EPA GIVES ANIMAL FEEDING OPERATIONS IMMUNITY FROM ENVIRONMENTAL STATUTES IN A "SWEETHEART DEAL"[1]

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INTRODUCTION

In the United States the farming industry has shifted from small, family-owned farms to corporate conglomerates manufacturing large concentrations of animals in confined spaces. These operations are referred to as Animal Feeding Operations (AFOs) or factory farms.[2] Hog farming is a prime example of the current trend across the agriculture sector towards a more intensive and industrialized system of farming. It is estimated that 80% of the hogs grown in the United States are on farms which produce 5,000 or more hogs per year.[3] The hog population in North Carolina dramatically increased from an average population of about 4.5 million in 1991 to 8.2 million in 1995, and grew to almost 10 million in 1997.[4] These massive hog facilities, along with other AFOs located throughout the United States, generate vast amounts of manure and produce large amounts of dangerous air pollutants, including particulate matter (PM), hydrogen sulfide (H_2S), ammonia (NH_3) and volatile organic compounds (VOCs).[5]

As AFOs continue to dramatically increase in size, communities are left to deal with the negative impacts these intensive facilities have on their health and the environment. A study conducted by the University of North Carolina found that people living near hog farms reported a decreased quality of life and more physical health symptoms than those located in communities with no livestock operations.[6] The symptoms reported more frequently in communities with hog farms included headaches, runny nose,

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1. Michael Janofsky, *E.P.A. Offers an Amnesty if Big Farms Are Monitored*, N.Y. TIMES, Jan. 22, 2005 (quoting a statement by Joe Rudek, a senior scientist with Environmental Defense, who called the Agreement "a sweetheart deal").

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2. U.S. Environmental Protection Agency, Animal Feeding Operations Overview, http://cfpub1.epa.gov/npdes/home.cfm?program_id=7 (last visited Aug. 17, 2006).

3. National Pork Producers Council, http://www.nppc.org/about/pork_today.html (last visited Aug. 17, 2006).

4. NAT'L RISK MGMT RESEARCH LABORATORY, REVIEW OF EMISSION FACTORS AND METHODOLOGIES TO ESTIMATE AMMONIA EMISSIONS FROM ANIMAL WASTE HANDLING 1 (2002), *available at* http://www.epa.gov/ORD/NRMRL/Pubs/600R02017/600R02017.pdf.

5. National Academy of Sciences, Air Emissions from Animal Feeding Operations: Current Knowledge, Future Needs 16 (2003), *available at* http://www.nap.edu/books/0309087058/html.

6. Steve Wing & Susanne Wolf, *Intensive Livestock Operations, Health, and Quality of Life among Eastern North Carolina Residents*, 108 Environmental Health Perspective (2000), *available at* http://www.ehponline.org/members/2000/108p233-238wing/wing2-full.html.

sore throat, excessive coughing, diarrhea, and burning eyes.[7] The researchers concluded that the study "supports previous research suggesting that community members experience health problems due to airborne emissions from intensive swine operations."[8] This study illustrates the negative impacts large farming operations have on local residents, reveals the reasoning behind citizen action to keep AFOs out of their communities and demonstrates why there is pressure on the Environmental Protection Agency (EPA) to regulate these facilities.

Although the EPA began regulating pollution from AFOs under the Clean Water Act (CWA), the agency has seldom brought enforcement actions against AFOs under the Clean Air Act (CAA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and Emergency Planning and Community Right-to-Know Act (EPCRA). As the problems associated with AFOs increase, pressure is mounting for the EPA to use its authority under the CAA, CERCLA, and EPCRA to control AFO pollution. Instead of taking enforcement action, however, the EPA negotiated a deal with AFOs under the Animal Feeding Operations Consent Agreement ("Agreement") to offer participating AFOs immunity from provisions of CAA, CERCLA, and EPCRA, while the EPA monitors emissions from their facilities.[9] Members of Congress and environmental groups have expressed concern over this agreement, and anger with the EPA's lack of enforcement actions against AFOs.[10]

Part I of this article provides background information regarding AFOs, describes the air pollutants emitted from AFOs, and the potential harm resulting from those emissions. Part II examines federal environmental statutes authorizing the EPA to regulate AFO emissions. Part III analyzes the Agreement and monitoring study, and discusses the benefits AFOs will receive from the Agreement. Part IV describes case law that demonstrates the EPA's ability to enforce AFO compliance with the CAA, CERCLA, and EPCRA regardless of the Agreement. Finally, Part V details potential problems with the Agreement from the perspective of harmed citizens and environmental groups opposing the Agreement. This part argues that if the EPA is going to provide immunity to AFOs, then the EPA must incorporate

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7. *Id.*

8. *Id.*

9. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4958 (Jan. 31, 2005).

10. *See* Letter from Joseph Lieberman, to the Honorable Marianne Lamont Horinko, Acting Administrator, U.S. EPA (Oct. 2, 2003), *available at* http://www.senate.gov/~gov_affairs/index.cfm?Fuseaction=PressReleases.View&PressRelease_id=502&Affiliation=R ("EPA's unwillingness to exercise its authority to address even the most serious emissions problems is a disservice to the American public and has serious consequences for the public.").

specific safeguards into the Agreement to ensure the mitigation of pollution and AFO compliance with federal environmental statutes in the future.

I. BACKGROUND INFORMATION ON ANIMAL FEEDING OPERATIONS

The number of farms in the United States decreased from 6.5 million in 1935 to 1.91 million farms in 1997, while the annual production of livestock and livestock products increased.[11] Large AFOs containing a threshold number of animals are classified by the EPA as concentrated animal feeding operations (CAFOs).[12] The EPA estimates that there are approximately 450,000 AFOs operating in the United States,[13] of which 18,000 are defined as CAFOs.[14] Large CAFOs contain over 700 dairy cattle, 30,000 broilers or laying hens, 10,000 swine weighing less than 55 pounds, and 2,500 swine weighing more than 55 pounds.[15]

The congregation of animals on a smaller number of farms creates operations quite different than the rural family farms of the past. Presently, a few large corporations are responsible for the production of a high percentage of farm animals in the United States. For example, four companies, Smithfield Foods, Premium Standard Farms, Seaboard Corporation, and Prestage Farms, are responsible for 49% of the pork produced in the United States.[16] Smithfield Foods is the largest owner of hogs with an estimated 825,000 heads.[17] Similarly, Tyson Foods, Pilgrim's Pride, Gold Kist, and Perdue produce 56% of the broiler chickens.[18] Cargill Turkey Products, Hormel Foods, ConAgra (Butterball Turkey Co.), and Carolina Turkeys produce 51% of the turkeys in the U.S.[19] These large, corporate owned and operated farming facilities are not only criticized as

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11. National Academy of Sciences, *supra* note 5, at 29.

12. *Id.* An important difference between AFOs and CAFOs is that CAFOs are potentially regulated as point sources and required to obtain National Pollutant Discharge Elimination System (NPDES) permits under the CWA. National Academy of Sciences, *supra* note 5, at 34.

13. U.S. Environmental Protection Agency, Animal Feeding Operations Frequently Asked Questions, http://cfpub.epa.gov/npdes/faqs.cfm?program_id=7 (last visited Aug. 17, 2006).

14. Office of Enforcement and Compliance, U.S. EPA, Compliance and Enforcement National Priority: Clean Water Act, Wet Weather, Concentrated Animal Feeding Operations 2 (2004), *available at* http://www.epa.gov/compliance/resources/publications/data/planning/priorities/fy2005prioritycwacafo.pdf.

15. U.S. Environmental Protection Agency, Regulatory Definitions of Large CAFOs, Medium CAFO, and Small CAFOs, http://www.epa.gov/npdes/pubs/sector_table.pdf (last visited Aug. 17, 2006).

16. Mary Hendrickson & William Heffernan, Univ. of Missouri Dep't of Rural Sociology, Concentration of Agricultural Markets 1 (2005), *available at* http://www.agribusinesscenter.org/docs/Kraft_1.pdf.

17. *Id.*

18. *Id.* at 2.

19. *Id.*

cruel and inhumane establishments to raise animals, but they also emit significant amounts of pollutants which adversely affect human health and the environment.

The main pollutants released from AFOs are particulate matter (PM), hydrogen sulfide (H_2S), ammonia (NH_3), and volatile organic compounds (VOCs).[20] CAFOs account for more than 575 billion pounds of manure yearly.[21] Manure runoff and spills contribute to surface water pollution, which results in fish kills and reduced biodiversity; increased nitrogen and phosphorus, which contribute to eutrophication and associated algae blooms; and increased pathogens, which contaminate drinking water.[22] Air pollutants are emitted from manure storage areas, such as lagoons or pits, confinement buildings, and land application sites.[23] Concern over the level of emissions from AFOs in Iowa caused the Governor to request that two universities conduct a comprehensive study regarding the public health and environmental impacts of CAFOs.[24] The group of researchers determined that "CAFO air emissions may constitute a public health hazard and that precautions should be taken to minimize both specific chemical exposures (hydrogen sulfide and ammonia) and mixed exposures (including odor) arising from CAFOs."[25]

The high concentration of particulate matter in the air surrounding AFOs raises concern over the health and safety of people living in communities where AFOs are located.[26] The particles are composed of many components from AFOs, including: fecal matter, feed materials, skin cells, bioaerosols, and products from bacteria and fungi.[27] The health effects from particulate matter vary depending on the size of the particles. Larger particles settle in the upper airways and are associated with asthma and bronchitis.[28] Smaller particles may be absorbed into the lungs and

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20. National Academy of Sciences, *supra* note 5, at 16.

21. David Wallinga, Institute for Agriculture and Trade Policy, Concentrated Animal Feeding Operations: Health Risks from Air Pollution 1 (2004), *available at* http://www.environmental observatory.org/library.cfm?RefID=37388.

22. U.S. Environmental Protection Agency, Animal Feeding Operations Frequently Asked Questions, http://cfpub.epa.gov/npdes/faqs.cfm?program_id=7 (last visited Aug. 17, 2006).

23. Wallinga, *supra* note 21.

24. Environmental Health Sciences Research Center, University of Iowa, Iowa Concentrated Feeding Operations Air Quality Study 5 (Feb. 2002), *available at* http://www.public-health.uiowa.edu/ ehsrc/CAFOstudy.htm [hereinafter Iowa Study].

25. *Id.* at 7.

26. *Id.* at 126.

27. *Id.* at 37.

28. *Id.* at 126.

produce increased rates of cardiac deaths.[29] In addition, smaller particles play a role in the formation of regional haze.[30]

AFOs also release hydrogen sulfide into the environment as a result of the storage, handling, and decomposition of animal wastes.[31] Exposure to low levels of hydrogen sulfide are associated with shortness of breath, cough, eye irritation, nausea, and loss of sleep.[32] Exposure to high levels of hydrogen sulfide can cause loss of consciousness and levels greater than 100 parts per million (ppm) are considered immediately hazardous to life and health.[33] At one AFO, levels as high as 1,000 ppm were reported from manure lagoons, illustrating the type of emission levels AFOs are capable of releasing.[34] Additionally, hydrogen sulfide produces a strong odor of rotten eggs and has a low odor threshold of less than 1 ppm, which affects the quality of life in communities where AFOs are located.[35]

Ammonia is another substance released from AFOs and is formed from nitrogen in manure.[36] Ammonia is considered a human toxin.[37] It is estimated that approximately 80% of ammonia emissions in the United States come from agricultural operations.[38] At low levels ammonia produces irritation of the eyes, sinuses, and skin, and can lead to severe cough and mucous production.[39] Higher concentrations of ammonia causes scarring of the upper and lower airways, chemical burns to the skin and eyes, and can result in death.[40] Furthermore, ammonia in the air contributes to the formation of particulate matter associated with ecosystem fertilization, acidification, and eutrophication.[41]

AFOs are also responsible for releasing VOCs into the air. VOCs are associated with irritation of the skin, eyes, nose, and throat.[42] In addition, VOCs contribute to the formation of ozone and particulate matter, both of which have negative consequences on public health and the environment.[43]

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29. *Id.*
30. National Academy of Sciences, *supra* note 5, at 55.
31. Iowa Study, *supra* note 24, at 124.
32. *Id.*
33. *Id.*
34. *Id.*
35. *Id.*
36. National Academy of Sciences, *supra* note 5, at 52.
37. *Id.* at 123.
38. Wallinga, *supra* note 21, at 1.
39. Iowa Study, *supra* note 24, at 123.
40. *Id.*
41. National Academy of Sciences, *supra* note 5, at 52.
42. Iowa Study, *supra* note 24, at 130.
43. U.S. Environmental Protection Agency, Criteria Pollutants, http://www.epa.gov/oar/oaqps/greenbk/o3co.html (last visited Nov. 6, 2006).

Many organizations and agencies recognize the adverse health effects of the pollutants emitted from AFOs. Specifically, the World Health Organization lists hydrogen sulfide as a toxic substance and the Agency for Toxic Substances and Disease Registry lists both hydrogen sulfide and ammonia as toxic substances.[44] These organizations recommend minimum exposure levels to protect the public health.[45] In addition, the EPA identifies hydrogen sulfide and ammonia as hazardous substances under CERCLA,[46] and as extremely hazardous substances under EPCRA.[47] Furthermore, the final report published in the Iowa study concluded that regulatory actions should be considered for hydrogen sulfide and ammonia.[48]

II. FEDERAL ENVIRONMENTAL STATUTES

As communities across the United States are increasingly impacted by air and water pollution resulting from AFOs, they are looking for different approaches to control and mitigate AFO pollution and to maintain their quality of life. The EPA began regulating AFO emissions under the CWA, however, the EPA has remained complacent in regulating and prosecuting AFOs under the CAA, CERCLA, and EPCRA. Only a few cases exist, some of which are discussed in Part IV of this Note, where the EPA took enforcement action against an AFO for failure to comply with provisions of these statutes. As concern over AFO emissions grows, there is increasing pressure on the EPA to use its authority under the CAA, CERCLA, and EPCRA to regulate the pollution emitted from concentrated farming operations.

A. Clean Air Act Permitting Requirements Relating to AFOs

The CAA is a federal environmental statute that regulates ambient air quality, stationary source emissions, and hazardous air pollutants.[49] Historically, agricultural facilities were not regulated under the CAA, because their emissions were not large enough to trigger the permitting requirements of the statute. However, with the consolidation of the livestock industry and the increase in farm size, AFO facilities are emitting significantly more pollution. This makes it possible for AFOs to meet the

44. Iowa Study, *supra* note 24, at 7.
45. *Id.*
46. 40 C.F.R. § 302.4.
47. 40 C.F.R. § 355, Appendix A.
48. Iowa Study, *supra* note 24, at 8.
49. 42 U.S.C. §§ 7401-7671q.

threshold level of pollution under the CAA that allows the EPA to regulate their emissions.

The CAA sets forth permitting requirements to control ambient air quality and stationary source emissions. The two permitting provisions in the CAA are the preconstruction permits under Title I, Parts C and D,[50] and the operating permit under Title V.[51] The preconstruction permit provision applies to the construction of new sources or the modification of existing sources emitting a threshold level of pollutants.[52] The permit requirements specifically address air quality criteria, established by the EPA administrator, for specific criteria pollutants, "[the] emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare . . . [and] the presence of which in the ambient air results from numerous or diverse mobile or stationary sources."[53] The EPA identified six criteria pollutants under section 108, including: sulfur dioxide (SO_2), particulate matter (PM), carbon monoxide (CO_2), ozone (O_3), nitrogen dioxide (N_2O), and lead (Pb).[54]

The EPA is required to promulgate both primary and secondary national ambient air quality standards (NAAQS) for those air pollutants listed under section 108.[55] The national primary air quality standards must allow an "adequate margin of safety" and must be "requisite to protect the public health," and the national secondary air quality standards must "protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air."[56] The NAAQs are implemented by the states through a State Implementation Plan (SIP) pursuant to section 110.[57] Each SIP must include "enforceable emission limitations and other control measures, means, or techniques" to satisfy the requirements of the CAA.[58] The preconstruction permit requirements of Title I, Parts C and D are implemented by states to achieve the national ambient air quality standards.

There are two types of preconstruction permits, permits issued for the Prevention of Significant Deterioration (PSD) in areas where NAAQS have

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50. *Id.* §§ 7475, 7503.
51. *Id.* § 7661-7661(f).
52. *Id.* § 7475.
53. *Id.* § 7408(a)(1)(A)–(B).
54. *See generally* 40 C.F.R. §§ 50.4-50.12 (2006).
55. *Id.* § 7409(a)(1)(A).
56. *Id.* § 7409(b)(1) (discussing the national primary air quality standards); *Id.* § 7409(b)(2) (discussing the national secondary air quality standards).
57. *Id.* § 7410(a)(1).
58. *Id.* § 7410(a)(2)(A).

been met[59] and permits for nonattainment areas where NAAQS have not been met.[60] Title I, Part C sets forth the preconstruction permit requirements for the PSD areas.[61] The CAA requires a permit for the construction or modification of a "major emitting facility."[62] Included within the definition of a "major emitting facility" are any "source[s] with the potential to emit two hundred and fifty tons per year [(tpy)] or more of any air pollutant."[63] When determining whether a source is a "major emitting facility," fugitive emissions are not included in the calculation.[64] Under these provisions, the main air pollutant regulated by this section and released by AFOs is particulate matter, a criteria air pollutant. Therefore, AFOs emitting more than two hundred and fifty tpy of a regulated air pollutant are required to obtain a permit under Title I, Part C before the construction or modification of a facility.

A significant requirement under the permitting requirements of Title I, Part C authorizes the EPA to mandate that facilities located in attainment areas monitor their own emissions. Specifically, Title I states that,

> [T]he person who owns or operates, or proposes to own or operate, a major emitting facility for which a permit is required under this part agrees to conduct such monitoring as may be necessary to determine the effect which emissions from any such facility may have, or is having, on air quality in any area which may be affected by emissions from such source.[65]

Based on this provision, the EPA is authorized to require AFOs releasing more than 250 tpy of an air pollutant to monitor emissions from their

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59. *See Id.* § 7475.

60. *Id.* § 7503. A nonattainment area is "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant." *Id.* § 7407(d)(1)(A)(i).

61. *Id.* § 7475(a).

62. *Id.*

63. *Id.* § 7479(1). "Air pollutant" is broadly defined in CAA § 302(g), 42 U.S.C. § 7602(g), to include "any air pollution . . . which is emitted into or otherwise enters the ambient air" and "includes any precursors to the formation of any air pollutant" described to the EPA. EPA issued a guidance document to limit the definition of "air pollutant," for the purposes of § 302(j), 42 U.S.C. § 7602(j), to include only "pollutants subject to regulation under the Act." Memorandum from Lydia N. Wegman, Deputy Director, EPA Office of Air Quality and Standards, to Air Division Director, Regions I-X, Definition of Regulated Air Pollutant for Purposes of Title V, at 4 (Mar. 26, 1993), *available at* http://www.epa.gov/Region7/programs/artd/air/title5/t5memos/rapdef.pdf.

64. 40 C.F.R. § 51.166(b)(1)(iii). Fugitive emissions are defined as emissions "which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening." 40 C.F.R. § 51.165(a)(1)(ix).

65. 42 U.S.C. § 7475(a)(7).

facilities. If the EPA enforced this provision and required applicable AFOs to monitor their own emissions, then the EPA and the agriculture industry would not only gain a better understanding of AFO emissions in general, but would also learn about the methodologies needed to measure those emissions.

Another requirement a facility must satisfy to obtain a PSD permit is that a proposed facility must install the best available control technology (BACT) for each pollutant subject to regulation.[66] BACT is the "emission limitation based on the maximum degree of reduction of each pollutant subject to regulation."[67] BACT is determined on a case-by-case basis by the permitting authority who, "taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems, and techniques."[68] Under this requirement, AFOs seeking a permit under Title I would be required to install BACT at their facilities, thereby ensuring that AFOs implement a pollution control mechanism and mitigate their releases of air pollutants.

The second type of preconstruction permit, which also regulates particulate matter, is for facilities located in nonattainment areas where NAAQS have not been met.[69] The state in which a "nonattainment area" is located must submit a plan to the administrator of the EPA,[70] which "shall require permits for the construction and operation of new or modified major stationary sources anywhere in the nonattainment area."[71] The definition of "major" differs between attainment and nonattainment areas. Specifically, a "major stationary source" in a nonattainment area means "any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant."[72] This definition includes "any major emitting facility or source of fugitive emissions of any such pollutant, as determined by rule by the Administrator."[73] Therefore, an AFO located in a nonattainment area, which emits or has the potential to emit 100 tpy or more of particulate matter, must apply for a permit under Title I, Part D.

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66. *Id.* § 7475(a)(4).
67. *Id.* § 7479(3).
68. *Id.*
69. *Id.* § 7503.
70. *Id.* § 7502(b).
71. *Id.* § 7502(c)(5).
72. *Id.* § 7602(c)(j).; *see* 42 U.S.C. § 7479(1) (defining "air pollutant").
73. *Id.* § 7602(c)(j).

A source receiving a permit in a nonattainment area is required to comply with the lowest achievable emission rate (LAER)[74] and facilities must provide for sufficient offsetting of emissions reductions.[75] As a result, an AFO that is defined as a new or modified major stationary source and is located in a nonattainment area must comply with applicable permitting requirements.

In addition to Title I preconstruction permitting requirements, Title V requires all facilities defined as a "major source" to obtain an operating permit.[76] Title V permitting requirements apply to major sources, which are stationary sources that have the potential to emit either (1) ten tpy or more of any hazardous air pollutant (HAP), (2) twenty five tpy of any combination of HAPs,[77] or (3) 100 tpy or more of any air pollutant, as defined in section 302.[78] Based on the definition of a "major source," an AFO emitting more than 100 tpy of VOCs or particulate matter must comply with the permitting requirements of Title V.

An AFO falling within the definition of a "major source" under Title V cannot be exempt from the Title V permitting requirements.[79] Although section 502(a) of Title V allows the administrator of the EPA to provide facilities exemptions from the permitting requirements, the provision specifically states that major sources can never be exempted from the

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74. *Id.* § 7503(a)(2).

75. *Id.* § 7503(a)(1)(A).

76. *Id.* § 7661a(a).

77. 40 C.F.R. § 70.2(1)(i) (2005).

78. 40 C.F.R. § 70.2; *see* 42 U.S.C. § 7479(1) (defining "air pollutant"). "Regulated air pollutant" includes the following:

> (1) Nitrogen oxides or any volatile organic compounds;
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> (2) Any pollutant for which a national ambient air quality standard has been promulgated;
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> (3) Any pollutant that is subject to any standard promulgated under section 111 of the Act;
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> (4) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act; or
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> (5) Any pollutant subject to a standard promulgated under section 112 or other requirements established under section 112 of the Act, including sections 112(g), (j), and (r) of the Act, including the following: (i) Any pollutant subject to requirements under section 112(j) of the Act. If the Administrator fails to promulgate a standard by the date established pursuant to section 112(e) of the Act, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to section 112(e) of the Act; and (ii) Any pollutant for which the requirements of section 112(g)(2) of the Act have been met, but only with respect to the individual source subject to section 112(g)(2) requirement. 40 C.F.R. § 70.2.

79. *See* 42 U.S.C. § 7661a(a).

permit requirements.[80] Therefore, large scale farming facilities that are a major source of pollution must obtain the requisite permit to operate.

The above analysis emphasizes the EPA's statutory authority under the CAA to regulate emissions of particulate matter, ammonia, VOCs, and hydrogen sulfide emitted from AFOs. Furthermore, certain provisions of the permitting requirements allow the EPA to compel an AFO to monitor its own pollution releases, and to require the installation of pollution control technology. Thus, the EPA has the power to control AFO emissions through the CAA permitting requirements.

B. CERCLA and EPCRA Reporting Requirements Relating to AFOs

CERCLA[81] and EPCRA[82] are environmental statutes providing the EPA authority to regulate hazardous substances. Both statutes contain reporting requirements that are triggered when a facility emits certain levels of a hazardous substance. The term "hazardous substance" is broadly defined under CERCLA and includes hydrogen sulfide and ammonia, two substances emitted from AFOs.[83] The reporting requirements allow local, state, and federal officials to take action in response to releases of hazardous substances, thereby mitigating possible damage to public health and the environment. CERCLA and EPCRA reporting requirements can play a significant role in reducing negative impacts to local communities when large levels of hydrogen sulfide or ammonia are released from an AFO.

CERCLA was enacted in 1980 to address the cleanup and liability of hazardous substances released into the environment and to authorize the federal government to respond to releases or potential releases of hazardous substances.[84] One component of CERCLA is the establishment of federal reporting requirements under section 103, which requires a person in charge of a facility to immediately report any release, including air emissions, of a hazardous substance from the facility if the release is equal to or greater than the reportable quantity (RQ) for that substance.[85]

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80. *Id.*

81. Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675 (2000).

82. Emergency Planning and Community Right-to-Know Act, 42 U.S.C. §§ 11001-11050 (2000).

83. *See* 42 U.S.C. § 9601(14).

84. U.S. Environmental Protection Agency, CERCLA Overview, http://www.epa.gov/superfund/action/law/cercla.htm (last visited Aug. 17, 2006). A "release" is defined as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment." 42 U.S.C. § 9601(22).

85. 42 U.S.C. § 9603(a).

In accordance with the EPA's statutory mandate, the EPA compiled a list of nearly 800 hazardous substances and their corresponding reportable quantities.[86] The EPA listed both ammonia and hydrogen sulfide as hazardous substances under section 102 of CERCLA and set their reporting requirements at 100 pounds per day.[87] Therefore, when 100 pounds per day of hydrogen sulfide or ammonia are released from a facility, the person in charge of the facility must immediately report the release to the National Response Center (NRC) under CERCLA section 103.[88] The reporting requirements allow government officials to evaluate the release of hazardous substances and to determine whether action is needed in response to a release.

EPCRA was promulgated to provide notification systems at the local and state levels for the storage and handling of toxic chemicals and the release of "extremely hazardous substances" into the environment.[89] EPCRA reporting requirements are triggered by the release of an RQ of "extremely hazardous substances" listed under EPCRA regulations and by the release an RQ of "hazardous substances" under CERCLA.[90] Thus, CERCLA section 103 reporting requirements trigger EPCRA section 304 requirements. Therefore, EPCRA reporting requirements must be followed when 100 pounds per day of hydrogen sulfide or ammonia are released from a facility.

The notification requirements under CERCLA and EPCRA are reduced if a release is labeled as "continuous."[91] A continuous release is "a release that occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes."[92] Specifically, "no notification is required for any release of a hazardous substance that is . . . continuous and stable in quantity and rate."[93] Although the reporting requirements are relaxed, the following notification must still be provided: (1) an initial telephone notification; (2) an initial written notification within thirty days of the initial telephone

86. 40 C.F.R. § 302.4, tbl. 302.4 (2005).

87. *Id.*

88. *Id.*

89. U.S. Environmental Protection Agency, EPCRA, http://www.epa.gov/region5/defs/html/epcra.htm (last visited Aug. 17, 2006); EPA requires that "[n]otice . . . be given immediately after the release by the owner or operator of a facility (by such means as telephone, radio, or in person) to the community emergency coordinator for the local emergency planning committees . . . and to the State emergency planning commission of any State likely to be affected by the release." 42 U.S.C. § 11004(b)(1).

90. 42 U.S.C. § 11004(a)(1)-(2).

91. 42 U.S.C. § 9603(f)(2) (2000); 40 C.F.R. § 355.40(a)(2)(iii) (2005).

92. 40 C.F.R. § 302.8(b).

93. *Id.* § 302.8(a).

notification; and (3) a follow-up notification within thirty days of the first anniversary date of the initial written notification.[94] In addition, notification must occur if there is a change in the composition or source of the release or in the other information submitted in the initial written notification. Notification is also required when there is a statistically significant increase in the quantity of the hazardous substance being released during any twenty four hour period.[95] Therefore, although the release of hydrogen sulfide and ammonia from an AFO may be labeled as "continuous," the reporting requirements are not eliminated, but are only reduced. Thus, the EPA is still authorized under CERCLA and EPCRA to require qualifying AFOs to report their emissions of hydrogen sulfide or ammonia that are over 100 pounds per day, regardless of whether the release is continuous or episodic.

An AFO is only required to report releases of hazardous substances under CERCLA and EPCRA if it meets the definition of a facility.[96] The definition of a "facility" differs between CERCLA and EPCRA. A facility is defined under EPCRA to include "*all* buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person."[97] However, under CERCLA, a "facility" is defined as "(A) *any* building, structure, installation, . . . well, pit, pond, lagoon, impoundment, ditch, landfill, storage container . . . or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located."[98]

Disputes have arisen regarding whether emissions from a farm site should be aggregated before determining whether the reportable quantity for a hazardous substance has been reached or exceeded, or whether emissions from buildings and structures should be calculated individually. In response, courts have broadly interpreted the term "facility" under CERCLA and EPCRA, causing more AFOs to fall within CERCLA and EPCRA reporting requirements. First, in *Sierra Club v. Seaboard Farms Inc.*, the Tenth Circuit interpreted the term "facility" under CERCLA to include the whole farm complex in the aggregate and not each individual barn, lagoon, and land application as an individual facility.[99] The court emphasized that prior case law had interpreted CERCLA liberally to carry out its purpose, and therefore, consistent with this reasoning, the court

94. *Id.* § 302.8(c).
95. *Id.*
96. 42 U.S.C. § 9603(a); 40 C.F.R. § 355.40(a).
97. 42 U.S.C. § 11049(4) (emphasis added).
98. 42 U.S.C. § 9601(9) (2000) (emphasis added).
99. Sierra Club v. Seaboard Farms Inc., 387 F.3d 1167, 1168 (10th Cir. 2004).

needed to broadly construe the term "facility."[100] Similarly, in *Sierra Club v. Tyson Food Inc.*, the court found that the term "facility" under CERCLA included the whole farm site and not just individual poultry houses, and emphasized that AFOs are not exempt from the reporting requirements under CERCLA and EPCRA.[101] Based on these interpretations, emissions from a barn, holding facility, waste lagoon, or manure pit located in an AFO will be looked at in the aggregate to determine whether an AFO release exceeds the reportable quantity for a specific substance. Thus, when an AFO releases one hundred pounds per day of ammonia or hydrogen sulfide the reporting requirements under CERCLA and EPCRA are triggered.

The EPA is authorized to enforce the notification requirements of CERCLA under section 103. Any person who fails to comply with the reporting requirements set forth in CERCLA is subject to civil penalties of up to $32,500 per day for continuing violations, and in the case of a second or subsequent violation, the amount of such penalty may be up to $97,500 for each day during which the violation continues.[102] In addition, failure to follow notification requirements and the submittal of false or misleading information may result in possible fines according to Title 18 of the U.S. Criminal Code and up to three years imprisonment for the first offense or five years imprisonment for subsequent offenses.[103]

Furthermore, EPCRA section 325 provides the EPA with the authority to enforce the reporting requirements of section 304.[104] The EPA "may order a facility owner or operator (except an owner or operator of a facility designated under section 11002(b)(2) of this title) to comply with section 11002(c) of this title and section 11003(d) of this title."[105] Any person who fails to comply with the order is subject to civil penalties of up to $32,500 for each day during which the violation continues, in accordance with section 325(b)(2) of the Act, and up to $97,500 for each day the violation continues in the case of a second or subsequent violation.[106] Furthermore, those who fail to report a release may face criminal penalties and up to two

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100. *Id.* at 1172 (citing United States v. Bestfoods, 524 U.S. 51, 55 (1998)).

101. Sierra Club v. Tyson Food Inc., 299 F.Supp.2d 693, 708 (W.D.Ky. 2003).

102. Adjustment of Civil Monetary Penalties for Inflation, 40 C.F.R. § 19.4, tbl.1 (2004) (increasing the penalties under 42 U.S.C. § 9609(b) (2000) from $25,000 to $32,500 and from $75,000 to $97,500).

103. 42 U.S.C. § 9603(b) (2000).

104. 42 U.S.C. § 11045(a) (2000).

105. *Id.*

106. 40 C.F.R. § 19.4, tbl.1 (increasing the penalties under 40 C.F.R. § 355.50(b) (2005) from $25,000 to $32,500 and from $75,000 to $97,500).

years imprisonment for the first offense or five years imprisonment for subsequent offenses.[107]

In the past, smaller farms have not been regulated under the reporting requirements of CERCLA and EPCRA because their emissions of hydrogen sulfide and ammonia have not met the threshold levels required under the statutes. However, with the expansion of AFO facilities, emission levels are greatly increasing, thereby permitting more AFOs to be regulated under CERCLA and EPCRA. These requirements provide a safety mechanism to members of the community, allowing them to respond to high levels of pollutants emitted into the environment. Based on the information the communities receive, they can make individualized decisions regarding their health and welfare, and protect themselves from large levels of hydrogen sulfide or ammonia released from AFOs.

III. ANIMAL FEEDING OPERATIONS CONSENT AGREEMENT AND MONITORING STUDY

As pressure increased for the EPA to regulate AFOs, the EPA, along with the United States Department of Agriculture (USDA), commissioned the National Academy of Sciences (NAS) to review and evaluate the scientific basis for estimating AFO emissions.[108] A sixteen member Committee on Air Emissions from Animal Feeding Operations ("the Committee") was formed and published its findings and recommendations in 2003.[109] The Committee found that "USDA and EPA have not devoted the necessary financial or technical resources to estimate air emissions from AFOs and develop mitigation technologies."[110] In response, the Committee recommended that "[f]or the short term, USDA and EPA should initiate and conduct a coordinated research program designed to produce a scientifically sound basis for measuring and estimating air emissions from AFOs on local, regional, and national scales."[111]

At the same time the National Academy of Sciences compiled its findings and recommendations on AFO emissions, the agriculture community began to respond to emerging pressure for the EPA to regulate AFOs.[112] Representatives of the agriculture industry approached EPA

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107. 40 C.F.R. § 355.50(c) (2005).

108. National Academy of Sciences, *supra* note 5, at 14.

109. *See generally* National Academy of Sciences, *supra* note 5.

110. *Id.* at 11.

111. *Id.* at 12.

112. *See generally,* National Pork Producers Council, Questions and Answers on the Air Emissions Consent Agreement and National Monitoring Study (2005), http://www.nppc.org/hot_topics/airemissionsQ&A.html ("[t]he pork industry saw the emerging legal liability as a critical issue for pork

officials with an "Outline for a Possible Livestock & Poultry Monitoring and Safe Harbor Agreement."[113] The proposal set forth a program to provide AFOs immunity from CERCLA and CAA enforcement actions based on their air emissions and to conduct an air emission monitoring study.[114] This outline, created by the agriculture industry, provided the substantive framework for what later became the Consent Agreement.

News of a possible consent agreement between the EPA and the AFO industry spread to environmental groups and raised significant concern. The environmental groups requested documents regarding this agreement in May 2003 under the Freedom of Information Act.[115] The EPA denied the existence of the agreement and asserted that there were no "draft or other underlying records relating to the topics described above at any stage of development."[116] However, a copy of the proposed safe harbor agreement was leaked in September of 2003 proving that the EPA was in fact negotiating with representatives of the agriculture industry.[117] Despite the concerns and objections regarding negotiations for a proposed safe harbor agreement between EPA and AFOs, the EPA set forth a comprehensive agreement and monitoring study in 2005 called the Animal Feeding Operations Consent Agreement.[118]

A. The Agreement

On January 31, 2005, the EPA published a notice in the Federal Register announcing the Consent Agreement between the EPA and participating AFOs.[119] In general, the Agreement allows the EPA to

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producers of all sizes and [National Pork Producers Council] engaged in the efforts of a coalition of agricultural organizations to bring [the Consent Agreement] about.").

113. Memorandum from John Thorne and Richard Schwartz, to David A. Nielsen, Director, Multimedia Enforcement Division, U.S. EPA and Sally Shaver, Director, Air Quality Strategies and Standards Division, U.S. EPA, Outline for a Possible Livestock and Poultry Monitoring and Safe Harbor Agreement (June 11, 2002),
available at http://www.sierraclub.org/pressroom/cafo_papers/2003/safe_harbor_proposal.pdf.

114. *Id.*

115. Letter from Brent Newell, Center on Race, Poverty & the Environment, Pat Gallagher, Sierra Club et. al., to Freedom of Information Officers, U.S. EPA (May 5, 2003), *available at* http://www.sierraclub.org/pressroom/cafo_papers/2003/2003sept_foia_request.pdf.

116. Letter from Sally Shaver, Director, Emission Standards Division to Pat Gallagher, Sierra Club (June 3, 2003), *available at* http://www.sierraclub.org/pressroom/cafo_papers/2003/2003sept_foia_denial.pdf.

117. Sierra Club, Press Room, Leaked Documents Reveal Deal, http://www.sierraclub.org/pressroom/cafo_papers/2003.

118. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4958 (Jan. 31, 2005).

119. *Id.*

provide AFOs immunity from liability under Title I, Parts C and D and Title V of the CAA; section 103 of CERCLA; and section 304 of EPCRA. In exchange, AFOs must allow the EPA to monitor emissions at selected facilities.[120] The goal of the Agreement is to "reduce pollution,"[121] "to ensure that all animal feeding operations are in compliance with applicable [CAA], CERCLA and EPCRA requirements,"[122] and to "generate scientifically credible data to provide for the characterization of emissions from all major types of AFOs."[123] The Agreement is a voluntary agreement between the EPA and eligible AFOs, and applies to emissions from agricultural waste at emission units.[124]

To participate in the program, a farm must meet the definition of an AFO as defined by the Clean Water Act.[125] Only AFOs in "the egg, broiler chicken, turkey, dairy, and swine industries" are eligible to participate in the Agreement.[126] Cattle feedlots are not eligible because the study will not monitor open-air feedlots.[127] The EPA can refuse to enter into an agreement with an AFO if the AFO has been "notified by the EPA or a State that they may be currently subject to a CAA, CERCLA section 103, or EPCRA section 304(a) enforcement action."[128]

Sign-up for the Agreement began when notice was published in the Federal Register.[129] Originally, AFOs had 90 days to sign-up and the EPA gave the public thirty days to submit their comments on the Agreement.[130]

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120. *Id.*

121. U.S. Environmental Protection Agency, Animal Feeding Operations Air Agreements, http://www.epa.gov/compliance/resources/agreements/caa/cafo-agr-0604.html (last visited Aug. 17, 2006).

122. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4962.

123. *Id.* at 4960.

124. *Id.* at 4963. "Emission Units" include "any part of a Farm that emits or may emit Volatile Organic Compounds (VOCs), Hydrogen Sulfide (H2S), Ammonia (NH3), or Particulate Matter (TSP, PM10 and PM2.5) and is either: (a) a building, enclosure, or structure that permanently or temporarily houses Agricultural Livestock; or (b) a lagoon or installation that is used for storage and/or treatment of Agricultural Waste." *Id.*

125. The CWA defines an AFO as:

> a lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i)Animals . . . have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. 40 C.F.R. § 122.23(b)(1) (2005).

126. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959.

127. Claudia Copeland, CRS Report, Air Quality Issues and Animal Agriculture: EPA's Air Compliance Agreement 4 (RL32947, 2005), *available at* http://www.ncseonline.org/nle/crsreports/05jul/RL32947.pdf.

128. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4962.

129. *Id.* at 4958.

130. *Id.*

However, the sign up period was extended twice to allow AFOs additional time "to make informed decisions about participation."[131] The sign-up period ended on August 12, 2005[132] and the comment period concluded on May 2, 2005.[133]

In exchange for immunity, participating AFOs are obligated to comply with five main provisions under the terms of the Agreement. First, each AFO participating in the Agreement must pay a civil penalty based on the size of their AFO.[134] The EPA clearly states that "payment of a penalty will not be an admission of liability by an AFO."[135] The penalties range from $200 to $1,000 per AFO and total penalties are capped at $10,000 for a participant with 10 farms or less, and $100,000 for a participant with over 200 farms.[136] The penalties are minor when compared with the penalties authorized for violating the reporting requirements under CERCLA section 103 or EPCRA section 304, which allow fines up to $32,500 per day for a continuous violation.[137] Second, each participant must pay up to $2500 to fund a nationwide emissions monitoring study.[138] Third, participants must make their facilities available for monitoring if they are chosen as a sample facility.[139] Although only a small number of facilities will be monitored, the EPA will still grant all facilities immunity under the Agreement.[140] Fourth, AFOs must "comply with all final actions and final orders issued by the State or local authority that address a nuisance arising from air emissions at the AFO."[141] Finally, at the conclusion of the monitoring study, participating AFOs are obligated to determine their emissions and

131. Animal Feeding Operations Consent Agreement and Final Order, Supplemental Notice, 70 Fed. Reg. 16266-01 (Mar. 30, 2005). The sign-up period was first extended to July 1, 2005, and subsequently to July 29, 2005. *See id.; see also* Animal Feeding Operations Consent Agreement and Final Order, Supplemental Notice, 70 Fed. Reg. 40016-01 (July 12, 2005).

132. Animal Feeding Operations Consent Agreement and Final Order, Supplemental Notice, 70 Fed. Reg. 44631-01 (Aug. 3, 2005).

133. Animal Feeding Operations Consent Agreement and Final Order, Supplemental Notice, 70 Fed. Reg. 16266-01 (Mar. 30, 2005).

134. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959.

135. *Id.* The Agreement also makes clear that an AFO entering into the Agreement "neither admits or denies that any of its Farms is subject to CERCLA or EPCRA reporting or Clean Air Act permitting requirements, or is in violation of any provision of CERCLA, EPCRA or the Clean Air Act." *Id.* at 4962.

136. *Id.* at 4959.

137. 42 U.S.C. § 9609(b) (2000); 40 C.F.R. § 355.50(b) (2005).

138. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4966.

139. *Id.*

140. *Id.* at 4962.

141. *Id.* at 4958.

comply with all applicable CAA permitting and reporting requirements under CERCLA and EPCRA.[142]

When the monitoring study is concluded, the EPA will have eighteen months to publish the Emissions-Estimating Methodologies.[143] "Emissions-Estimating Methodologies" are defined as "those procedures that will be developed by the EPA, based on data from the national air emissions monitoring study and any other relevant data and information, to estimate daily and total annual emissions from individual Emission Units and/or Sources." [144] Once these methodologies are published, participating AFOs have 120 days to calculate their emissions and comply with the permitting requirements of Title I, Parts C and D and Title V of the CAA and the reporting requirements of CERCLA section 103 and EPCRA section 304.[145] If an AFO's emissions are not great enough to require permits or notification, then an AFO must certify that to the EPA within sixty days after the Emissions-Estimating Methodologies are published.[146]

AFOs that participate in the Agreement and abide by its terms will receive from the EPA a release and covenant not to sue for certain past, present and ongoing civil violations of the CAA, CERCLA, and EPCRA.[147] Specifically, AFOs will not be liable for any civil violations of permitting requirements contained in Title I, Parts C and D and Title V of the CAA, and any other civil violations of federally enforceable State Implementation Plan (SIP) requirements.[148] Participating AFOs will also be immune from all civil violations of the reporting requirements under CERCLA section 103 and EPCRA section 304 for air emissions of hydrogen sulfide and ammonia.[149] However, the EPA will continue to prosecute all cases that present "an imminent and substantial endangerment to public health, welfare or the environment."[150]

The EPA will grant participating AFOs immunity from liability for violations occurring prior to the study, during the study, and until a specified time after the EPA publishes the Emissions-Estimating Methodologies.[151] Once the Emissions-Estimating Methodologies are published, immunity will end at either the time an individual AFO submits

142. *Id.* at 4963–4964.
143. *Id.* at 4963.
144. *Id.*
145. *Id.*
146. *Id.*
147. *Id.*
148. *Id.*
149. *Id.*
150. *Id.*
151. *Id.* at 4965.

its last required certification under the Agreement or two years after it submits any permit applications under the CAA, whichever is earlier.[152] However, after these two applicable time periods are reached, the final rule allows an extension of immunity for up to six months.[153] Therefore, AFOs can extend their immunity from liability for over two years after the monitoring study concludes and almost four years from when the Agreement is executed.

Following the termination of the sign up period, all agreements were forwarded to the EPA's Environmental Appeals Board (EAB) for final approval.[154] In total, the EPA received signed agreements from "2,681 AFOs, representing more than 6,700 farms in 42 states."[155] The EAB approved the first 20 agreements on January 30, 2006, which consisted of 10 AFOs in the swine industry and 10 egg-laying operations.[156] On April 17, 2006, EAB approved an additional 702 agreements, which consisted of 48 AFOs in the egg-laying industry, representing 333 farms and 654 swine-raising operations, representing 2,143 farms.[157]

B. The Monitoring Study

A major element of the Agreement is the nationwide emissions monitoring study ("the study"). The study will monitor the emission of particulate matter, hydrogen sulfide, volatile organic compounds, and ammonia from buildings and waste lagoons at AFOs.[158] The goal of the study is to collect data from different industries (i.e., swine, dairy and poultry) and geographical locations, and to use that data to develop Emissions-Estimating Methodologies for AFOs.[159] The monitoring study is the result of the National Academy of Sciences (NAS) 2003 report recommending that the EPA and USDA coordinate a research program

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152. *Id.* AFOs have 120 days after EPA publishes Emissions-Estimating Methodologies to submit all CAA permit applications. *Id.* at 4964.

153. *Id.* at 4964.

154. *Id.* at 4962.

155. Press Release, Environmental Appeals Board Approves First Air Compliance Agreements with Animal Feeding Operations (Jan. 30, 2006), http://yosemite.epa.gov/opa/admpress.nsf/198a007cc57e64d3852570210055f3f6/85b299fbd0ab3894852571060071f0ae.

156. *Id.*

157. U.S. Environmental Protection Agency, Animal Feeding Operations Air Agreements, http://www.epa.gov/compliance/resources/agreements/caa/cafo-agr-0604.html (last visited Aug. 17, 2006).

158. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4960.

159. *Id.*

designed to produce "a scientifically sound basis for measuring and estimating air emissions from AFOs."[160]

The agriculture industry will play a large role in carrying out the study. An Agricultural Air Research Council (AARC), a nonprofit organization, will be created by the industry to handle the monitoring fee each participating AFO is required to contribute.[161] The AARC "will be comprised of representatives from the various animal husbandry industries who are knowledgeable of actual farming operations as related to the farm sites proposed for monitoring."[162] The AARC is also responsible for choosing and subcontracting a Science Advisor and an Independent Monitoring Contractor (IMC) to run the nationwide monitoring study, holding and dispersing funds to the IMC as needed for the study, and communicating the progress of the study to the industry and public.[163] The AARC will select AFOs from the list of all participating AFOs to be candidates for monitoring.[164]

Once the AARC compiles a list of AFO candidates, the Science Advisor will select the AFOs to be monitored.[165] In the selection process, the Science Advisor will analyze "differing regional and climatic conditions, number of animals, different manure handling practices, and types of ventilation (natural vs. forced air)."[166] The Science Advisor is responsible for overseeing the study and selecting and advising principal investigators to conduct the monitoring.[167] The Science Advisor is also responsible for drafting the comprehensive study design and the Quality Assurance Project Plan (QAPP), and submitting these plans to the EPA for final approval.[168]

Although the IMC will be a separate organization from the industry, the IMC will be chosen by the agriculture representatives in the AARC.[169] The IMC will be responsible for overseeing the performance of the Science Advisor.[170] In addition, the IMC will purchase equipment and develop contracts for the principal investigators, supervise budgets and monitoring

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160. *Id.*
161. *Id.* at 4969.
162. *Id.* at 4970.
163. *Id.*
164. *Id.*
165. *Id.* at 4970–4971.
166. *Id.* at 4971.
167. *Id.*
168. *Id.* "The QAAP will outline appropriate procedures to ensure acceptable accuracy, precisions, representativeness, and comparability of the data." *Id.* at 4968.
169. *See supra* notes 161–62.
170. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4970.

expenditures, and audit all financial statements.[171] The IMC is responsible for reporting back to the EPA and the AARC on the progress of the study, including the study's financial status.[172]

The EPA predicts the study will begin in 2006 and continue for two years.[173] During this time, the IMC will monitor emissions of ammonia, hydrogen sulfide, particulate matter (PM) (TSP, PM10 and PM2.5), and volatile organic compounds (VOCs) from buildings and waste lagoons.[174] Following the conclusion of the study, the EPA will develop and publish the Emissions-Estimating Methodologies for AFOs. The purpose of these methodologies is to provide guidance to AFOs to assist them in complying with the CAA, CERCLA, and EPCRA and to provide the EPA with the information they need to regulate AFOs.

IV. EPA ENFORCEMENT ACTIONS AGAINST ANIMAL FEEDING OPERATIONS UNDER THE CAA, CERCLA, AND EPCRA

The EPA claims the lack of enforcement actions against AFOs is the result of a need for greater scientific knowledge about emissions monitoring technologies at AFOs. However, there are examples discussed below of the EPA enforcement of AFOs under the CAA, CERCLA, and EPCRA. These examples demonstrate that it is not necessary for the EPA to grant full immunity to participating AFOs for them to achieve compliance with federal environmental statutes; rather, the EPA is already authorized to enforce compliance with these federal environmental statutes.

In 1997, Citizens Legal Environmental Action Network, Inc. (CLEAN) filed suit against Premium Standard Farms, Inc. (PSF), an AFO, alleging violations of the CAA, CWA, and CERCLA.[175] PSF is a hog operation in northern Missouri, which holds an average of 900,000 hogs at fifteen facilities.[176] In 1999, the EPA intervened, filing a complaint against PSF for violations of the CWA.[177] Subsequently, the EPA issued Notices of Violation for failure to apply for preconstruction and operating permits

171. *Id.*

172. *Id.*

173. EPA Response to Public Comments, 70 Fed. Reg. 40016, 40018 (July 12, 2005).

174. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4966.

175. Consent Decree, Citizens Legal Environmental Action Network, Inc. v. Premium Standard Farms, Inc., No. 97-6073-CV-SJ-6, at 4 (W.D. Mo.), *available at* http://www.epa.gov/oecaerth/resources/decrees/civil/mm/psfcd.pdf [hereinafter PSF Consent Decree].

176. Complaint, Citizens Legal Environmental Action Network, Inc. and U.S. Environmental Protection Agency v. Premium Standard Farms, Inc., No. 97-6073-CV-SJ-6, at 7 (W.D. Mo. Apr. 26, 2000), *available at* http://www.epa.gov/compliance/resources/cases/civil/mm/psfcp.pdf.

177. *Id.* at 1.

under the CAA,[178] and for failure to follow the reporting requirements for ammonia under CERCLA section 103.[179] The parties settled and entered into a consent degree which was "unprecedented" in the CAFO industry.[180]

Key terms of the settlement agreement require PSF to pay the United States a civil penalty of $350,000 and install wastewater treatment technology that will reduce the nitrogen content of the wastewater by at least 50% and "substantially eliminate" emissions of hydrogen sulfide and ammonia from treatment systems, fields, and lagoons.[181] Additionally, PSF must monitor emissions of particulate matter, volatile organic compounds, hydrogen sulfide, and ammonia from barns and lagoons before and after control technology is implemented, and install an oil sprinkling system to control particulate matter emissions and odor from barns.[182]

Although CLEAN representatives criticized the settlement,[183] it illustrates the EPA is equipped to enforce current environmental laws against AFOs without providing them immunity from past and present violations. Through the settlement agreement, PSF was required to reduce and monitor air emissions from its facilities, and test new technology to fulfill these requirements. The end result of the PSF settlement agreement calls into question the logic behind the Consent Agreement between the EPA and participating AFOs. If the EPA can mandate enforcement and monitoring for PSF under current statutes and scientific knowledge, then the EPA can use that same authority to regulate other AFOs.

Another example of the EPA enforcement action against an AFO under the CAA occurred against Buckeye Egg Farms.[184] Buckeye, the largest egg producer in Ohio, produced 2.6 billion eggs or four percent of the nation's total in 2002.[185] The company's facilities are equipped to house "more than

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178. PSF Consent Decree, *supra* note 175, at 5-6. (EPA, Notice of Violation issued to Premium Standard Farms (April 2000); EPA, Clarification of Notice of Violation (September 2000)).

179. *Id.*

180. "PSF is the first CAFO to agree to conduct source-specific emissions monitoring of its barns and lagoons." Rockefeller Family Funds, Raising a Stink: Air Emissions from Factory Farms 9–10 (July 1, 2002), *available at* http://www.environmentalintegrity.org/pubs/CAFOAirEmissions_white_paper.pdf.

181. PSF Consent Decree, *supra* note 175, at 13–14.

182. *Id.* at 12, 67.

183. Press Release, Citizens Legal Environmental Action Network (CLEAN), PSF-ContiGroup Fined $350,000 for Environmental Violations (Nov. 20, 2001), *available at* http://www.pmac.net/AM/CLEAN_PR.html (CLEAN representatives described the settlement as "very weak and disappointing" complaining the agreement did not accomplish its goal of providing "immediate, real and lasting relief to those families that must live next to its filth and stench.").

184. Press Release, Dep't of Justice, Ohio's Largest Producer Agrees to Dramatic Air Pollution Reductions from Three Giant Facilities (Feb. 23, 2004), *available at* http://www.usdoj.gov/opa/pr/2004/February/04_enrd_105.htm [hereinafter DOJ Press Release].

185. *Id.*

12 million chickens in over 100 barns."[186] In 2001, the EPA filed a Notice and Finding of Violation against Buckeye alleging that Buckeye failed to obtain necessary air permits under the CAA for three of its facilities in Ohio.[187] The results of preliminary testing conducted at the facilities showed emission levels of particulate matter between 550 and 700 tpy.[188] Ammonia emissions were also reported at levels of 275, 375 and 800 tpy.[189]

Buckeye failed to comply with the EPA's request for information and an administrative order under sections 114 and 113 of the CAA and violated PSD regulations and the Ohio SIP.[190] The Department of Justice (DOJ) initiated enforcement proceedings on behalf of the EPA and in 2004, the parties entered a Consent Decree requiring Buckeye to pay a civil penalty of $880,598.[191] Additionally, Buckeye was required to invest more than $1.6 million to install and test innovative pollution controls to reduce emissions of particulate matter and ammonia from its facilities.[192] This case is not only an excellent example of the magnitude of pollution emitted from AFOs, but also demonstrates the EPA's ability to enforce pollution control laws against AFOs.

The cases against PSF and Buckeye illustrate that the EPA is authorized under current federal statutes to regulate pollutants emitted from AFOs. The EPA argues that enforcement action through litigation will be lengthy, and, by comparison, the Agreement will provide quicker data results and will bring AFOs into compliance with environmental statutes sooner.[193] However, the Consent Decree entered into by PSF was executed only four years after CLEAN filed its initial complaint and only one year after the EPA filed a Notice of Violation.[194] Similarly, the settlement agreement between the EPA and Buckeye occurred only three years after the EPA filed a Notice and Finding of Violation against Buckeye.[195] In comparison, AFOs can extend their immunity from liability for over two years after the monitoring study concludes and almost four years from when the Agreement is executed.[196] Thus, the EPA Consent Agreement does not provide the EPA with a shorter time period to bring AFOs into

186. *Id.*
187. *Id.*
188. *Id.*
189. *Id.*
190. Notice of Lodging of Consent Decree Under the Comprehensive Environmental Response, Compensation, and Liability Act, 69 Fed. Reg. 11649 (Mar. 11, 2004).
191. *Id.*
192. *Id.*
193. EPA Response to Public Comments, 70 Fed. Reg. at 40018.
194. *See* PSF Consent Decree, *supra* note 174, at 2–3.
195. DOJ Press Release, *supra* note 184.
196. *See supra* notes 152–153.

compliance with applicable federal laws. Based on the prior enforcement cases, the EPA not only has the authority to enforce pollution control regulations, but enforcement action is also a practical and timely option.

V. PROBLEMS WITH THE CONSENT AGREEMENT AND MONITORING STUDY

Critics of the Agreement raise a number of concerns regarding possible outcomes of the study, fearing that the Agreement might not further the purposes of the environmental statutes. Specifically, EPA officials failed to define whether emissions from AFOs will be labeled fugitive or nonfugitive under the CAA, stating that these terms will be defined after the conclusion of the study.[197] This leaves open the possibility that the EPA could define AFO emissions in such a way as to exclude them from regulation under the CAA. Also, there is concern that a study by industry representatives might present a conflict of interest, producing biased results in the monitoring study.[198] Finally, the study focuses on monitoring emissions, but does not implement mitigation techniques to reduce pollution in the future.[199] Development of emission controls at these facilities would achieve the ultimate goal of compliance with federal environmental laws. The EPA should consider concurrently researching mitigation techniques while conducting the monitoring study.

In the Agreement, the EPA fails to define AFO emissions as nonfugitive. There is a debate, even within the EPA, over whether emissions from AFOs should be treated as fugitive or nonfugitive.[200] Fugitive emissions are defined as emissions "which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening."[201] Fugitive emissions of a stationary source are not taken into consideration when determining whether a facility is a "major source"

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197. *See* Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959 ("The Agency plans to issue regulations and/or guidance on [whether emissions from different areas at AFOs should be treated as fugitive or non fugitive] after the conclusion of the monitoring study.").

198. *See* Letter from Nancy L. Seidman, President, State and Territorial Air Pollution Program Administrators (STAPPA) and Dennis McLerran, President, Association of Local Air Pollution Control Officials (ALAPCO), to the U.S. Environmental Protection Agency (March 2, 2005).

199. *Id.*

200. Joel A. Mintz, *"Treading Water": A Preliminary Assessment of EPA Enforcement During the Bush II Administration*, SK057 ALI-ABA 183, 193 (discussing interview with J.P. Suarez from the Office of Enforcement and Compliance Assurance (OECA) of the EPA, who describes that right before negotiations of the Agreement were almost complete between OECA and the industries, the office of Air and Radiation indicated they were drafting regulations that would treat all CAFO emissions as "fugitive emissions").

201. 40 C.F.R. § 51.165(a)(1)(ix).

under the CAA.[202] Therefore, there is concern that if emissions from AFOs are classified as "fugitive," many AFOs would not be classified as a "major source" regulated by the CAA.[203]

In 1999, the EPA issued a memorandum interpreting the definition of "fugitive emissions" for 40 CFR Parts 70 and 71 relating to Part V of the CAA.[204] The EPA relied upon previous memorandums and concluded that emissions which "*are actually collected*" are not fugitive emissions.[205] The EPA went on to state that, "where emissions are not actually collected at a particular site, the question of whether the emissions are fugitive or nonfugitive should be based on a factual, case-by-case determination made by the permitting authority."[206] The EPA noted that,

> In determining whether emissions could reasonably be collected (or if any emissions source could reasonably pass through a stack, etc.), "reasonableness" should be construed broadly. The existence of collection technology in use by other sources in the source category creates a presumption that collection is reasonable. Furthermore, in certain circumstances, the collection of emissions from a specific pollutant emitting activity can create a presumption that collection is reasonable for a similar pollutant-emitting activity, even if that activity is located within a different source category.[207]

Based on the EPA's interpretation of nonfugitive emissions, there are two arguments as to why AFO emissions are nonfugitive and should therefore be labeled as such by the EPA.[208] First, emissions from barns are nonfugitive because they pass through "exhaust vents typical of enclosed

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202. 40 C.F.R. § 51.166 (b)(1)(iii) (exempts fugitive emissions from being considered in Title I, Part C); 40 CFR § 51.165(a)(1)(iv)(C) (exempts fugitive emissions from being considered in Title I, Part D); and 40 CFR § 70.2(2) (excludes fugitive sources from being considered in Title V).

203. Letter from Lloyd Eagan, President, State and Territorial Air Pollution Program Administrators (STAPPA) and Ellen Garvey, President, Association of Local Air Pollution Control Officials (ALAPCO), to the Honorable Christine Todd Whitman, Administrator, U.S. Environmental Protection Agency (April 7, 2003).

204. Letter From Thomas C. Curran, Director, Information Transfer and Program Integration Division, to Judith M. Katz, Director, Air Protection Division, Region III (Feb. 10, 1999) (Interpretation of the Definition of Fugitive Emissions in Parts 70 and 71) [hereinafter Interpretation Memorandum].

205. *Id.*

206. *Id.*

207. *Id.*

208. *See* Letter from Association of Irritated Residents, Center on Race, Poverty & the Environment, Environmental Defense, Environmental Integrity Project, NRDC & Sierra Club to Christine Todd Whitman, EPA (May 5, 2003) [hereinafter Environmental Defense Letter].

animal production systems."[209] These exhaust vents normally found at AFOs are considered to be "other functionally equivalent openings" which pollutants pass through under the definition of fugitive emissions.[210]

Second, waste lagoons and distribution systems are analogous to operations whose emissions are treated as nonfugitive, such as landfills,[211] and barns are analogous to whiskey warehouses and paint manufacturing facilities, whose emissions are also treated as nonfugitive.[212] With regards to whiskey warehouses, even though it is uncommon for these facilities to install collection devices, the EPA presumed emissions could reasonably be collected because emissions from warehouses in other source categories are collected and therefore labeled emissions from these facilities as nonfugitive.[213]

In 1994, the EPA overturned a prior decision which labeled landfill gas emissions as fugitive. Since then, the EPA has treated landfill emissions as nonfugitive.[214] The EPA concluded that landfill emissions are nonfugitive because the use of collection technology by other landfill sources . . . creates a presumption that collection of the emissions is reasonable at other similar sources."[215] Emissions from lagoons and distribution systems can also be "reasonably collected" using "existing capture and treatment technology employed nationally at CAFOs."[216] Since there is technology available to collect AFO emissions at some sites, the EPA should presume that this technology is reasonable at other sites and label AFO emissions as nonfugitive.

The EPA's failure to label AFO emissions as nonfugitive in the Consent Agreement prolongs a vital determination and calls into question the purpose of the Agreement. If the EPA labels AFO emissions as "fugitive" at the conclusion of the study, then a majority of AFO emissions will be exempt from regulation under the CAA. If the EPA makes this determination, it would appear that the EPA is buying time and avoiding

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209. *Id.*

210. *Id.*

211. Environmental Defense Letter, *supra* note 209.

212. Interpretation Memorandum, *supra* note 205.

213. *Id.*

214. Memorandum from John S. Seitz, Office of Air Quality Planning and Standards, to Air Division Directors, Regions I-X, (Oct. 21, 1994) (entitled Classification of Emissions from Landfills for NSR Applicability Purposes).

215. *Id.*

216. Environmental Defense Letter, *supra* note 209 ("Biogas recovery systems are a proven technology. Currently, more than 30 digester systems are in operation at commercial U.S. livestock farms, and an additional 30 are expected to be in operation by 2003") (quoting Managing Manure with Biogas Recovery Systems: Improved Performance at Competitive Costs, The AgSTAR Program, Office of Air and Radiation, EPA-430-F-02-004, Winter 2002).

political pressure from industry while appeasing, or trying to appease, AFO critics. However, if the purpose of the study is in fact to decrease emissions from AFOs, then the EPA needs to guarantee this will happen by defining AFO emissions as nonfugitive.

Critics have also expressed concern that the Agreement gives AFO representatives "too much control" over the monitoring study.[217] The EPA is allowing "representatives from the various animal husbandry industries" to form a nonprofit organization called the AARC with the specific purpose of managing the monitoring study.[218] The AARC will hire the IMC and Science Advisor, and will choose the candidate farms to be monitored.[219] There is concern that because the IMC and Science advisor receive their funding from the AFOs, it could impair their objectivity and therefore lead to biased results.[220] A study this significant needs the involvement of both industry officials and critics to ensure that all sides are adequately represented and that the results are neutral and unbiased.

In addition, there are concerns regarding the number of sites that will be selected for monitoring. Critics have argued that the study will not monitor a sufficient number of sites to provide "scientifically defensible emission estimates" and that the sample size will not be representative of the many different farm traits and practices.[221] In response, the EPA stated that it expects approximately twenty-eight farms to be monitored, and that those farms will be "representative of the broadest population of participating animal feeding operations."[222] However, many believe that "the number of sites is too limited to account for all of the differences in types of manure management systems, buildings, ventilation rates, feeding practices, animal type/age, animal management practices, geography, and climate."[223] Therefore, the EPA should monitor a larger number of farms to ensure that the sample size adequately represents AFOs throughout the country.

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217. *See* Letter from Nancy L. Seidman, President, State and Territorial Air Pollution Program Administrators (STAPPA) and Dennis McLerran, President, Association of Local Air Pollution Control Officials (ALAPCO) to the U.S. Environmental Protection Agency (March 2, 2005).

218. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4970.

219. *Id.*

220. *See* Letter from Nancy L. Seidman, President, State and Territorial Air Pollution Program Administrators (STAPPA) and Dennis McLerran, President, Association of Local Air Pollution Control Officials (ALAPCO) to the U.S. Environmental Protection Agency (March 2, 2005).

221. EPA Response to Public Comments, 70 Fed. Reg. at 40020.

222. *Id.*

223. *Id.*; Comments, Brian Cleghorn, Clean Air Council, Comments on US EPA Waiver for Certain Animal Feeding Operations 6 (Mar. 2, 2005), *available at* http://www.cleanair.org/pressRoom/comments%20-%20CAFOmar05.htm.

Finally, the EPA should consider concurrently researching and implementing mitigation techniques while conducting the monitoring study. The Agreement does not require AFOs to reduce emissions of pollutants during the monitoring study.[224] The 2003 report published by the NAS not only recommended that the EPA coordinate a research program to study air emissions, but also recommended mitigation of AFO air emissions.[225] Specifically, the NAS found that "the implementation of technically and economically feasible management practices (e.g., manure incorporation into soil) designed to decrease emissions should not be delayed," and recommended that "best management practices (BMPs) aimed at mitigating AFO air emissions should continue to be improved and applied as new information is developed."[226] In accordance with the recommendations made by the NAS and in furtherance of the goals of the Consent Agreement, the EPA should require the development and installation of mitigation technology at participating AFOs.

CONCLUSION

The trend towards large-scale animal production operations raises novel problems for communities located near AFOs and the government agencies charged with regulating these facilities. These intensive agriculture operations generate substantial amounts of waste that release high levels of dangerous air pollutants into the environment. The harmful effects of particulate matter, hydrogen sulfide, ammonia, and volatile organic compounds released from AFOs are being studied across the country. As discussed in this Note, researchers in North Carolina and Iowa have reported the negative impacts AFO emissions have on human health and the environment. As the pollution increases and as more information is known about the dangers of these substances, more pressure is put on EPA to use its authority to control and mitigate the release of air pollutants from these facilities.

Although EPA is authorized under federal environmental statutes to regulate AFO air emissions, EPA has relinquished its authority under the Animal Feeding Operations Consent Agreement. This Agreement, which was heavily influenced by representatives from the agriculture industry, allows AFOs to continue to release pollutants into the air without any

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224. *See* Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959 (participating AFOs are not required to determine their emissions and comply with CAA, CERCLA and EPCRA requirements until the emissions estimating methodologies are published).

225. National Academy of Sciences, *supra* note 5, at 12.

226. National Academy of Sciences, *supra* note 5, at 6.

requirement to report those releases to local, state, or federal authorities or to comply with permitting requirements under the CAA. The lack of reporting and permitting requirements will leave communities uninformed as to the severity and frequency of air pollution emitted from AFOs, and will diminish the power of states to achieve their ambient air quality standards.

EPA's justification for negotiating the Consent Agreement with AFOs is based on the NAS recommendation that EPA work with the USDA to conduct research establishing a scientific basis for measuring and estimating air emissions from AFOs. However, EPA failed to consider other important recommendations made by the NAS. Namely, NAS also recommended mitigation of AFO air emissions and the implementation of best management practices. Therefore, if EPA follows through with the Agreement and monitoring study, EPA must ensure that the Agreement furthers the goals of both the NAS recommendations and the federal environmental statutes. Thus, the EPA should require the implementation of mitigation techniques during the monitoring study and mandate peer review of the study to prevent biased results. EPA should also define AFO emissions as nonfugitive to ensure that AFOs will be covered under provisions of the CAA. Only if EPA establishes these requirements will the Consent Agreement curtail AFO emissions in the future.