

ADEQ

A R K A N S A S
Department of Environmental Quality

CERTIFIED MAIL RETURN RECEIPT REQUESTED: (91 7199 9991 7036 5032 3696)

John Van Brahana
20 Gearhart Hall
Fayetteville, AR 72701

RE: AFIN: 51-00020; Permit No.: 3540-WR-7

Dear Mr. Brahana:

This letter constitutes notice of the Department's final permit decision and a copy of the final no-discharge permit is enclosed. The attached response to comments describes any substantial changes from the draft permit.

The applicant, and any other person submitting written comments during the comment period, and any other person entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Department should be revised or modified. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201 within thirty (30) calendar days of the date of issuance of this final permit decision as provided in Reg. 8.211(B)(1). If you have any questions about filing the request, please call the Commission at 501-682-7890.

I, Amy Deardoff, hereby certify that a copy of this permit has been mailed by first class mail to John Van Brahana, 20 Gearhart Hall, Fayetteville, AR, 72701.

Amy Deardoff

Amy Deardoff
Administrative Specialist, Office of Water Quality

June 30, 2016

Date Mailed

**AUTHORIZATION FOR A NO-DISCHARGE WATER PERMIT UNDER THE
ARKANSAS WATER AND AIR POLLUTION CONTROL ACT**

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act
(Ark. Code Ann. § 8-4-101 *et seq.*)

Ellis Campbell d/b/a EC Farms

is authorized to land apply liquid waste from C&H Hog Farm, Inc. on sites listed in Condition
No. 8 of Part II of the permit in Newton County.

The land application sites are located in Stream Segment 4J of the White River basin and in
Stream Segment 3H of the Arkansas River basin.

Operation shall be in accordance with all conditions set forth in the permit.

Response to Comments is attached.

Effective Date: April 1, 2012


1st Modification Effective Date: March 1, 2015

2nd Modification Effective Date: July 29, 2016

Expiration Date: N/A



Caleb J. Osborne
Associate Director, Office of Water Quality
Arkansas Department of Environmental Quality



Modification Issue Date

Part I
Monitoring Requirements

The following tables detail the monitoring frequencies and the requirements for reporting results to the ADEQ for each respective parameter listed in the table heading.

TABLE I		
Waste Analysis		
Parameter¹	Limits (Reporting Units)	Monitoring Frequency
pH	Report (S.U.)	Analysis from C&H Hog Farm ³
Percent Solids	Report (Percentage (%))	
Total Phosphorus	Report (mg/L)	
Soluble Phosphorus		
Total Nitrogen		
Potassium		
Application Rate	Report ² (gal/acre)	Per application

¹ See Part II Specific Condition Nos. 19 and 20.

² Not to exceed that listed in Part II Specific Condition No. 8.

³ Most recent waste analysis performed by C&H Hog Farm. All new waste analyses shall be in compliance with Condition Nos. 8, 9 and 22.

TABLE II		
Soils		
Parameter	Limit (Reporting Units)	Monitoring Frequency
pH	Report (S.U.)	Once every five (5) years from the effective date of the permit per land application site
Phosphorus	Report (mg/L)	
Potassium		
Nitrates		

Part II
Specific Conditions

1. This permit is for the land application of liquid swine waste and is subject to Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation No. 5 in its entirety. This facility shall only receive liquid swine waste from C&H Hog Farms (AFIN 51-00164).
2. Waste shall not be discharged from this operation to the waters of the State or onto the land in any manner that may result in ponding or runoff to the waters of the State. [Reg. 5.303]
3. No liquid animal waste management system shall be constructed or placed into operation unless written approval by the Department is received. [Reg. 5.401]
4. The land application operation shall be managed in accordance with the June 2015 Site Management Plan (SMP) and revised documents submitted December 10, 2015. The SMP and revised documents submitted for the land application operation are hereby incorporated into this permit by reference. As a result, all provisions and information contained in the SMP become enforceable conditions of this permit. If the SMP is inconsistent with this permit, the land application operation shall be managed in accordance with the terms of the permit and the SMP shall be revised to conform to the permit conditions.
5. Land application rates shall be in accordance with the June 2015 SMP, revised documents submitted December 10, 2015, and Condition No. 8 listed below.¹
6. The permittee shall determine if the land application sites listed below are currently permitted or used by another user. In the event that the Department determines that any land application site under this permit is permitted for land application under another Office of Water Quality Permit, the permittee cannot land apply on the land application site(s) until such time that the permits are corrected.
7. Unless otherwise specified, methods and timing of sampling and analysis described in this permit must be in accordance with the University of Arkansas Cooperative Extension Service guidelines. [Reg. 5.407(D)]
8. All land application of waste must occur only on the approved land application sites and at no more than the maximum application rates listed below. Any other land application sites that are not listed below even if listed in the application or other documents are prohibited.

Land Application Sites						
Field	New/ Existing	Acreage	Latitude	Longitude	Maximum Application Rate ^{1,3} (gal/ac/yr)	Maximum Application Rate ^{2,3} (gal/ac/yr)
CC1	Existing	5.2	35°54'43.427"N	93°12'12.133"W	6000	11000
JG-A	Existing	14	35°54'42.571"N	93°12'19.986"W	7500	13000
EC-A	Existing	4.8	35°54'11.135"N	93°12'26.422"W	7500	10500

¹ The land application fields are authorized herein to facilitate the installation of synthetic liners in the waste storage lagoons allowed under Permit Tracking No. ARG590001 and continuing operations in a manner protective of the environment.

Land Application Sites						
Field	New/ Existing	Acreage	Latitude	Longitude	Maximum Application Rate ^{1,3} (gal/ac/yr)	Maximum Application Rate ^{2,3} (gal/ac/yr)
HB1	Existing	11.1	35°50'21.505"N	93°14'41.726"W	7500	10500
HB2	Existing	13.1	35°50'45.286"N	93°14'06.534"W	7500	10500
LCM1	Existing	18.5	35°51'45.009"N	93°11'01.470"W	10500	14000
LCM2	Existing	16.2	35°51'38.009"N	93°10'52.464"W	10500	14000
LCM3	Existing	19.1	35°51'38.573"N	93°11'22.681"W	10500	14000
RM1	Existing	82.2	35°54'47.608"N	93°09'13.749"W	7500	10500
RM2	Existing	21.4	35°54'45.980"N	93°09'13.186"W	10500	14000
MM1	Existing	13.8	35°55'24.985"N	93°07'21.302"W	10500	14000
MM2	Existing	29.8	35°55'19.393"N	93°07'10.543"W	10500	14000
MM3	Existing	10.9	35°55'17.607"N	93°07'13.254"W	10500	14000
RC3	Existing	12	35°55'15.910"N	93°07'12.208"W	10500	14000
RC4	Existing	18.4	35°54'56.137"N	93°07'05.394"W	7500	10500
PC1	Existing	18.3	35°54'59.632"N	93°06'49.953"W	7500	10500
CB1	Existing	12.5	35°56'27.536"N	93°06'52.448"W	10500	14000
CB2	Existing	37.5	35°56'36.365"N	93°06'59.954"W	7500	10500
CB3	Existing	3.8	35°56'38.732"N	93°06'54.057"W	7500	10500
CB4	Existing	16.1	35°56'22.651"N	93°07'02.932"W	10500	14000
CB5	Existing	1.8	35°56'32.232"N	93°07'19.900"W	7500	10500
CB6	Existing	13.3	35°56'31.162"N	93°07'23.270"W	7500	12000
CB7	Existing	44	35°56'29.407"N	93°07'26.546"W	7500	10500
CB8	Existing	6.5	35°56'25.656"N	93°07'44.149"W	7500	10500
CB9	Existing	19.7	35°56'19.915"N	93°08'09.429"W	7500	10500
CB10	Existing	22.5	35°56'33.329"N	93°08'02.521"W	7500	10500
CB11	Existing	8.5	35°56'03.476"N	93°07'57.787"W	5500	9500
CB12	Existing	4.4	35°56'08.654"N	93°07'58.920"W	7500	10500
CB13	Existing	8.5	35°56'28.126"N	93°08'22.650"W	7500	10500
GD1	Existing	10.2	35°48'22.963"N	93°08'39.719"W	10500	14000
VIV1	Existing	22.9	35°52'14.285"N	93°11'30.893"W	10500	14000
VIV1A	Existing	10.2	35°52'17.313"N	93°11'35.059"W	10500	14000

¹ Maximum application rate for waste from Waste Storage Pond 1. The application rate cannot exceed a rate that results in a violation of Condition No. 9.

² Maximum application rate for waste from Waste Storage Pond 2. The application rate cannot exceed a rate that results in a violation of Condition No. 9.

³ For any given year, each field can be applied to from either Waste Storage Pond 1 or Waste Storage Pond 2, but not both.

9. Land application shall only take place on fields that are classified as Low or Medium classes in the Phosphorus Index. Application rates may be updated based on the waste and soil results from Part I Table I and Table II, respectively, but application rates may not exceed the maximum rates listed in Condition No. 8.
10. Waste shall not be land applied where land application is prohibited by Arkansas Department of Health regulations for the protection of public water supplies. [Reg. 5.406(F)]

11. The permittee will be responsible for ensuring that the landowners of all waste application sites and the waste applicators abide by the conditions of this permit. [Reg. 5.405 (B)]
12. The permittee must take all reasonable and necessary measures to minimize obnoxious and offensive odors. In accordance with Section 1 of the SMP, the facility will focus on the following management practices for land application: avoiding spreading just before weekends and holidays; spreading in the mornings; and consideration of weather conditions. [Reg. 5.405(A)]
13. Waste must be evenly distributed over the application sites. [Reg. 5.406(A)]
14. Waste must not be land applied when the soil is saturated; frozen or covered with ice or snow; when significant precipitation is reasonably anticipated in the next 24 hours; or during a precipitation event. [Reg. 5.406(B)]
15. Waste must not be applied on slopes with a grade of more than 15% or in any manner that will allow waste to enter the waters of the State or to run onto adjacent property. [Reg. 5.406(C)]
16. Waste must not be land applied within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies; or 300 feet of extraordinary resource waters as defined by the APC&EC Regulation No. 2. Buffer distances for streams, ponds and lakes must be measured from the ordinary high water mark. [Reg. 5.406(D)]
17. Waste must not be land applied within 50 feet of property lines or 500 feet of neighboring occupied buildings existing as of the date of the permit. The restrictions regarding property lines or neighboring buildings may be waived if the adjoining property is also approved as a land application site under a permit issued by the Department or if the adjoining property owner consents in writing. [Reg. 5.406(E)]
18. All boundaries cited in Condition Nos. 16 and 17 of Part II of the Permit must be flagged prior to land applying.
19. Annual reports for the previous year (i.e. Annual report is due on May 30, 2017 for the 2016 calendar year) must be submitted to the Department prior to May 30 of each year and must include the following: waste and soils analyses as described in Part I and the location (land application sites). For each location (land application sites), the following must be submitted with the annual report: volume of waste applied, nitrogen and phosphorus application rates, method of waste application and type of crop(s) grown. Reports must be submitted on forms provided by the Department that can be found at the following website. [Reg. 5.407(E)]

http://www2.adeq.state.ar.us/water/branch_permits/pdfs/reptform.pdf
20. Records must be kept of all land applied waste and must include, at a minimum, the following: date of application; weight or volume applied; waste destination; and number of acres over which the waste was applied. All records and logs shall be kept at the facility and provided to the Department upon request. [Reg. 5.407(A)]
21. Records must be kept of the source of the waste, including location and permit number, if applicable. All records shall be kept at the facility and provided to the Department upon request. [Reg. 5.601]

22. The SMP shall be reviewed annually by the operator. An updated SMP shall be submitted to ADEQ when changes are made or as required by ADEQ. [Reg. 5.405(C)]

Part III
Standard Conditions

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. §8-4-101 et seq. and is grounds for civil and administrative enforcement action; for permit termination, revocation and reissuance, or modification; or for rejection of a permit renewal application.

2. Penalties for Violations of Permit Conditions

The Arkansas Water and Air Pollution Control Act, Ark. Code Ann. §8-4-101 et seq. provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than twenty-five thousand dollars (\$25,000) or both for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to a civil penalty not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

3. Permit Actions

- A. This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:
- i. Violation of any terms or conditions of this permit;
 - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
 - iii. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination; or
 - iv. Failure of the permittee to comply with the provisions of Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation No. 9 (Permit fees).
- B. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state statutes or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. §8-4-101 et seq.

5. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act and Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

6. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

9. Permit Fees

The permittee shall comply with all applicable permit fee requirements (i.e., including annual permit fees following the initial permit fee that will be invoiced every year the permit is active) for wastewater discharge permits as described in APCEC Regulation No. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR Parts 122.64 and 124.5(d), as adopted in APCEC Regulation No. 6 and the provisions of APCEC Regulation No. 8.

10. Proper Operation and Maintenance

- A. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- B. The permittee shall provide an adequate and trained operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

11. Duty to Mitigate

The permittee shall take all reasonable steps to prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health, the environment, or the water receiving the discharge.

12. Removed Substances

Solids removed in the course of treatment or control of waste shall be discarded in a manner such as to prevent any pollutant from such materials from entering the waters of the State.

13. Reporting of Violations and Unauthorized Discharges

A. Any violations to this permit must be reported to the Enforcement Branch of the Department immediately. Any leaks or seeps shall be reported to the Department and appropriately corrected. Any discharge from the storage system such as an overflow, a broken pipe, etc., shall be immediately reported to the Department.

B. The operator shall visually monitor and report immediately (within 24 hours) to the Enforcement Branch any unauthorized discharge from any facility caused by dike or structural failure, equipment breakdown, human error, etc., and shall follow up with a written report within five (5) days of such occurrence. The written report shall contain the following:

- i. A description of the permit violation and its cause;
- ii. The period of the violation, including exact times and dates;
- iii. If the violation has not been corrected, the anticipated time expected to correct the violation; and
- iv. Steps taken or planned to reduce, eliminate, and prevent the recurrence of the violation.

C. Reports shall be submitted to the Enforcement Branch at the following address:

Arkansas Department of Environmental Quality
Office of Water Quality, Enforcement Branch
5301 Northshore Dr.
North Little Rock, Arkansas 72118
Fax (501) 682-0880

Or by email to:

Water-Enforcement-Report@adeq.state.ar.us

14. Penalties for Tampering

The Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-101 et seq. provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than ten thousand dollars (\$10,000) or by both such fine and imprisonment.

15. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit,
- D. Sample, inspect, or monitor at reasonable times, for the purposes of assuring permit compliance any substances or parameters at any location.

16. Planned Changes

The permittee shall give notice and provide the necessary information to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility.

17. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

18. Transfers

The permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

19. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying; revoking and reissuing or terminating this permit; or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. Information shall be submitted in the form, manner and time frame requested by the Director.

20. Signatory Requirements

- A. All applications, reports or information submitted to the Director shall be signed and certified. All permit applications shall be signed as follows:
 - i. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - a. A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or

- b. The manager of one or more manufacturing, production, or operation facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including: having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - ii. For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or
 - iii. For a municipality, State, Federal, or other public agency; by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - a. The chief executive officer of the agency, or
 - b. A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- B. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- i. The authorization is made in writing by a person described above.
 - ii. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - iii. The written authorization is submitted to the Director.
- C. Any person signing a document under this section shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

21. Availability of Reports

Except for data determined to be confidential under the Arkansas Trade Secrets Act, Ark. Code Ann. § 4-75-601 et seq., all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

22. Penalties for Falsification of Reports

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject to civil penalties and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act, Ark. Code Ann. § 8-4-101 et seq.

23. Applicable Federal, State, or Local Requirements

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable Federal, State, or local statute, ordinance policy, or regulation.

24. Laboratory Analysis

All laboratory analyses submitted to the Department shall be completed by a laboratory certified by the Department under Ark. Code Ann. § 8-2-201 *et seq.* Analyses for the permittee's internal quality control or process control do not need to be performed by an ADEQ certified laboratory.

25. Retention of Records

The permittee shall retain records of all monitoring information, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

Part IV
Definitions

“**Act**” means the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.) as amended.

“**APC&EC**” means the Arkansas Pollution Control and Ecology Commission.

“**Available Acreage**” means total acreage minus buffer zones

“**Confined Animal Operation**” means any lot or facility where livestock, fowl, or other animals have been, are or will be stabled or confined and fed or maintained and where crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over significant portions of the lot or facility.

“**Department**” means the Arkansas Department of Environmental Quality (ADEQ).

“**Director**” means the Director of the Arkansas Department of Environmental Quality.

“**Liquid Animal Waste Management System**” means any system used for the collection storage, distribution or removal of animal waste in liquid form generated by a confined animal operation.

“**NRCS**” means the Natural Resources Conservation Service

“**Ordinary High Water Mark**” means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a cleat, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

“**s.u.**” means standard units.

“**Site Management Plan**” means a plan prepared for land application sites, showing all buffer zones, a description of the land use and the crops grown on the site, and land use agreements if the sites are not owned by the permittee.

“**Waters of the State**” means all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of this state as defined by the Act.

STATEMENT OF BASIS

This Statement of Basis is for information and justification of the permit monitoring requirements as well as other conditions in the permit only and is not enforceable. This draft permit decision is for modification of a no-discharge operation under draft permit number 3540-WR-7 and AFIN 51-00020.

1. Permitting Authority

Arkansas Department of Environmental Quality
Office of Water Quality, Permits Branch
5301 Northshore Dr.
North Little Rock, Arkansas 72118-5317

2. Applicant

Ellis Campbell
EC Farms
P.O. Box 52
Vendor, AR 72683

3. Permit History/ Activity

1. Permit No. 3540-W was issued to Jimmie Lee McCutcheon and effective October 18, 1987 for a sow farrowing operation.
2. Permit No. 3540-WR-1 was not issued.
3. Permit No. 3540-WR-2 was issued to Harl Bohannon dba Bohannon Farm and effective April 21, 1998 for a sow farrowing facility.
4. Permit No. 3540-WR-3 was issued to Harl Bohannon dba Bohannon-Barnard Farm and effective January 29, 1999 for a sow farrowing operation.
5. Permit No. 3540-WR-4 was issued to Richard E. Campbell dba C & C Hog Barn and effective May 23, 2000 for a sow farrowing operation.
6. Permit No. 3540-WR-5 was issued to Richard E. Campbell dba C & C Hog Barn and effective April 1, 2012 for a sow farrowing operation.
7. Permit No. 3540-WR-6 was issued to Ellis Campbell dba EC Farms and effective March 1, 2015 for a permit transfer.

The permittee submitted a permit modification application for a No-Discharge permit, which was received on August 5, 2015, with additional information received August 17, 2015, September 16, 2015, and December 10, 2015. The permit modification is to convert to a land application only permit. Only swine waste received from C&H Hog Farms (AFIN 51-00164) will be land applied on sites covered under this permit. The storage components for liquid and solid wastes previously permitted were certified closed by the Natural Resources Conservation Service (NRCS). It is proposed that the current water no-discharge permit be modified.

4. Changes from Previous Permit

- Addition of Condition No. 21 of Part II of the permit for converting permit from storage and land application of swine waste to land application only of swine waste.

- Removed condition in Part II pertaining to animal mortality management.
- Removed condition in Part II pertaining to closure of facility's storage components since storage components were certified closed by NRCS.

5. Facility Location

The land application sites are on numerous farm fields in Newton County. For a more detailed description of the locations for each land application site, refer to Part II of the draft permit or the site management plan. The site management plan may be accessed by searching the permit number at the following website:

<http://www.adeq.state.ar.us/home/pdssql/pds.aspx>

6. Receiving Stream Location

The land application sites are located in Stream Segment 4J of the White River basin and Stream Segment 3H of the Arkansas River basin, which are not in a Nutrient Surplus Area. The surrounding areas were evaluated to determine if any Extraordinary Resource Waters (ERWs), Ecologically Sensitive Waterbodies (ESWs), Natural or Scenic Waterways (NSWs), or waterbodies in the 2008 ADEQ 303(d) list of impaired waterbodies in the State of Arkansas are near the land application sites.

The Buffalo River is the closest waterbody listed as an ERW and NSW to the land application sites located in Stream Segment 4J of the White River Basin. Fields HB1 and HB2 are approximately 29 miles or more from the Buffalo River. Fields VIV1A is approximately 22 miles from the Buffalo River. Field EC-A is approximately 19 miles from the Buffalo River. Fields CCGW, CC1, JG-A, JG-B, and DC are approximately 18 miles or more from the Buffalo River. Fields LCM1, LCM2, LCM3, and VIV1 are approximately 15 miles or more from the Buffalo River. Fields RM1 and RM2 are approximately 10.5 miles or more from the Buffalo River. Fields MM1, MM2 and MM4 are approximately 7.4 miles or more from the Buffalo River. Fields RC3, RC4, and PC1 are approximately 8 miles or more from the Buffalo River. Fields CB1 through CB13 are approximately 7.4 miles or more from the Buffalo River. Land application activities at these sites should not impact the Buffalo River due to best management practices and the separation between the sites and any impacted waterbody. Compliance with the terms of this No-Discharge permit is protective of water quality. Additionally, the sites utilize the Phosphorus Index to minimize nutrients from entering Waters of the State. Land application will only occur on fields with a P-Index risk value of medium or low.

Field GD1 is approximately 3 miles from Hurricane Creek in Stream Segment 3H of the Arkansas River basin. Hurricane Creek is an ERW and NSW as well as on the 2008 303(d) list of impaired waterbodies for pathogen indicator bacteria from an unknown source. Compliance with the terms of this No-Discharge permit is protective of water quality. Additionally, the sites utilize the Phosphorus Index to minimize nutrients from entering waters of the State. The field has a P-Index risk value of low.

7. Applicant Activity

Under the standard industrial classification (SIC) code 0213 or North American Industry Classification System (NAICS) code 11221, the applicant's activities are the operation of a swine facility; however, this facility is land application only of swine waste from C&H Hog Farm. There are no active waste generation or storage at the facility.

8. Facility Type and Size

This facility operates as land application only in accordance with APC&EC Reg. 5.601. This facility shall only receive swine waste from C&H Hog Farms (AFIN 51-00164). The facility no longer produces waste or has storage components.

9. Waste Application Method

Liquid swine waste from C&H Hog Farm will be evenly spread over the land application sites using liquid tank trucks (honeywagons). The waste application rates for each land application site are based on the Phosphorus Index (P-Index). Site-specific rates can be found in the Site Management Plan or in Condition No. 8 of Part II for each waste source, Waste Storage Ponds 1 and 2, permitted by C&H Hog Farms (AFIN 51-00164). Only one field recommendation from one waste source (Waste Storage Pond 1 or Waste Storage Pond 2) is to be used per year.

Application Timing for P-Index Risk Assessment

The Phosphorus Index calculations were made for each field for the most restrictive timing window (Nov-Feb), which will allow for land application during all months of the year based on the nutrient uptake found on the land application sites. The time periods used in the Phosphorus Index were developed for the P-Index risk assessment after evaluation of historical rainfall and stream flow data. Land application can occur at rates that are equal to or less than the site-specific rates listed in Section 4 of the Site Management Plan and Condition No. 8 of Part II.

10. Total Available Acreage

There are 596.5 acres available for land application. Only 557.8 acres of 596.5 acres are usable based on the ARNMP Phosphorus Index calculations. Fields DC and JG-B were originally included in the Site Management Plan; however, the fields are not included in the permit due to the assigned P-Index risk of high or very high. Although Field CCGW was assigned a value in the medium risk range by the P-Index without receiving any waste, the field is not included in the permit because land application activities would result in a high risk classification by the P-Index. Land application is prohibited by the permit on any fields that are assigned high or very high values by the P-Index.

According to Section 4 of the Site Management Plan, the land application sites can receive 4,800,000 gallons per year of waste from Waste Storage Pond 1 or 6,654,000 gallons per year of waste from Waste Storage Pond 2 based on the P-Index. For any given year, each field can be applied to from either Waste Storage Pond 1 or Waste Storage Pond 2, but not both to ensure that over application does not occur.

The addition of land application sites will facilitate the installation of liners on Waste Storage Pond 1 and Waste Storage Pond 2, in accordance with the approved modification to C&H Hog Farms (AFIN 51-00164), and the continuing operations in a manner protective of the environment. Any addition of

waste sources not included in Condition No. 1 of Part II of the permit would require the modification of the SMP and permit.

P-Index Risk based on Waste Storage Pond 1

Fields EC-A, LCM2, RM1, RC4, PC1, CB9, CB10, CB13, and GD1 are classified as a low P-Index risk. Fields CC1, JG-A, HB1, HB2, LCM1, LCM3, RM2, MM1, MM2, MM3, RC3, CB1, CB2, CB3, CB4, CB4, CB6, CB7, CB8, CB11, CB12, VIV1, and VIV1A are classified as a medium P-Index risk.

P-Index Risk based on Waste Storage Pond 2

Fields CC1, JG-A, RM2, MM1, MM2, MM3, RC3, CB1, CB2, CB3, CB4, CB5, CB6, CB7, CB8, CB11, CB12, VIV1, and VIV1A are classified as a medium P-Index risk. Fields EC-A, HB1, HB2, LCM1, LCM2, LCM3, RM1, RC4, PC1, CB9, CB10, CB13, and GD1 are classified as low P-Index risk.

11. Basis for Permit Conditions

The Arkansas Department of Environmental Quality has made the determination to issue a draft modification permit for the no-discharge facility as described in the application and the SMP. Permit requirements and conditions are based on regulations pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.), Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 5 and generally accepted scientific knowledge and engineering practices (Ark. Code Ann. § 8-4-203(e)(2)(B)(i)).

Part I - Waste and Soil Analysis and Reporting

Analysis and reporting requirements in Table I and Table II of Part I of the permit are based on the APC&EC Regulation No. 5. The waste parameters listed in Table I shall be sampled and analyzed at a minimum of once a year based on Reg. 5.407(B). The soil, of each field where waste will be applied, parameters listed in Table II shall be sampled and analyzed at least once every five (5) years based on Reg. 5.407(C).

Part II - Specific Conditions

The conditions in Part II are based on the APC&EC Regulation No. 5 unless specified below. In accordance with Ark. Code Ann. § 8-4-203(e)(2)(B)(ii), the Department has provided the appropriate APC&EC Regulation No. 5 citation at the end of each condition or provided justification with appropriate reference to the scientific and engineering literature or written studies conducted by the Department.

Condition No. 2 prohibits any discharge from this facility. If the facility has any discharge then the facility must apply for a National Pollutant Discharge Elimination System (NPDES) Permit.

Condition No. 6 was added to the permit because an application site covered in more than one permit is at risk of over application of nutrients. This condition encourages the applicant to confirm with the landowner that the site is not currently covered under another active permit before permitting the site.

Condition No. 9 is based upon Table 6 of the Arkansas Phosphorus Index (API) by the University of Arkansas Cooperative Extension Service, which identifies lower risk categories to be those with an API value in the Medium class or lower.

Condition No. 16 is based on APC&EC Reg. 5.406(D). However, the Department used US Army Corps of Engineers Regulatory Guidance Letter No. 05-05 to provide a comprehensive definition of the ordinary high water mark.

Condition Nos. 16 and 17 is based on APC&EC Reg. 5.406. However, the Department added Condition No. 18 to the permit in order to verify that the permittee will be applying waste within all of the required boundaries of the land application site(s).

Condition No. 19 is based on APC&EC Reg. 5.407(E). However, the Department added the requirement to submit the phosphorus application rate with the annual report in order to verify the phosphorus application rates in the Phosphorus Index.

Part III - Standard Conditions

Standard Conditions have been included in this permit based on NPDES General Permit ARG590000 (Part 6-9).

Part IV - Definitions

All definitions in Part IV of the permit are self-explanatory.

4. Point of Contact

The following staff contributed to the preparation of this permit:

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12. Sources

The following Sources were used to draft the permit:

1. APC&EC Regulation No. 8, Administrative Procedures, as amended.
2. APC&EC Regulation No. 9, Fee System for Environmental Permits, as amended.
3. APC&EC Regulation No. 5, Liquid Animal Waste Management Systems, as amended.
4. NPDES General Permit ARG590000, Concentrated Animal Feeding Operations (CAFO).
5. Integrated Water Quality and Assessment Report (305(b) Report).
6. Arkansas Water and Air Pollution Control Act, Ark. Code Ann. §8-4-101 et seq.
7. Arkansas Trade Secrets Act, Ark. Code Ann. § 4-75-601 et seq.
8. US Army Corps of Engineers Regulatory Guidance Letter No. 05-05
9. Application for permit No. 3540-WR-7 received August 5, 2015.
10. Site Management Plan received July 27, 2015.
11. Additional information received August 17, 2015, September 16, 2015 and December 10, 2015.
12. Arkansas Department of Health letter with no comments received on September 8, 2015.

**Response to Comments
Final Permitting Decision**

Permit No.: 3540-WR-7

Applicant: Ellis Campbell d/b/a EC Farms

Prepared by: Katherine McWilliams

The following are responses to comments received regarding the draft permit number above and are developed in accordance with regulations promulgated at APC&EC Regulation No. 8, Administrative Procedures.

Introduction

The above permit was submitted for public comment on March 9, 2016. The public comment period ended on April 8, 2016. The Arkansas Department of Environmental Quality (hereinafter “ADEQ” or “the Department”) conducted one (1) public meeting and hearing on April 11, 2016.

This document contains a summary of the comments that the ADEQ received during the public comment period. A summary of changes can be found on the last page of this document. There were several similar issues raised throughout the comments; those are grouped together, with one response from the ADEQ.

The following people or organizations sent comments to the ADEQ during the public notice and public hearing. A total of 66 comments were raised by 90 separate commenters.

Commenter	Number of Comments Raised
1. Steven Hignight	1
2. Billy Jack Burns	1
3. Ken Hulsey	1
4. Ginny Hulsey	1
5. James Simpson	1
6. Susanna Brinnon	2
7. Kathy Wallace	1
8. James McPherson	1
9. Virginia Booth	4
10. Joe Golden	1
11. Lynda Majors	2
12. Susan Anglin	1
13. Ken Leonard	3
14. Barbara Fell	3
15. Kitty Sanders	3
16. Robert C. Patton	3
17. Beth Keck	3
18. Matt Musial	3
19. Lowell Collins	1
20. Dave Spencer	2
21. Nan Johnson	2

22. Karen Seller	3
23. Patti Kent	3
24. Judi Nail	3
25. Jean Nayga	4
26. Rudy Nayga	4
27. Nyle Nayga	4
28. Shawn Porter	1
29. Evan A. Teague	1
30. John Murdoch	3
31. Julia Vollman	1
32. Edward Vollman	4
33. Margaret Lonadier	6
34. Candace McGhee	2
35. Ann Lasater	5
36. Nancy Haller	2
37. Carmen Quinn	2
38. Terri Bitting	6
39. R. Ellen Corley	4
40. Alice B. Andrews	4
41. Claire Dougan	4
42. David Dougan	3
43. Nancy Miner	4
44. Harrison Miner	1
45. Patrick Dallas	1
46. Alan Nye	4
47. Fay Knox	7
48. Charles J. Bitting	8
49. Bruce T. Jackson	1
50. Kathleen Malm Marleneanu	8
51. Susan Watkins	6
52. Tasha Hudson	2
53. National Park Service	4
54. Brian A. Thompson	4
55. Carol Bitting	14
56. Gordon Watkins	17
57. Ginny Masullo	5
58. Ellis Campbell	1
59. Dennis Larson	1
60. David Neville	1
61. Janice Neville	1
62. Teresa A. Turk	7
63. Sandra Jackson	1
64. Kent Bonar	7
65. Jack Stewart	6
66. Marti Olesen	10
67. John Van Brahana	1
68. Michael Kmiecik	2
69. Michael deBuys	1
70. Lin Wellford	3
71. Laura Timby	5

72. Larry Olesen	1
73. Kathy Downs	5
74. Angela Head	4
75. Carol Kmiecik	1
76. Barbara Vasluski	5
77. Bob Shofner	1
78. Bill Lord	5
79. Pam Stewart	3
80. Pat Pollack	1
81. Pam Fowler	1
82. Margaret Johnson	1
83. Mary Olson	1
84. Arkansas Wildlife Federation	1
85. Ed Mills	1
86. Patricia Mills	1
87. Phyllis Head	1
88. Dane Schumacher	17
89. David Peterson	1
90. Jerry Masters	1

Comment 1: I understand that C&H Hog Farms is requesting a permit modification, that will allow them to spread more hog waste over many new areas. When will this end? Who will monitor all this waste that they propose to apply to new pastures, and who will verify that these pastures are appropriate for that much waste? If resources are already stretched thin, how are we to believe that more areas can be observed and measured, not to mention reported to the public? I encourage you to reject this permit modification. Our children and grandchildren deserve fields that do not stink of hog manure, and clean, sparkling streams, most especially our national treasure, the Buffalo River.

Original commenter: Susanna Brinnon

Similar comments were received from: Virginia Booth, Lynda Majors, Patti Kent, Lowell Collins, Julia Vollman, R. Ellen Corley, Nancy Miner, Harrison Miner, Pam Fowler, Claire Dougan, Margaret Johnson, Mary Olson, Lin Wellford, Barbara Vasluski, Kathy Downs, Shawn Porter, Jean Nayga, Rudy Nayga, Nyle Nayga, Edward Vollman, Dave Spencer, Nan Johnson, Laura Timby, Susan Watkins

Response: The Department acknowledges the commenter position; however, C&H Hog Farms has not requested a modification to their permit. EC Farms has requested to modify their existing permit to convert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601. The permittee was previously permitted for a sow farrowing operation before closure of the waste storage components, which were certified closed by the Natural Resources Conservation Service (NRCS). No additional fields are included as part of this permit modification, and no increase in the total amount of waste land applied on these fields is requested.

A site management plan (SMP) was developed to manage nutrients on the land application sites. The application rate is one input into the API to compute the risk value of a specific field. Other inputs include soil test phosphorus, soil erosion, soil runoff

class, flooding frequency, and timing of the applications. These site specific characteristics are required to assess risk of phosphorus runoff. Condition No. 9 of Part II of the permit prohibits land application on fields that are classified low or medium classes in the API. The application rates may be based on the waste and soil results from Part I Table I and Table II of the permit; however, the application rates may not exceed the maximum rates listed in Condition No. 8. Both phosphorus and nitrogen are considered for nutrient management. The application rate of phosphorus is developed using the Arkansas Phosphorus Index (API). Nitrogen application rates must not exceed the recommended nitrogen application rate for the cover crops. The API planner in the SMP shows the inputs that were used in assigning a risk category to the fields as well as consideration of the recommended nitrogen application rate for the cover crop. Any field that was in or would be in the high or very high risk categories are excluded from this permit.

As with all permits issued by the Permits Branch of the Office of Water, the permittee must self-monitor and maintain records. Periodic inspections are performed during which records are reviewed. The facility is required to submit annual reports in accordance with Condition No. 19 of Part II of the permit.

The Office of Water Quality does not regulate odor or air quality concerns.

Comment 2: I have heard so many complaints about this hog operation and ADEQ's handling of the process, from the speedy granting of permission to build in the first place, to acceptance of shoddy research practices, to refusal to view expert information that counters ADEQ's decisions, to refusal to recognize affected waterways as impaired -- what is wrong with this system? Whose interests are being served here? Not, it is obvious, the people of Arkansas.

Original commenter: Susanna Brinnon

Similar comments were received from: Virginia Booth, Candace McGhee, Ann Lasater, Carol Bitting, Susan Watkins, Phyllis Head

Response: The Department acknowledges the commenter; however, this comment does not pertain to the permit modification to covert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601.

Comment 3: This hog farm and its waste disposal / dumping / lagoons / seepage into the Buffalo River has caused my property to lose value. I have been trying to sell my property located downstream from the Carver landing on the Buffalo. I have only had a few inquiries, but when those people found out the property was downstream from the hog farm waste seepage into the river they said, "not interested". I have been deprived of needed income from selling my farm because of this hog farm waste. Some have expressed their belief that this is just opening the door to the entire region being converted to factory hog farms thereby making it unfit for human habitation as has happened in Iowa and other areas of the country. I urge no renewal or modifications to expand more dumping / spreading of any and all permits for this hog farm operation or its waste disposal.

Original commenter: James McPherson

Similar comments were received from: Virginia Booth, Candace McGhee

Response: The Department acknowledges this comment and understands the homeowner concerns. However, the Department does not have regulatory authority over property values. No additional land application sites are proposed with the requested modification to covert from storage and land application of swine waste from EC Farms to land application only of swine waste from C&H Hog Farms, Inc. The waste system components of the original sow farrowing operation were certified closed by the NRCS.

Comment 4: Basically a CAFO is not a farm in the way you and I think of a farm. It is quite a toxic environment. The two plastic lined ponds to store the massive amounts of liquid manure appear quite unproven and risk prone to me. Witness that the first plan was to spray from them, but now the plan has switched to 'trucking the liquid waste to other people's field. What went wrong with the first plan to spray them there at the CAFO? Some say the manure amounts to no more than the sewage from a city the size of Harrison. Well, this can't be true, because even if the volume is the same, the sewage from Harrison serves multiple square miles of land, it is not compacted into a small acreage producing the waste. I have seen the Harrison sewage plant. There are drainage pools where good old-fashioned sunlight filters through the pools and they loose their toxicity naturally over time. Where is that natural process happening at C & H? These CAFO's, with their mass production and the animals kept caged amounts to animal cruelty by all meat companies to make a profit against competitors. Not fighting this CAFO is tantamount to opening up Newton County to the possibility of even more CAFO's in the area. Even if this CAFO is proven safe for now, sooner or later there is going to be karst leakage, or flood overflow during extreme rains. Just the stink, which I've heard can seep miles down a valley, will be bad enough. I feel sorry for landowners downstream and nearby who have already lost property value.

Original commenter: Virginia Booth

Similar comments were received from: Larry Olesen, Pam Stewart

Response: The Department acknowledges the comment. This permit modification is to covert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601. This comment is outside of the scope of this modification.

Comment 5: Please do not allow any dispersal of hog waste that would be upstream of the current approved fields. ADEQ is now aware of the concerns of citizens to the danger of spreading hog waste. Now is the time for ADEQ to do their duty to protect the air and water quality. I would recommend that C & H ship the hog waste to Minnesota and spread it on the fields of Cargill owned property.

Original commenter: Joe Golden

Similar comments were received from: David Neville, Janice Neville

Response: The Department acknowledges the comment. Land application is a common practice of managing waste from waste storage structures. For liquid animal waste in state of Arkansas, land application sites are required to be permitted in accordance with APC&EC Regulation 5.

Comment 6: I am writing today to express my continued concern about pollution flowing into the Buffalo National River due to the creation of the C&H hog operation. Recent analysis by the National Park Service of the Big Creek Research and Extension team (BCRET) data has shown that in 2014 E. coli levels exceed the state level for contamination on the section of Big Creek that is directly adjacent to the C&H hog operation and the manure spreading fields. The most recent soil tests show that the level of Phosphorous is above optimum on 16 out of 17 manure fields. It is difficult to safely get rid of 3 million gallons of untreated hog manure generated annually in a karst environment.

Original commenter: Ken Leonard

Similar comments were received from: Barbara Fell, Kitty Sanders, Matt Musial, Robert C. Patton, Beth Keck, Dave Spencer, Nan Johnson, Karen Seller, Patti Kent, Judi Nail, Jean Nayga, Rudy Nayga, Nyle Nayga, Edward Vollman, Claire Dougan, David Dougan, Margaret Lonadier, Alan Nye, Kathleen Malm Marleneanu, Brian A. Thompson, Teresa A. Turk, Pam Stewart, Laura Timby, Bill Lord, Carol Bitting, Susan Watkins

Response: The Department acknowledges the comment; however, this comment does not pertain to the permit modification to covert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601.

Comment 7: Now I read that C&H wants to expand its manure spreading fields to the Left Fork of Big Creek and to Shop Creek that flows into the Little Buffalo River. The Left Fork of Big Creek already has elevated E. coli levels likely from contamination from the existing C&H manure fields. Dye tracing studies initiated by Dr. Brahana demonstrated the portal for nutrients to travel from C&H hog operation to the Left Fork of Big Creek in less than one week. This interconnectivity of watersheds is very troubling given that most of the current and proposed manure fields sit atop karst terrain.

Original commenter: Ken Leonard

Similar comments were received from: Barbara Fell, Kitty Sanders, Matt Musial, Robert C. Patton, Beth Keck, Karen Seller, Patti Kent, Judi Nail, Jean Nayga, Rudy Nayga, Nyle Nayga, Fay Knox, Lynda Majors, Edward Vollman, Claire Dougan, David Dougan, Terri Bitting, Alice B. Andrews, Alan Nye, Kathleen Malm Marleneanu, Brian A. Thompson, Teresa A. Turk, Laura Timby, Gordon Watkins, Carol Bitting, Dane Schumacher

Response: The Department acknowledges the comment. The land application sites were previously permitted to receive waste from EC Farms' sow farrowing operation. All fields included with the requested modification have been permitted since 2012. Condition No. 16 of Part II of the prohibits land application of waste within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies; or 300 feet of Extraordinary Resource Waters as defined by the APC&EC Regulation No. 2. Application rates in the SMP are developed using the API to assess phosphorus risk as well as developed with consideration to the recommended nitrogen application rates. If the application rate based solely on the phosphorus risk assessment is greater than the recommended nitrogen application rate for the cover crop, then the application rate must be adjusted so not to exceed the recommended nitrogen application rate.

Comment 8: The permit request by EC Farms appears to be a sleight of hand. The original permit was for a small hog CAFO with only 300 hogs. It was closed with no ponds and no animals during 2013 and 2014 and they did not provide an annual report to ADEQ as required. A moratorium on medium and large hog CAFOs in the Buffalo River Watershed was enacted on May 6, 2014. Yet in 2015 the permit was transferred to a new individual from a co-owner of C&H to a relative. Now the relative, Ellis Campbell, wants to spread C&H manure from the largest hog CAFO in Arkansas on over 30 separate parcels in Newton County. This is illegal and should not be allowed to occur.

Original commenter: Ken Leonard

Similar comments were received from: Barbara Fell, Kitty Sanders, Matt Musial, Robert C. Patton, Beth Keck, Karen Seller, Judi Nail, Jean Nayga, Rudy Nayga, Nyle Nayga, Claire Dougan, David Dougan, Ann Lasater, Alice B. Andrews, Tasha Hudson, Brian A. Thompson, Teresa A. Turk, Barbara Vasluski, Charles J. Bitting, Jack Stewart, National Park Service, Carol Bitting, Susan Watkins, Marti Olesen

Response: The Department acknowledges the comment. The facility has submitted the annual reports requested by the Enforcement Branch of the Office of Water Quality. No additional action is required.

The modification does not increase the total volume of waste permitted to be land applied beyond the total volume that was previously permitted. The previous permit allowed for 6,788,800 gallons of waste per year to be land applied. The maximum amount of waste allowed for land application with the modification is 6,654,000 gallons per year if the facility only land applied waste from Waste Storage Pond 2. The modification does not increase the number of swine. The previous permit was active on the effective date of the moratorium for new large or medium Confined Animal Feeding Operations or modification of an existing facility increasing the number of swine located in the Buffalo River Watershed.

The moratorium does not prohibit the transfer of existing permits. Arkansas Code Ann. §8-4-203(h)(1) requires that permits be freely transferable if the applicant for the transfer notifies the director at least thirty days in advance of the proposed transfer date, submits a disclosure statement, provides any replacement financial assurance required, and ensures all annual permit fees are paid. Richard Campbell d/b/a C&C Hog Barn transferred the permit coverage to Ellis Campbell d/b/a EC Farms.

Comment 9: Under Section 6 (i.e. Receiving Stream Location) to paraphrase in paragraph two ADEQ states that various fields are approximately (e.g. 29 miles, 22 miles, 19 miles, 18 miles, 15 miles, 10.5 miles, 8 miles, and 7.4 miles) or more from the Buffalo River. This illustrates ADEQ's lack of acquiescence, deliberate or not, to address the geology and hydrogeology of the area. A Professional Geologist (P.G.), which specializes in hydrogeology will inform you that in fractured limestone terrain (i.e. Karst) such as the Boone-St. Joe Formation, which many of the spreading fields are located, these horizontal distances from the spreading fields to the Buffalo River are not relevant. It is quite obvious that ADEQ is lacking P.G.'s with specializations in hydrogeology. An analogy would be that any individual that is Medical Doctor (M.D.) can perform neurosurgery. I know I would not want my M.D. (e.g. Family Practitioner) to perform brain surgery on me. In comparison, there are geologists that specialize in Geochemistry, Geophysics, Paleontology, Stratigraphy, Petroleum, etc. ADEQ has several P.G.'s on

staff, but it is assumed that very few of them have academic specializations in the field of hydrogeology. It is believed that most of them do not have Master of Science degrees which provides an individual with a specialization in a distinct discipline in the field of Geology.. Unfortunately, this leads the majority of readers (e.g. non scientific people) to believe that since the spreading fields are horizontally miles from the Buffalo River that spreading raw swine waste on them is acceptable. I am familiar with agriculture disciplines and the potential uptake of raw swine waste that vegetation and soil absorption has on the spreading fields but, this is and will always be a contentious issue.

The following request is being made per the Freedom of Information Act (FOIA). Please provide the P.G.'s that ADEQ has on staff that have a Master of Science degree with a specialization in Hydrogeology that are currently employed in the former Water Division's NPDES Branch or any P.G. that worked on the permitting of the C&H's concentrated animal feeding operation (CAFO). Please provide the names of the P.G.'s, their college transcripts, state application along with their resume. ADEQ has four business days to provide this information from receipt of this transmittal. Please send the information to me electronically via the email address shown on this transmittal. If this is unacceptable please send the information to the address at the end of this transmittal. I will pay for any copying and shipping charges.

It has been documented by notable hydrogeologists that groundwater in a karst terrain can travel approximately a hundred miles in one day. In Newton County it has been documented through dye tracing that interbasinal groundwater flow occurs and groundwater can travel several miles a day. Therefore, what does a field that is situated on karst geology that receives raw swine waste actually mean? ADEQ is once again ignoring basic hydrogeologic science by making this major permit modification. Please stop trying to "pull the blindfold" over the taxpayers that are paying your salaries. This is all going to come back to ADEQ. You are tasked with protecting the waters of our State and you have failed miserably in this area at various locations across our beautiful state.

Original commenter: John Murdoch

Response: The Department acknowledges the comment. The FOIA request in bold was forwarded to the appropriate Office within the Department for response, and a response was provided by the Department. The permit was developed in accordance with APC&EC Regulation 5, which does not prohibit the land application of waste on karst. However, buffers are required to minimize any potential runoff to Waters of the State.

Comment 10: Under Section 10 (Total Available Acreage) you state field CCGW amongst others "are not included in the permit due to the assigned P-Index risk of high or very high". However, on page 4 of the Draft Permit you include this field and state it has a "low P-Index risk". Please correct this blatant mistake.

Original commenter: John Murdoch

Response: The Department acknowledges the comment. Field CCGW is classified in the Medium range of the Arkansas Phosphorus Index; however, land application events results in the field entering the high risk category. Therefore, the field is not

included in the permitted land application sites in Condition No. 8 of Part II. The Department has clarified the sentence in Statement of Basis No. 10 as follows:

Fields DC and JG-B were originally included in the Site Management Plan; however, the fields are not included in the permit due to the assigned P-Index risk of high or very high. Although Field CCGW was assigned a value in the medium risk range by the P-Index without receiving any waste, the field is not included in the permit because land application activities would result in a high risk classification by the P-Index. Land application is prohibited by the permit on any fields that are assigned high or very high values by the P-Index.

Additionally, CCWG has been removed from the discussion in Statement of Basis No. 10 when discussing the P-Index Risk based on Waste Storage Pond 1 and the P-Index Risk based on Waste Storage Pond 2.

Comment 11: The NPS has requested that Big Creek be added to the 303(d) list of impaired streams due to low DO based on measurements taken by the USGS station near the mouth of Big Creek at Carver. Big Creek is composed of two large branches. The main fork is where C&H is located showing evidence of impairment by *E. coli*. This evidence is found using the BCRET's own data. USGS data shows impairment for DO. The Left Fork of Big Creek does not have specific science available showing that it is impaired, but a visual inspection shows that there is evidence of nutrient loading as seen in this photo showing abundant green algae mats.

Some of the largest spreading fields to be used by EC Farms are directly adjacent to the Left Fork of Big Creek. ADEQ has assured the public as well as the state legislature that it fully intends to address Big Creek pollution. According to recent soil tests, many of the C&H spreading fields are now showing "above optimum" levels of phosphorus, which will likely continue to be a potential source of contamination of the main fork of Big Creek for the foreseeable future even if spreading is discontinued. By allowing waste application in the Left Fork of Big Creek, ADEQ is not demonstrating good faith in mitigating pollutants detected at Carver. These conditions are certain to deteriorate if ADEQ allows permit 3540-WR-7 to go forward.

Original commenter: Gordon Watkins

Similar comments were received from: Fay Knox, R. Ellen Corley, Kathleen Malm Marleneanu, Brian A. Thompson, Dane Schumacher

Response: The Department acknowledges the comment. The permit requires that land application not occur on fields that are assigned values in the high or very high category of the API. The maximum values for land application are included in Condition No. 8 of Part II of the permit. These application rates were developed based on existing field specific data and were assigned a value of low or medium by the API. Additionally, a 100 foot buffer from streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies must be maintained. Land application cannot occur when soil is saturated; frozen; covered in ice or snow; significant precipitation is reasonably anticipated within the next 24 hours; or during a precipitation event. These conditions are to minimize any potential discharge of waste to Waters of the State.

This permit modification is to covert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601. Comments regarding the listing of streams on the Arkansas 303(d) list and C&H Hog Farms permit are outside the scope of this response to comments.

Comment 12: One of the spreading fields of EC farms is within three miles of Hurricane Creek, which is listed as an Extraordinary Resource Water (ERW). This ERW is also listed on the 2008 303(d) list (the last one actually approved by EPA) for bacterial contamination. ADEQ is clearly not acting in the interest of the State of Arkansas' ERW resources by allowing an additional potential contaminant load on Hurricane Creek. We request that ADEQ use scientific evidence to avoid further pollution of the Left Fork or Big Creek as well as Hurricane Creek. We request that ADEQ use good judgment in regard to their stated purpose of protecting Arkansas' most precious natural resources.

Original commenter: Gordon Watkins

Similar comments were received from: Fay Knox, Carmen Quinn, Alice B. Andrews, Alan Nye, Kathleen Malm Marleneanu, Ginny Masullo, Teresa A. Turk, Dane Schumacher

Response: The Department acknowledges the comment. Condition No. 16 requires that waste not be land applied within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies; or within 300 feet of Extraordinary Resource Waters as defined by the APC&EC Regulation No. 2. These buffer distances must be measured from the ordinary high water mark. Condition No. 18 of Part II requires that these boundaries be flagged prior to land applying waste. These buffers are listed in APC&EC Regulation No. 5.406(D). The Field GD1 is approximately 0.32 miles (1,708 feet) from Cub Creek or 0.56 miles (2,931 feet) from an unnamed tributary of Cub Creek, which are not listed as ESWs. GD1 must maintain a 50-foot buffers from the property boundaries as well as 100-foot buffer from a pond located adjacent to the site. These boundaries will be flagged prior to land applying waste.

Comment 13: EC Farms proposes to spread up to 6.5 million gallons of waste annually. This is more than twice the current annual waste production of C&H, the sole source of waste to be accepted by EC Farms. About one-half of the area proposed for waste application is in fields that already have STP higher than optimal for forage production (50 ppm). 39% of the area is above 100 ppm, and 20% is above 150 ppm. These high STP soils will contribute both dissolved and particulate phosphate to the water for many years, contributing to the algae blooms in the water (see photo above). According to the EC Site Management Plan, currently two fields are not eligible for waste application due to high phosphorus risk, but in the near future, several others are likely to also become ineligible due to buildup of STP. Further, any increase in the waste application rate specified is likely to increase the risk (Arkansas Phosphorus Index) drastically. Only two of the 36 fields, totaling 33.1 acres, are designated as hayland. The balance are designated for grazing. Hay harvest would better assure removal of excess nutrients, whereas grazing leaves most nutrients (up to 90%) in place. Further, grazing can be far more erosive than hay production and harvest, particularly on sloping upland soils.

Original commenter: Gordon Watkins

Similar comments were received from: Fay Knox, Ann Lasater, Terri Bitting, Margaret Lonadier, Patrick Dallas, Kathleen Malm Marleneanu, National Park Service, Carol Bitting, Susan Watkins, Dane Schumacher, Alice B. Andrews, Alan Nye

Response: The facility has been previously permitted to land apply up to 6,788,800 gallons of waste per year in accordance with the previous Comprehensive Nutrient Management Plan; therefore, the permit modification does not increase the amount of waste permitted to be land applied. The total amount of waste for land application is developed on the proposed land base, which is a practice to ensure that a facility has adequate acreage to land apply waste produced. Additional acreage above the minimum acreage allows for farms to spread the nutrient load over a wider land area. Prior to the implementation of the API, the land base provided in permits was based off of nitrogen application rates. With the implementation of the API, both the risk assessment of phosphorus runoff and the nitrogen application rates are considered. The application rate must result in a low or medium risk category in the API and not exceed the recommended nitrogen application rate. Pasture usage is accounted for in the API when assigning a risk category to a field to account for the effect of grazing on the potential for phosphorus runoff.

Comment 14: Several waste spreading fields border or drain into USFS property where there are numerous caves and bat roosts. At least two endangered bat caves are located nearby. ADEQ must anticipate that EC Hog Farms and C&H Hog Farms will have a significant cumulative impact on degradation of the Buffalo River and its tributaries which encompass critical habitats for endangered and threatened Gray, Northern Long-eared and Indiana bats, found throughout the Big Creek and Left Fork of Big Creek watershed. In addition, there will be an increased risk of impact to the threatened Rabbitsfoot and Snuffbox mussel species found downstream in the Buffalo National River.

The destruction through habitat degradation of a hibernation or maternity cave along creeks such as Big Creek and its Left Fork, which are known to be macroinvertebrate foraging zones for bats, is inevitable for endangered and threatened species including the Northern Long-eared bat, Gray bat, and Indiana bat (see 2015 bat acoustic survey results in commentary report by James Gore on Big Creek and the Left Fork of Big Creek: <http://buffaloriveralliance.org/Resources/Documents/Bat%20Survey%20Left%20Fork%20Final-2.pdf>)

Degradation of the Little Buffalo/Shop Creek river zone is equally predictable. The consequences of such a flawed action as ADEQ permitting EC Farms to land apply swine waste in an ever growing swath of BNR's watershed can only result in the bioaccumulation of phosphorus in the soil which will be released for years to come, and the spread of excess nitrates into the streams of a greater area. Such practices, if approved, will negatively impact the endangered bats' survival. These bat populations are already under stress since the Buffalo River watershed has been identified positively for White Nose Syndrome, a disease which is decimating endangered and threatened bat species across America. This permit will further add to the cumulative stress suffered by these threatened species.

Should you consider this a minor worry or minimal residual effect of spreading swine effluent in the proposed increased area of critical bat habitat, Dorian Fox, writing for the National Parks Conservation Association Spring issue, "The Trouble With Bats," states:

“Along with pollinating plants and dispersing seeds, bats consume hundreds of tons of insects. According to a 2011 study published in the journal Science, the natural pest-control bats provide saves the U.S. agricultural industry up to \$53 billion each year. ‘Since they eat thousands of insects every night, if you take that out of the picture, then suddenly something’s changing,’ says Bruce Connery, Acadia National Park’s wildlife biologist. ‘You may not sense it right away, but there’s got to be a ripple effect there.’ As bat numbers dwindle, farmers may be forced to use more pesticides, upping our intake of these chemicals. Spruce budworm, an insect scourge of northeastern forests eaten largely by bats, could decimate Maine’s timber industry. Fewer bats could also result in less obvious environmental effects such as a higher prevalence of disease-carrying mosquitoes or the loss of rare cave-dwelling organisms that depend on nutrients in bat guano.”

(https://www.npca.org/articles/1158-the-trouble-withbats?utm_source=parknotes&utm_medium=email&utm_campaign=magazine)

Original commenter: Gordon Watkins

Similar comments were received from: Fay Knox, Carmen Quinn, R. Ellen Corley, Kathleen Malm Marleneanu, Carol Bitting, Dane Schumacher

Response: The Department acknowledges the comment. Condition No. 17 of Part II of the permit requires that waste cannot be land applied within 50 feet of property lines or 500 feet of neighboring occupied buildings existing at the date of the permit unless the adjoining property owner consents in writing or if the adjoining property is also approved as a land application site under a permit issued by the Department. Application rates cannot exceed the maximum application rates listed in Condition No. 8 of the permit. The application rates were developed with consideration to both phosphorus application and nitrogen application. The API is used to assign a site specific risk category with a specific application rate as an input. Application cannot occur if the assigned risk category is high or very high. For application rates that result in a low or medium risk category, further consideration must be given to the recommended nitrogen application rate to prevent excessive nitrogen application beyond crop needs.

Comment 15: Heavy tanker trucks (honeywagons) will have to regularly negotiate steep winding gravel roads increasing potential of accidents and spills and discharge to waters of the state.

Original commenter: Gordon Watkins

Similar comments were received from: Fay Knox, R. Ellen Corley, Kathleen Malm Marleneanu, Ginny Masullo, Angela Head, Barbara Vasluski, Laura Timby, Jack Stewart, Carol Bitting, Kent Bonar, Marti Olesen, Dane Schumacher

Response: The Department acknowledges the comment. Condition No. 13 of Part III of the permit requires that any violations and unauthorized discharges or spills be reported to the Enforcement Branch of the Office of Water Quality. Unauthorized discharges are required to be reported within 24 hours. This permit does not authorize discharges.

Comment 16: How will this expansion of fields affect the Big Creek Research and Extension Team study? Will the current study remain valid? Will the Governor designate additional hundreds of thousands of dollars to monitor these additional fields?

Original commenter: Gordon Watkins

Similar comments were received from: Fay Knox, Kathleen Malm Marleneanu, Ginny Masullo, Teresa A. Turk, Lin Wellford, Dane Schumacher

Response: The expansion of fields is not expected to affect the Big Creek Research and Extension Team (BCRET) study. The existing fields in the Big Creek watershed are expected to continue to receive swine waste applications. A number of the additional fields are located in the watershed of the Left Fork of Big Creek and upstream of the downstream monitoring site (Site 7) of the BCRET study. These fields are authorized by the current permit to receive waste applications. In discussions with the BCRET team, the researchers did not feel that it would affect their study and their findings will remain valid. The Department has on-going water quality monitoring in the watershed and will evaluate monitoring needs in these tributaries relative to these fields.

Comment 17: Instead of containing the hog waste in holding ponds or spreading the excrement of the thousands of hogs on the fields of Newton County, why not process it in a waste treatment plant in situ? This would greatly reduce the potential for its transport to the Buffalo River, as well as prevent the contamination of water in wells from which residents in the vicinity may be drinking.

Original commenter: Edward Vollman

Response: The Department acknowledges the comment. Land application of animal waste is an acceptable practice for managing waste as part of the liquid animal waste management system, which is regulated under APC&EC Regulation 5. Application rates are developed using the API and recommended nitrogen application rates.

Comment 18: Also, the permit and nutrient management plan allow year around spreading of the waste. This is NOT environmentally safe due to the fact that waste will be spread when pasture grasses are NOT actively growing therefore not increasing risk of runoff and decreased nutrient uptake from the forages.

Original commenter: Margaret Lonadier

Response: The PI calculations were made for each field using the most restrictive timing window (Nov-Feb), which allows for land application during all months of the year. The other timing windows are March-June and July-Oct. The loss rating value assigned to each time window were developed for the API after evaluation of historical rainfall and stream flow data for the corresponding months to model the potential for phosphorus loss from fields. These windows are included in calculating the phosphorus transport potential portion of the API. The greatest risk for runoff is November to February; therefore, the lower application rates during this timing window can be used year round since the other time windows are less conservative.

Comment 19: And, who is monitoring whether the waste applicators are actually following the application setback distances from sensitive environmental areas (rock outcrops, sink

holes, streams, etc.)? Under the draft permit Part II - Specific Conditions Item 16 & 17 these set back distances are given and item 18 states these areas must be flagged prior to land application. I know for a fact these permit requirements are not going to be followed. I've yet to see any fields where C&H is applying waste as having flagged out waste application setback areas.

Original commenter: Margaret Lonadier

Response: The Department acknowledges the comment. The CAFO NPDES general permit does not require that boundaries be flagged prior to land application.

Comment 20: Finally, the permit states that only fields with either low or medium phosphorus levels will [be] permitted for waste application but the fields are not required to have soils test but once every 5 years. What happens when 5 years from now the phosphorus index is high? It will then be too late to protect our water resources.

Original commenter: Margaret Lonadier

Response: The Department acknowledges the comment. APC&EC Regulation 5 requires that soil analyses be conducted once every five years. Condition No. 9 of Part II prohibits land application on fields that are not classified as low or medium classes by the API. As shown in the SMP, fields that are classified high, very high, or if land application would result in high classification are not covered by this permit. Therefore, the fields cannot receive swine waste without violating the conditions of the permit.

Comment 21: I am very worried about the draft approval of the modification of the permit request by EC hog farms to spread hog waste on fields around the county. I think they should absolutely be required to apply for a new and separate permit for each land application site.

Original commenter: Ann Lasater

Response: The Department acknowledges the comment. Multiple land application sites may be covered under one permit if they are located within the same county. An application rate is developed for each land application site based on the site-specific data obtained for each farm, including the planned management of each field. This is an existing permitted facility with an active permit that covers the same acreage included in the modification. Therefore, the permit can be modified, and a new permit is not required.

Comment 22: I was county health officer for Newton County in 1978. That year the Arkansas Department of Health went to Mount Judea (in Newton County) to tell the people their water supply had been condemned due to *E. coli* contamination of their well. This was caused by a farmer spreading chicken manure on his fields and due to the karst topography of this area. As a physician, I am concerned about the health impacts and illnesses that might result by contamination of streams and wells. It has happened before and it will happen again. Spreading manure in these mountains is too dangerous and an unknown risk is posed.

Original commenter: Nancy Haller

Similar comments were received from: Angela Head, Carol Kmiecik, Kathy Downs, Kent Bonar, Laura Timby

Response: The Department acknowledges the comment. Land application of chicken litter is not regulated, except within designated Nutrient Surplus Areas. The Buffalo River Watershed and Dardanelle Reservoir Watershed are not designated Nutrient Surplus Areas. Condition No. 16 of Part II of the permit prohibits land application of waste within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies. Applicants for new facilities or permit modifications to add land application sites are required to notify the Arkansas Department of Health (ADH) Division of Engineering that an application has been made. The notice must include a complete set of maps for the land application sites. A copy of the letter transmitting the document to the ADH must be submitted with an application to the Department. The ADH may review the proposed land application sites and request that sites or portions of sites be removed for the protection of public water supplies. Condition No. 10 of Part II of the permit prohibits land application of waste where land application is prohibited by the ADH regulations for the protection of public water supplies.

Comment 23: In 1994, the people of Newton County met and developed a strategic plan for development in the county. They came up with 25 goals that they wanted. Goal 3 was to “position Newton County as the sustainable tourism capital of the state & region.” Goal 5 states we will “ensure that development is sustainable and that the natural environment and local character is preserved.” This plan was approved by the Quorum Court, signed by the County Judge, and the governor of Arkansas. I will be happy to provide you a copy of “A Strategic Plan for Newton County, Arkansas.”

Original commenter: Nancy Haller

Similar comments were received from: Pam Stewart, Kathy Downs

Response: The Department acknowledges the comment. This permit was developed in accordance with state laws and APC&EC Regulation 5.

Comment 24: I understand that the method used to evaluate the safety of spreading this waste is by use of a Phosphorous test via soil testing. Perhaps this may be of merit in determining the amount of phosphorous that any given field may be able to tolerate and not overload the soil profile, however, it does in no way take into account, the unacceptable levels that may filter in unseen through the vast riddled network of Karst that these fields sit on.

My concern is that the Phosphorous test [is] inadequate to protect the water bodies that are within the proposed watershed of the fields to be used. There have been dye tests done in the springs and waterbodies in the areas of concern that affect The Buffalo River. These tests show without a doubt, a very direct correlation of interconnected underground waterways that fall within the region of the fields where this waste will be spread. Dye tracing studies initiated by Dr. Brahana demonstrated the ability of nutrients to travel through karst substrata from C&H hog operation to the Left Fork of Big Creek **in less than one week!** There have also been oxygen level studies done that show there is a current detriment to Big Creek and in addition, elevated E-coli levels have been found as well.

Original commenter: Terri Bitting
Similar comments were received from: Tasha Hudson

Response: The Department acknowledges the comment. The API is a risk assessment tool, used to determine the risk of runoff of phosphorus. Land application sites that are in the high or very high classifications are prohibited from land application of waste. Soil test phosphorus (STP) is one input in the API that is used in assigning a risk category for a specific field. STP is not the sole input used to determine if land application of waste is appropriate or determine the application rate. Additional inputs include the soluble P application rate, soil erosion, soil runoff, soil runoff class, flooding frequency, application method, and timing of P application. Best management practices may also be considered in the calculating the API risk category. STP has a role in determining application rates; however, multiple other factors are considered in nutrient management planning.

The conditions of the permit are adapted from APC&EC Regulation 5. These conditions include setbacks from streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies; prohibition from applying waste on soil that is saturated, frozen, or covered with snow or ice; and prohibition of land applying when significant precipitation is reasonably anticipated within 24 hours or during a precipitation event. The conditions in the permit are in place to minimize any potential the migration of pollutants into Waters of the State. Nonpoint sources require management practices such as the practices required by the permit to protect against any potential pollutants from entering Waters of the State.

Comment 25: The land application sites are located in Stream Segment 4J of the White River basin and Stream Segment 3H of the Arkansas River basin, which are not in a Nutrient Surplus Area. The surrounding areas were evaluated to determine if any Extraordinary Resource Waters (ERWs), Ecologically Sensitive Waterbodies (ESW's) Natural or Scenic Waterways (NSWs), or waterbodies in the 2008 ADEQ 303(d) list of impaired water bodies in the State of Arkansas are near the land application sites.

The Buffalo River is the closest waterbody listed as an ERW NSW to the land application sites located in Stream Segment 4J of the White River Basin... Land application activities at these sites should not impact the Buffalo River due to best management practices and the separation between the sites and [any] impacted waterbody. Compliance with the terms of this No-Discharge permit is protective of water quality. Additionally, the sites utilize the Phosphorus Index to minimize nutrients from entering [W]ater[s] of the State. Land application will only occur on fields with a P-Index risk value of medium or low. (Page 2 of the Statement of Basis, Permit No. 3540-WR-7, AFIN 51-0020)

The statement "should not impact the Buffalo River" seems to be misleading. Perhaps this statement needs to be read as "will not impact the Buffalo River." Should is a word that is very ambiguous and may be said with good intention, however it does not convey a committed promise to do as stated. It leaves many loopholes that may be used to the disadvantage of the intended area it is meant to protect.

The compliance with the terms of this No-Discharge permit does not seem to reflect the detrimental results that are currently being seen by other methods of water quality standards. The phosphorous tests only show a compliance for phosphorous in the fields,

but it does not show the effects of seepage from these fields into the underground system and the concurrent waterways therein. State of the art water testing has shown significant threat via low oxygen levels and e-coli in waterways adjacent to fields that are currently being spread with hog waste.

Original commenter: Terri Bitting
Similar comments were received from: John Murdoch

Response: The Department acknowledges the comment. The Receiving Stream Location is a review of the proximity of land application sites to sensitive waterbodies that may be impacted if conditions of the permit are not followed. Impacted waterbodies includes waterbodies listed as Extraordinary Resource Waters, Ecological Sensitive Waterbodies, Natural or Scenic Waterways, or waterbodies in the 2008 ADEQ 303(d) list. The permittee must comply with the conditions of the permit, which prohibit land application in a manner that would result in a discharge of waste to Waters of the State. The permit was developed in accordance with state laws and APC&EC Regulation 5. See Comment 24 regarding soil test phosphorus as a management tool and permit conditions to protect against migration of pollutants to Waters of the State.

Comment 26: Waste shall not be discharged from this operation to the waters of the State or onto the land in any manner that may result in ponding or runoff to the waters of the State. [Reg. 5.303] (Page 1 of Part II, Permit No. 3540-WR-7, AFIN 51-00020)

1. "Waters of the State" means all streams, lakes, marshes, ponds, watercourses, waterways, wells, spring, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within flow through, or border upon this state or any portion of this state as defined by the Act. (Part IV, Page 1 of Part IV, Permit No. 3540-WR-7, AFIN 51-00020)

My concern is how our karst topography allows for easy entry of pollutants into our underground waterways. It directly states that waters of the state are surface as well as underground. If these waterways are within the waters of the state, and dye tests show the very fast travel of water within our underground system and subsequent testing shows levels of e-coli, and low oxygen levels are found in emergent springs and waterways, is this not considered a violation? Do you not see the fallacy of using a phosphorous test as a false indicator of the safety of hog waste on fields sitting atop karst? Is this not a direct violation that may or already may have occurred?

Original commenter: Terri Bitting

Response: The Department acknowledges the comment. APC&EC Regulation 5 requires buffers of 100 feet from streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies. The permittee is required to flag these setbacks prior to and during land application to ensure that the buffers are maintained during land application. These setbacks are a best management practice used to control to nutrient load in runoff into Waters of the State. See Comment 24 regarding soil test phosphorus as a management tool and permit conditions to protect against migration of pollutants to Waters of the State.

Comment 27: The permittee shall take all reasonable steps to prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health, the environment, or the water receiving the discharge. (Page 3 of Part III, Permit No. 3540-WR-7, AFIN 51-00020)

If I swim in the Buffalo River am I to assume that I am protected from e-coli and other pollutants that may be in the runoff due to flooding, or emerge from springs that feed the river? Do people who drill wells within this watershed and use these wells for their water, are they protected from having their health adversely affected? Does the testing of the fields with a soil test showing Phosphorous levels really do the job of showing us how the waters of the state are protected? Would the work being done by government agencies, concerned, well educated citizens, using state of the art equipment, who are committed to ensuring the real protection of our resources not be a better picture of the real endangerment to this treasured resource?!

It is often said that if something does not affect us directly, it is easy to look the other way and not be involved. It is called the bystander affect. It is a way to ease our conscious, to not be bothered by emotional calling and pretend that it doesn't matter anyway.

In closing I ask you to directly look at your conscious, look at the real data that has been presented by very qualified citizens, and reflect on this precious resource that matters to so many. Ask yourself if your actions really help or hurt this cause and to take that matter to heart. It is after all what really matters, how you feel inside and whether or not you can live with the decisions you make that affect others and the environment we all live in and share together.

Original commenter: Terri Bitting

Response: The Department acknowledges the comment. The permit was developed in accordance with state laws and APC&EC Regulation 5. *E. coli* may be present in any Waters of the State due to runoff from various sources including but not limited to waste from wildlife, improper management of human waste treatment systems, or improper land application of waste. In accordance with Condition No. 10 of Part II of the permit, land application of waste is prohibited by Arkansas Department of Health regulations for the protection of public water supplies. See Comment 24 regarding soil test phosphorus as a management tool and permit conditions to protect against migration of pollutants to Waters of the State.

Comment 28: Follow me, if you will, down memory lane for the 6,500 hog factory farm saga in the Buffalo River watershed.

1. 2012 C&H: NMP good to go for the acreage of C&H. Public is told that the spraying fields of C&H can handle the 2 million plus gallons of waste applied there as fertilizer, that there will be no contamination to the Buffalo River watershed.
2. 2013: In response to public outcry and concerns about potential contamination of Big Creek and Buffalo River, then Arkansas Governor set up taxpayer funded study, the BCRET, to monitor the effects of the swine feeding operation on the Buffalo River.

3. 2014: Elevated E. coli found in Big Creek by BCRET. Elevated E. coli and low levels of DO found by NPS suggest impairment of Big Creek.
4. 2015 and early 2016: NPS and AGFC request Big Creek be placed on the 303(d) list of impaired streams. ADEQ declines, despite robust data from credible sources, to do so.
5. According to recent soil tests, in less than 3 years most of the C&H fields along Big Creek are now at “above optimum” levels of phosphorus. Big Creek is now showing signs of impairment due to low DO and high E. coli and is impacting the Buffalo. How long before we can expect the same for the Little Buffalo?
6. 2015 and now: EC farm application to ADEQ to receive up to 6 million gallons of swine waste from C&H to be applied to more fields in the Buffalo River watershed. C&H only produces 2.1 million gallons.

So now follow me back around to 2012, why is ADEQ even considering allowing C&H to truck waste to these new fields. I would contend because the so called non-polluting facility we were told C&H was “ain’t a working.” Such a facility should never have been permitted in this sensitive and unpredictable karst terrain. Spreading the waste on more fields in karst is a stop gap measure at best. It exchanges one set of problems for another. Such a facility has no place in the karst terrain of this region. You have a responsibility to the people of Arkansas and I would say to Mr. Henson and now I would venture Ellis Campbell who I believe has been poorly advised by your agency and other agencies as to the efficacy of this type of operation in karst terrain. Advise them correctly. Remove C&H and do not allow the expansion or proliferation of other such facilities.

Original commenter: Ginny Masullo

Similar comments were received from: Lin Wellford, Angela Head

Response: The Department acknowledges the commenter; however, this comment does not pertain to the permit modification to covert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601. The EC Farm fields are additional land application sites but are not required by C & H Hog Farms for management of the generated waste at the facility.

Comment 29: Land application of swine waste on land parcels located along tributaries of the Buffalo River other than Big Creek should have baseline water quality parameters that would clearly show any water degradation downstream. This should be done before permits for this land application are approved. Specifically along the Little Buffalo, the headwaters of Buffalo and Hurricane Creek.

Original commenter: Dennis Larson

Similar comments were received from: Michael deBuys, Barbara Vasluski, Nancy Miner, Kathy Downs

Response: The Department acknowledges the comment. The Department has a series of monitoring locations located throughout the state to evaluate Water Quality Standards in stream. The locations are determined by need and budget constraints. The

permit does not allow for discharge of any waste to Waters of the State, and any discharge would be a violation of this permit. Appropriate conditions are in place in the permit to control runoff from the land application sites such as setbacks and prohibition of land application on saturated, frozen, or snow covered soils. Land application also is prohibited when a significant precipitation event is reasonably anticipated in the next 24 hours or during a precipitation event.

Comment 30: The permit modification, will dramatically alter the amount of bacteria and nutrients in the Little Buffalo River and Big Creek, which if dissolved oxygen problems are any indication, is already impaired for nutrients.

Original commenter: Charles J. Bitting

Response: The Department acknowledges the comment. The maximum land application rates are listed in Condition No. 8 of Part II of the permit. Nutrient management planning in the State must consider both phosphorus and nitrogen application rates in accordance with the Natural Resources Conservation Service Conservation Practice Standard Nutrient Management (Code 590). The API is a risk assessment tool used to assess the risk of phosphorus loss in runoff. Land application of phosphorus is prohibited on any field that is assigned a risk category of high or very high by the API. If application of phosphorus is in the low or medium category, then the application must also not exceed the recommended nitrogen application rate. Compliance with the terms of the permit, which includes setbacks from streams and occasions when land application is prohibited, control the migration of pollutants to Waters of the State. The permit was developed in accordance with state law and APC&EC Regulation 5.

Comment 31: The permit modification will drastically increase the amount of waste which can be applied to the former C&C Hog Barn spreading fields. The Waste Management Plan for C&C Hog Barn estimated that facility's output of waste to just a bit over 410,000 gallons. The new permit will allow 4,800,000 gallons of waste from C&H Hog Farm waste storage pond 1 to be applied, or 6,654,000 gallons of waste from C&H waste storage pond 2 to be applied. Either of these volumes is more waste than C&H purports to produce in a single year. Is C&H planning to expand? That seems to be the only reasonable conclusion.

Original commenter: Charles J. Bitting

Similar comments were received from: Teresa A. Turk

Response: The Department acknowledges the comment. The increase in land base is a common practice to lower nutrient loading on fields to be protective of the environment. There is no proposal to increase the amount of waste produced with this modification, nor does the modification increase the amount of waste beyond the amount that was previously permitted by the permit. The amount of waste applied is based on the API and recommended nitrogen application and is not based on the number of acres. Condition No. 1 of Part II of the permit allows for only land application of waste from either waste storage pond permitted by C&H Hog Farms. No storage or waste generation is allowed by Permit No. 3540-WR-7. To store or generate waste, the permit would require modification.

Additional land application areas will facilitate the installation of liners in the waste storage ponds (permitted by Permit Tracking Number ARG590001). The waste stored will need to be removed and land applied on fields permitted either by this permit or by ARG590001. The following has been added to Statement of Basis No. 10 to provide information that land application on these fields will facilitate the installation of liners and is not an increase in waste generated or stored, which would require a permit modification.

The addition of land application sites will facilitate the installation of liners on Waste Storage Pond 1 and Waste Storage Pond 2, in accordance with the approved modification to C&H Hog Farms (AFIN 51-00164), and the continuing operations in a manner protective of the environment. Any addition of waste sources not included in Condition No. 1 of Part II of the permit would require the modification of the SMP and permit.

A note was also added to Condition No. 5 of Part II of the permit to clarify this.

Comment 32: It seems to me that if this permit modification is approved, the Newton County Road Department will have to spend even more of their limited funds maintaining the gravel roads leading from C&H to these additional spreading fields. This is because the honeywagon traffic will cause additional stress on roads without an adequate structural base. I also expect to see additional widening of the roadways, resulting in additional road runoff into our surface streams, and additional mining of limestone for gravel to surface the roadways. Will the quarry operators get mining permits from the ADEQ Mining Division? Or, will they just operate as they always have? It appears to me that this single action has the potential to dramatically impact water quality in the Beautiful Buffalo watershed. That would be a shame.

Original commenter: Charles J. Bitting
Similar comments were received from: Jack Stewart

Response: The Department acknowledges this comment. Per Arkansas Code Annotated § 14-299-102, maintenance and repair of county highways is within the jurisdiction of the local government. Instream mining for gravel is regulated by the Office of Land Resources.

Comment 33: Such potential degradation of water resources in two Extraordinary Resource Waterbodies as the Buffalo River and Hurricane Creek requires ADEQ to conduct an Antidegradation Review pursuant to 40 CFR 131.12(a)(1-3).

Original commenter: Charles J. Bitting
Similar comments were received from: Ginny Masullo, Teresa A. Turk, Margaret Lonadier, Gordon Watkins, Marti Olesen, Carol Bitting, Susan Watkins, Dane Schumacher

Response: Nonpoint sources are managed by best management practices which include but are not limited to setbacks, appropriate application rates, and refraining from land application prior to a significant precipitation anticipated in the next 24 hours. The conditions of the permit were developed in accordance with state law and APC&EC Regulation 5 for a no-discharge permit for liquid animal waste management system.

Comment 34: The Ozarks were uplifted long ago. This caused numerous orthogonal joint sets to develop in the bedrock. The limestone and dolomite formations such as the Boone-St, Joe, Pitkin, Everton, and Powell have display tens of thousands of karst features such as caves, sinkholes, losing streams, and springs in this area. There are many more features, probably on the order of millions which are not expressed at the surface. That lack of expression does not mean they do not exist. We just haven't figured out how to "see" them. No one would deny the existence of bacteria today, but not that long ago, humans could not detect them. The Electrical Resistivity Imaging project that Mr. Jon Fields and Dr. Todd Halihan have done in the Big Creek valley around C&H Hog Farm shows us some of the karst which underlies the surface, but it does not have the resolution to see everything. The dye tracing work completed by the Karst Hydrogeology of Buffalo National River Team lead by Dr. John Van Brahana shows some of the interconnectedness of the surface and groundwater. It also shows pretty rapid long distance transport of groundwater to the Buffalo River from Big Creek valley. Additional dye tracing work in the Buffalo River area has demonstrated transfer of water from the Crooked Creek watershed to the Buffalo River watershed through the karst aquifers. All this points out the flaws of allowing fields underlain by limestone in the Buffalo River basin to receive millions of gallons of raw manure slurry annually. The Arkansas Phosphorus Index and Nutrient Management Plans were not designed to estimate risk in these situations, especially when you factor in the economic value of the Buffalo River. I have been studying karst geology and hydrogeology for nearly 40 years. The total lack of regard ADEQ gives to karst areas is truly unbelievable.

Original commenter: Charles J. Bitting

Similar comments were received from: Nancy Miner, Barbara Vasluski, Kathy Downs

Response: The API is a required risk assessment tool in designated Nutrient Surplus Areas for assessing the risk of phosphorus loss in runoff from fields that receive any phosphorus application. Additionally, NRCS adopted the API as part of its Conservation Practice Standard Nutrient Management (Code 590), which is required by APC&EC Regulation 5 for developing nutrient management portion of the waste management plan of a facility. Included in the designated Nutrient Surplus Areas is much of Northern Arkansas, which is karst topography. Therefore, consideration is given to karst areas in the development of Nutrient Management Plans.

Management practices for facilities that land apply waste in these areas include setbacks and appropriate application rates determined by assessing the runoff risk of phosphorus in addition to the recommended nitrogen application rates. Setbacks are required by permits issued under APC&EC Regulation 5 for streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies. Condition 16 of Part II of the permit details the setback requirements from streams. Part of the nutrient management planning process is a farm assessment and inventory, which includes but is not limited to, obtaining soil and waste samples and determining field boundaries. During this process, setbacks are included to determine the appropriate spreadable acreage for developing the API. The Arkansas Nutrient Management Planner, included in the SMP, assigns a risk value to a field based on site specific inputs and proposed application rates. Land application can only occur on fields that are assigned a low or medium risk category.

Comment 35: What is the cost benefit analysis? Does the community receive any revenue or is EC the only beneficiary?

Original commenter: Michael Kmiecik

Response: State law does not require a facility to perform a cost benefit analysis for permitting process.

Comment 36: Can EC Farms allow property to become a Brownfield? If so, is the burden passed on to the community?

Original commenter: Michael Kmiecik

Response: A brownfield is a parcel of property where commercial, industrial, or agricultural use may have contaminated the site with an inorganic material or persistent organic compound, which complicates prospects for expansion, redevelopment, or reuse.

Comment 37: Our research team (Karst Hydrogeology of the Buffalo National River), which is composed of a diverse range of professional individuals who have donated their time and expenses to study the karst hydrogeology of Big Creek and the Buffalo National River, collected data starting from the summer of 2013. Downgradient from the fields used for spreading C&H Hog [Farm] waste (feces and urine) we monitored karst springs to get background data on Left Fork of Big Creek, and results from state approved labs indicated that NO₃ values in karst spring water was above the EPA maximum limit of 10 mg/L, registering as high as 11.3 mg/L. Obviously, these fields are near saturation now, they are underdrained by karst into the Left Fork of Big Creek and thus not subject to natural attenuation. EC Farms currently show anomalously high concentrations of impacts from the current animal husbandry in the basin. I have been studying karst geology, hydrology, and hydrogeology for more than 50 years, both the U.S.G.S. and the University of Arkansas, and the lack of background information and the misinformation provided by tracking number 3540-WR-7 indicates that good documentable science is not being honored if this permit modification is approved. I strongly encourage you to reject this permit request.

Original commenter: John Van Brahana
Similar comments were received from: Marti Olesen

Response: Condition No. 8 of Part II of the permit lists the approved maximum application rates for each site associated with the permit. The application rates were developed using the API to assess the risk of phosphorus runoff at the application rates with the other site specific inputs. Additionally, the recommended nitrogen application rate was considered in the approved SMP. According to the SMP, the amount of nitrogen applied to the fields at the application rates will not exceed the recommended nitrogen application. The API was developed to assess risk of phosphorus loss in runoff from fields and adopted by Arkansas Natural Resources Commission (ANRC) for use in designated Nutrient Surplus Areas and by the USDA NRCS as part of the Conservation Practice Standard Nutrient Management (Code 590).

Comment 38: We contend that by allowing this questionable series of ownership transfers and modifications, ADEQ is circumventing the proper enforcement of state regulations by

allowing C&H Hog Farms to add new acreage without modifying its own NMP, thereby avoiding a reopening of its permit to public scrutiny. These maneuvers are a permitting scheme which should not be allowed.

Original commenter: Gordon Watkins
Similar comments were received from: Dane Schumacher

Response: The Department acknowledges the comment. Arkansas Code Ann. §8-4-203(h)(1) requires that permits be freely transferable if the applicant for the transfer notifies the director at least thirty days in advance of the proposed transfer date, submits a disclosure statement, provides any replacement financial assurance required, and ensures all annual permit fees are paid. Richard Campbell d/b/a C&C Hog Barn transferred the permit coverage to Ellis Campbell d/b/a EC Farms. The permit modification for Permit No. 3540-WR-7 conducted a public comment period and public hearing in accordance with APC&EC Regulation 8. The SMP was open for comment as Condition No. 4 of Part II incorporates the terms of the SMP into the permit as an enforceable condition.

Comment 39: According to the most recent Newton County records, the current owner of C&H Hog Farm (NPDES Permit # ARG590001), is the actual owner of the property shown on the permit as the physical location of EC Farms. The permittee of 3540-WR-6 (Primary SIC: 0213-HOGS, Primary NAICS: 11221 – Hog and Pig Farming) shown as the owner/operator of EC Farms, neither owns nor operates any part of the operation, other than perhaps the erroneously issued permit itself. As further explained below, due to a chain of errors allowed by ADEQ, **3540-WR-6 and all leases associated with it should be voided, and this modification of 3540-WR-7 should be denied.**

Original commenter: Gordon Watkins
Similar comments were received from: Carol Bitting, Dane Schumacher

Response: The Department acknowledges the comment. Land application only permits are required to provide the location of one field on the permit application that will serve as the location associated with the ADEQ Facility Identification Number (AFIN) assigned to a facility. A facility may either be a location with structures or land application sites only. In the case of Permit No. 3540-WR-7, the existing AFIN was kept for the permit since the original location is included within the permit.

Comment 40: On April 1, 2012, C&C Hog Barn, Permit 3540-WR-5, AFIN 00020 [*sic*], a Regulation 5 Animal Feeding Operation with land use agreements for the application of its own hog waste, requested a minor modification to add 481.6 acres of land application area to its existing leased acreage. There was no increase in the number of animals in confinement. ADEQ approved the modification. According to C&C Annual Reports, the facility was depopulated of swine sometime between May and November 2013, the ponds were empty in November and the facility no longer functioned as an animal feeding operation. No waste was applied in 2014. Previous Annual Reports show that only a small part of the total leased acreage was actually used for waste application. Why was acreage added when the existing acreage was not being fully utilized and closure was imminent?

Original commenter: Gordon Watkins
Similar comments were received from: Dane Schumacher

Response: The Department acknowledges the comment. The addition of acreage was not required by the Department. APC&EC Regulation 5 allows for a minor modification to add land application sites not associated with a greater than ten percent increase in volume of waste excreted, needed to provide more land to lower nutrient loadings in an effort to be more proactive in environmental protection. The permittee must have an active confined animal feeding operation for this minor modification, which the associated permit did have at the time that the land application sites were added in April 2012.

Comment 41: On March 17, 2014, C&C Hog Barn, permit 3540-AR-5, received a certification of closure by NRCS and all operations ceased. The facility had been depopulated and waste storage ponds were filled. There was no physical “operation” remaining at the time of closure, however, owners chose not to terminate or void the permit and the permit remained activated (although several required annual reports were not submitted to ADEQ in a timely manner).

Original commenter: Gordon Watkins
Similar comments were received from: Dane Schumacher

Response: The Department acknowledges the comment. The permittee must request that their permit be terminated with the Department if they wish to terminate permit coverage, with the exception of revocation of a permit by the Department with adequate justification.

Comment 42: On February 27, 2015, permit 3540-WR-5 was transferred from C&C Hog Barn to EC Farms and on March 1, 2015 EC Farms was assigned permit #3540-WR-6, a no discharge permit to “*store and apply land waste*” even though there was no waste or waste storage facilities. According to public records there was no corresponding change in ownership of the property attached to the permit, which still belongs to the owners of C&H, and is still provided as collateral for a loan to C&H Hog Farms. According to records, the site includes vacant of “Flat” buildings with no personal property attached. EC Farms does not hold a deed to the property specified in the permit nor is there record of a lease for said property. EC Farms is not the “*owner/operator*” of a “*facility*” as stated in the permit. There is no facility.

Original commenter: Gordon Watkins
Similar comments were received from: Jack Stewart, Carol Bitting, Marti Olesen, Dane Schumacher

Response: The Department acknowledges the comment. A facility may refer to actual structures or to land application sites only. In the event that the storage facility is closed, a facility then refers to the land that was also included within the application. A permittee must provide proof of land ownership or control of land to the Department with an application. This requirement can be met by providing one of the following three items: a copy of the deed or other legal document proving ownership, a copy of a lease agreement with the land owner granting control of the land for the use proposed in the application, or a land use contract. Land use contracts were submitted with the application.

Comment 43: Land Use Contracts, which were updated in 2015 following transfer of ownership, “...allow EC Farms to land apply waste from his/her operation located in Newton County.” EC Farms has no “operation,” no land, and no waste of its own to apply. These contracts do not allow for the application of waste from C&H or any other facility and thus are null and void.

Original commenter: Gordon Watkins

Similar comments were received from: Carol Bitting, Dane Schumacher

Response: The Department acknowledges the comment. The land use contracts are standard contracts approved by the Department. Multiple land application only permits use these contracts to apply waste from other facilities on properties not owned by the permittee. The land use contracts were signed by both Ellis Campbell and the land owners. The operation is to land apply waste received from C & H Hog Farms. Additionally, NPDES General CAFO Permit ARG590000 allows for the transfer of waste to other facilities.

Comment 44: We contend that ADEQ erred in allowing permit 3540-WR-5 to be transferred as a Regulation 5 permit to an individual who owned no facility and had no intention of operating a Regulation 5 animal feeding operation, or storing and land applying waste from the nonexistent facility. The permit transfer form is inaccurate in this regard: Permit Section II, EC Farms is not “*the owner of the facility.*”

Further, we contend that **permit #3540-WR-6 should be null and void** as well as any and all land use contracts associated with it. If an individual wants to receive waste from C&H Hog Farm, he/she must apply for a separate land application permit, or C&H must add them as lessors of acreage added to its own permit.

Original commenter: Gordon Watkins

Similar comments were received from: National Park Service, Carol Bitting, Charles J. Bitting, Marti Olesen, Dane Schumacher

Response: Land application only operations are common in the state. A facility is not required to have an active confined animal operation to obtain a land application only permit. A facility may modify its operation as necessary to reflect the current status of the liquid animal waste management system, which may be as system for the collection, storage, distribution, or disposal of animal waste in liquid form generated by a confined animal operation. Major modifications are not limited to the examples listed in APC&EC Reg. 5.305. In the case of EC Farms, the facility has modified its operation from collection, storage, distribution, and disposal to distribution and disposal only. Arkansas Code Ann. §8-4-203(h)(1) requires that permits be freely transferable if the applicant for the transfer notifies the director at least thirty days in advance of the proposed transfer date, submits a disclosure statement, provides any replacement financial assurance required, and ensures all annual permit fees are paid. Richard Campbell d/b/a C&C Hog Barn transferred the permit coverage to Ellis Campbell d/b/a EC Farms.

Comment 45: A separate permit is required per Regulation 5.601, Permit for Land Application Site Only which states (emphasis added):

“A separate permit may be issued for a land application site if the operator submits an application which includes a site management plan for the land application site and a plan detailing nutrient application rates; the timing of waste application with respect to the nutrient uptake cycle of the vegetation found on the land application site(s); and waste storage and distribution method(s) prepared in accordance with the requirements of this regulation. The applicant for such a permit shall notify the Department of any contractual agreement for the use of the land as a land application site by submitting a copy of the agreement.”

This regulation, which spells out the requirements for a separate permit, was clearly intended to address the situation for which EC Farms is instead seeking a permit modification. A modification, major or minor, is not appropriate and instead, as Regulation 5.601 states, ADEQ should have required EC Farms to request a *separate* permit for land application sites only. However, a separate permit would be *de facto* a new permit, and Regulation 5.901(B) states: “*The Director shall not issue a new permit pursuant to Regulation No. 5 for a Confined Animal Operation in the Buffalo National River watershed...*” Under the current moratorium an any new swine CAFO permit in the Buffalo National River watershed, issuing a new permit to EC Farms is prohibited.

Original commenter: Gordon Watkins
Similar comments were received from: Dane Schumacher

Response: The Department acknowledges the comment. APC&EC Regulation 5 does not prohibit a facility from modifying their permit to update the management practices, unless the modification violates APC&EC Regulation 5.901. A separate permit may be issued for land application only for an operation with storage and land application, depending on the circumstances of that facility. An existing facility is not prohibited from modifying their permit coverage to land application only if the storage facility is certified closed, and they wish to receive waste from other permitted facilities.

Comment 46: About 75% of the fields where C&H waste will be applied are upland fields located at higher elevations. Those upland fields are very steep, making them very susceptible to erosion and transmission of surface applied waste. The risk of phosphorus-transport increases rapidly with overgrazing on these steep lands. In “normal” years, good management may prevent overgrazing, but periods of drought are likely to occur from time to time, and this is a very big problem for steep fields and soils with elevated soil test phosphorus (STP).

Regarding these upland soils, according to Dr. Van Brahana, “The younger layers above the Boone Formation are dominated by shale and some sandstone, and these are common in the higher elevations of Big Creek and Left Fork of Big Creek. The shale has low permeability, and rain that falls on it runs off (like an umbrella) rather than soaking into the ground and the underlying karst rock (like a sponge) in the karstified Boone Limestone. That is why prior hog farms in this area, located on the shale had ‘dead zones’ down gradient from their lagoons. The feces and urine from 300 hogs killed all the plants beside the streams, until there was enough water to dilute them below a toxic level.”

Original commenter: Gordon Watkins
Similar comments were received from: Dane Schumacher

Response: The API includes assessment of slope and erosion when assigning a risk category to a field at an application rate. Consideration of soil type is part of the process of nutrient management planning to develop appropriate application rates. Rotational grazing is a conservative approach for the pasture usage term in the Arkansas Nutrient Management Planner since rotational grazing will allow for periods of grazing as well as periods of hayland. Condition No. 8 of Part II of the permit contains the maximum application rates for each field based on the API assessment and recommended nitrogen application rate. The compliance with the terms of this permit is required by the permittee to maintain a no-discharge system.

Comment 47: Dr. Todd Halihan's report *Electrical Resistivity Surveys of Applied Hog Manure Sites, Mount Judea, AR* was contracted by BCRET. Dr. Halihan is a geologist at Oklahoma State University specializing in Electrical Resistivity Imaging (ERI) which uses electrical waves to construct conductivity "pictures" that reveal underground formation. I include excerpts from his report.

There just isn't a favorable place for this excessive amount of waste to be absorbed by the Boone formation that lies beneath our pastures and hay fields. No one objects to farming and conserving farmland for family farms, but responsible farming takes into account its imprint on neighbors and their water.

In karst hydrogeology when heavy rains wash through the fields, nitrates will flow into neighbors' wells or springs, often their source for drinking water. Phosphorus will move along with the stirred up mud and clay into wells, or springs, or fishing holes. Brown sewage algae and long strands of bright green algal slime will stretch through once sweet water. Low DO will interfere with breathing for blue ribbon Smallmouth bass and other key species that live in the streams. What we dump on our fields and into our streams shows up underground in our wells and our spring water, and we drink it.

Original commenter: Jack Stewart
Similar comments were received from: Marti Olesen

Response: Condition No. 8 of Part II of the permit lists the maximum application rates for each field based on the API assessment and recommended nitrogen application rate. Nitrogen application rates are based on the nitrogen uptake of the cover crops grown on the field to ensure that available nitrogen in the waste is utilized by the plants. Condition No. 14 of Part II of the permit prohibits the land application of waste when significant precipitation is reasonably anticipated in the next 24 hours or during a precipitation event to minimize any runoff of waste into Waters of the State. Condition No. 16 of Part II of the permit requires that waste not be land applied within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies. Buffers are a practice that is used to minimize the potential of pollutants from entering Waters of the State.

Comment 48: What action will ADEQ take should the permit holder neglect its requirements in the future? EC Hog Farm can't lose its land. It doesn't own any. It can't lose its operation or facility since it has no functional buildings, swine, or equipment according to county records. In fact, there is no EC Farms on record at all in the courthouse.

Original commenter: Jack Stewart

Similar comments were received from: Marti Olesen

Response: The Department acknowledges the comment. Condition No. 4 of Part III of the permit provides information on the civil and criminal liability of the permittee. The permittee is Ellis Campbell d/b/a EC Farms. The Department can terminate the permit if there is continuous non-compliance with permit requirements.

Comment 49: I present the following in response to a permit application that would allow hog waste to be applied to open pasture land from the CAFO, the C&H Hog Farm. These fields are within the watershed of the Little Buffalo River and Shop Creek, a tributary of the Little Buffalo, which is a tributary to the Buffalo National River. As a landowner in the Little Buffalo River watershed, this permit application is disturbing. To me, the need for additional acreage to dispose of hog waste indicates a problem with the initial assessment of the land's ability to absorb the waste. Now, the permitted facility needs to obtain additional acreage to handle the toxic waste that equals the volume generated by the City of Harrison.

Original commenter: Bill Lord

Similar comments were received from: Marti Olesen

Response: The Department acknowledges the comment. The permit modification is for EC Farms to convert from a sow farrowing operation to a land application only permit. The CAFO General Permit (ARG590000) allows for a facility with coverage to transfer waste generated to another facility.

Comment 50: The ADEQ regulations no longer allow human waste to be land applied, so why is it allowed to distribute hog waste throughout Newton County and jeopardize our water resources?

Original commenter: Bill Lord

Response: The Department acknowledges the comment. Land application of liquid animal waste is permitted by the Department under APC&EC Regulation 5, Liquid Animal Waste Management Systems. The Arkansas Department of Health regulates the land application of septage under "The Rules and Regulations Pertaining to Septic Tank Cleaners."

Comment 51: If it is the focus of the Arkansas Department of Environmental Quality to protect and preserve the air, water, and land resources of the Natural State, the[n] why is this being allowed? I do not question C&H Farms' compliance with the ADEQ regulations. They act as they are required to by ADEQ. The root of the problem is that the regulations are inadequate to protect our water resources.

Original commenter: Bill Lord

Similar comments were received from: Ann Lasater

Response: The Department acknowledges the comment. The Department developed the permit in accordance with state laws and APC&EC Regulation 5, Liquid Animal Waste Management Systems. Land application is an acceptable method of managing liquid animal waste.

Comment 52: I also suggest a moratorium on any permits that allow hog waste from CAFOs to be spread on karst topographical regions such as Newton County. Facilities in this type of geological formation should be required to deliver the waste to an approved wastewater treatment facility where it can be treated to meet the National Drinking Water standards. In the absence of an available public facility, the permitted facility should be required to construct and maintain an on-site water treatment plant that can meet the National Drinking Water standards. These disposal methods are required for other facilities that generate toxic water. Even our local transfer station must collect its toxic water (leachate) and transport it to an approved wastewater treatment facility.

Original commenter: Bill Lord

Response: The Department acknowledges the comment. The Department does not have the authority to impose a moratorium. Any moratorium imposed would be from the APC&EC. Land application is an acceptable method for managing liquid animal waste in accordance with state laws and APC&EC Regulation 5. A moratorium is in effect for the Buffalo River Watershed in accordance with APC&EC Reg. 5.901.

Comment 53: The recent report on the Electrical Resistivity Imaging (ERI) survey conducted for BCRET by Jon Fields and Dr. Todd Halihan at Oklahoma State University shows that the three spreading fields studied are underlain by karst with numerous sinkholes which do not show up on the surface of the land. The report also shows electrically conductive fluids, possibly swine waste slurry, travelling down into the epi-karst below these fields. Allowing the spreading of untreated liquid waste to fields underlain by the Boone and Pitkin (karst) Formations could put water quality on the Buffalo River at risk. To be protective of the groundwater, a minimum 100 foot buffer should be applied on fields or portions of fields that lie up strata of these limestone formations.

Original commenter: National Park Service

Response: The Department acknowledges the comment. The setbacks are in accordance with APC&EC Regulation 5, which require setbacks from Waters of the State. Land application of liquid animal waste is not restricted from karst areas by APC&EC Regulation 5. Condition No. 16 of Part II of the permit requires that waste not be land applied within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies.

Comment 54: The National Wildlife Federation declares that it is the policy of the National Wildlife Federation that large CAFOs, as defined by federal regulations, should not be permitted, or subsidized through federal loan guarantee assistance, in the watershed of any river designated by any state as an outstanding national resource water (similar exception water designation) subject to the state's anti-degradation policy, unless the state's water quality permitting agency, after public notice and comment, determines in writing that the Large CAFO, with specific and binding measures avoiding and mitigating potential adverse effects on the river and its tributaries, will not contribute to impairment of a water quality standard or a failure to meet the state's anti-degradation requirements for the river.

Original commenter: Arkansas Wildlife Federation

Response: The Department acknowledges the comment. The permit was developed in accordance with state laws and APC&EC Regulation 5. There is no prohibition of confined animal operations located in any watershed with the exception of APC&EC Regulation 5.901 and Regulation 6.602 which prohibits new medium and large swine confined animal feeding operations and swine concentrated animal feeding operations and modifications to existing facilities that increase the number of swine within the Buffalo River Watershed. Modifications of permits are allowed within this area if the number of animals does not increase beyond the current permitted limit. No increase in animals is proposed with this modification which is to convert from a storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601.

Comment 55: Does Ellen Carpenter have the authority to sign for the Director? Page 4 of Part 3 permit # 3540-WR-5, #18. Transfers say the permit is non transferable except after notice to the Director. The Director may require modification or revocation and rescission of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the ACT. I FOIA'd this information to see if the Director had given anyone authority to sign for her, yet there was no information pertaining to any Director except Martin Manor, and he didn't sign the document that was emailed and returned to me in the FOIA.

Original commenter: Carol Bitting

Response: The Department acknowledges the comment; however, this comment does not pertain to the permit modification to convert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601.

Comment 56: No longer is C&H spreading fertilizer, it is now a waste disposal operation due to the high phosphorus levels in the fields on Big Creek. Not even Dr. Sharpley the phosphorus specialist can make the phosphorus go away. Would Monica Hancock consider karst topography when preparing a NMP? Why didn't C&H or EC Farms use a local planner, someone who is familiar with Newton County? I ask that all permits use nutrient management planners within their counties. Secrecy, such as traveling to other areas of the state to get documentations that can be done in your own county suggests an industry has something to hide.

Original commenter: Carol Bitting

Response: The Department acknowledges the comment. Any nutrient management planner is required to be certified through a certification program acceptable to the Natural Resources Conservation Service. Nutrient management planning requires site specific data which may require a planner to visit the facility to determine farm management and field specific details such as determining the location of sinkholes and rock outcrops to apply buffers. APC&EC Regulation 5 requires that any waste or site management plan to be prepared by the United States Department of Agriculture Natural NRCS, an ANRC water quality technician, a certified nutrient management planner, the University of Arkansas Cooperative Extension Service, or a professional engineer registered in the state of Arkansas.

Comment 57: What is the likely operating span of this permit? Opposed to the long term impacts which are predictable. Waiting for impacts to be found, verified, and processed is allowing them to occur meanwhile. Prevention is more effective than restoration or damage control. The burden of proof and monitoring should not be dumped on the public. The agency should not be protecting corporations from the public.

Original commenter: Kent Bonar

Response: The Department acknowledges the comment. As with all permits issued by the Permits Branch of the Office of Water, the permittee must self-monitor and maintain records. Any violations must be reported. Periodic inspections are performed during which records are reviewed. The public may also submit complaints if they feel that the terms of the permit are not being adhered to by the facility. The facility is required to submit annual reports in accordance with Condition No. 19 of Part II of the permit. The Department does not regulate the operating span of facilities.

Comment 58: Feral hog populations in Newton County have gone up drastically in the last few years. Most likely came from permitted hog operations including present fields, and resulted from falling hog prices which would cost more to keep feeding. This illegal dumping shows ethics of permittees and likelihood that these regulations will also be ignored as convenient.

Original commenter: Kent Bonar

Response: The Department acknowledges the comment. The Department does not regulate wildlife populations.

Comment 59: The landslides (falling water, 7 South of Jasper, Low Gap, Compton) recently resulting from fracking further south show potential for other regional impacts to impact local geology and change water flow on a large scale. Minor landslides have recently occurred near Mt. Judea. Seismic testing in the Arkansas River Valley new gas wells and other current modifications of landscape scale further cracks rock and allows for water leaching and ice expansion to further lower groundwater. Perched aquifers are at most risks. You need to consider other impacts on the watershed such as agricultural conversion of timber and resulting increased acceleration of surface runoff and increased leaching will result in changes in flow rate and sediment loads. Groundwater recharge is through leaching. What, if any, consideration is given to changing groundwater movement? I've seen springs dry up and others appear where they weren't. Sediment plugs up some conduits opens others. Agricultural waste would be better applied to a more intensely agricultural area such as Crooked Creek or better the Arkansas River Valley where there is no karst. This is the worst place to apply waste.

Original commenter: Kent Bonar

Response: The Department acknowledges the comment. Application rates are developed based on the API and recommended nitrogen application rates. The API contains multiple site specific inputs in addition to the application rate and waste characteristics. The permit includes other conditions to minimize any waste from leaving the land application sites. The permit requires, in Condition No. 16 of Part II, a setback

of 100 feet from streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies. Waste also cannot be land applied when soil is saturated; frozen or covered with ice or snow; significant precipitation is reasonably anticipated in the next 24 hours; or during a precipitation event, according to Condition No. 14 of Part II of the permit. The conditions of the permit are in accordance with APC&EC Regulation 5. These conditions are to minimize any potential runoff of waste into Waters of the State.

Comment 60: On response to my comment on the flare (comment #28) if water division doesn't have authority to regulate the methane flare, then what was it doing in the modification proposal? Is the flare operating without regulation? Timing is critical. Spring migration is about to peak. The bat and bird risks to wildlife from the flare was mentioned in my previous comments. On foggy nights, lighted towers have produced bird kills for decades on spring migration. As a teaching assistant in ornithology, I've spent all day and night skinning and injecting pickup loads of dead birds from one night's kill. (University of Missouri – Columbia) Fog diffuses light to blur everything; birds move to the light source as they become night-blind from it. Indiana, gray, long-eared, and eastern small footed bats all fly low, just over or within the canopy; and can approach the flare without seeing it until over or close to it. Foraging bats change their nightly flight patterns in response to prey populations which constantly change.

Original commenter: Kent Bonar

Response: The Department acknowledges the comment; however, this comment does not pertain to the permit modification to covert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms, Inc. in accordance with APC&EC Reg. 5.601.

Comment 61: If any person were to fill out an application for such a Reg. 5 swine CAFO land application only permit, would he need to show that he has a legitimate business, or a true physical address where the "facility/operation" is located? What assurances would he need to provide to show he is in good standing and able to carry out the conditions of a permit besides signatures for land leases? Would paperwork guided and supervised for him by public agency employees suffice?

Original commenter: Marti Olesen

Response: The Department acknowledges the comment. A permittee may either be a sole proprietorship, an entity registered with the Arkansas Secretary of State, local government, state government, or federal government. The permittee is responsible for activities that occur related to their permit.

Comment 62: I'm a mathematician from Greenbrier and I speak for all those people who love statistics. As background, when Big Creek comes into C&H, it's relatively low in nitrates but there's a slug of nitrate laden water that comes in from the C&H farm or at least the monitored area. It's 5.8 times as high. That's incredible. Below Big Creek the nitrate level concentration is 3.5 times what it is above level. So we have relatively low nitrate, a slug of 5.8 times, and a slug of 3.4 times. For phosphorous, its similar the phosphorus level before C&H is in a moderate level and then there's a slug of phosphorus laden water that comes off the monitoring section that's 5.1 times that. Now I've been told that

technically that's not a point source but we can all point to the source. It's a two and a half mile wide pipe for these pollutants. For phosphorous, it's pretty important because by the time the water leaves C&H, below C&H its 45% above the federal limits set by EPA .1 milligrams per liter, that's by flow rated, which not everybody uses because not everybody can figure out, but its 45% above the EPA limit. I've been told that that's not relevant because Arkansas does not use a quantitative number, which is true, except there's a precedent. In the Illinois River litigation, Arkansas versus Oklahoma that ran for years, eventually Arkansas conceded that they would try for the goal of .037 milligrams per liter as a correct free flowing level. That's one third of what's currently running out of Big Creek. So there is a precedent. Now to the pertinent to the application, there's 58 thousand pounds of phosphate applied yearly, 29 tons. Net cow consumption is 18% of that, that's what's removed by agriculture. The buildup in the soil is 56% and surface runoff that's not caused else, surface runoff phosphorus from that area, monitored, is 26%, 7.5 tons, goes directly from the farm yearly into the creek. Now John, we heard earlier that if you put animal sewage in a field that runs off, then you're liable. What happens if you put sewage on a field and 26% ends of in the stream? Well it's time to quit, but I'll just make one quote from Andrew Sharply, I think the problem is enforcement. Andrew Sharply creator of the Arkansas Phosphorous Index says "A key balance approach will involve alternative technologies for manure utilization and exploit the manure for many farms and some watersheds." He says, "P index values are not tied directly to water quality." It's an inappropriate tool in its current status.

Original commenter: David Peterson

Response: The Department acknowledges the comment. This permit modification is for the conversion from a sow farrowing operation to a land application only permit. The API was developed to assess risk of phosphorus loss in runoff from fields and adopted by ANRC for use in designated Nutrient Surplus Areas and by the USDA NRCS as part of the Conservation Practice Standard Nutrient Management (Code 590).

Comment 63: Thank you for the opportunity to review the draft permit prepared by the Arkansas Department of Environmental Quality on behalf of my farm. I have reviewed the draft and have one modification request for the final permit.

Part I, Table II reflects a requirement that one soil sample must be taken for every 40 acres. I respectfully request to have this requirement removed from the final permit. This is an unrealistic requirement in instances of large tracts of land where no natural or manmade boundary exist. It is impractical and illogical to attempt to manage a single field as more than one unit. A more realistic requirement would be to increase the number of core samples taken in larger fields.

Original commenter: Ellis Campbell

Response: The Department acknowledges the comment. Based on the nutrient management planning manual, the requirement has been revised. Increasing the number of soil samples for a composite soil sample is an acceptable method for soil analysis if the number of core meets the current University of Arkansas Extension Service guidelines and the acreage is managed as one unit.

Comment 64: We want to be removed from this plan as we now have 3 rental cabins and home at this location on Smith Mountain Road and hog sewage would be detrimental to our business.

Original commenter: Ed Mills and Patricia Mills

Response: The Department acknowledges the comment. The permittee submitted a request to remove EM1 from the permit. The removal of land application sites is a minor modification.

Comment 65: Comment period should extend past public hearings. Many questions come up at this time and should get answers.

Original commenter: Nancy Miner

Similar comments were received from: Angela Head, Kent Bonar

Response: The Department acknowledges the comment. The comment period was in conducted in accordance with APC&EC Regulation 8, Administrative Procedures.

Comment 66: Citizens in favor of the permit and modification.

The following people commented on the issue: Steven Hignight, Billy Jack Burns, Ken Hulsey, Ginny Hulsey, James Simpson, Kathy Wallace, Susan Anglin, Evan A. Teague, Bruce T. Jackson, Jerry Masters, Bob Shofner, Pat Pollack, Sandra Jackson

Response: The Department thanks the commenters for their comments.

Department Correction 1 The Department has revised Condition No. 1 of Part II, Statement of Basis No. 3, Statement of Basis No. 8, and Statement of Basis No. 9 to reflect the ADEQ Facility Identification Number or AFIN. The Department has determined the reference to this specific facility's AFIN is more appropriate for this condition.

Summary of Permit Changes			
Part	Draft Permit	Final Permit	Comment #
Statement of Basis No. 10	Fields CCGW, DC, and JG-B were originally included in the Site Management Plan; however, the fields are not included in the permit due to the assigned P-Index risk of high or very high.	<i>Fields DC and JG-B were originally included in the Site Management Plan; however, the fields are not included in the permit due to the assigned P-Index risk of high or very high. Although Field CCGW was assigned a value in the medium risk range by the P-Index without receiving any waste, the field is not included in the permit because land application activities would result in a high risk classification by the P-Index. Land application is prohibited by the permit on any fields that are assigned high or very high values by the P-Index.</i>	10
Statement of Basis No. 10	Fields CCGW, CC1, JG-A, HB1, HB2, LCM1, LCM3, RM2, MM1, MM2, MM3, RC3, CB1, CB2, CB3, CB4, CB4, CB6, CB7, CB8, CB11, CB12, VIV1, and VIV1A are classified as a medium P-Index risk.	Fields CC1, JG-A, HB1, HB2, LCM1, LCM3, RM2, MM1, MM2, MM3, RC3, CB1, CB2, CB3, CB4, CB4, CB6, CB7, CB8, CB11, CB12, VIV1, and VIV1A are classified as a medium P-Index risk.	10
Statement of Basis No. 10	Fields CCGW, CC1, JG-A, RM2, MM1, MM2, MM3, RC3, CB1, CB2, CB3, CB4, CB5, CB6, CB7, CB8, CB11, CB12, VIV1, and VIV1A are classified as a medium P-Index risk.	Fields CC1, JG-A, RM2, MM1, MM2, MM3, RC3, CB1, CB2, CB3, CB4, CB5, CB6, CB7, CB8, CB11, CB12, VIV1, and VIV1A are classified as a medium P-Index risk.	10
Condition No. 5 Part II	Land application rates shall be in accordance with the June 2015 SMP, revised documents submitted December 10, 2015, and Condition No. 8 listed below.	Land application rates shall be in accordance with the June 2015 SMP, revised documents submitted December 10, 2015, and Condition No. 8 listed below. ¹ ¹ <i>The land application fields are authorized herein to facilitate the installation of synthetic liners in the waste storage lagoons allowed under Permit Tracking No. ARG590001 and continuing operations in a manner protective of the environment.</i>	31

Summary of Permit Changes

Statement of Basis No. 10		<i>The addition of land application sites will facilitate the installation of liners on Waste Storage Pond 1 and Waste Storage Pond 2, in accordance with the approved modification to C&H Hog Farms (AFIN 51-00164), and the continuing operations in a manner protective of the environment. Any addition of waste sources not included in Condition No. 1 of Part II of the permit would require the modification of the SMP and permit.</i>	31							
Table II Part I	*One composite sample must be taken for every 40 acres.		63							
Condition No. 8 Part II	<table border="1"> <tr> <td>EM +</td> <td>Existing</td> <td>6.6</td> <td>35°54'36.129 "N</td> <td>93°12'36.204" W</td> <td>7500</td> <td>10500</td> </tr> </table>	EM +	Existing	6.6	35°54'36.129 "N	93°12'36.204" W	7500	10500		64
EM +	Existing	6.6	35°54'36.129 "N	93°12'36.204" W	7500	10500				
Statement of Basis No. 6	Fields CCGW, CC1, JG-A, JG-B, DC, and EM1 are approximately 18 miles or more from the Buffalo River.	Fields CCGW, CC1, JG-A, JG-B, and DC are approximately 18 miles or more from the Buffalo River.	64							
Statement of Basis No. 10	Fields EC-A, LCM2, RM1, RC4, PC1, CB9, CB10, CB13, EM1 and GD1 are classified as a low P-Index risk.	Fields EC-A, LCM2, RM1, RC4, PC1, CB9, CB10, CB13, and GD1 are classified as a low P-Index risk.	64							
Statement of Basis No. 10	Fields EC-A, HB1, HB2, LCM1, LCM2, LCM3, RM1, RC4, PC1, CB9, CB10, CB13, EM1 , and GD1 are classified as low P-Index risk.	Fields EC-A, HB1, HB2, LCM1, LCM2, LCM3, RM1, RC4, PC1, CB9, CB10, CB13, and GD1 are classified as low P-Index risk.	64							
Condition No. 1 Part I	This facility shall only receive liquid swine waste from C&H Hog Farm (Permit Tracking No. ARG590001).	This facility shall only receive liquid swine waste from C&H Hog Farms (AFIN 51-00164).	Department Correction 1							
Statement of Basis No. 3	Only swine waste received from C&H Hog Farm (Permit Tracking No. ARG590001) will be land applied on sites covered under this permit.	Only swine waste received from C&H Hog Farms (AFIN 51-00164) will be land applied on sites covered under this permit.	Department Correction 1							
Statement of Basis No. 8	This facility shall only receive swine waste from the facility covered under Permit Tracking No. ARG590001 .	This facility shall only receive swine waste from C&H Hog Farms (AFIN 51-00164).	Department Correction 1							

Summary of Permit Changes			
Statement of Basis No. 9	Site-specific rates can be found in the Site Management Plan or in Condition No. 8 of Part II for each waste source, Waste Storage Ponds 1 and 2, covered under Permit Tracking No. ARG590001.	Site-specific rates can be found in the Site Management Plan or in Condition No. 8 of Part II for each waste source, Waste Storage Ponds 1 and 2, <i>permitted by C&H Hog Farms (AFIN 51-00164).</i>	Department Correction 1