

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

TOPICS:

hogs	I.C. § 25-31-1-19(b)(3)
manure storage capacity	327 IAC 15-15-10
land application	327 IAC 16-8-1
individual NPDES permit	327 IAC 16-8-4
aquifer	327 IAC 16-8-6
nitrate	327 IAC 16-10-1(b)
earthen floor	327 IAC 15-15-9
perimeter drain tile	Ind. Evid. R. 401
masonry structures	Ind. Evid. R. 404
underground manure storage tanks	<i>Swine Pro</i> , 2007 OEA 155
waste volume	<i>Lykins</i> , 2007 OEA 114
land use agreement	<i>DeGroot</i> , 2006 OEA 1
expert witness	<i>Gettlefinger</i> , 1998 WL 918589
professional engineer	
NOI (Notice of Intent)	
NPDES (National Pollution Discharge Elimination System)	

PRESIDING JUDGE:

Mary L. Davidsen

PARTY REPRESENTATIVES:

Petitioners:	James P. Fenton, Esq.; Eilbacher Fletcher LLP
Respondent/Permittee:	Daniel P. McNerny, Esq., Alex C. Intermill, Esq.; Bose McKinney & Evans LLP
IDEM:	Denise A. Walker, Esq.

ORDER ISSUED:

December 3, 2009

INDEX CATEGORY:

Water

FURTHER CASE ACTIVITY:

[none]

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Chris Duckwall

Van Buren, Grant County, Indiana

2009 OEA 155 (07-W-J-3836)

STATE OF INDIANA)	BEFORE THE INDIANA OFFICE OF
)	ENVIRONMENTAL ADJUDICATION
COUNTY OF MARION)	

IN THE MATTER OF:)

OBJECTION TO THE ISSUANCE OF)

CONFINED ANIMAL FEEDING OPERATION)

NPDES CAFO GENERAL PERMIT)

FARM ID NO. 357C / CAFO ID NO. ING800357)

CHRIS DUCKWALL)

VAN BUREN, GRANT COUNTY, INDIANA.)

CAUSE NO. 06-W-J-3836

_____)

Edward & Linda Embry, Gary & Connie Endsley,)

Lewis R. & Doris Smith, Donald R. Miller (dismissed),)

Jeffrey & Barbara Denham (dismissed),)

Petitioners,)

Chris Duckwall,)

Respondent/Permittee,)

Indiana Department of Environmental Management,)

Respondent)

FINDINGS OF FACT, CONCLUSIONS OF LAW and FINAL ORDER

This matter is before the Court on Final Hearing held on June 9, 10, 2009 on administrative review as to whether Respondent, Indiana Department of Environmental Management’s determination that Chris Duckwall’s Notice of Intent to construct two finishing hog barns to expand the capacity of an existing finishing hog barn, for approximate total capacity of 9,000 hogs, and for land application of manure, was covered under the National Pollution Discharge Elimination System Concentrated Animal Feeding Operation “general permit” rule, and did not require an individual permit. Some issues were disposed of in the Court’s March 27, 2009 Findings of Fact, Conclusions of Law and Order on summary judgment, which Order is incorporated herein by reference. The Chief Environmental Law Judge (“ELJ”) having considered the petitions, testimony, evidence, and pleadings of the parties, now finds that judgment may be made upon the record. The Chief ELJ, by substantial evidence, and being duly advised, now makes the following findings of fact and conclusions of law and enters the following Final Order:

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FINDINGS OF FACT

1. On July 7, 2006, Chris Duckwall (“Duckwall” or “Permittee”) submitted a Notice of Intent (“NOI”) to the Indiana Department of Environmental Management (“IDEM”) that Duckwall intended to construct and operate finishing hog barns in order to expand the capacity of farm 357, Animal Waste No. AW-5688, in Grant County, Indiana. Two new barns would each house approximately 4,000 hogs, and would have self-contained concrete pits beneath slatted floors for liquid manure storage. Duckwall also indicated an intent to house approximately 1,000 hogs in an existing hog finishing barn, which barn and outdoor manure storage lagoon had received prior approval on May 1, 1996. Land application of manure by injection or single pass incorporation was also approved.
2. On November 28, 2006. IDEM issued its determination (“Determination”) that Duckwall’s project, as described in the NOI, did not require a site-specific permit, as it qualified to obtain coverage as a “permit-by-rule” under the National Pollution Discharge Elimination System (“NPDES”) Concentrated Animal Feeding Operation (“CAFO”) rule”, 327 IAC 15-15. *Petitioners’ March 15, 2007 Amended Petition for Administrative Review (“Petition”, Ex. A).* The November 28, 2006 determination was assigned NPDES CAFO Number ING800357 (“CAFO Approval”). The Determination provides that the Duckwall facility is “no discharge”.
3. Timely petitions for administrative review of IDEM’s CAFO Approval-by-rule were filed on or about December 16, 2006, by Petitioner Donald R. Miller and by Petitioners Edward and Linda Embry, Lewis R. and Doris Smith, and Gary and Connie Endsley.
4. Jeffrey and Barbara Denham’s December 19, 2006 petition for administrative review, amended later, was the subject of a Duckwall’s motion to dismiss for failure to timely file stated in Duckwall’s October 12, 2007 Motion for Summary Judgment, and of the Court’s March 26, 2009 Findings of Fact, Conclusions of Law and Final Order of Dismissal of Petitioners Jeffrey and Barbara Denham. Petitioner’s June 3, 2009 Motion to Dismiss Petitioners Lewis Smith, Doris Smith and Donald Miller was granted. Remaining Petitioners are Edward and Lewis Embry and Gary and Connie Embry.
5. The first prehearing conference was conducted on February 19, 2007.

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2009 OEA 155 (07-W-J-3836)

6. On March 15, 2007, all of the above-named Petitioners, by legal counsel James P. Fenton, Esq., filed an Amended Petition for Administrative Review. (“Amended Petition”). In support of their assertion that they are aggrieved and adversely affected by the Approval, the Petitioners stated that they are “owners of property in the immediate vicinity of the proposed facility” site for construction, and/or designated land application areas, and that they “utilize the ground and surface waters in the vicinity of the proposed facility” and “will be adversely affected by subsurface and surface drainage from the proposed facility and the land application areas.” *Amended Petition*. Petitioners sought administrative review of the CAFO Permit on the basis that IDEM failed “to comply with appropriate standards for approval of this type of permit” such that if the CAFO could have been permitted, it should have been permitted by individual permit. *Id.* In sum, Petitioners alleged the following environmental concerns and/or technical deficiencies which fail to meet applicable regulatory requirements:
 - A. Waste management system design fails to meet mandatory standards, concerning concrete specifications, perimeter tile design, waste volume estimates, masonry structure design.
 - B. Nutrient management design fails to meet mandatory standards for calculation of land application areas, manure characteristic and volume calculations, lack of specific and historic crop yield per soil type, inappropriate land used for disposal and lack of soil conservation plan, mortality management.
7. On October 12, 2007, Duckwall filed a Motion for Summary Judgment. The parties fully briefed their positions on summary judgment, submitted proposed findings of fact, conclusions of law and proposed orders. Oral argument was conducted. In sum, the Court’s March 27, 2009 Findings of Fact, Conclusions of Law and Order (“March 27, 2009 Order”) on summary judgment (incorporated into this Final Order by reference) held that Duckwall was granted summary judgment that:
 1. surface and/or subsurface contamination will not be caused even if Duckwall’s land application activities comply with the CAFO rule;
 2. surface and/or subsurface contamination will not be caused even if Duckwall’s land application acreage complies with the CAFO rule.”
8. The Court’s March 27, 2009 Order denied summary judgment for Duckwall, for lack of substantial evidence required to meet his burden of proof and production on the following issues:
 1. whether surface and/or subsurface contamination will be caused by the concrete pit design and construction;
 2. whether surface and/or subsurface contamination will be caused by the volume of manure, due to how the volume was calculated;
 3. whether Duckwall’s land use agreements satisfy applicable law;
 4. whether Duckwall’s mortality management information satisfies 327 IAC 15-15 10(h);

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Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

5. whether Duckwall's concrete pit and perimeter drain designs and specifications satisfy 327 IAC 16-8;
6. whether adequate review occurred, and resulted in the appropriate decision to issue a general permit, instead of an individual permit.

These issues were the subject of the June 9, 10, 2009 Final Hearing ("Final Hearing").

9. At the Final Hearing, testimony for Petitioners was presented from Edward L. Embry and Gary Endsley, and expert testimony from Kathy A. Martin. Permittee/Respondent, Duckwall presented his testimony, and expert testimony from IDEM's Daniel J. Bruggen and Livestock Engineering Solutions, Inc.'s Dr. Michael A. Veenhuizen, Ph.D. IDEM did not present its own witnesses, but did examine other parties' witnesses.
10. Petitioners' expert witness, Kathy Martin, testified that IDEM should not have issued Duckwall a general permit, that if any permit was warranted, it was an individual permit. Ms. Martin testified further that she never designed a CAFO, nor prepared or submitted application materials for a CAFO NPDES permit. *Tr. p. 188.*¹
11. In summary, Ms. Martin alleged that the Duckwall NOI material were deficient as concerned the perimeter drain tile system, masonry structures, concrete specifications for the underground manure storage tanks, calculations of waste volume in the underground manure storage tanks, and sufficiency of land use agreements.
12. Dr. Veenhuizen's education and professional experience as to CAFO design, construction and management included preparation and submission to IDEM of approximately 300 CAFO applications or related materials since 1994. *Tr. p. 5 – 13.* In serving as Duckwall's expert witness, Dr. Veenhuizen reviewed but did not prepare the Duckwall NOI materials. *Tr. p. 13.*
13. Drinking water is supplied in the area of the Duckwall farm from the sand and gravel aquifer system underlying a clay layer. *Testimony of Kathy Martin, Tr. p. 189).* The Embry well is 132 to 137 feet deep. *Petitioner's Ex. 55, letter of Lowell A. Taylor, Taylor Well Drilling.* Gary and Connie Endsley's well is as deep as 156 feet. *Petitioner's Ex. 55, letter of Gary and Connie Endsley (well is 130-160 feet deep); Indiana Department of Natural Resources' Record of Water Well (156 feet).* Soil formations for the Endsley well consist of clay from 0 to 138 feet, and sand and gravel from 138 to 156 feet. *Petitioner's Ex. 55, Indiana Department of Natural Resources' Record of Water Well.* The Duckwalls utilize the same aquifer for their drinking water.

¹ Although the Court did not have a transcript, citations were provided in Respondent/Permittee's proposed Findings of Fact, Conclusions of Law and Final Order, and correspond in substance to the Court's notes from the evidentiary hearing. Therefore, the Court is adoption transcript pinpoint citations.

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

14. At the Duckwall CAFO site, the 138-foot clay layer is a barrier to the aquifer used for drinking water by the Petitioners and Duckwall, making the suite suitable for Duckwall's proposed operations. *Testimony of Dr. Michael Veenhuizen, Ph.D., Tr. p. 73, 74.*

Perimeter Drain Tile System

15. 327 IAC 16-8-1 provides, in pertinent part:
- a. new waste management systems for liquid or solid manure must not be constructed:
...
(5) in soil that is expected to be in the seasonal high water table, unless the water table is lowered to keep the water table below the bottom of the waste management system.
16. Ms. Martin expressed her opinion that the design for the perimeter drain tile system did not contain adequate detail to establish whether the proposed perimeter drain tile system would comply with 327 IAC 16-8-1(a)(5). *Tr. pp. 73-75.* Ms. Martin relied upon specifications in ASABE Publications regarding the construction of field tiles to conclude that additional detail should have been provided. *Tr. pp. 60, 78-80.* However, Ms. Martin presented no evidence or testimony that the design of the perimeter drain tile system was in fact inadequate to comply with 327 IAC 16-8-1.
17. Mr. Bruggen coordinated IDEM's review of the Duckwall NOI Materials, and presented testimony specifying how IDEM found the perimeter drain tile system design to be adequate. *Tr., p. 204.*
18. Dr. Veenhuizen identified the specific portions of the application materials regarding details of the perimeter drain tile system. *Tr. pp. 15-18.* Dr. Veenhuizen's testimony supported his opinion that the plans and specifications in the NOI Materials provided sufficient detail and documentation to determine whether the drain tile system complies with IDEM's requirements. *Tr. pp. 14, 15.*
19. Dr. Veenhuizen also performed two sets of calculations to determine whether the perimeter drain tile would comply with the 327 IAC 16-8-1. The result of his calculations, assuming a worst-case scenario where the seasonal water table was renewing itself continually as the perimeter tile removes water, was that the drain tiles would run at about half to two-thirds full, providing capacity in excess of that required to comply with 327 IAC 16-8-1. *Tr. pp. 18-20.* Dr. Veenhuizen's calculations and testimony were not refuted by Petitioners on this issue.
20. Substantial evidence was presented that the Duckwall perimeter drain tile exceeded capacity required by regulations.

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

Masonry Structures

21. 327 IAC 16-8-6 (2009) states design requirements applicable to all new concrete storage structures for liquid manure, and provides:

In addition to sections 1 through 5 of this rule, new concrete storage structures for liquid manure must be designed to be structurally sound through:

- (1) a concrete mixture that is well-proportioned and consolidated;
 - (2) minimized cracking;
 - (3) joints that are properly spaced, sized, designed, and constructed;
 - (4) adequate reinforcement steel;
 - (5) a foundation that provides necessary support; and
 - (6) use of water stops.
22. Ms. Martin's expert opinion concluded that the plans and specifications for column and beam details contained in the NOI Materials consisted solely of masonry block construction. *Tr. p. 190*). She expressed low confidence in the stability of masonry blocks because of perceived permeability issues. She also cited to the most recent version of the Midwest Plan Service MWPS-36 which, in its preface, states that masonry columns are rarely used in manure storages and are susceptible to poor construction, and that those designs were removed from the publication. *Tr. p. 87*.
23. Mr. Bruggen testified that IDEM determined that the design and specifications for the manure storage tanks contained in the NOI Materials complied with IDEM's rules. *Tr. p. 205*.
24. Dr. Veenhuizen testified regarding the plans and specifications for columns and beams and referenced the specific portions of the NOI Materials regarding these plans. *Tr. pp. 20-24*. He explained that, contrary to Ms. Martin's testimony, the plans and specifications contained two options for construction: (1) utilizing masonry blocks with rebar and poured concrete as reinforcement; and (2) poured concrete columns utilizing no masonry. He stated that both proposed designs are approved by IDEM. *Tr. p. 23*. Dr. Veenhuizen's expert opinion was that the specifications for columns and beams met or exceeded the construction or concrete standards applicable to the Duckwall facility. *Tr. p. 21, 22*.
25. By substantial evidence, the Duckwall facility design and construction concrete standards meet or exceed regulatory requirements.

Concrete Specifications for the Underground Manure Storage Tanks

26. 327 IAC 16-8-6, *supra*, governs the design requirements applicable to new concrete storage structures.

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

27. Ms. Martin expert opinion stated concern about the concentration of sulfates in the swine manure and the need to use a sulfate corrosion resistant concrete for the manure pits. She stated that only Type V Portland cement should be used for concrete manure storage pits to prevent sulfate corrosion. Ms. Martin opined that using Type I or Type II Portland cement as proposed in the NOI Materials is a deficiency and that Mr. Duckwall has not addressed the permeability requirement of the IDEM rule. *Tr. pp. 91-98, 134-135.* In support of her opinions, Ms. Martin referred to a study conducted by the University of Guelph School of Engineering in Ontario, Canada (“Guelph Study”). The Guelph Study indicated that swine manure has severe levels of sulfate concentrations and that Type V Portland cement should be used for manure storage pits. *Pet. Ex. 121(A).* Ms. Martin also offered her calculations converting sulfur concentrations to sulfate concentrations and stated that based on her calculations, that there is more than a negligible level of sulfates in a deep manure storage pit. *Pet. Ex. 102; Tr. p. 129.*
28. Ms. Martin also testified that if there were no releases from the manure storage pits or the CAFO barns, there would be no threat of ground water contamination to the Petitioners from the proposed CAFO. *Tr. p. 191.*
29. Dr. Veenhuizen relied upon the MWPS-36 for the proposition that a concrete mix with a compressive strength of 4,000 PSI and a water-cement ratio of 0.50 is suitable for most structures storing manure, and that Type I Portland cement is used in most manure storages. *Tr. p. 29, 30.* Dr. Veenhuizen testified that the concrete proposed for the Duckwall tanks is consistent with the recommendations contained in MWPS-36, will “far exceed” the permeability required to meet the seepage standard, and complies with IDEM’s requirements. *Tr. pp. 31, 44-45, 49-50.*
30. Dr. Veenhuizen also relied upon a study from the University of Illinois, *Resp. Ex. C*, that identified sulfate concentration in stored manure at 5.78 mg/L as opposed to the Guelph Study that showed 1,800 mg/L. Dr. Veenhuizen stated that the sulfate levels presented in the Guelph study are much higher than the levels he has observed in his personal experience with swine manure analysis. *Tr. pp. 36-40.*

Calculations of Waste Volumes in the Manure Storage Tanks

31. 327 IAC 16-8-4 governs the storage capacity for manure storage structures and requires 180 days of storage capacity, and requires that:
- New manure storage structures for the confined feeding operation must be designed, constructed, and maintained with a combined storage capacity of at least one hundred eighty (180) days storage for:
- (1) manure;
 - (2) if applicable, bedding;
 - (3) net average rainfall; and

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General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)**

- (4) if applicable, the expected rainfall and run-off from a twenty-five (25) year, twenty-four (24) hour precipitation event that falls on the drainage area around the liquid manure storage structure, but not to include the expected rainfall and run-off from a twenty-five (25) year, twenty-four (24) hour precipitation event that falls directly on the liquid manure storage structure.
32. Undisputed evidence by the parties indicated that the majority of animals present on the Duckwall facility will be hogs, from birth to 20 weeks of age, after which time they will be sold.. Ms. Martin believes that in calculating waste volume, 150 pounds should be used as the average animal weight, as opposed to 135 pounds used by IDEM in its waste volume calculations. *Tr. pp. 136, 137.* By substantial evidence, 135 pounds of weight per animal is a more accurate average weight of hogs from the age of birth to 20 weeks. Ms. Martin also contested IDEM's use of 20,000 gallons of wash water every twenty weeks and suggested that IDEM should have based its calculation on a per animal figure provided in a Purdue University guidance document. Had IDEM used the Purdue calculation, it would have arrived at a much greater volume of wash water that would increase the overall volume of waste produced. *Tr. pp. 138-143.* Ms. Martin contended that, because IDEM did not use the Purdue calculation, it could not determine with accuracy whether the proposed storage tanks provide the required 180-day capacity. *Tr. pp. 144-145.*
33. Dr. Veenhuizen explained why 135 pounds was an appropriate average weight for a “wean-to-finish” building, as proposed by Duckwall. *Tr. p. 51, 52.* Dr. Veenhuizen also testified that, in his personal experience and based on his knowledge of CAFO operations, 20,000 gallons of wash water every 20 weeks is an accurate estimate. *Tr. p. 53, 54.* Dr. Veenhuizen calculated that even if the Purdue formula cited by Ms. Martin is used to determine the volume of wash water, the proposed storage tanks would still have more than 300 days of storage capacity, compared to the 331 days calculated by IDEM. *Tr. p. 55.* Based on this information, Dr. Veenhuizen testified that manure storage tanks proposed for the Duckwall operation exceed the 180-day requirement for storage capacity. *Tr. p. 56.*
34. Substantial evidence was presented that the Duckwall manure storage tanks exceed the 180-day requirement for storage capacity.

Sufficiency of the Land Use Agreements

35. 327 IAC 16-10-1(b) requires a land use agreement signed by the owner of any property not owned by the CAFO owner on which manure may be land applied.
36. Ms. Martin stated that the land use agreements in the NOI Materials did not provide sufficient information to allow IDEM to determine the actual number of acres available for land application of manure. *Tr. pp. 147, 148.*

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

37. Mr. Bruggen testified that he reviewed both the land use agreements in the NOI Materials, which were IDEM forms, and land application maps submitted by Mr. Duckwall to determine the number of acres available for land application. For required land application acreage, IDEM calculated that Duckwall would require five hundred eighty-eight (588) acres would be required; the parties do not dispute that Duckwall is providing one thousand forty-nine (1,049) acres. Even if Petitioners' allegation that IDEM's calculation was thirty percent (30%) less than required in Purdue Bulletin ID-101, then only eight hundred thirty (830) acres would be required. Based on his review of the NOI materials, Mr. Bruggen determined that the land use agreements complied with IDEM's requirements, and provided sufficient land for application. *Tr. pp. 208, 210, 211.*
38. By substantial evidence, the NOI materials provided sufficient information to determine that the number of acres available for land application, which amount met or exceeded IDEM regulations.

Mortality Management

39. 327 IAC 15-15-10(h) requires CAFOs which use composting for dead animals to "have run-on and run-off control."
40. Ms. Martin's expert opinion was that the NOI Materials are deficient because they do not address the question of composting and mortality management provided in 327 IAC 15-15-10(h). *Tr. p. 156, 159.*
41. Mr. Bruggen testified that IDEM does not require a mortality management plan as part of CAFO application materials; however, IDEM does require a CAFO permittee to comply with IDEM's rules (327 IAC 15-15-10(h)) for carcass management with respect to composting. *Tr. pp. 206, 241.*
42. Dr. Veenhuizen's expert opinion was that the NOI materials complied with IDEM's rules. *Tr. p. 76.*
43. Mr. Duckwall testified that he is aware of IDEM's requirements concerning composting as a means of mortality management, and he will ensure that any compost facility will have run-on and run-off control pursuant to IDEM's rule. *Tr. p. 139.*

Adequacy of IDEM Review of the NOI Materials

44. Ms. Martin's expert opinion was that IDEM's review of the NOI Materials was deficient for lack of considering information related to Mr. Duckwall's existing CAFO operation. *Tr. p. 169-171.*

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

45. Mr. Bruggen described IDEM's process in reviewing the NOI Materials, which includes ensuring compliance with the application requirements under 327 IAC 16-7-2, review by the engineering and geology staff at IDEM Office of Land Quality, and a site inspection. *Tr. pp. 196-200.* Mr. Bruggen also explained that during the review process, IDEM's engineering staff noted deficiencies in the engineering plans originally submitted. IDEM issued a Notice of Deficiency ("NOD") requesting additional information. Mr. Duckwall responded to the NOD with information that, coupled with information obtained by IDEM during the site inspection, cured the deficiencies. *Tr. pp. 201-203.*

General v. Individual Permit

46. Ms. Martin's expert opinion was that an individual, as opposed to a general permit, should be required for the proposed Duckwall operation. It was her belief that with an individual permit, special conditions, such as ground water monitoring, could be required. *Tr. pp. 185-187.*
47. Both Dr. Veenhuizen and Mr. Bruggen testified that 327 IAC 15-15-9 provides the various factors which could lead IDEM to require an individual, as opposed to a general CAFO permit. Both witnesses testified that none of the factors contained in that rule were present on the Duckwall property, and that therefore, an individual permit was not warranted. *Tr. pp. 56, 57, 206, 207.*
48. By substantial evidence, none of the factors stated in 327 IAC 15-15-9 were present concerning the Duckwall facility.

Preparation of NOI Materials by JBS United and Dr. Veenhuizen Certification

49. On cross-examination of Dr. Veenhuizen, counsel for Petitioners asserted that the Duckwall Application materials were submitted in violation of Indiana's professional engineer statute, I.C. § 25-31-1, *et seq.*, because they allegedly were not prepared by an engineer licensed in the State of Indiana. *Tr. pp. 88-92.* Further, counsel for Petitioners questioned Dr. Veenhuizen's competency to testify as an expert witness based on the lapse of his professional engineer's registration, which registration is in the process of renewal. *Tr. p. 102.*
50. Dr. Veenhuizen presented his curriculum vitae and provided testimony regarding his extensive education and professional experience regarding CAFO design, construction, and management. *Tr. p. 12.*

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

CONCLUSIONS OF LAW

1. The Office of Environmental Adjudication (“OEA”) has jurisdiction over decisions of the Commissioner of the IDEM and the parties to the controversy pursuant to I.C. § 4-21.5-7-3. I.C. § 4-21.5-3, *et seq.*, and I.C. § 4-21.5-7, *et seq.*, allow the OEA to promulgate rules and standards in order to allow it to conduct its duties.
2. This is a Final Order issued pursuant to I.C. § 4-21.5-3-23, I.C. § 4-21.5-3-27, and 315 IAC 1-2-1(9). Findings of fact that may be construed as conclusions of law and conclusions of law that may be construed as findings of fact are so deemed.
3. In this case, Petitioners sought administrative review as to whether Respondent, Indiana Department of Environmental Management (“IDEM”) correctly determined that Duckwall’s project to construct and operate finishing hog barns for approximately 9,000 hogs did not require a site-specific permit, as it qualified to obtain coverage as a “permit-by-rule” under the National Pollution Discharge Elimination System (“NPDES”) Concentrated Animal Feeding Operation (“CAFO”) rule”, 327 IAC 15-15. Petitioners have the burden of showing whether IDEM’s determination either complied with, or was contrary to law or is somehow deficient so as to require revocation, as a matter of law. ”). I.C. § 4-21.5-3-14(c); *In the matter of Objection to the Issuance of Permit Approval No. IN 0061042 Aquasource Services and Technology*, 2002 OEA 41.
4. The OEA’s findings of fact must be based exclusively on the evidence presented to the Environmental Law Judge (“ELJ”) and deference to the agency’s initial factual determination is not allowed. I.C. § 4-21.5-3-27(d); *Indiana Dept. of Natural Resources v. United Refuse Co., Inc.*, 615 N.E. 100 (Ind. 1993); *Indiana-Kentucky Electric v. Commissioner, Indiana Department of Environmental Management*, 820 N.E.2d 771, 781 (Ind. App. 2005). “*De novo* review” means that “all issues are to be determined anew, based solely upon the evidence adduced at that hearing and independent of any previous findings.” *Grisell v. Consol. City of Indianapolis*, 425 N.E.2d 247 (Ind.Ct.App. 1981).

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

5. OEA is required to base its factual findings on substantial evidence. *Huffman v. Office of Env'tl. Adjud.*, 811 N.E.2d 806, 809 (Ind. 2004)(appeal of OEA review of NPDES permit); *see also* I.C. § 4-21.5-3-27(d). While the parties disputed whether IDEM correctly determined that Duckwall's project to construct and operate finishing hog barns for approximately 9,000 hogs did not require a site-specific permit, as it qualified to obtain coverage as a "permit-by-rule" under NPDES CAFO rule, 327 IAC 15-15, OEA is authorized "to make a determination from the affidavits . . . pleadings or evidence." I.C. § 4-21.5-3-23(b). "Standard of proof generally has been described as a continuum with levels ranging from a "preponderance of the evidence test" to a "beyond a reasonable doubt" test. The "clear and convincing evidence" test is the intermediate standard, although many varying descriptions may be associated with the definition of this intermediate test." *Matter of Moore*, 453 N.E.2d 971, 972, n. 2. (Ind. 1983). The "substantial evidence" standard requires a lower burden of proof than the preponderance test, yet more than the scintilla of the evidence test. *Burke v. City of Anderson*, 612 N.E.2d 559, 565, n.1 (Ind. Ct. App. 1993). *GasAmerica #47*, 2004 OEA 123, 129. *See also Blue River Valley*, 2005 OEA 1, 11-12. *Objection to the Denial of Excess Liability Trust Fund Claim Marathon Point Service, ELF # 9810570/FID #1054, New Castle, Henry County, Indiana; Winimac Service, ELF #9609539/FID #14748, Winimac, Pulaski County, Indiana; HydroTech Consulting and Engineering, Inc*, 2005 OEA 26, 41.
6. As Duckwall correctly argues, the OEA has considered several appeals of Confined Feeding Operation and CAFO approvals, and has established precedent, including:
 - A. OEA may not overturn an IDEM approval upon speculation that a regulated entity will not operate in accordance with the law. *In Re: Objection to the Issuance of Confined Feeding Operation Approval, Swine Pro 1, LLC*, 2007 OEA 155; *In Re: Objection to Issuance of Approval No. AW5499/Farm ID #6370, NPDES CAFO ID No. ING806370, Concentrated Animal Feeding Operation, Talara Lykins*, 2007 OEA 114, *aff'd.*, Marion County Superior Court Civil Division, Room F-12, Cause No. 49F12-0708-MI-32019 (April 4, 2008); *In Re: Objection to Amendment to Approval No. AW #5076/Farm ID#6165, Confined Feeding Operation, DeGroot Dairy*, 2006 OEA 1; *In Re: Objection to the Issuance of Approval No. AW5404, Mr. Stephen Gettlefinger, Washington, IN, 1998 WL 918589 (Ind. Off. Env. Adjud.)*.
 - B. OEA may not overturn IDEM's approval of a permit upon speculation that the permittee would allow unauthorized run-off, that the permittee would not detect or control failure of a concrete tank which otherwise complied with applicable design or operation requirements and regulations, or that the permittee would fail to comply with land application rules. *Lykins, Id.*
 - C. OEA cannot invalidate a permit on allegations of a permittee's future violations. *Swine Pro 1, LLC, Id.; Lykins, Id.; DeGroot, Id.; Gettlefinger, Id.; In Re: Objection to the Issuance of Permit Approval No. AW-4429, William Smith, Rush County, Indiana*, Cause No. 97-S-J-1855.

**Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)**

D. The Water Pollution Control Board promulgated applicable regulations, and in so doing, determined that the regulations were protective of human health and the environment. Therefore, OEA only has jurisdiction to determine whether IDEM acted in accordance with Title 13 and applicable regulations. *Swine Pro 1, LLC, Id.*

Perimeter Drain Tile System

7. Petitioners did not meet their burden of proof that the design of the perimeter drain tile system is deficient. Ms. Martin's reliance on ASABE field tile standards is misplaced, as these standards are not required to be adhered to by IDEM, and the OEA may not impose requirements beyond those imposed by the rules applicable to CAFO construction. Both Mr. Bruggen's and Dr. Veenhuizen's testimony demonstrated that the perimeter drain tile design complies with 327 IAC 16-8-1. By substantial evidence, the perimeter drain tile system complies with applicable IDEM requirements.

Masonry Structures

8. Petitioners did not meet their burden of proof that the design of the masonry structures is deficient. Ms. Martin incorrectly interpreted the plans to mean both column designs would be masonry block. Further, testimony offered by Mr. Bruggen and Dr. Veenhuizen addressed and refuted Ms. Martin's concerns. By substantial evidence, the proposed column designs satisfy applicable IDEM requirements.

Concrete Specifications for the Underground Manure Storage Tanks

9. Petitioners did not meet their burden of proof in alleging that the concrete specifications for the underground manure storage tanks are deficient. A document relied upon by Ms. Martin to establish that manure has corrosive properties, MWPS-36, states that the type of concrete mix proposed to be utilized by Mr. Duckwall is suitable for structures storing manure, and that "in most cases Type I Portland cement is used in manure storages." *Pet. Ex. 110, Tr. p. 45.* By substantial evidence, the concrete proposed to be utilized will have permeability within regulatory requirements.

Calculation of Waste Volumes in Manure Storage Tanks

10. Petitioners did not meet their burden of proof that the calculations of waste volumes were deficient. Testimony offered by Dr. Veenhuizen demonstrated that Ms. Martin's proposed numbers for the wash water resulted in a storage capacity exceeding regulatory requirements. By substantial evidence, there is no deficiency in the calculation of the waste volume or the storage capacity of the tanks.

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

Sufficiency of Land Use Agreements

11. Petitioners did not meet their burden of proof that the land use agreements provided in the NOI Materials were deficient. The land use agreements, coupled with the land application maps, allowed IDEM to verify that adequate acreage is available for land application. Further, Mr. Duckwall utilized IDEM's form land use agreement. By substantial evidence, the land use agreements submitted in the NOI Materials comply with IDEM's requirements.

Mortality Management

12. Petitioners did not meet their burden of proof that the NOI Materials are deficient for lack of a mortality management plan. IDEM's rules do not require an applicant to submit a mortality management plan with NOI materials. Further, to the extent Mr. Duckwall composts carcasses, ensuring the design of the compost facility complies with IDEM's rules is an enforcement matter; and cannot be prospectively enforced. *See Swine Pro 1, LLC, Id.; Lykins, Id.; DeGroot, Id.; Gettlefinger, Id.; In Re: Objection to the Issuance of Permit Approval No. AW-4429, William Smith, Rush County, Indiana, Cause No. 97-S-J-1855.*

Adequacy of IDEM Review of the NOI Materials

13. Petitioners did not meet their burden of proof that IDEM's review of the NOI Materials was inadequate. IDEM thoroughly reviewed the NOI Materials, utilizing, among others, its engineering and geology staff. IDEM's detailed review was evidenced by its identifying deficiencies in the engineering plans and requiring Duckwall to submit additional information before the Permit was issued. By substantial evidence, IDEM's review of the NOI Materials was adequate and appropriate.

Individual vs. General Permit

14. Petitioners did not meet their burden of proof that an individual permit, as opposed to a general permit, should have been required for the proposed Duckwall operation. No substantial evidence was presented that factors provided by 327 IAC 15-15-9 which could be utilized by IDEM to require an individual permit exists with respect to the proposed Duckwall operation. Therefore, IDEM justifiably exercised its discretion not to require an individual permit.

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

Preparation of NOI Materials by JBS United and Dr. Veenhuizen Certification

15. I.C. § 25-31-1-19(b)(3) provides in relevant part that:

(b) An official of this state . . . charged with the enforcement of any law, ordinance, or rule relating to the design, construction, or alteration of buildings or structures, may not use or accept or approve any plans or specifications that have not been prepared by, or under the supervision of and certified by, a registered professional engineer.

This section does not apply:

(3) **To plans or specifications contained in . . . [a] permit application for an initial permit**, the renewal of a permit, the modification of a permit, or a variance from a permit submitted to [IDEM] under IC 13, unless the permit is for the approval of plans or specifications for construction for which a professional engineer's seal is required by operation of either state or federal law, rule, or regulation.

(Emphasis added.)

16. Duckwall's NOI was submitted to IDEM pursuant to I.C. § 13, *et seq.*

17. Petitioners presented no evidence of any state or federal law, rule, or regulation that required the Duckwall NOI Materials to be prepared by a professional engineer.

18. Based on I.C. § 25-31-1-19(b)(3), there is no requirement for the Duckwall NOI Materials to be prepared by or certified by a professional engineer. The Office of Environmental Adjudication is not authorized to impose such a requirement, contrary to environmental laws stated in I.C. § 13, *et seq.*, and contrary to professional licensing requirements stated in I.C. § 23-31, *et seq.*

19. Dr. Veenhuizen's education, professional experience, and prior testimony before this court establish his competency to testify as an expert witness concerning CAFOs. Dr. Veenhuizen's expertise has been previously acknowledged before OEA in these matters. *In Re: Objection to Issuance of Approval No. AW5499/Farm ID #6370 NPDES CAFO ID No. ING806370, Concentrated Animal Feeding Operation, Talara Lykins*, 2007 OEA 114.

20. Petitioners did not meet their burden of proof regarding their allegation that they would be adversely affected by subsurface and surface drainage from the proposed Duckwall CAFO and land application areas.

Objection to Issuance of Confined Animal Feeding Operation NPDES CAFO
General Permit Farm ID No. 357C / CAFO ID. No. ING800357
Chris Duckwall
Van Buren, Grant County, Indiana
2009 OEA 155 (07-W-J-3836)

21. 327 IAC 15-15-7(b) requires:

The NOI must also contain all information required under 327 IAC 16-7-2 and the operation must comply with the design and construction requirements of 327 IAC 16-5 and 16-8 (governing design and construction requirements for concrete pits under confinement buildings).

By substantial evidence, the NOI Materials submitted by Mr. Duckwall to IDEM meet or exceed all applicable CAFO rules.

FINAL ORDER

AND THE COURT, being duly advised, hereby **FINDS AND ORDERS** that substantial evidence supports Respondent, Indiana Department of Environmental Management's granting of National Pollution Discharge Elimination System Concentrated Animal Feeding Operation General Permit for Farm number 357C / CAFO ID NO. ING800357, to Chris Duckwall on his Notice of Intent to construct two finishing hog barns to expand the capacity of an existing finishing hog barn, for approximate total capacity of 9,000 hogs, and for land application of manure.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that Respondent, Indiana Department of Environmental Management's granting of National Pollution Discharge Elimination System Concentrated Animal Feeding Operation General Permit for Farm number 357C / CAFO ID NO. ING800357, to Chris Duckwall on his Notice of Intent to construct two finishing hog barns to expand the capacity of an existing finishing hog barn, for approximate total capacity of 9,000 hogs, and for land application of manure is **AFFIRMED**, and remaining Petitioner's Amended Petition for Administrative Review is **DISMISSED**. All further proceedings are **VACATED**.

You are further notified that pursuant to provisions of I.C. § 4-21.5-7-5, the Office of Environmental Adjudication serves as the ultimate authority in administrative review of decisions of the Commissioner of the Indiana Department of Environmental Management. This is a Final Order subject to Judicial Review consistent with applicable provisions of I.C. § 4-21.5, *et seq.* Pursuant to I.C. § 4-21.5-5-5, a Petition for Judicial Review of this Final Order is timely only if it is filed with a civil court of competent jurisdiction within thirty (30) days after the date this notice is served.

IT IS SO ORDERED this 3rd day of December, 2009 in Indianapolis, IN.

Hon. Mary L. Davidsen
Chief Environmental Law Judge