Objection to Issuance of Confined Feed Operation Approval
Farm ID #7000/Animal Waste #6749
Rhett Light
Cause No. 18-W-J-5000

OFFICIAL SHORT CITATION NAME: When referring to 2019 OEA 17, cite this case as **Rhett Light 2019 OEA 17.**

Case Name: Objection to Issuance of Confined Feeding Operation Approval, Farm ID #7000/Animal Waste #6749, Rhett Light, Muncie, Delaware County, Indiana

Cause No. 18-W-J-5000

TOPICS:
Confined Feeding Operation/CFO
Confined Animal Feeding Operation/CAFO
Wean-to-feed
Below ground concrete waste pits
Manure storage capacity
process water
storm water
seasonal high-water characterization
berm
federal storm water requirements
Land application
Soil borings
Mottles
Water table
Aquifer
Hydrogeologic
Infiltration rate
Perimeter drain tile
Sump pump
Alternative compliance approach/ACA
Expert witness
Professional engineer/PE
Manning's Equation
Darcy's Law
National Resource Conservation Service/NRCS
Manure Management Plan/MMP
Nutrient Management Plan/NMP
Ind. Code § 4-21.5-7-3
I.C. § 4-21.5-3-14(c)
I.C. § 4-21.5-3-27(d)
I.C. § 13-13, et seq.
315 IAC 1-3-2(b)

327 IAC 3
327 IAC 19
327 IAC 19-3-1
327 IAC 19-5-1
327 IAC 19-7-1(c)(6)
327 IAC 19-7-2(b)(1)
327 IAC 19-7-5(a)
327 IAC 19-12-3(d)
327 IAC 19-12-4(n), (o)
327 IAC 19-14-4(d)
40 CFR.122.42(e)(1)-(2)
40 CFR 122.23(e)
NRCS Code 313
NRCS Code 606
NEM 531.0
NEM IN531.2
Nat'l Pork Producers Council v. U.S. EPA,
635 F.3d 738 (5th Cir. 2011)
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532 U.S. 275, (2001)
Indiana Dep't of Natural Resources v. United Refuse Co., Inc.,
615 N.E.2d 100 (Ind. 1993)
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425 N.E.2d 247 (Ind. Ct. App. 1981)
Broshears Farm, 2018 OEA 1
Milco Dairy 2017 OEA 18
Union Go Dairy, 2016 OEA 1
New Fashion Pork, 2012 OEA 1
Aqua Indiana, 2011 OEA 14
Duckwall, 2009 OEA 155
Stuber, 2009 OEA 96
Elrod Water Co., 2009 OEA 4
Kyle Hall, 2008 OEA 100
Jennings Water, 2007 OEA 114
Blue River Valley, 2005 OEA 1
Fred Warner Farms, 2002 OEA 27

PRESIDING JUDGE:
Davidsen

PARTY REPRESENTATIVES:
Petitioners Kevin & Kathy Chambers, Stephen & Elizabeth Driscoll, Perry & Tonya Evans, Bob & Connie Rahe: Kim E. Ferraro, Esq.
Respondent/Permittee: Todd J. Janzen, Esq., Brianna J. Schroeder, Esq.
IDEM: Susanna A. Bingman, Esq.

ORDER ISSUED:
May 31, 2019

INDEX CATEGORY:
Water

FURTHER CASE ACTIVITY: [none]

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

IN THE MATTER OF:	)	
	)	
OBJECTION TO THE ISSUANCE OF	)	CAUSE NO. 18-W-J-5000
CONFINED FEEDING OPERATION APPROVAL	)	
FARM ID # 7000/ ANIMAL WASTE # 6749	)	
RHETT LIGHT	)	
MUNCIE, DELAWARE COUNTY, INDIANA.	)	
_____	)	
Kevin & Kathy Chambers, Stephen & Elizabeth Driscoll,	)	
Perry & Tonya Evans, Bob & Connie Rahe,	)	
Petitioners,	)	
Rhett Light,	)	
Permittee/Respondent,	)	
Indiana Department of Environmental Management,	)	
Respondent.	)	

FINDINGS OF FACT, CONCLUSIONS OF LAW AND FINAL ORDER

This matter came before the Office of Environmental Adjudication (the "Court" or the "OEA") on a final evidentiary hearing, by legal counsel, on Petitioners' Kevin & Kathy Chambers, Stephen & Elizabeth Driscoll, Perry & Tonya Evans, and Bob & Connie Rahe's Petitions for Administrative Review of Confined Feeding Operation Approval for Farm ID #7000/Animal Waste #6749 issued to Respondent Rhett Light, by Respondent Indiana Department of Environmental Management. The Final Hearing was conducted on November 15, November 16, and December 10, 2018. The parties attended in person and by legal counsel. Chief Environmental Law Judge Mary L. Davidsen, Esq., presided. Witnesses were sworn and evidence heard. The parties submitted well-stated February 6, 2019 Proposed Findings of Fact, Conclusions of Law and Proposed Orders.[1] In sum, Petitioners objected to IDEM's issuance of a wean-to-feed pork production barn construction and operating permit issued to the farm, for the permit application's lack of sufficient information needed to determine whether specified drainage features would function within regulatory parameters. And the Court, being duly advised, enters the following Findings of Fact, Conclusions of Law and Final Order.[2]

Summary of Decision

[1] The parties' Proposed Findings, *et al*., comported with the transcript, exhibits and pleadings. Either document met the presiding chief environmental law judge's standards, such that either one would have been a quality final order substantially as written, depending on which party prevailed on which argument. After confirmation as to accuracy, this Final Order adopts the excellent drafting from each of the submitted Proposed Findings.

[2] Per email communications on May 8, 9, 2019 (part of the Court's record), the parties agreed to the Court's extension of Final Order issuance date of May 31, 2019, due to schedule congestion.

Petitioners presented substantial evidence regarding errors allegedly made by the Indiana Department of Environmental Management ("IDEM") in approving the permit in question. Petitioners' evidence was rebutted or outweighed by Respondents' substantial evidence in response that Respondent IDEM correctly issued the challenged permit to Respondent Rhett Light. Judgment is entered in favor of IDEM and Respondent Rhett Light.

Findings of Fact

1. On December 12, 2017, Respondent/Permittee Rhett Light ("Light") submitted an application (the "Application") to IDEM to construct and operate a new hog confined feeding operation ("CFO") at 2601 West County Road 1270 North, in Muncie, Delaware County, Indiana. *Ex. 1*.

2. Prior to permit Approval and site construction, on February 5, 2018, several concerned area residents and most Petitioners met with IDEM staff, including Application reviewers Joe Williams, Daniel Bruggen and Andrew Najafiarab. *Ex. 27, IDEM 00012 – 00013; Tr. Vol I, 40 – 41, 75, 225.*[3] Petitioners state that they presented video and photos showing local water flow conditions at the CFO site. *Id.* Najafariab agreed that water ponding and flooding were shown, *Tr. Vol. I, 75,* and testified that he considered this information while reviewing the Application. *Tr. Vol. I, 41.*

3. On March 22, 2018, IDEM approved Light's CFO application as supplemented ("Approval" or "Permit"). *Ex. 2*.[4] The Application was reviewed by IDEM "for completeness and/or satisfaction with the requirements" by Joe Williams, Dan Bruggen, Leila Trabelsi[5] and Andrew Najafiarab. *Ex. 3, IDEM 00723 – 00724*. In approving the perimeter drain system and the berm as an alternative compliance approach to surface water setback, IDEM relied in part on Trabelsi's engineering review and Najafiarab's geology review. *Ex. 3, IDEM 00727 -00728.*

4. Annually, the Permitted facility may house 10,560 wean-to-finish hogs in four production buildings constructed over below-ground[6] concrete waste pits with an estimated capacity of 4.2 million gallons of animal waste and process wastewater. *Ex. 1, IDEM 00006 – 00012.* The CFO is not allowed to discharge waste or process water, as it is a "zero-discharge" facility. *Tr. Vol. III, 33.* The pits are designed to exceed required manure storage capacity: the Light waste pits are designed to hold at least 347 days of

[3] The parties prepared a well-organized exhibit notebook; citations to its specific pages note the party which proffered a particular exhibit and the page/page range.

[4] Petitioners refer to the facility as a Confined Animal Feeding Operation ("CAFO"); IDEM issued a Confined Feeding Operation ("CFO") Approval. As Petitioners are challenging IDEM's Approval, this Final Order will refer to the facility as a CFO.

[5] Ms. Trabelsi stated that English was her second language, but that she believed that she understood the attorneys' questions.

[6] The top of the pits are from 36 to 50 inches below ground.

accumulated manure (and process water), while relevant regulations require that they be designed to hold 180 days of manure storage. *Ex. 2, IDEM 00321*

5. On April 2, 2018, Kevin and Kathy Chambers, Stephen and Elizabeth Driscoll, Perry and Tonya Evans, and Bob and Connie Rahe ("Petitioners"), by counsel, timely sought administrative review of the Approval, alleging the following four issues: (1) insufficient seasonal high-water characterization and perimeter drain specifications; (2) insufficient diversion berm information; (3) land application of manure would lead to impermissible levels of runoff; and (4) the Approval did not comply with federal storm water requirements.[7] Petitioners later appeared by legal counsel, who filed a May 24, 2018 First Amended Petition for Administrative Review ("Petition") on behalf of all Petitioners.

Preconstruction Site Conditions

6. Petitioner Kathy Chambers testified that her home and property are located across the road and downhill (about seventeen feet below) from the CFO site. *Tr. Vol. I, 222-223, 225.* Ms. Chambers testified that this has been her home for seventeen years, and that there is a long history of ponding and flooding in the area, including on the properties of the other Petitioners. *Id.* On sixteen occasions within the past two years, she has taken videos of stormwater runoff from the CFO site entering her property. *Tr. Vol. I, 225 – 226.* Ms. Chambers testified about how storm events currently result in low levels of flooding and excess water flow on properties in the area of and adjacent to the Site, and presented photos depicting saturated yards, water above the surface of driveways and roads ranging from adjacent to the Site, or approximately five and a quarter miles away, *Tr. Vol. I, 225 – 237; Ex. 27, IDEM 00942 – 00955,* but did not identify specific violations of applicable regulations in IDEM's Approval of the Light CFO. *Tr. Vol. I, 239.* Although testimony was presented that the Light CFO was not yet constructed, was not allowed to discharge manure and process water, had a perimeter drain for its waste pits, and had a berm/swale system to redirect storm water, Petitioners did not present testimony as to how these approved systems would specifically impact the water flow identified by Petitioner Chambers.

Characterization of Seasonal High-Water Table

7. Based on evidence presented by the parties, site soil is, in common terms, mostly clay, and has very low permeability, which will limit the entry of facility discharge into the groundwater at the Site. Light's Application, as supplemented, stated that certified soil scientists conducted eight soil borings at the CFO site to characterize the seasonal water table. *Ex. 2, IDEM 00323-325, 00464, 00472-478; Tr. Vol I, 193.* The soil borings

[7] In their February 6, 2019 Proposed Findings of Fact, Conclusions of Law and Final Order, Petitioners do not address a land application issue, *P. 2, ¶ 3,* raised in their First Amended Petition for Administrative Review. At final hearing, all parties presented evidence on the land application issue. Therefore, this Order will address the land *application* issue raised by Petitioners' Petition.

showed depth, soil texture/type, matrix, mottles, coatings, grade, size, shape, consistency, effervescence, and the location of a seasonal water table approximately 11 inches below ground surface. *Id.* Light's Application was reviewed by then-IDEM geologist Andrew Najafiarab, the coloration of soil at the site provides evidence of a seasonable high-water table at approximately 11 inches below surface. *Tr. Vol. I, 79, 106*. Over time, the presence of a water table causes a reaction in soil which changes the color of the soil. *Tr. Vol. I, 104*. Soil logs look for historical trends in soil, not free water floating in the sample itself. *Tr. Vol. I, 104-105*. USDA[8] soil typing provides information regarding seepage rates, soil texture, and soil plasticity, *Tr. Vol. I, 80, 105*, making the Site inappropriate for uses such as dwellings with basements, septic systems and sewage lagoons. *Ex. 27, IDEM 01013 – 01040.* The time of year at which a soil sample is taken does not affect the seasonal high-water table location or the soil scientist's ability to identify that table. *Tr. Vol. I, 106-107*.

8. IDEM geologist Najafiarab concluded that the local aquifers were adequately protected, based on site-specific geologic conditions, hydrogeologic aspects of the Site, water table and lower aquifer connections, in addition to proper construction and maintenance of the facility's waste management systems. *Ex. 5, Ex. 6, Tr. Vol. I. 22, 45-46, 52, 111-12*. Najafariab testified that the Adams Environmental soils investigation report, *Ex. 10,* two Indiana Department of Natural Resources ("DNR") maps which generally depict the county's consolidated and unconsolidated aquifers, and DNR water well records provided him with more relevant information than the pre-construction flooding information provided by the area residents/Petitioners. *Tr. Vol. I, 62.* He also concluded that the perimeter tile drainage system would effectively lower the water table below the base of the concrete pits. *Ex. 3, IDEM 00728.* The aquifers are protected by layers of clay. *Tr. Vol. I, 52-53, 57, 108-09*. The subsystems are not susceptible to surface contamination because they were overlain by thick till deposits. *Tr. Vol. I, 92, 109-11; Ex. 33, 34*. Soils at the site have a low infiltration rate. *Tr. Vol. I, 74*. This provides additional protection to groundwater against surface contamination. *Tr. Vol. I, 75*. Based on these site-specific conditions showing a low pollution potential, IDEM did not include groundwater monitoring as a requirement in the Approval. *Ex. 5 at IDEM 00235; Ex. 6 at IDEM 00286*.

9. IDEM engineer Leila Trabelsi testified the soil sampling was adequate for purposes of the perimeter tile drain. *Tr. Vol. I, 127*. She reviewed the county soil books and online governmental soil reports to determine the unified soil classification for soils at the site. *Tr. Vol. I, 144-45*. This classification provides color and structure specifications for the soil types. *Id.* Soil texture influences the water infiltration rate. *Tr. 145*. Eight borings were completed at the Site, which is more than is suggested in the relevant guidance, IN531-2. *Tr. Vol. I, 147, 149, 193-94*.

10. Because the soil borings depicted a seasonal water table within the footprint of the proposed below-building manure storage tanks, the Application and Approval indicated a perimeter drain would be utilized at the CFO. *Ex. 2 at IDEM 00303, 00465-471*.

[8] USDA is an abbreviation for the United States Department of Agriculture.

Perimeter Drainage Tile

11. Based on the soil seepage rate, relatively small drainage area, the information provided in the Permit Application, and past experiences with similar sites, IDEM determined a four-inch tile is more than adequate to handle and remove subsurface water at the site. *Ex. 3, IDEM 00724*. Trabelsi considered the type of perimeter drainage tile pipe (perforated or smooth), pipe elevations, the slope of pipes, the size of pipes, locations, and distance from the waste management system provided in the Application. *Tr. Vol. I, 165, 182, 197*. The Application also provided information regarding the proposed sumps and pumps and shutoff value in the perimeter tile system. *Tr. Vol. I, 197*. Trabelsi used standard calculations provided by the NRCS and the University of Minnesota to determine that the perimeter tile system was adequate. *Tr. Vol. I, 164, 166, 182-83*. She considered pipe diameter and flow capacity. *Id*. The drainage area she used was four times larger than the area of the concrete pits, or 1.85 acres total. *Tr. Vol. I, 166, 171*. She used a drainage coefficient based on the soil types at the Site. *Tr. Vol. I, 172, 198-99*. She considered similar perimeter drains in use at comparable sites. *Tr. Vol. I, 173-74*. Trabelsi opined that the perimeter tile drainage system would comply with 327 IAC 19. *Tr. Vol. I, 202-03*. She explained that the perimeter tile will adequately lower the seasonal high-water table below the bottom of the concrete manure pits. *Id.*

Berm

12. A berm was proposed and approved in accordance with an alternate compliance approach under 327 IAC 19-5-1. The berm diverts and directs surface drainage water to achieve at least 300 feet of drainage flow path between the production area and grassed waterway to the south. *Ex. 2 at IDEM 00303-304; Tr. Vol. I, 158, 188, 195-96; Tr. Vol. III 169-70.* The Approval explains the use of the berm as an alternative design approach. *Ex. 2 at IDEM 00303-304, Tr. Vol. I, 220*. It further explains the berm's use, purpose, and specifications in the special approval condition 2. *Ex. 2 at IDEM 00304*. Per the Approval, the berm is required to be a minimum four feet wide at the top, four feet wide at the bottom of the swale, with at least two feet to the bottom of the swale, and a side slope ratio of at least 4:1. *Ex. 2 at IDEM 00304*. A drawing of the berm is included in the Approval. *Id.* To direct water flow, the berm must have a positive grade to an outlet protected from erosion. *Id*. Light must remove all vegetation and topsoil beneath the berm fill area. *Id.* Light is required to compact the berm soil and seed the berm and swale. *Id*. The berm/drainage diversion will be constructed and certified with the construction completion affidavit prior to populating the buildings. *Ex. 2 at IDEM 00304*. A sloped swale through which surface water is designed to flow will be adjacent to the raised berm. *Tr. Vol. I, 200-01, 215-16, Ex. 2 at IDEM 00303*.

13. Trabelsi testified that after analyzing the berm as depicted in the Application, it was her opinion as an IDEM engineer that the proposed berm meets the alternative design approach requirements in the IDEM regulations. *Tr. Vol. I, 185, 203*. She opined the berm would serve the purpose of providing 300 feet of flow setback. *Id.* Trabelsi testified the berm reduced the potential for manure releases to waters of the state in accordance with 327 IAC 19-5-1(b)(2). *Tr. Vol I, 210, 217-18*. The berm directs liquid

flow away from features specified for protection, like the grassed waterway, as specified in 327 IAC 19-5-1(b)(3). *Tr. Vol. I, 210, 218-19*. Operational practices such as maintaining the grass growth and the berm itself provide additional protection in accordance with 327 IAC 19-5-1(b)(4). *Tr. Vol. I, 210, 219.*

14. Petitioners based their challenge to the berm design by applying IDEM Storm Water Manual Guidance for berm requirements. This Guidance is typically used by the IDEM Storm Water permitting section, it has never been used by the CFO section and is not referenced in CFO guidance manual. *Tr. Vol. I, 204; Tr. Vol. III 212-13*. Pursuant to the IDEM Storm Water Manual Guidance, many storm water quality measures can be applied and/or installed based on general criteria. *Ex. 20 at PET 00005*. The CFO regulations do not require compliance with the Storm Water Guidance.

Manure Land Application

15. Based on the number of animals, the CFO requires at least 484.8 acres of farmland for manure land application. *Ex. 2, IDEM 00322*. Light designated 665.486 acres for land application (with setbacks calculated) using the manure application method of single-pass or liquid injection incorporation. *Ex. 2, IDEM 00322*. The Application included contracts and plot maps showing the acres available for Light to land-apply manure. *Ex. 2, IDEM 00322, 00484-525*. The Application provides additional details regarding manure storage, manure application, and record-keeping requirements. *Ex. 2, IDEM 00307, 00319, 00323*. Manure and process wastewater storage was calculated using the Natural Resource Conservation Service ("NRCS") Practice Standard Code 313 and IDEM CFO Guidance Manual Table 1. *Id.*, *IDEM 00319-320*. The total available manure storage capacity is 347 days, which exceeds the minimum 180-day storage required under 327 IAC 19-12-4(c). *Tr. Vol I, 143; Tr. Vol. III 64-65; Ex. 2, IDEM 00321*. The Application includes a Manure Management Plan ("MMP") which shows manure sample collection procedures and frequency and soil sample collection procedures and frequency. *Ex. 2, IDEM 00480-483, Tr. 143*.

Expert Witnesses

16. IDEM expert witnesses Andrew Najafiarab worked as a geologist in the permitting branch of IDEM's Office of Land Quality and reviewed Light's Application. *Tr. Vol. I, 22 – 25.* He earned an undergraduate degree in geology and earth sciences from Purdue University in May, 2016. *Id.* Since graduation, Najafiarab has applied his degree through employment with the State of Indiana, currently for the Indiana Department of Transportation. *Id.* Najafiarab is not a licensed professional geologist. *Id.*

17. IDEM expert witnesses Leila Trabelsi works as an engineer in the permitting branch of IDEM's Office of Water Quality, and reviewed Light's Application. *Tr. Vol. I, 130 – 133.* She earned a B.S. degree from Michigan State University in 1986. *Id.* She first worked for IDEM in 1988, then transferred to the Indiana Department of Health where she focused on septic systems, then stopped working as an engineer until she returned to IDEM in 2006. *Id.* She is not a licensed Professional Engineer (PE). *Id.*

18. Petitioners' expert witness Dr. Kyle Doudrick was qualified to testify regarding general engineering principals by the presiding ELJ. Dr. Michael Veenhuizen qualified as Light's expert witness. Both expert witnesses had access to the same documents from the IDEM virtual filing cabinet, maps, data, Application, and Approval. Both expert witnesses testified that they had instructed undergraduate and graduate students in environmental and civil engineering; their publications were extensive but not focused on the issues in controversy in this case. Both expert witnesses testified that Light's CFO employed fundamental (versus advanced) engineering principals, such as water flow/velocity and storage capacity.

19. Dr. Doudrick is an Assistant Professor in civil and environmental engineering at the University of Notre Dame, where he teaches undergraduate and graduate engineering courses. *See Tr. Vol. II at 11 – 20, 23 – 24, 28 – 32, 36; Ex. 29.* To obtain his current position, he was selected out of 185 other applicants who were also required to have a Ph.D and a rigorous publication record on state-of-the-art research. *Id*. Dr. Doudrick has a Masters in Civil Engineering from the University of Memphis; his research thesis was on the topic of groundwater flow and transport of contaminants. *Id*. His Ph.D. in Environmental Engineering from Arizona State University included a dissertation on the development of new technology for the treatment of nitrates in groundwater. *Id*. Dr. Doudrick is a peer reviewer for scientific journals, including Environmental Science and Technology, which he testified is the top journal in the field of environmental engineering. *Id.*

20. Dr. Doudrick explained that a civil engineer is an engineer who designs and constructs the built environment, including the foundations of structures such this case's waste pits and perimeter drain. *Id*. An environmental engineer is a subset of civil engineering, where the focus is on the use of engineering science and principles to protect and improve human health and the environment. *Id*. Environmental engineers design structures similar to civil engineers, but they also design detailed treatment infrastructure. *Id*.

21. Dr. Doudrick is licensed in Indiana as a professional engineer ("PE"). *Id*. Dr. Doudrick testified that a PE is a licensure designation attesting to his qualifications to practice sound engineering design and construction, imposes mandatory continuing education requirements, and requires him to uphold ethical engineering standards. *Id*.
The parties agree that Indiana CFOs must have a PE certify/"stamp" the **construction** of their waste management structures. *Id*. Dr. Doudrick testified that he has not used his PE stamp on a project. *Tr. Vol. II, 35*. Dr. Doudrick has not studied, researched, published, or taught a course on CFOs, manure pits, manure storage, manure application, IDEM's CFO regulations, the federal CAFO rule, or manure regulations. *Tr. Vol. II 68-70, 72-73, 77, 82-86, 85, 89-92*. Dr. Doudrick admitted he was only "minimally" familiar with IDEM's CFO application review process. *Tr. Vol. II, 138*.
He has not visited the Approved Light site, nor ever been to a CFO. *Tr. Vol. II, 78*. He has not reviewed the Indiana State Chemist's rules on manure land application. *Tr. Vol. II, 101-102*. Prior to this case, Dr. Doudrick had not reviewed or designed plans for a

CFO. *Tr. Vol. II, 86-87, 179*. He had not reviewed the Indiana CFO rule or the federal CAFO rule.[9] *Tr. Vol. II, 86-87, 101*. He had not evaluated a manure land application. *Tr. Vol. II 86-87*. He had not reviewed an alternative design approach under Indiana CFO rules. *Tr. Vol. II, 108*. Before this case, Dr. Doudrick had not designed or reviewed a perimeter tile drain used with manure pits or a berm at a CFO site. *Tr. Vol. II, 87, 100-101*. Dr. Doudrick has not designed a perimeter drain or site drainage plan which has actually been built. *Tr. Vol. II, 100-101, 103*. He has not designed a manure pit or livestock barn. *Tr. Vol. II, 101*. He has no experience siting, designing, or planning CFOs or manure pits. *Tr. Vol. II, 102*. He has not worked with IDEM on any type of permit. *Tr. Vol. II, 102*. None of his education, professional experience, or publications have dealt with the Indiana CFO rule, manure pits, perimeter tile drains around manure pits, berms at CFOs, or manure land application, *Tr. Vol. II, 91-92; 68-100,* although both expert witnesses testified that these projects typically applied basic math and engineering skills. Much of Dr. Doudrick's testimony was directed at the premise that the calculations required to determine whether IDEM properly evaluated Light's Application lacked sufficient detail to be calculated, and required that they be calculated by a PE.

22. Dr. Michael Veenhuizen, Ph.D., testified for the Lights. Dr. Veenhuizen earned a B.S. in Agricultural Engineering from Purdue University in 1980, concentrating on structures and environment. *Ex. B.* Dr. Veehuizen earned his Master's Degree in Agricultural Engineering in 1982, concentrating on Agricultural Waste Management, Treatment and Control. *Id*. Dr. Veenhuizen earned his Ph.D. in Agricultural Engineering from Iowa State University in 1989, concentrating on Indoor/Outdoor Air Quality and Control. *Id*. From 1982 – 1989, he worked as a Plan Service Engineer for the Midwest Plan Service, Department of Agricultural Engineering, Iowa State University. *Id*. From 1989 – 1994, he worked as an Assistant Professor and as an Extension Agricultural Engineer for the Department of Agricultural Engineering for The Ohio State University. *Id*. Since 1994, Dr. Veenhuizen has served as the Consultant/President of Livestock Engineering Solutions, Inc. *Id*. Dr. Veenhuizen assisted the Lights in preparing and submitting the IDEM CFO Application. *Tr. Vol. III, 84*. He has significant education and experience in agricultural engineering and CFOs in Indiana, dating back to the late 1970's. *Tr. Vol. III, 8-15, Ex. B*. Dr. Veenhuizen plans and designs livestock CFOs and manure storage structures for a living. *Tr. Vol. III, 16-17, 25*. His livestock facility design work includes structural analysis and design, regulatory reviews, site design drawings, and compliance with waste and manure management. *Tr. Vol. III, 17*. Dr. Veenhuizen was part of a group which participated in the review and revision of the current IDEM CFO rules. *Tr. Vol. III, 18-19, 112*. Dr. Veenhuizen has been involved with roughly 500 applications over his lifetime. *Tr. Vol. III, 27-28*. Dr. Veenhuizen has designed roughly 400 perimeter tile drains for CFOs. *Tr. Vol. III, 38-39*. Dr. Veenhuizen reviewed how IDEM CFO regulations had changed since 1994. *Tr. Vol. II, 28-29*. Dr. Veenhuizen was once licensed as a PE in Iowa, but did not maintain his PE license because it is not required in Indiana to design livestock manure management facilities, and requires more continuing professional education hours than is useful for his practice. *Tr. Vol. III, 29-30; 72 – 85,*

[9] While testifying, Dr. Doudrick addressed errors in his written report's cites to several sections in the CFO regulation. *Tr. Vol. II 159, 192*.

111 – 145; Ex. B; Ex. 35. Prior to this case, Dr. Veenhuizen regularly reviews and applies the CFO rule prior to this case. *Tr. Vol. III, 34*.

23. Dr. Doudrick acknowledged that Dr. Veenhuizen has designed more CFOs, storm water control berms, perimeter tile drains, and alternative design compliance approaches for CFOs than he has. *Tr. Vol. II, 107-108*.

24. Overall, Dr. Doudrick testified that the scope of engineering work on the Light Application and Approval should have been performed by a PE,[10] and that the data provided on the Application and Approval was insufficient to complete accurate calculations. Dr. Doudrick offered four opinions:

    a. First, he claimed the seasonal high-water table was not adequately defined. [*Tr. Vol. II, 121-22*. This case was the first time he had offered that opinion. *Id*. Dr. Doudrick admitted the soil borings done at the site were adequate. *Tr. Vol. II, 121*. He admitted 327 IAC 19-5-1 does not require compliance with IDEM's Storm Water Guidance. *Tr. Vol. II, 141-142; see Ex. 20*. Likewise, he admitted the rule does not require soil borings to include chemical analysis of the soil. *Tr. Vol. II, 143*. He opined there was not enough information in the application to allow IDEM to determine whether the perimeter tile drainage system would work. *Tr. Vol. II, 42*. His opinion is based on NRCS Standard 606, not the IDEM regulations, but he also admitted the IDEM CFO rules do not require compliance with NRCS Standard 606. *Tr. Vol. II, 42, 44, 132, 187*. Dr. Doudrick opined that the application should have identified the peak volume expected to enter the drainage system. *Tr. Vol. II, 125*. He admitted the regulation does not say it requires identification of "peak flow," but contended "it was understood" that an applicant should provide that information. *Tr. Vol. II, 126-27*. Dr. Doudrick does not have an opinion as to what the peak flow is for this system. *Tr. Vol. II, 129-130.*

    b. Dr. Doudrick's second opinion was that the Application did not contain sufficient information about the proposed berm. He contended the seasonal high-water table would adversely impact the structural integrity of the berm. *Tr. Vol. II, 55*. Dr. Doudrick admitted that if the berm works as designed, there would be no problem, *Tr. Vol. II, 141,* unless the structure fails. *Id*.

    c. Dr. Doudrick's third and fourth opinions deal with manure application. He admitted he has "no expertise in application" of manure to farm land. *Tr. Vol. II, 103, 163.* His third opinion was that application of untreated manure to fields with soils susceptible to perched water tables will lead to waste and nutrient runoff. *Tr. Vol. II, 62*. He believed that manure could not be injected into those fields because he does not know where the seasonal high-water table in those fields is located. *Tr. Vol. II, 64*. He admitted state regulations allow the application of untreated manure to farm fields. *Tr. Vol. II, 157-58*. He agreed

[10] Petitioners' Motion in Limine to exclude Dr. Veenhuisen's testimony, for lack of a PE, was denied. The Court further noted that it was not authorized to adjudicate PE licensure or censure issues.

that CFO applicants are not required to do any soil borings at their proposed land application sites as part of a CFO application. *Tr. Vol. II, 157.*

d. Dr. Doudrick's fourth opinion was that land application of manure will violate nutrient loading rules and/or federal storm water rules. *Tr. Vol. II, 64, 66-67.* He admitted the Approval contained a condition which included the storm water management practices in 327 IAC 19-11-1(a), the manure application rate limitations in 327 IAC 19-14-3(d), the manure application activities in 327 IAC 19-14-4(e), and the storm water management practices in 40 CFR 122.42(e)(2). *Tr. Vol. II, 170.* He admitted the IDEM regulations address the same issues raised in 40 CFR 122.4(e)(2). *Tr. Vol. II, 173.* IDEM requires a CFO to ensure adequate manure storage and to maintain an MMP. *Tr. Vol. II, 173-74.* IDEM regulations address storage capacity and design requirements, and land application. *Tr. Vol. II, 174.* He agreed that IDEM regulations require the Lights to maintain copies of land application records. *Tr. Vol. II, 174-75.* Dr. Doudrick admitted he did not identify any way in which the Lights' application or approval violates 327 IAC 19-7-5 (MMP requirements). *Tr. Vol. II, 165-66.* Before this case, Dr. Doudrick had never reviewed an MMP or nutrient management plan ("NMP"). *Tr. Vol. II 168.* Dr. Doudrick concluded that if the Lights comply with Special Approval Condition 1 (regarding storm water management practices, manure application rate limitations, and manure application activities), they would not be in violation of any federal regulations. *Tr. Vol. II, 177-78.*

25. On January 11, 2018, IDEM issued a Notice of Deficiency concerning ten deficiencies in the Light Application prepared by Dr. Veenhuizen. *Ex. 8, IDEM 00236 – 00239.* IDEM's witnesses testified that it is common that an Application receives Notices of Deficiency, and that they were corrected at or in excess of the requested standards. Dr. Veenhuizen acknowledged that the Light Application utilized a portion of an application prepared for a prior client. *Tr. Vol. III, 110 – 111.*

26. Contrary to Petitioners' contentions, Dr. Veenhuizen testified that the required details for a perimeter tile drain were included in the Application. *Tr. Vol. III, 39.*

    a. The perimeter drain is a subsurface drainage tile placed below or adjacent to the foundation of the manure pits to act as an interceptor drain to draw down and control the seasonal water table. *Tr. Vol. III, 37.* The Application includes the depth of the perimeter tile (17 inches below the pit floor), the location of the tile in relation to the pits/buildings, the slopes (0.25%), the size of the tile (4 inches), the soil types and properties in which the system will be placed based on the soils investigation, and it identifies the seasonal high water table (9-11 inches below ground surface). *Tr. Vol. III, 39-40, 161; Ex. 2 at IDEM 00464-471.* The Application also includes information regarding the tile outfall, collection sumps, and pump. *Tr. Vol. III, 40, 47-48; Ex. 2 at IDEM 00464-471.* The collection sumps provide an observation point to sample water to ensure it is not affected by any waste. *Tr. Vol. III, 47-49.* There is also a shut-off valve for each building sump. *Tr. Vol. III, 48.* The design drawings of the perimeter tile drain system

show the pipe would be embedded in granular material to distribute the load evenly and protect against sediment infiltration. *Tr. Vol. III, 163*.

b. Dr. Veenhuizen explained how to verify that the proposed tile will be sufficient to drain the ground water to lower the seasonal water table. *Tr. Vol. III, 42, 46-47*. He reviewed the soil properties and soil drainage capacity. *Tr. Vol. III, 42*. He used Manning's Equation to determine a flow capacity based on the given diameter of the tile, the slope of the tile, and the standard roughness coefficient of the proposed pipe. *Tr. Vol. III, 42-43*. He concluded that for a four-inch tile at 0.25% slope with a smooth or perforated drainage tile, the flow capacity would be between 35 to 37 gallons per minute. *Tr. Vol. III, 43, 154*. Based on the soil reports, this Site has clay loam and silt loam type soils. *Tr. Vol. III, 43*. Dr. Veenhuizen looked at soil porosity and the potential for water to move through the soils using Darcy's Law. *Tr. Vol. III, 43*. Given the amount of water which would be presented to the tile based on soil types, Dr. Veenhuizen determined a four-inch tile at 0.25% slope would operate at well below full capacity. *Tr. Vol. III, 43-44*. Applying a three-eighths inch drainage coefficient as one of the standard methods for drainage, the tile would drain greater than five acres, which is more than needed. *Tr. Vol. III, 44*. By leaving the area of the impervious buildings out of the equation, the Application gives a conservative estimate and addresses more water removal from the Site than would exist. *Tr. Vol. III, 168-69.* It was Dr. Veenhuizen's expert opinion that the perimeter tile would effectively collect and drain the ground water at the Lights' farm. *Tr. Vol. III, 49*.

c. Given the specifications provided in the Application, IDEM's engineers use standard equations and methodologies to assess whether the perimeter tile drainage system will work as designed. *Tr. Vol. III, 41, 94, 154, 166, 190, 199-200, 206.* Here, IDEM determined the Application provided the specifications of a system which would effectively collect and drain ground water and which is of adequate size, slope, and proper distance from the waste management system. *Tr. Vol. III, 94*.

27. Dr. Veenhuizen also addressed the berm:

a. The berm is located south/southwest of the proposed building location. *Tr. Vol. III, 50, Ex. 2 at IDEM 00355*. The buildings are less than 300 feet away from the grassed waterway, so the berm creates 300 feet of surface water flow path to meet the setback requirements. *Tr. Vol. III, 52, 57, 169-70, 173, 176, Ex. 3 at IDEM 00725-726*. A 300-foot setback also provides runoff filtering and allows an increased response time. *Tr. Vol. III, 55, 173-74*. In case of an accidental release, the berm would slow the release and protect human health and the environment. *Tr. Vol. III, 55-56*.

b. The berm design follows NRCS guidance. *Tr. Vol. I, 158.* The berm will be constructed with shallow slopes to prevent erosion. *Tr. Vol. III, 56*. It has a one to two-foot deep channel and a four-foot berm top with 4:1 sloped sides, which

will collect and redirect any sheet surface water flow off the site. *Tr. Vol. III, 56, 197*. The berm will be vegetated to stabilize the surface. *Tr. Vol. III, 56*. The berm design in the Application provides specifics regarding dimensional requirements, slopes, the open channel, and vegetation. *Tr. Vol. III, 179-80, 187; Ex. 1 at IDEM 00035*. The berm will be constructed with soils native to the area. *Tr. Vol. III, 182*. These silt loam and clay loam soils are of low permeability and are appropriate for berm construction. *Tr. Vol. III, 58, 161, 182*. There is no requirement that the application include specific berm calculations. *Tr. Vol. III, 197*.

c. Topography at the berm site will change during construction, but construction will not change the location of the seasonal high-water table. *Tr. Vol. III, 53-54, 58-59*. The seasonal high-water table will reestablish itself 9-11 inches beneath the contours of the berm. *Tr. Vol. III, 184, 186, 198*. Having a seasonal high-water table below the berm will not compromise the structural integrity of the berm. *Tr. Vol. III, 59, 198-98*.

28. Dr. Veenhuizen's testimony addressed Dr. Doudrick's third opinion regarding manure land application, concluding that the amount of storage a CFO has influences how often the farm needs to land apply the manure. *Tr. Vol. III, 64*. There is no requirement to provide any soil or manure samples with a CFO application. *Tr. Vol. III, 66*. The Lights' Application includes the frequency and procedures for manure and soil sampling as part of the operating record. *Tr. Vol. III, 67-68*.

29. Concerning Dr. Doudrick's fourth opinion, regarding MMPs, NMPs, and federal storm water regulations, Dr. Veehuizen testified that all CFOs must have a manure management plan that covers soil and manure testing. 327 IAC 19-7-5. Only CFOs that meet the federal definition of a CAFO have to comply with the federal storm water requirements. The Light Approval includes an MMP that complies with 327 IAC 19-7-5. *Ex. 2 IDEM_00480*. The Application and Approval also include information which complies with 327 IAC 19-11-1(a), which incorporates by reference federal CAFO storm water regulations, including: information regarding mortality management, diversion of clean water away from the production area, and keeping animals away from waters of the United States. *Tr. Vol. III, 69-70*. Dr. Veenhuizen opined that the Application complies with state manure management requirements and federal storm water requirements. *Tr. Vol. III 70*.[11] The Light CFO Approval requires that it will be a zero-discharge facility. *Tr. Vol. III, 33*.

30. Petitioners challenged each of Respondents' witnesses as to the credibility of Dr. Veenhuizen's testimony, on the basis that he was not currently licensed as a PE. Dr. Doudrick did not challenge testimony presented by IDEM's witnesses and Dr. Veenhuizen, that a licensed PE was required to approve, or "stamp", a CFO's plans once

[11] The Approval also includes requirements to maintain manure records, manure sampling, soil fertility testing, phosphorus sampling, crop rotation records and schedule, land application records, weather records before, during, and after manure land application events, and calculations to determine the application rate. *Tr. Vol. III 68-69*.

the facility was constructed and before it started operating. Instead, Petitioners presented argument that, for lack of a current PE license, Dr. Veenhuizen was not authorized to do the engineering work he did on the Light CFO, and that engineering work included basic calculations.[12]

31. The ELJ gives Dr. Veenhuizen's testimony more weight regarding CFOs, given his extensive experience with CFO design over the years. Dr. Veenhuizen has been recognized as a CFO expert in at least five other published OEA matters. *See Objection to the Issuance of Confined Animal Feeding Operation, Chris Duckwall*, 2009 OEA 155; *Objection to the Issuance of NPDES Permit No. ING806568, John A. and Becky S. Stuber*, 2009 OEA 96; *Talara Lykins - CAFO*, 2007 OEA 114; *Objection to the Issuance of Permit Approval No. AW-5093, Fred Warner Farms*, 2002 OEA 27, 30; *Objection to the Denial of Applications for CFO Approval and NPDES CAFO Construction/Expansions, Farm ID No. 3658 New Fashion Pork, LLP - Indiana 1 Linton, Greene County, Indiana; consolidated with NPDES CAFO Renewal and Update Application, Farm ID No. 3781 New Fashion Pork, LLP - Indiana 2 Bloomfield, Greene County, Indiana*, 2012 OEA 1.

32. IDEM witness Joe Williams is the Section Chief for the CO permitting branch of IDEM's Office of Land Quality and reviewed Light's Application. *Tr. Vol. III, 210 – 214, 216 – 219; Ex. 3, IDEM 00728; Exs. 18, 19, 22.* He earned a B.S. degree in agronomy from Purdue University. *Id*. Prior to starting work for IDEM in 2012, he worked for the Natural Resources Conservation Service ("NRCS"). *Id*. Williams is responsible for final review of all CFO applications. Since the current CFO rule went in to effect in 2012, IDEM has received 50 – 60 CFO applications each year, and have denied none which comply with submission requirements. *Id*. Williams stated that IDEM does not require compliance with NRCS Codes 606 and 313 (which reference NEM 531.0 and NEM IN531-2) to assess an application's compliance with the CFO rule, in contradiction to an IDEM discovery response. *Id*. Williams also stated that IDEM was not required to assess the berm's pre-construction feasibility or compliance with IDEM's own storm water guidance as part of its review. *Id.*

33. IDEM Confined Feeding Permits Section Chief Joe Williams confirmed that Light submitted a complete application and IDEM had no basis to deny the application. *Tr. Vol. III, 208, 215*. IDEM engineer Trabelsi also concluded that IDEM was correct in approving the Lights' CFO application and that the application met the IDEM regulatory requirements. *Tr. Vol. I, 203*.

Conclusions of Law

1. The Indiana Department of Environmental Management ("IDEM") is authorized to implement and enforce specified Indiana environmental laws, and rules promulgated

[12] Some professional fields, such as medicine and law, strictly prohibit most unlicensed efforts of practice. Some, such as accounting, may require professional certification only for the finalization of certain types of work but allow the work to be performed without professional certification, or under the supervision/review of a certified professional.

relevant to those laws, per Ind. Code § 13-13, *et seq*. The Office of Environmental Adjudication ("OEA") has jurisdiction over the decisions of the Commissioner of the IDEM and the parties pursuant to Ind. Code 4-21.5-7-3.

2. 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. This office must apply a *de novo* standard of review to this proceeding when determining the facts at issue. *Indiana Dept. of Natural Resources v. United Refuse Co., Inc.*, 615 N.E.2d 100 (Ind. 1993). Findings of fact must be based exclusively on the evidence presented to the ELJ, and deference to the agency's initial factual determination is not allowed. *Id.*; Ind. Code § 4-21.5-3-27(d). "*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).

4. The Petitioner, as the entity requesting IDEM revoke the Approval, has the burden of persuasion and the burden of going forward with the evidence supporting its request. Ind. Code § 4-21.5-3-14(c).

5. Speculation, without evidence, is not sufficient to meet the burden of proof. *Union Go Dairy*, 2016 OEA 1, p. 11. To meet its burden, the Petitioner must present more than its opinion that there is another way to do something. It must prove by substantial evidence that IDEM failed to comply with the applicable regulations or abused its discretion. It has not. *Union Go Dairy*, 2016 OEA 1, p. 11.

6. IDEM regulatory authority includes the presumption that any person that receives a permit will comply with the applicable regulations. OEA may not overturn an IDEM approval upon speculation that the regulated entity will not operate in accordance with the law. *Blue River Valley,* 2005 OEA 1, 12.

7. An agency's authority is limited to what has been authorized by the legislature. *Nat'l Pork Producers Council v. U.S. EPA*, 635 F.3d 738, 753 (5th Cir. 2011) (citing *Alexander v. Sandoval*, 532 U.S. 275, 292 (2001)). IDEM is prohibited from expanding the controlling statutes and regulations when issuing a CFO Approval. *See Aqua Indiana, Inc.*, 2011 OEA 14, 19. Neither IDEM nor this Court may require a CFO applicant to include information beyond what is required by the law. *Union Go Dairy* at 8; *Kyle Hall*, 2008 OEA 100, 114; *see also Elrod Water Company*, 2009 OEA 43, 51.

8. The issues presented for consideration are:

    a. Did Light provide IDEM enough information regarding the seasonal water table and the perimeter drainage tile?
    b. Is the berm an approved alternative compliance approach under 327 IAC 19 ("ACA")?
    c. Does the Approval violate manure application regulations?

d. Does the Approval comply with the federal storm water permitting requirements?

Light Provided the Required Information Regarding the Seasonal High-Water Table and the Perimeter Drainage Tile System

9. The Petitioners contend the Application does not include enough information regarding the seasonal high-water table.

10. An application for a CFO must include the following information:

> Soil and water table information from test holes for proposed manure storage facilities that are conducted by a soil scientist….The number of test holes must be sufficient to adequately characterize the seasonal water table and soil….

327 IAC 19-7-1(c)(6). Further,

> [a]ny drainage system to lower the seasonal water table around the base of a waste management system must be designed and installed to:
> (1) Effectively collect and drain the ground water;
> (2) Be of adequate size, proper slopes, and proper distance from the waste management system;
> (3) If applicable, be provided with sumps, pumps (including a backup pump), and electricity supply;
> (4) If applicable, have a surface outlet that is at least fifty feet away from the building…; and
> (5) Have a shut-off valve or equivalent.

327 IAC 19-12-4(o).

11. IDEM regulations require a PE to certify construction but do not require a PE to prepare the design drawings or plans for a CFO. *Ex. 2 IDEM 00307, 00319, 0032;* 327 IAC 19-12-4(d); *Jennings Water*, 2997 OEA 114, 128.

12. IDEM Guidance requires soil sampling to follow the guidance in the NRCS national engineering manual page IN531-2. *Ex. 16 IDEM 00589*. The Guidance does not refer to IN 531-3, which includes information for testing and reports. *Tr. Vol I, 107-108, 123; Ex. 16, 22*. IN 531-2 also includes several statements on clay liners and animal waste lagoons or borrow areas, which are not relevant here. *Ex. 22 PET00019-20; Tr. Vol. I, 125-26, 195, 214*. There are no animal waste lagoons at the Site. *Tr. Vol. I, 195*. Section Chief Joe Williams explained IDEM does not require a CFO applicant to comply with *all* of IN 531 for soil samples. *Tr. Vol. III, 211; Ex. 22*. For concrete manure pit construction, IDEM only requires compliance with Section I – Site Description, which explains sampling procedures for soil investigations. *Tr. Vol. III, 211, 221*.

13. The Application included the required soil sampling information. *See* 327 IAC 7-1(c)(6). The eight soil borings were conducted by a certified soil scientist; included at least two borings for a site up to ½ acre and one additional boring for each additional ½ acre; and were at least two feet below the base of the proposed structure. *Id.; Ex. 2 IDEM 00356, 00464-79*. The soil tests identified soil type, textures, matrix, mottles, coatings, color, grad, size, shape, consistency, effervescence, and parent material. *Ex. 2 IDEM 00472-479.* IDEM's geologist and engineer testified they were able to characterize a seasonal water table based on the soil tests. Dr. Veenhuizen also opined that the soil samples were sufficient to characterize the seasonal high-water table. Dr. Doudrick's opinion that additional tests should have been performed is based on guidance documents, not the IDEM regulatory requirements. Thus, the Application included the required soil information regarding the seasonal high-water table.

14. Petitioners also argued the CFO Application did not contain sufficient information regarding the perimeter drainage tile system.

15. The CFO rules allow the construction of waste management systems in soils with a seasonal high-water table as long as the water table is lowered to keep the water table below the bottom of the waste management system. 327 IAC 19-12-2(a)(5). The Rule goes on to state the requirements that must be met for drainage systems designed to lower the seasonal water table. 327 IAC 19-12-4(n), (o).

16. The Application included the system's size, slope, and distance from the waste management system. *Ex. 2 IDEM 00463-479*. It included sumps and pumps with electricity, an appropriate surface outlet, and a shut-off valve. *Id*. There is no regulatory requirement to include the calculations used by the applicant to prepare the drawings. *Tr. Vol. III, 194-95, 205*. 327 IAC 19-12-4(o). Likewise, the regulations do not require any information related to iron ochre or weight loads. 327 IAC 19-12-4(o). *Tr. Vol. III, 166-67*. As Trabelsi and Dr. Veenhuizen explained, IDEM's engineers use the specifications provided and standard equations to check whether the proposed system will be adequate to effectively collect and drain ground water. *Tr. Vol. I, 164, 166, 182-83.* Thus, the Application complied with the requirements for drainage systems and contained sufficient information for IDEM to confirm the perimeter tile was of adequate size, proper slopes, and proper distance from the waste management system to effectively collect and drain the ground water. Petitioners have failed to demonstrate by substantial evidence that the Lights' application did not provide sufficient detail on the design of the perimeter drain to meet 327 IAC 19-12-4(n) and (o). Nor did Petitioners show by substantial evidence that the size, slope, or distance of the perimeter drain were inadequate. Petitioners' reliance on NRCS Standard 606 is misplaced, as this standard is not required to be adhered to by the CFO rules. *See Chris Duckwall*, 2009 OEA 155, 168.

The Application Included the Required Information Regarding the Berm as an ACA

17. Petitioners claim the Application does not contain the required information related to the berm as an ACA.

18. The CFO rules allow applicants to obtain a reduced setback as an alternative compliance approach, including the 300-foot setback from surface waters. 327 IAC 19-12-3(d).

19. The CFO rules include requirements for alternative compliance approach proposals:

> (1) The proposal….must be accompanied by documentation that indicates that the performance standards in 327 IAC 19-3-1 will be met….
> (2) The proposed design…must be incorporated into the approval.

327 IAC 19-5-1(a). In ruling on an alternative compliance approach, the Commissioner shall consider applicable criteria that may include the following:

> (1) Design specifications that indicate structural integrity.
> (2) Protective measures that reduce the potential for manure releases and spills.
> (3) The existence of barriers or surface gradient that directs liquid flow away from features specified for protection.
> (4) Operational practices that provide additional protection.
> (5) Threats of adverse impacts to water quality or other specified sensitive areas.
> (6) Other criteria related to protection of the environment or human health.

327 IAC 19-5-1(b). "The Commissioner shall provide written documentation describing the basis for the approval or denial of the proposed alternate design, compliance approach, or innovative technology." 327 IAC 19-5-1(c).

20. The performance standards in 327 IAC 19-3-1 include:

> 1. A CFO shall be managed so as to avoid an unpermitted discharge into waters of the state.
> 2. A CFO must be constructed and operated in a manner that minimizes nonpoint source pollution entering waters of the state.
> 3. A CFO shall take all reasonable steps to prevent manure releases, spills, or the discharge of manure in violation of the approval or this article, including seepage and leakage.
> 4. All waste management systems must be designed, constructed, and maintained to minimize leaks and seepage and prevent manure releases or spills, as well as ensure compliance with the water quality standards in 327 IAC 2.
> 5. Manure must be staged in such a manner as to:
>   (1) Not threaten or enter waters of the state;
>   (2) Prevent:
>   a. Runoff;

b. Manure releases; and
c. Spills.

6. Manure must not be applied in such a manner as to:
   (1) Not threaten or enter waters of the state;
   (2) Prevent:
      a. Ponding for more than 24 hours;
      b. Manure releases; and
      c. Spills; and
   (3) Minimize nutrient leaching beyond the root zone.

327 IAC 19-3-1.

21. The Light Application includes a berm to create 300 feet of flow path for surface water as an ACA. The berm is an ACA for the regulatory setback requiring 300 feet between surface water and a waste management system. 327 IAC 19-12-3. The Application includes documentation indicating the berm will protect surface waters, minimize any pollution, and create a filtering distance between the grassed waterway and the production area. *Ex. 2 IDEM 00303*. There is no requirement that the applicant conduct soil borings at the berm location. 327 IAC 19-5-1.

22. The Approval also addresses the berm and specifically states that it is approved as an ACA. *Ex. 2 IDEM 00304*. The berm must remain functional for the life of the CFO; it will divert surface water away from a grassed waterway; it has positive drainage that allows for a minimum of 300 feet of surface runoff before being released to a water feature. *Id.* The Approval includes minimum specifications for slopes and heights of the berm. *Id.* The Approval also includes requirements regarding vegetation at the berm and swale. *Id*. This Court approved a berm as an ACA in *Broshears Farm*, Cause No. 17-W-J-4957, 2018 OEA 1, pp. 3, 10.

23. The Application and Approval meet the requirements in 327 IAC 19-5-1 and 327 IAC 19-3-1 for alternate compliance approaches. Petitioners failed to demonstrate by substantial evidence that the berm does not create 300 feet of flow path or that it is not an adequate alternative compliance approach. Speculating that the berm may fail in the future is not grounds for reversing the Approval.

Light's Manure Management Plan Complies with Indiana Regulations

24. Petitioners argue land application of untreated manure to fields with high seasonal water tables will lead to runoff.

25. Light is not allowed to land apply manure to saturated ground. 327 IAC 19-14-4(d)(1). The Approval requires Light to comply with all land application requirements including manure application rates and setbacks. *Ex. 2 IDEM 00296*.

26. There is no regulatory requirement to conduct soil or manure tests prior to submitting a CFO application. Likewise, there is no requirement to characterize the seasonal high-water table in fields destined for land application of manure. *See* 327 IAC 19-14 *et al*.

27. A CFO application must include a manure management plan ("MMP") for land application activities. 327 IAC 19-7-1; 327 IAC 19-7-5. An MMP must include procedures for soil testing, procedures for manure testing, and plot maps. 327 IAC 19-7-5(a). The Light Application met all the requirements for an MMP, including the required testing procedures and plot maps. *Ex. 2 IDEM 00480-509*. This Court cannot presume that the Lights will violate the Approval or land application rules.

The CFO Approval Complies with 40 CFR 122.23(e) and 40 CFR.42(e)(1)-(2)

28. 327 IAC 19-11-1 regarding storm water management requires all CFOs that meet the definition of a CAFO in 40 CFR 122.23(b)(2) to meet the storm water requirements in 40 CFR 122.23(e), 40 CFR 122.42(e)(1), and 40 CFR 122.42(e)(2). As noted in the Approval, IDEM's Guidance Manual explains the applicable requirements for storm water with which CAFOs must comply *Ex. 2 IDEM 00304; Ex. 16t IDEM 00634*.

29. Petitioners claim IDEM and Light did not follow federal permitting requirements in 40 CFR 122.23 and 40 CFR 122.42. However, the CFO Approval and Light's application documents meet the applicable federal storm water requirements. The Approval language specifically incorporates 327 IAC 19-11-1. *Ex. 2 IDEM 00304*. Thus, the Approval meets the federal requirements, and Light must comply with these requirements. Dr. Doudrick admitted there would be no violation if the Lights abided by their Approval. *Tr. Vol. II, 177-78*.

30. IDEM's regulations also address the same storm water requirements found in 40 CFR 122.42(e). For example, 40 CFR 122.42(e)(i) requires CAFOs to ensure adequate manure storage. This is addressed in 327 IAC 19-7-2(b)(1) (plot map must show location of manure storage systems); 327 IAC 19-7-5 (manure management plan requirements); and 327 IAC 19-12-4 (manure storage capacity and design requirements). Light's Application and Approval address adequate manure storage in numerous places, namely its manure management plan and farmstead plan. *See Ex. 2 IDEM 00303, 00319-21, 00480-509.*

31. Likewise, the other requirements of 40 CFR 122.42(e)(1) and (2) are already addressed by IDEM's confined feeding regulations. The requirements of 40 CFR 122.23(e) address land application discharges from a CAFO that to NPDES requirements. IDEM manure management plans and land application requirements mandate that Lights retain extensive land application records. See 327 IAC 19-7-1(c)(5) (application requires a manure management plan); 327 IAC 19-7-1(c)(13) (application requires copies of all land use agreements); 327 IAC 19-7-5 (details of manure management plan); 327 IAC 19-14-1 (detailed requirements regarding land application of manure). There is no evidence the Lights plan not to keep proper land application records once the farm begins operating. The Approval meets the permitting requirements. *Tr. Vol. III, 70.*

32. This Court rejected Petitioners' arguments regarding federal storm water regulations in the case of *Objection to the Issuance of Confined Feeding Operation Approval Milco Dairy LLC*, 2017 OEA 18, page 27-28.

33. IDEM's Commissioner did not abuse his discretion when he approved Light's application for the CFO. The Approval complies with IDEM regulations in all challenged respects.

Final Order

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED that the petitions for administrative review filed by Kevin & Kathy Chambers, Stephen & Elizabeth Driscoll, Perry & Tonya Evans, Bob & Connie Rahe are **DISMISSED**. Judgment is entered in favor of Respondents Rhett Light and the Indiana Department of Environmental Management. All further proceedings are **VACATED.**

You are further notified that pursuant to provisions of IC §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 IC 4-21.5. Pursuant to IC 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 31st day of May, 2019 in Indianapolis, IN.

Hon. Mary L. Davidsen, Esq.
Chief Environmental Law Judge