemical facilities shall bear the name of the agrichemical facility and shall show the scale in feet, a graphic scale, the north point, date, and the name of the engineer, certificate number and imprint of his/her registration seal. The plans shall be clear and legible. They shall be drawn to a scale which will permit all necessary information to be plainly shown. The size of the plans generally should not be larger than thirty inches by forty-two inches (30" × 42") (76 cm × 107 cm). Datum used should be indicated. Locations and logs of test borings and when made shall be shown on the plans. Detail plans shall consist of plan views, elevations, sections, and supplementary views which, together with the specifications and general layouts, provide the working information for the contract and construction of the containment facilities. Plans shall include dimensions and relative elevations of structures, the location and outline form of equipment, storage tanks, location and size of piping, and ground elevations.

(B) Plans for new construction.

(15) Specifications. Complete technical specifications for new construction shall be included with the plans. The specifications included with construction drawings shall include, but not be limited to, all construction information not shown on the drawings which is necessary to inform the builder in detail of the design requirements as to the quality of materials and workmanship and fabrication of the project and type, size, strength, operating characteristics, and rating of equipment; the complete requirements for all mechanical and electrical equipment, including machinery, valves, piping and jointing of pipe; electrical apparatus, wiring, and instrumentation; operating tools; construction materials; special construction materials such as clay, sand, concrete, or steel;

miscellaneous appurtenances; instructions for testing materials and equipment as necessary to meet design standards and performance tests for the completed works and component units. It is suggested that these performance tests be conducted at the design conditions for the operation of the agrichemical facility whenever practical.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment by writing to Amber L. Daugherty, Assistant General Counsel, Department of Mental Health, PO Box 687, 1706 E. Elm Street, Jefferson City, MO 65102. To be considered, comments must be delivered by regular mail, express or overnight mail, or by courier within thirty (30) days after publication in the ***Missouri Register****. If to be hand-delivered, comments must be brought to the Department of Mental Health at 1706 E. Elm, Jefferson City, Missouri. No public hearing is scheduled.*

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 20—Clean Water Commission
Chapter 8—Design Guides

PROPOSED AMENDMENT

10 CSR 20-8.500 *[Secondary Containment]* ***Design Requirements*** **for Agrichemical Facilities.** The director proposes to amend the rule title, purpose statement, and sections (2)–(9), (12), (14), and (15), and remove section (16).

PURPOSE: This proposed amendment is necessary as a result of changes in section 644.051, effective August 28, 2013, removing the current permitting requirement for a construction permit for some agrichemical facilities. The rulemaking includes several clarifications.

[PURPOSE: The following criteria have been prepared as a guide for the design, construction and operation of secondary and operational area containment structures at bulk agrichemical facilities. This rule is to be used with rules 10 CSR 20-8.110–10 CSR 20-8.220 for the planning and design of the complete storage and containment facility. This rule reflects the minimum requirements of the Missouri Clean Water Commission regarding adequacy of design, submission of plans, approval of plans and approval of completed storage and containment facility. Deviation from these minimum requirements will be allowed where sufficient documentation is presented to justify the deviation. A facility need only to comply with these rules when it comes within the definition of an agrichemical facility. Any new agrichemical facility shall be in compliance with all of these rules before the commencement of any operational activities or any storage or use of agrichemicals. Upon adoption of these rules, all existing agrichemical facilities shall be in compliance with them as follows: secondary and operational area containment for pesticides—five (5) years from the date the rule is adopted; and secondary and operational area containment for fertilizers—five (5) years from the date the rule is adopted. Any facility that has a discharge of agrichemicals or process generated wastewater which results in damage to the environment may be required to take immediate steps to implement the secondary and operational containment requirements contained in this rule. All agrichemical facilities shall be registered and issued a general operating permit from the department on forms furnished by the department. Registration shall be valid for the life of the permit, terminated by the department or voluntarily withdrawn by the applicant. These criteria are based on the best information presently available and are similar to secondary containment regulations that have been implemented in other states. It is anticipated that they will be subject to review and revision periodically as additional information and methods appear. Addenda or supplements to this publication will be furnished to the regulated community. If others desire to receive addenda or supplements, please advise the Clean Water Commission so that your name can be added to the mailing list.

Editor's Note: The secretary of state has determined that the publication of this rule in its entirety would be unduly cumbersome or expensive. The entire text of the material referenced has been filed with the secretary of state. This material may be found at the Office of the Secretary of State or at the headquarters of the agency and is available to any interested person at a cost established by state law.]

PURPOSE: The following criteria serve as a guide for the design, construction, and operation of primary, secondary, and operational containment structures at bulk agrichemical facilities.

(2) General. A facility need only to comply with these rules when they come within the definition of an agrichemical facility. Any *[new agrichemical facility]* **construction after the effective date of this rule** shall be in compliance with all of these rules before the commencement of any operational activities or any storage or use of agrichemicals. *[All existing agrichemical facilities shall be in compliance with these rules as follows: secondary and operational area containment for pesticides— five (5) years from the date the rule is adopted; and secondary and operational area containment for fertilizers—five (5) years from the date the rule is adopted.]* Any existing agrichemical facility that has a discharge of agrichemicals or process generated wastewater to the environment *[will be]* **is** required to take immediate steps to implement the secondary and operational containment requirements contained in this rule **in addition to any other remedy required**. *[All agrichemical facilities shall apply for an operating permit on forms furnished by the department. Storage of bulk liquid fertilizer in a mobile container for more than thirty (30) days is prohibited unless the mobile storage container is located within a secondary containment or operational containment area. Deviation from the requirements contained in this rule will be considered by the department on a case-by-case basis. Sufficient documentation shall be submitted justifying the need for the deviation.]* **All new operations shall be designed to be no discharge.**

(3) Exceptions. The following exceptions shall apply to agrichemical facilities:

(B) Liquid fertilizer storage tanks*[,]* that *[are]* **were** in use *[when this rule is adopted]* **prior to January 13, 1992**, having a storage capacity greater than forty thousand (40,000) gallons shall be exempt from the requirement of installing a liner underneath the tank itself. Spill containment diking is required around these tanks. These facilities shall submit to the department for approval a program outlining the monitoring, tank testing, and record keeping that will be done at the facility to document that a release of agrichemicals from these tanks has not occurred either to surface or subsurface waters of the state.

(4) *[Engineering services are performed in three (3) steps: engineering report or facilities plan, preparation of construction plans, specifications and contractual documents and construction compliance, inspection, administration and acceptance. These services are generally performed by engineering firms in private practice but may be performed by state or federal agencies. All reports, plans and specifications should be submitted at least sixty (60) days prior to the date upon which action by the agency is desired or in accordance with the National Pollutant Discharge Elimination System (NPDES) or other schedules. The documents should be submitted for formal approval at the appropriate times and should include the engineer's report (facilities plan) and design drawings and specifications. For unusual or complex projects, it is suggested that the engineer meet with the appropriate department staff to discuss the project and that preliminary reports be submitted for review prior to the*

preparation of final plans and specifications. These documents are used by the owner in programming future action and by the agency to evaluate probable compliance with statutes and regulations. The preliminary reports and plans shall broadly describe existing problems, consider methods for alternate solutions including site and/or facility relocation estimate capital and annual costs and outline steps for further project implementation including approval by regulatory agencies. No approval for construction can be issued until final, detailed plans and specifications have been submitted to the agency and found to be satisfactory.] **Deviations. The department may require a construction permit with a substantial deviation from these requirements as addressed in 10 CSR 20-6.010. Deviations from these rules may be approved by the department when engineering justification satisfactory to the department is provided. Justification must substantially demonstrate in writing and through calculations that a variation(s) from the design rules will result in either at least equivalent or improved effectiveness. Deviations are subject to case-by-case review with individual project consideration. Containment structures for agrichemical facilities that are not addressed or covered in this design guide are considered deviations. A written request for any deviation must include a certification that indicates compliance with all other design guide requirements.**

(5) Engineering Report **for new construction or modifications to existing facilities as required in 10 CSR 20-6.010**. The engineering report assembles basic information, presents design criteria and assumptions, examines alternate projects with preliminary layouts and cost estimates, offers a conclusion with a proposed project for client consideration, and outlines official actions and procedures to implement the project. *[The concept, including process description and sizing, factual data and controlling assumptions and considerations for the functional planning of secondary and operational containment facilities are presented for each process at the facility as well as the overall operation of the agrichemical facility as a whole system. These data form the continuing technical basis for detail design and preparation of construction plans and specifications. Architectural, structural, mechanical and electrical designs are usually excluded. Sketches may be desirable to aid in presentation of a project. Outline specifications of process units, special equipment, etc. are occasionally included.]* **Engineering reports shall contain the following information and other pertinent information and may be combined with other engineering documentation:**

[(A) Engineering Report Content. It is urged that the following paragraphs be utilized as a guideline for the content of the project engineering report to be submitted to the agency for review and approval:

1. Letter of transmittal. A one (1)-page letter typed on design engineer's letterhead should be included in the submission of the report to the client;

2. Title page. Title of project, agrichemical facility name and address, name and address of firm preparing the report, seal and signature of the professional engineer in charge of project;

3. Table of contents shall include section headings, chapter headings and subheadings, maps, graphs, illustrations, exhibits, diagrams and appendices. Number all pages and cross-reference by page number;

4. Introduction. Purpose—reasons for the report and circumstances leading up to the report;

5. Existing conditions at the agrichemical facility and discussion about proposed expansions or modifications to the facility;

6. Technical information and design criteria—

A. Process facilities. The process by which bulk chemicals are received, unloaded and transferred within the facility should be discussed. The mixing, loading and unloading of spreading or spraying equipment should be discussed. Design and sizing of secondary and operational containment structures should be discussed. All cleaning of chemical handling equipment, spraying or spreading vehicles, nurse vehicles and containment areas should be discussed. Collection, storage and disposal of rinsates, process generated wastewaters and collected precipitation should be discussed. Collection, treatment and disposal of all domestic wastewater flows associated with the facility should be discussed; and

B. Process diagrams. A process configuration showing the interconnection of all pumps, piping and storage tanks associated with the operation of the agrichemical facility should be shown; and

7. Summary. Highlight very briefly what was found from the evaluation of the facility and what the proposed recommendations are for the facility—

A. Findings. Method of operation, estimation of the number of cropping programs for which agrichemical services will be provided, sources of wastewater, proposed disposal or treatment practices;

B. Conclusions. Project recommended to client for construction; and

C. Recommendations. Summarized, step-by-step actions for client to follow to implement conclusions and submission of the report to the agency for review and approval.]

(A) Title of project, agrichemical facility name and address, name and address of firm preparing the report, seal and signature of the professional engineer in charge of project;

(B) Introduction. Reasons for the report and circumstances leading up to the report;

(C) Existing conditions at the agrichemical facility and proposed expansions or modifications to the facility shall be discussed;

(D) Design criteria—

1. Design and sizing of secondary and operational containment structures should be discussed;

2. Process diagrams. A process configuration showing the interconnection of all pumps, piping, and storage tanks associated with the operation of the agrichemical facility should be shown;

(E) The process by which bulk chemicals are received, unloaded, and transferred within the facility should be discussed. The mixing, loading, and unloading of spreading or spraying equipment should be discussed. All cleaning of chemical handling equipment, spraying or spreading vehicles, nurse vehicles, and containment areas should be discussed. Collection, storage and disposal of rinsates, process generated wastewaters, and collected precipitation should be discussed. Collection, treatment, and disposal of all domestic wastewater flows associated with the facility should be discussed;

(F) Method of operation, estimation of the number of cropping programs for which agrichemical services will be provided, sources of wastewater, proposed disposal or treatment practices, and the project recommended to client for construction shall be included; and

(G) Antidegradation must be implemented according to the procedures in 10 CSR 20-7.031(3)(D).

(6) Primary Containment for Bulk Agrichemicals **for new construction or modifications to an existing facility**. Containers and appurtenances used as the primary containment in the storage and handling of bulk agrichemicals shall be constructed, installed, and maintained to prevent a discharge and shall be of materials and construction compatible with the specifications of the product stored.

(7) Secondary Containment for Bulk Agrichemicals **for new construction or modifications to an existing facility**. Secondary containment for nonmobile bulk pesticides and nonmobile bulk fertilizers shall be designed to contain any spilled product **and prevent a discharge** from the primary containers or rainfall from the operational containment area and secondary containment area for the amount of time required for proper cleanup and recovery.

(C) Nonmobile Bulk Dry Fertilizer Storage.

1. Dry fertilizer shall be stored inside a sound structure to prevent contact with precipitation. All surface water runoff shall be diverted away from the storage structure.

2. All unloading, loading, mixing, and handling of dry bulk fertilizers should be done on an operational containment area.

3. Pesticide impregnation of dry fertilizer shall take place within an operational containment area adequate in size to hold the volume of pesticides used and impregnation equipment.

[4. Unloading of bulk dry fertilizers may be satisfied by individual catchment basins.]

*[5.]***4.** Daily cleanup of the dry fertilizer loading, unloading, mixing, and handling areas shall take place.

*[6.]***5.** Whenever feasible, dry fertilizer spreading equipment should be cleaned in the field to minimize containment and disposal requirements at the operational containment area.

*[7.]***6.** The floors of the bulk dry fertilizer storage area shall be paved with concrete or other approved materials that will prevent the downward movement of fertilizer materials and moisture through the floor. For concrete floors and walls, expansion joints shall be placed on a close enough spacing to prevent cracks from forming. The expansion joints shall be sealed with a material resistant to agrichemicals. Cracks that occur in the floors and walls shall be sealed to prevent the downward or lateral movement of fertilizer materials and moisture.

7. A mixing and loading pad shall extend beneath any conveyor used to load or unload dry bulk fertilizer unless the conveyor is fully enclosed within a housing that contains all spillage from the conveyor.

(D) Nonmobile Bulk Dry Pesticide Storage.

1. Dry pesticides shall be stored inside a sound structure to prevent contact with precipitation. All surface water runoff shall be diverted away from the storage structure.

2. All loading, mixing, and handling of bulk dry pesticides should be done on an operational containment area.

[3. Unloading of bulk dry pesticides may be satisfied by individual catchment basins.]

*[4.]***3.** Daily cleanup of the bulk dry pesticide loading, unloading, mixing, and handling areas shall take place.

*[5.]***4.** Whenever feasible, bulk dry pesticide spreading equipment should be cleaned in the field to minimize containment and disposal requirements at the operational containment area.

*[6.]***5.** The floors of the bulk dry pesticide storage area shall be paved with concrete or other approved materials that will prevent the downward movement of pesticide materials and moisture through the floor. For concrete floors and walls, expansion joints shall be placed on a close enough spacing to prevent cracks from forming. The expansion joints shall be sealed with a material resistant to agrichemicals. Cracks that occur in the floors and walls shall be sealed to prevent the downward or lateral movement of pesticide materials and moisture.

6. A mixing and loading pad shall extend beneath any conveyor used to load or unload dry bulk pesticide unless the conveyor is fully enclosed within a housing that contains all spillage from the conveyor.

(8) **Operational Containment for bulk liquid pesticides and bulk liquid fertilizers for new construction or modifications to an existing facility.** The operational containment area for bulk liquid pesticides and bulk liquid fertilizers shall be designed to contain any product discharged or collected precipitation for the amount of time required for proper cleanup and recovery.

(C) The volume of the operational containment area shall be one hundred ten percent (110%) of the volume of the largest *[application]* vehicle that will be loaded or unloaded in the operational containment area. This volume may be achieved through the use of above ground tank(s) located within the secondary containment area connected to an automatic sump pump in the operational containment area.

(E) *[Unloading containment may be satisfied by the operational containment area or with individual catchment basins or portable pans/containers. The individual basins or portable containers shall be placed to catch or recover spillage and leakage from transfer connections and pumps.]* **The operational containment area shall extend beneath any pump, appurtenance, or plumbing connection not located within the secondary containment area and that is used to transfer liquid fertilizer or pesticide.**

(9) **Operational Containment Area for bulk dry pesticides and bulk dry fertilizers for new construction or modifications to an existing facility.** The operational containment area for bulk dry pesticides and bulk dry fertilizers shall be sized and designed to contain any spillage or leakage of dry materials that occurs from the loading and unloading of hauling or spreading equipment and from the mixing and blending equipment or precipitation that comes in contact with the operational containment area for the amount of time required for proper cleanup and recovery.

(C) *[Unloading containment may be satisfied by the operational containment area or with i]*Individual catchment basins or portable pans/containers **may be used to satisfy the requirement for operational containment**. The individual basins or portable containers shall be placed to catch or recover spillage and leakage from transfer connections and conveyors.

(D) For unloading dry pesticides and dry fertilizers from rail cars, a catchment basin or concrete pad that can effectively contain the dry fertilizer or pesticide that may be discharged during the unloading process shall be used. The operator shall clean up a spill immediately after unloading occurs.

(12) Operation and Management of Agrichemical Facilities. Bulk agrichemicals shall be stored, handled, transported, loaded, and unloaded in a manner to prevent discharge that may result in unreasonable adverse *[affects]* **effects** to humans or the environment. All applicable hazards of the pesticide shall be considered in the handling and loading practices to ensure proper protection of facility personnel and the environment.

(A) *[Discharges]* **Spills** occurring *[to]* **within** the secondary containment and operational containment area shall be recovered promptly. All waste and wastewater associated with the recovery process shall be disposed of in accordance with the permit for the facility and the product labeling.

(F) Prior to repackaging or refilling *[bulk]* **mobile** containers, the containers must be thoroughly cleaned and inspected except when a dedicated pesticide container is refilled and the tamper indicator is otherwise intact.

(14) Plans.

(A) General. All plans for **primary,** secondary**, and operational** containment structures *[at]* **for new construction or modifications to existing** agrichemical facilities shall bear the name of the agrichemical facility and shall show the scale in feet, a graphic scale, the north point, *[data]* **date,** and the name of the engineer, certificate number and imprint of his/her registration seal. The plans shall be clear and legible. They shall be drawn to a scale which will permit all necessary information to be plainly shown. The size of the plans generally should not be larger than thirty inches by forty-two inches (30" × 42") (76 cm × 107 cm). Datum used should be indicated. Locations and logs of test borings and when made shall be shown on

the plans. *[Blueprints shall not be submitted.]* Detail plans shall consist of plan views, elevations, sections, and supplementary views which, together with the specifications and general layouts, provide the working information for the contract and construction of the containment facilities. **Plans shall** *[/]*include dimensions and relative elevations of structures, the location and outline form of equipment, storage tanks, location and size of piping, and ground elevations.

(B) Plans *[of]* **for new construction or modifications to existing** *[A]*agrichemical *[F]*facilities.

1. Location plan. A plan shall *[be submitted]* show*[ing]* the location of the agrichemical facility in relation to streams, roads, water supply systems, property lines, and any dwellings or structures not owned by the agrichemical facility in the immediate area of the facility.

2. General layout. Layouts of the proposed agrichemical containment facility shall *[be submitted]* show*[ing]* topography of the site, size, and location of storage tanks and containment structures, schematic flow diagram showing the flow through the various agrichemical mixing and handling systems, piping including any arrangements for bypassing individual systems, agrichemical handled and direction of flow through pipes, pumps and valves used for handling agrichemicals, storage areas for waste materials that cannot be reused (mud and sediment from sumps, dry fertilizer, and pesticide materials accumulated during clean up processes, etc.), any test borings showing soil and rock elevations and composition at the proposed site, and information showing existing groundwater elevations in relation to proposed liner installation and containment area floors shall be provided.

3. Detail plans. Unless otherwise covered by the specifications or engineer's report, detail plans shall show location, dimensions, and elevations of all existing and proposed facilities; elevations of high and low groundwater level; size, pertinent features, and operating capacity of all pumps, tanks, containment areas, and other mechanical devices associated with the operation of the agrichemical facility and adequate description of any other features pertinent to the design and operation of the agrichemical containment facility.

(15) Specifications. Complete technical specifications for *[the construction of the]* **new construction or modifications to an existing** agrichemical containment facility shall *[accompany]* **be included with** the plans. The specifications *[accompanying]* **included with** construction drawings shall include, but not be limited to, all construction information not shown on the drawings which is necessary to inform the builder in detail of the design requirements as to the quality of materials and workmanship and fabrication of the project and type, size, strength, operating characteristics, and rating of equipment; the complete requirements for all mechanical and electrical equipment, including machinery, valves, piping and jointing of pipe; electrical apparatus, wiring, and instrumentation; operating tools; construction materials; special construction materials such as clay, sand, concrete, or steel; miscellaneous appurtenances; instructions for testing materials and equipment as necessary to meet design standards and performance tests for the completed works and component units. It is suggested that these performance tests be conducted at the design conditions for the operation of the agrichemical facility whenever practical.

[(16) Modifications During Construction. Any deviations or changes from the approved plans or specifications affecting capacity or operation of the agrichemical facility shall be noted on a set of as-built plans clearly showing the alternations. The as-built plans shall be submitted to the department at the completion of the project along with an application for issuance of an operating permit for the facility].

AUTHORITY: section[s] 644.026, RSMo Supp. [1990] 2014, and section 644.036, RSMo [1986] Supp. 2013. Original rule filed July 15, 1991, effective Jan. 13, 1992. Amended: Filed Aug. 1, 2016.

PUBLIC COST: This proposed amendment will cost state agencies or political subdivisions forty-two thousand nine hundred eighty-seven dollars ($42,987) in the aggregate.

PRIVATE COST: This proposed amendment is expected to save private entities fifty-one thousand twenty-six dollars ($51,026) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Natural Resources, Division of Environmental Quality, Water Protection Program, Diane Reinhardt, PO Box 176, Jefferson City, MO 65102. Comments may be sent with name and address through email to diane.reinhardt @dnr.mo.gov. To be considered, comments must be received by November 17, 2016. A public hearing is scheduled at a meeting of the Clean Water Commission to be held at 10 a.m., on October 5, 2016, at the Echo Bluff State Park Lodge, 34489 Echo Bluff Drive, Eminence, MO 65466.

FISCAL NOTE
PUBLIC COST

I. Department Title: Department of Natural Resources
Division Title: Clean Water Commission
Chapter Title: Design Guides

Rule Number and Title:	10 CSR 20-8.500, Secondary Containment Design Requirements f or Agrichemical Facilities
Type of Rulemaking:	Amendment

II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimated Cost of Compliance in the Aggregate
Department of Natural Resources	Net loss of revenue of $ 42,987.14

III WORKSHEET

The reduction in construction permitting will reduce the amount of fees collected by the Department. Based on historic data, the department estimates that as many as 8 construction permit applications were issued for agrichemical facilities each year. The fees associated with these projects ($1,000) will not be collected resulting in an estimated fee loss of $13,000. This loss in collected fees, however, is offset by the fact that the department no longer has to issue these permits or review these applications. Any loss of revenue to a state agency is considered a public cost.

Lost revenue to the department.
Reduced number of construction permits.
$1000 application fee X 13 applications/year = $ 13,000

Terminations of permits and resulting loss of $100 annual fee
400 of terminated permits x $100/year fee = $40,000

Cost savings to the department.
No construction permit reviews by department staff.
20 hours/application $35.01/hourly wage for EEII@ 13 applications/year = $9,102.60

No as-built or Statement of Work Completed review by department staff.
2 hour/application $35.01/hourly wage for EEII @ 13 applications/year = $910.26

TOTAL LOST REVENUE	$ 53,000.00
TOTAL COST SAVINGS	$ 10,012.86
NET LOSS TO THE DEPARTMENT	$ 42,987.14

IV. ASSUMPTIONS

1. An annualized aggregate cost of this rulemaking is used for the purposes of providing the aggregate cost for the life of the rule. The annualized aggregate cost is the agency estimate of the average costs that will be incurred in any future year, no matter how far distant. For convenience of calculating this fiscal note over a reasonable time period, the life of the rule is assumed to be indefinite. If the life of the rule extends beyond 1 year, the annual costs for additional years will be consistent with the assumptions used to calculate annual costs as identified in this fiscal note.

2. It is difficult to estimate the cost for the department to comply with this rulemaking as it is impossible to predict how many applications will be received in a year. Therefore, the number of applications is based on recent applications. The estimated average cost was determined on a per application basis. Operating permit applications for minor modifications such as facility name change and ownership transfer are not included in this estimate as these requirements have not changed.

3. The reduction of construction permit applications and the elimination of voluntary operating permit applications will result in a loss of revenue to the department. Construction and operating permit fees are based on the fee structure effective January 1, 2015.

4. Construction permit and as-constructed plans or a Statement of Work Completed is no longer required for agrichemical facilities that are not constructing an earthen basin. The reduction of construction permit applications will reduce the amount of time spent by engineering staff for review of applications. The hourly rate for an Environmental Engineer II (EEII) is based on the Office of Administration, Division of Personnel pay grid.

5. Facilities with SIC code 5191 will no longer need to obtain or maintain an operating permit. A search of the database show there are 456 permitted agrichemical facilities with their primary SIC code of 5191. This number was used in the loss of revenue calculations for the department.

FISCAL NOTE
PRIVATE COST

I. **Department Title: Department of Natural Resources**
Division Title: Clean Water Commission
Chapter Title: Permits

Rule Number and Title:	10 CSR 20-8.500, Secondary Containment Design Requirements for Agrichemical Facilities
Type of Rulemaking:	Amendment

II. SUMMARY OF FISCAL IMPACT

Estimate of the number of entities by class which would likely be affected by the adoption of the rule:	Classification by types of the business entities which would likely be affected:	Estimate in the aggregate as to the cost of compliance with the rule by the affected entities:
	SIC NAICS	
8 facility owners per year	**5191 farm retail** **2873** **2874** **2875 fertilizer mixing and storage** **2879**	**$51,026 savings**

III. WORKSHEET

Cost Savings (to applicant)
No construction permit required.
$1000 application fee x 8 applications = $8,000

No construction permit application preparation and associated engineering fees incurred
2 hours/application X $120/ hourly engineering fee* x 8 applications = $1,920

No as-built or Statement of Work Completed required
2 hours/application X $120.00/hourly engineering fee* x 8 application = $1,920

Terminations of permits and resulting in a savings of $100 annual fee
400 terminated permits** x $100/year fee = $40,000

Additional Costs (to applicant)
Additional costs will be incurred by dry fertilizer storage facilities for the construction of a loading pad.

3.7 cy. X $110/cubic yard concrete*** X 2 facilities per year = $814

TOTAL COST SAVINGS	$ 51,840
TOTAL COST INCREASES	$ 814
TOTAL NET SAVINGS	$51,026

ASSUMPTIONS

1. An annualized aggregate cost of this rulemaking is used for the purposes of providing the aggregate cost for the life of the rule. The annualized aggregate cost is the agency estimate of the average costs that will be incurred in any future year, no matter how far distant. For convenience of calculating this fiscal note over a reasonable time period, the life of the rule is assumed to be indefinite. If the life of the rule extends beyond 1 year, the annual costs for additional years will be consistent with the assumptions used to calculate annual costs as identified in this fiscal note.

2. The number of agrichemical facility applications submitted to the department varies from year to year. For cost estimates of this fiscal note, the number of applications is based on recent submittals and each application is submitted by a different owner. The estimated cost was determined on a per application basis.
3. Construction permit fees are based on the fee structure effective January 1, 2015.

4. It is impossible to determine cost savings for each classification of business because there is no way of knowing which ones will submit operating permit applications. For new or expanding agrichemical facilities that do not construct an earthen storage basin, the cost savings would be the same per application regardless of the classification. Based on current issued permits, that majority of cost savings would be in the NAICS Classifications of 5191 and 2875.

5. This fiscal note accounts for costs associated with permit application. It does not account for costs associated with the engineering design of the agrichemical facility as design requirements in this rule have not changed.

Only facilities that store and mix agrichemicals will be required to be permitted. Facilities with a primary SIC code 5191 will no longer need to obtain or maintain an operating permit. A search of the database show there are 456 permitted agrichemical facilities with their primary SIC code of 5191. This number was used in the calculations for savings to the facility owner.

* Basis of hourly fee is from information provided by 2 consulting engineers
**Assumption made that 90% of existing permitted facilities will terminate their permit.
***Based on delivered rate of $110 per yard of concrete to site 10 miles from concrete plant for Sandridge Concrete in Jefferson City, MO.