WHAT STINKS . . . THE ANIMAL FEEDING OPERATIONS CONSENT AGREEMENT AND FINAL ORDER OR EPA INVOLVEMENT IN THE AREA?

Benjamin R. Merrill¹

I. Introduction	85
II. Background of the Industry	87
III. Applicable Federal Law	
A. The CAA	89
B. CERCLA and EPRCA	90
IV. The Agreement	92
A. CRITICISM 1: The Industry Is Engaging in Self-Regulation 29	92
B. CRITICISM 2: Civil Payment or Admission of Liability?	94
C. CRITICISM 3: Limited Release and Covenant not to Sue? 29	95
D. CRITICISM 4: A Violation of Proper Rulemaking Procedure? 29	96
V. Air Quality Regulation Activities in States	97
VI. Shortcomings of Past Enforcement Suits	99
VII. Status of Agreement and Monitoring System	01
VIII. Conclusion	03

I. INTRODUCTION

On January 31, 2005, the Environmental Protection Agency (EPA) released the Animal Feeding Operations Consent Agreement and Final Order (AFO CAFO).² This agreement, between the EPA and participating Animal Feeding

285

^{1.} J.D. Candidate, Drake University Law School, 2008; B.A., Saint John's University (MN), 2005. The author wishes to thank Professor Neil Hamilton and Professor Jerry Anderson for their assistance with this Note. The author also wishes to thank Michele M. Merkel with the Environmental Integrity Project in Washington DC and Eldon McAfee with Beving, Swanson & Forrest, P.C. in Des Moines, Iowa for their assistance with the subject matter. However, any errors remain the sole responsibility of the author.

^{2.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4,958 (Jan. 31, 2005) (Notice of consent agreement and final order and request for public comment).

Drake Journal of Agricultural Law [Vol. 13]

Operations (AFOs),³ promulgated a program to establish an industry-funded emissions monitoring program that the EPA will use to better enforce applicable federal laws such as the Clean Air Act ("CAA"), Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), and Emergency Planning and Community Right-to-Know Act ("EPCRA").⁴ AFOs that chose to sign the AFO CAFO share the responsibility for funding the nationwide emissions monitoring study.⁵ In return, the EPA will give participating facilities a release from liability for past and ongoing CAA, CERCLA, and EPCRA violations.⁶ This agreement aims to "ensure that AFOs comply with applicable environmental requirements and to gather scientific data the [EPA] needs to make informed regulatory . . . determinations."⁷ The EPA asserts that this agreement is the best way to reach a large number of AFOs in the shortest period of time, ensuring a comprehensive and effective system of compliance.⁸

Despite the EPA's enthusiasm, this agreement has received a great deal of criticism. Critics contend that this is simply a "sweetheart deal" for the industry to regulate itself in the area of hazardous air emissions while subsequently delaying any potential federal enforcement.⁹ Many complain this allows the industry to have too large of an influence on the federal oversight of their operations.¹⁰ Others argue this simply illustrates the lack of concern the current administration has for the enforcement of our environmental laws.¹¹

Determining how to decrease air emissions from AFOs is important to the modern environmental welfare of our nation. These operations have proven

7. Bergman, *supra* note 4.

^{3.} Mariel Kusano, Note, *Rewarding Bad Behavior: EPA's Regime of Industry Self-Regulation*, 12 HASTINGS W.-NW. J. ENVTL. L. & POL'Y 167, 167 (2006). *See also*, EPA, Animal Feeding Operations, http://cfpub.epa.gov/npdes/home.cfm?program_id=7 (last visited Mar. 4, 2008) (explaining that the term "Animal Feeding Operations" refers to "agricultural operations where animals are kept and raised in confined situations").

^{4.} Press Release, Cynthia Bergman, EPA, EPA Announces Air Quality Compliance Agreement for Animal Feeding Operations (Jan. 21, 2005), http://www.epa.gov/ ag-ing/press/news_text_archive.htm#2005_0121.

^{5.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4,958; Press Release, EPA, EPA Takes Important Step in Controlling Air Pollution from Farm Country Animal Feeding Operations (Aug. 22, 2006), http://www.epa.gov/aging/press/ epa-news/2006/2006_0822_1.htm (The time period to voluntarily sign up for the consent agreement expired on August 12, 2005.).

^{6.} Kusano, *supra* note 3, at 167.

^{8.} *Id*.

^{9.} Michael Janofsky, E.P.A. Offers an Annesty if Big Farms are Monitored, N.Y. TIMES, Jan. 22, 2005, at A8.

^{10.} See Andrew Martin, Livestock Industry Finds Friends in EPA: Documents Detail Lobbyists' Impact on Air Quality Plan, CHI. TRIB., May 16, 2004, at 9.

^{11.} *Id*.

to be egregious air polluters. In fact, studies have shown that the livestock sector is one of the largest contributors of ammonia emissions in the country.¹² For example, the Buckeye Egg Farm, a single egg-laying operation in Ohio, recently reported ammonia emissions of over 4,300 pounds per day, which is forty-three times the mandatory reporting thresholds allowed under CERCLA and EPCRA.¹³ Other studies have found that "people living near hog farms [have] reported a decreased quality of life and more physical health symptoms than those located in communities with no livestock operations."¹⁴ Clearly this is a health issue that merits careful attention from our EPA officials. Yet, before critics rush to condemn the AFO CAFO as nothing more than an industry "get out of jail free card,"¹⁵ one must consider the EPA's regulatory history that created the need for such an unorthodox agency agreement in the first place.

This note examines the AFO CAFO and how it relates to the three applicable federal laws: CAA, CERCLA, and EPCRA. Part I provides a background of the AFO industry and explains the role the EPA has played in its regulation. Part II provides a description of the applicable federal environmental statutes in regards to their relation to the AFO CAFO. Part III analyzes the Agreement itself and argues that while many of its aspects may appear controversial, it has the potential of leaving a positive impact on the industry's regulation of air emissions. Part IV describes the deficiencies in the regulation that individual states have taken for the issue of AFO air pollution. Part V discusses the shortcomings of the minimal EPA enforcement actions that have taken place, as well as how they relate to citizen suits in the area. Part VI discusses the current status of the monitoring system the EPA has promulgated and the possible benefits that can be achieved if the EPA fully commits to effectively carrying it out.

II. BACKGROUND OF THE INDUSTRY

The American farming industry is one that has drastically changed over the past few decades. Small family farms have given way to industrialized live-

^{12.} See D. BRUCE HARRIS, RICHARD C. SHORES, & LARRY G. JONES, EPA, AMMONIA EMISSION FACTORS FROM SWINE FINISHING OPERATIONS 1 (2007), http://www.epa.gov/ttn/chief/conference/ei10/ammonia/harris.pdf.

^{13.} Press Release, U.S. Dep't of Justice, *Ohio's Largest Egg Producer Agrees to Dramatic Air Pollution Reductions from Three Giant Facilities* (Feb. 23, 2004), http://www.usdoj.gov/ opa/pr/2004/February/04_enrd_105.htm; 42 U.S.C. § 9603 (2006) (containing the notification requirements of CERCLA).

^{14.} Laura Karvosky, Note, *EPA Gives Animal Feeding Operations Immunity from Environmental Statutes in a "Sweetheart Deal,"* 8 VT. J. ENVTL. L. 115, 115 (2007).

^{15.} See Janofsky, supra note 9.

Drake Journal of Agricultural Law [Vol. 13]

stock productions where single facilities raise thousands of animals at a time.¹⁶ It is estimated that across the country there are "238,000 animal feeding operations where livestock and poultry are confined, reared, and fed."¹⁷ These large facilities confine their livestock in "enclosed, tightly constructed buildings, most often in large numbers and with relatively little space in which the livestock can move."18 These animals produce an extraordinary amount of waste that often sits in silage piles,¹⁹ or is spread across fields, emitting undocumented levels of ammonia (NH₃), particulate matter (PM), hydrogen sulfide (H₂S), and volatile organic compounds (VOCs) into the air.²⁰ Additionally, this waste remains untreated.²¹ Not surprisingly, serious health effects have been attributed to this practice:²² and one would expect the EPA to commit many resources to circumvent such a problem. However, our country's leaders have historically shown tremendous support for its agricultural industry.²³ Accompanying this support was a lack of a formidable regulatory presence leading to uncontrolled air emissions and data deficiencies for determining whether operations were in violation of federal statutes.²⁴ Consequently, the EPA had been reluctant to bring enforcement actions against agricultural operations involving federal air emission laws.²⁵

^{16.} Susan M. Brehm, Comment, *From Red Barn to Facility: Changing Environmental Liability to Fit the Changing Structure of Livestock Production*, 93 CAL. L. REV. 797, 797-98 (2005).

^{17.} CLAUDIA COPELAND, CONG. RESEARCH SERV., AIR QUALITY ISSUES AND ANIMAL AGRICULTURE: EPA'S AIR COMPLIANCE AGREEMENT 2 (Feb. 2, 2006). Some say that nearly "80% of the hogs grown in the United States are on farms which produce 5,000 or more hogs per year." Karvosky, *supra* note 14, at 115.

^{18.} Brehm, *supra* note 16, at 798.

^{19.} See Warren A. Braunig, *Reflexive Law Solutions for Factory Farm Pollution*, 80 N.Y.U. L. REV. 1505, 1509 (2005) (suggesting that this industry produces nearly 500 million tons of animal waste per year, which is three times the amount of human waste generated in this country).

^{20.} COPELAND, *supra* note 17, at 2 (stating other sources of emissions on these facilities include barns, feedlot surfaces, manure storage and treatment units, and animal composting structures).

^{21.} Michele M. Merkel, CLE Presentation at Albany Law School, The Use of CERCLA to Address Agricultural Pollution (Sept. 15, 2006).

^{22.} See generally Sierra Club, Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693 (W.D. Ky. 2003); Sierra Club v. Seaboard Farms, Inc., 387 F.3d 1167 (10th Cir. 2004) (citizen suits alleging health effects due to animal operations' failure to comply with federal regulations).

^{23.} See Ved P. Nanda, Agriculture and the Polluter Pays Principle, 54 AM. J. COMP. L. 317, 318 (2006); see also Braunig, supra note 19, at 1505-06 (stating that unlike other areas of environmental regulations, farms operate almost entirely outside of the regulatory framework).

^{24.} *See* EPA, Air Emissions Monitoring Study, June 14, 2007, http://www.epa.gov/agriculture/airmonitoringstudy.html.

^{25.} See Merkel, *supra* note 21, at 6 (stating that "over the past five years, EPA has declined to enforce the CAA, CERCLA, and EPCRA against [these operations]"); *see also* CLAUDIA

2008]

EPA Involvement in Animal Feeding Operations

289

A. The CAA

III. APPLICABLE FEDERAL LAW

The CAA is "a federal environmental statute that regulates ambient air quality, stationary source emissions, and hazardous air pollutants."²⁶ Generally, under this Act, the EPA sets limits for how much of a pollutant can be emitted into the air from a particular source.²⁷ Statutorily, the EPA is required to promulgate national ambient air quality standards (NAAQS) for certain air pollutants it has identified that contribute to air pollutants that the AFO CAFO is particularly concerned with include particulate matter (PM), carbon monoxide (CO), nitrogen dioxide (NO₂), and Volatile Organic Compounds (VOCs).²⁹

Title V of the 1990 Amendments to the CAA established a permit program for large pollutant sources.³⁰ This program allows air pollution to be managed by a national permit system.³¹ Permits provide information on which pollutants are being released by a site, how much is being released, and what types of mitigation steps the site is currently using to reduce their emissions.³² Furthermore, Title I, Part A, Section 114 of the CAA mandates that owners and operators monitor their own emissions.³³ This provision states that an operator shall monitor "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."³⁴ These permits were designed to be beneficial for local businesses and the surrounding public by providing information on a facility's emissions while promoting measures to reduce those emis-

COPELAND, CONG. RESEARCH SERV., AIR QUALITY ISSUES AND ANIMAL AGRICULTURE: A PRIMER 19 (Oct. 18, 2006) (stating that the "EPA has enforced the CERCLA and EPCRA reporting requirements against AFO release of hazardous air pollutants in two cases").

^{26.} Karvosky, supra note 14, at 120; Clean Air Act, 42 U.S.C. §§ 7401-7671 (2006).

^{27.} EPA, PUB. NO. EPA-456/K-07-001, THE PLAIN ENGLISH GUIDE TO THE CLEAN AIR

ACT 3 (Apr. 2007), *available at* http://www.epa.gov/air/caa/peg/peg.pdf. 28. 42 U.S.C. § 7409(a)(1)(A); Karvosky, *supra* note 14, at 121.

^{29.} Eldon McAfee, Presentation to Iowa Pork Producers Association: Animal Feeding

Operations Air Compliance Consent Agreement (Jul. 14, 2005); Karvosky, *supra* note 14, at 115. *But see* Braunig, *supra* note 19, at 1520 (suggesting that this Agreement may only address a portion of the problem due to the fact that "[t]he CAA has no provisions that deal with odors, nor are ammonia and hydrogen sulfide currently regulated as air pollutants.").

^{30. 42} U.S.C. §§ 7661–7661f (2006); EPA, supra note 27.

^{31.} EPA, *supra* note 27, at 19.

^{32.} Id.

^{33. 42} U.S.C. § 7414 (2006); Karvosky, *supra* note 14, at 122-23.

^{34. 42} U.S.C. § 7475(a)(7) (2006). See Karvosky, supra note 14, at 121.

Drake Journal of Agricultural Law [Vol. 13]

sions.³⁵ Unfortunately, the EPA has not required AFOs to establish that they are meeting their emission source requirements or monitoring obligations,³⁶ which leaves the surrounding public unsure as to the hazardous emissions of nearby AFOs.

Another essential objective of the CAA was its requirement that each state establish its own system of compliance.³⁷ States are required to develop State Implementation Plans (SIPs) that implement the NAAQS within that state.³⁸ According to the CAA, SIPs must contain "enforceable emission limitations and other control measures, means or techniques . . . for compliance, as may be necessary or appropriate to meet the applicable requirements of this [Act]."³⁹ The EPA must approve each of these SIPs, and further, if the EPA decides a state's SIP is substandard, the EPA is responsible for taking over the enforcement of the CAA in that state.⁴⁰

The success of SIPs depends greatly on whether the state has adequate personnel, funding, and administrative desire to carry out the plan.⁴¹ While SIPs must always include enforceable NAAQS limitations, the process of enforcement against AFOs to this point has been merely in the form of local nuisance complaints against operations concerning a particular state's governing law.⁴²

B. CERCLA and EPRCA

CERCLA (commonly known as the Superfund law) has the primary objective of cleaning up abandoned hazardous waste sites, arising from a concern that chemicals in those sites will eventually come into contact with the public's water or air.⁴³ It was enacted in 1980 with two central policy goals.⁴⁴ "First, Congress intended to give the federal government the necessary tools for a prompt and effective response" for problems arising from hazardous waste dis-

37. See EPA, supra note 27, at 3.

39. 42 U.S.C. §§ 7410(a)(2)(A), (a)(2)(H) (the limitations set out by SIPs must be sufficient to ensure compliance with the EPA's NAAQS.); Karvosky, *supra* note 14, at 121.

40. 42 U.S.C. §§7410(a)(1), (c)(1); EPA, *supra* note 27, at 3.

41. AD HOC COMM. ON AIR EMISSIONS FROM ANIMAL FEEDING OPERATIONS, ET AL, NAT'L RESEARCH COUNCIL, AIR EMISSIONS FROM ANIMAL FEEDING OPERATIONS: CURRENT KNOWLEDGE, FUTURE NEEDS 134 (2003).

42. *Id.* at 136.

43. 42 U.S.C. § 9604; Iowa Farm Bureau, *Overview of CERCLA and EPCRA* 1, http://www.iowafarmbureau.com/special/epa_consent/cercla.pdf.

44. See Merkel, supra note 21; United States v. Reilly Tar & Chem. Corp., 546 F. Supp. 1100, 1111 (D. Minn. 1982).

^{35.} *See* EPA, *supra* note 27, at 19.

^{36.} See Karvosky, supra note 14, at 122-23.

^{38.} *Id.*; 42 U.S.C. § 7410.

posal.⁴⁵ Second, Congress intended for polluters to bear the costs and responsibility for fixing the problems they caused.⁴⁶ CERCLA provides the statutory requirement that emitters of hazardous substances report their releases.⁴⁷

EPCRA was enacted in 1986 with the similar goal of protecting the general public from the release of hazardous substances by requiring that owners or operators notify the proper authorities when certain levels of emissions are released into the atmosphere.⁴⁸ Its primary purpose is to encourage and support emergency planning efforts at state and local levels.⁴⁹ EPCRA works in congruence with CERCLA to help local commissions adequately document the facilities within their jurisdictions.⁵⁰

Controversy surrounds CERCLA and EPCRA when it comes to their relationships with AFOs. One of the issues that has been litigated in recent cases involves the use of the term "facility," and how that should apply to AFOs.⁵¹ CERCLA defines a facility as "(A) any building, structure, installation . . ., or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located."⁵² However, under EPCRA a facility is defined as "[a]ll 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."⁵³ Responding to this inconsistency, courts interpreted the term "facility" to mean the entire farm complex in the aggregate.⁵⁴ For example, a "facility" should be understood to require reporting the total ammonia releases from the *entire* animal operation as opposed to individual locations within the site which emit hazardous pollutants.⁵⁵ Obvious-

52. 42 U.S.C. § 9601(9).

^{45.} Merkel, *supra* note 21 (citing *Reilly Tar & Chem.*, 546 F. Supp. at 1112). *See* 42 U.S.C. § 9604(a)(1)(B).

^{46.} Merkel, *supra* note 21 (citing *Reilly Tar & Chem.*, 546 F. Supp. at 1112); 42 U.S.C. §§ 9606-9609.

^{47. 42} U.S.C. § 9601, 9603. See Tyson Foods, 299 F. Supp. 2d at 713 (holding that ammonia releases from a Tyson farm were not exempt from CERCLA reporting requirements, nor were the releases found to be continuous under § 103(f)(2) of CERCLA to warrant any reduced reporting requirement).

^{48.} Environmental Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11001-11050 (2006); Iowa Farm Bureau, *supra* note 43.

^{49. 42} U.S.C. § 11001; *see* Fact Sheet: Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), http://www.p2pays.org/ref/11/10323.htm (last visited Mar. 5, 2008).

^{50.} See 42 U.S.C. §§ 11001-11050.

^{51.} Karvosky, *supra* note 14, at 127.

^{53.} *Id.* at § 11049(4).

^{54.} See Seaboard Farms, 387 F.3d at 1168; see also Tyson Foods, 299 F. Supp. 2d at 708.

^{55.} *See* 42 U.S.C. § 9603. For additional case law interpreting the term "facility" under CERCLA to include all sources of pollution on a single site see United States v. Twp. of Brighton,

Drake Journal of Agricultural Law [Vol. 13]

ly, this interpretation leads to a higher number of farm "facilities" that are currently violating federal air emission laws.

Particularly at issue is whether this series of laws should be understood as regulating these operations. Originally, CERCLA and EPCRA were passed to address the pollution of heavy industry.⁵⁶ However, court decisions have held that livestock and poultry producers nationwide are required to report their emissions according to these provisions as well.⁵⁷ Yet, an insufficiency in scientific data, combined with the lack of regulatory desire to enforce these federal laws, has left an industry virtually free of administrative enforcement suits under the CAA, CERCLA, and EPCRA.⁵⁸

IV. THE AGREEMENT

Due to the fact that "the Clean Air Act and its regulations generally rely on objective measures of pollutants, the regulatory process has been ineffective in controlling odors, which are difficult to measure objectively."⁵⁹ The AFO CAFO attempts to create industry cooperation in obtaining the needed information to ensure future compliance with federal law.⁶⁰ Essentially, there are four significant aspects of the AFO CAFO that create its controversial nature.⁶¹ However, each aspect appears far from troubling when compared to the EPA's previous inaction in the area as a whole.

A. CRITICISM 1: The Industry Is Engaging in Self-Regulation

The AFO CAFO asked for funding and cooperation from industry actors to set up a new emissions monitoring study program.⁶² All participating AFOs

58. Merkel, *supra* note 21 (In the twenty-six year history of CERCLA, only six lawsuits have been adjudicated for violations against animal feeding operations.).

59. NAT'L RESEARCH COUNCIL, *supra* note 41, at 137.

60. Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4,959.

¹⁵³ F.3d 307, 313 (6th Cir. 1998); Axel Johnson, Inc. v. Carroll Carolina Oil Co., 191 F.3d 409, 417-19 (4th Cir. 1999); United States v. 150 Acres of Land, 204 F.3d 698, 709 (6th Cir. 2000); *see also*, Braunig, *supra* note 19, at 1521 (suggesting that since the courts are now holding that aggregate releases from these operations constitute "facility" releases, it is likely that thousands of operations currently violate EPCRA and CERCLA).

^{56.} Iowa Farm Bureau, *supra* note 43.

^{57.} See Seaboard Farms, 387 F.3d 1167; see also Tyson Foods, 299 F. Supp. 2d 693.

^{61.} *See generally* Kusano, *supra* note 3, at 171-74 (discussing major aspects of the AFO CAFO).

^{62.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959; Kusano, *supra* note 3, at 172.

2008] EPA Involvement in Animal Feeding Operations

contributed a payment of approximately \$2,500 per farm into a fund that will be used to conduct the nationwide emission study monitoring program.⁶³ This is followed by a two-year period of monitoring which will work to compile credible scientific data that the EPA will then use to regulate the industry.⁶⁴ Within eighteen months of the conclusion of the monitoring study, the EPA will evaluate the data and publish their newly formulated emission-estimating methodologies.⁶⁵ If the emissions study produced after this two year period appears insufficient in any way, the EPA has the ability to reject the methodologies and develop another program more to their liking.⁶⁶

Critics contend that this setup will allow the industry to control the manner in which the emissions studies are conducted.⁶⁷ However, as recommended by the National Academy of Sciences (NAS) 2003 report, the EPA and the U.S. Department of Agriculture (USDA) created a National Air Emissions Monitoring Study Protocol.⁶⁸ This document provides an objective overview and summary of the monitoring protocol that is being used to collect data from each animal operation studied.⁶⁹ The protocol was developed over a period of twelve months by a group of thirty experts in the area of air emissions including scientists from the EPA, members of the AFO industry, environmental groups, and members of academia in an attempt to ensure the process would be comprehensive, useful, and fair.⁷⁰

The nature of this agreement appears to provide the fastest way to implement new emission control technology.⁷¹ In addition, the EPA believes this process provides the only viable means of obtaining the necessary data by facilitating a collegial process between their scientists and the AFO industry, while

^{63.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959; Kusano, *supra* note 3, at 172.

^{64.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4,959.

^{65.} Press Release, EPA, Environmental Appeals Board Approves First Air Compliance Agreements with Animal Feeding Operations (Jan. 30, 2006), http://www.epa.gov/ compliance/resources/agreements/caa/cafo-agr-0706.html (follow "Jan. 30, 2006" hyperlink).

^{66.} McAfee, *supra* note 29.

^{67.} *See* COPELAND, *supra* note 25, at 19 (discussing the skepticism of critics for the protocol's lack of adequate peer review and involvement of independent scientists).

^{68.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4958, Attachment B (Jan. 31, 2005), *available at* http://www.p2pays.org/ref/37/36182.pdf.

^{69.} *Id*.

^{70.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 40,016, 40,020 (Jul. 12, 2005) (Supplemental Notice; response to comments on consent agreement and final order).

^{71.} *See id.* at 40,018 (data methodologies will be available on a rolling basis when they becomes available as opposed to waiting till the end of the two-year monitoring period).

Drake Journal of Agricultural Law [Vol. 13]

avoiding any potentiality of litigation between the parties.⁷² For example, while the Agreement is in place AFOs will be unable to challenge the emission estimating methodologies due to the fact that they are an intricate part of the process themselves.⁷³

Another controversial issue is the number of monitoring sites that will be used in carrying out this protocol. Critics suggest that the number of sites researched is too small and therefore will produce insufficient data to account for the wide range of manure management systems currently used by AFOs.⁷⁴ The EPA considered the fact that AFOs use various techniques in handling their hazardous emissions.⁷⁵ However, scientists have concluded that "monitoring the farms described in the protocol will provide sufficient data to get a valid sample that is representative of the vast majority" of operations.⁷⁶ Additionally, the scientists involved believe significantly increasing the number of farms would be excessive and expensive while failing to substantially add to the value of the data retrieved.⁷⁷ The EPA stresses that in developing their methodologies for estimating AFO emissions, their scientists are not limited to the data collected under the Agreement.⁷⁸ Scientists are free to use all data related to agricultural air emissions they can find to create the best methodology possible.

B. CRITICISM 2: Civil Payment or Admission of Liability?

The AFO CAFO requires participating AFOs to pay a civil penalty based on the size of their facilities.⁷⁹ The penalty considers the type and quantity of the animals involved; assessing penalties from \$10,000 for participating AFOs with ten or fewer farms, to \$100,000 for an AFO with more than 200 combined farms.⁸⁰ This civil penalty is not considered to equate to past liability under any

^{72.} *Id*.

^{73.} See generally Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959; see also Angela Black & David A. Crass, *EPA Conducts Two-Year Study: Regulating Farm Emissions*, 78 WIS. LAW. 6, 9 (2005).

^{74.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 40,020.

^{75.} Id.

^{76.} *Id*.

^{77.} COPELAND, *supra* note 17, at 8.

^{78.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 40,020.

^{79.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4958, 4959 (Jan. 31, 2005); Kusano, *supra* note 3, at 172.

^{80.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959.

2008] EPA Involvement in Animal Feeding Operations

statute or regulation.⁸¹ This is an important aspect for the success of the Agreement because it ensures that AFOs actively participate in the study free from fear of being held liable for any past or present violations in which they are presently unaware of.

The EPA does not characterize the civil payment as an admission that an agricultural operation has been "operated negligently or improperly or that any such operation is or was in violation of any Federal, State, or local law or regulation."⁸² These operations were not forced to participate and the payment is simply part of the process to obtain a release of the AFO's liability for possible violations.⁸³ However, the penalty serves as a mechanism for creating and maintaining an adequate amount of AFO participation throughout the two-year monitoring study period.

C. CRITICISM 3: Limited Release and Covenant not to Sue?

Finally, the EPA is providing participating AFOs with a limited release and covenant not to sue for violations of applicable federal laws.⁸⁴ This release is considered valid through the two-year monitoring study as well as during the data analysis period.⁸⁵ After this time, the participating AFOs are required to closely monitor and report their hazardous emissions (under CERCLA and EPRCA), as well as apply for, and receive, their requisite CAA operating permits.⁸⁶

Critics see this aspect of the Agreement as the equivalent of a "get out of jail free card" because it provides amnesty to AFOs from federal regulations.⁸⁷ Yet, supporters say the protection is necessary because without it there would be no incentive for producers to volunteer their farms for participation in the protocol.⁸⁸ The limited release was a productive way of incorporating willing lives-tock operations and developing a national monitoring study. Prior to the Agreement, "very few actions were brought against AFO[s] for air emissions under the

^{81.} See id.

^{82.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 40,019.

^{83.} *See id.* (responding to critics who believe the civil payment appears to be more of an admission of liability than anything else).

^{84.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959. *See* Kusano, *supra* note 3, at 173 (discussing the limited release from certain provisions of CERCLA, EPCRA and CAA).

^{85.} McAfee, *supra* note 29.

^{86.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 4959.

^{87.} Janofsky, *supra* note 9 (quoting Sierra Club statement).

^{88.} COPELAND, *supra* note 17, at 6.

Drake Journal of Agricultural Law [Vol. 13

authorities set out in the Agreement."⁸⁹ In fact, due to EPA inactivity, the actions brought against these operations have generally been through local regulations unaffected by this Agreement.⁹⁰

Critics also worry that the agreement will be used by the Industry to argue that liabilities arising from statutory violations in the past are being wiped clean, while state and citizen enforcement suits will be even harder to prove in future cases.⁹¹ The EPA countered that this Agreement will actually help to improve State and local control of the area in many respects.⁹² First, the data that is generated by the nationwide emissions study will be available for public use during, and after, the monitoring period.⁹³ The current methodologies are inadequate to measure the individual operation's emissions, and this study will provide local enforcement agencies with valuable scientific data to move forward with their work.⁹⁴ Second, the Agreement does not limit a local government's authority to impose additional permitting requirements for AFOs in their jurisdiction.⁹⁵ The "covenant not to sue will be [of no relevance] if [an] AFO fail[s] to comply with State nuisance final orders arising from air emissions."⁹⁶ In other words, an AFO is subject to any judgment for violations of State or local nuisance law in the area, regardless of their participation in the Agreement.

D. CRITICISM 4: A Violation of Proper Rulemaking Procedure?

One of the largest criticisms of the AFO CAFO is that it violated proper rulemaking procedures required by the Administrative Procedures Act ("APA"). This criticism is currently being litigated in our nation's courts.⁹⁷ The argument, rooted in principles of administrative law, states that the notice-and-comment

93.

Id.

^{89.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 40,018.

^{90.} *See id.* (This agreement does not prevent the EPA from bringing an action under the emergency provisions of the CAA to prevent any "imminent and substantial endangerment" to public health.).

^{91.} COPELAND, *supra* note 17, at 9.

^{92.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 40,018.

^{94.} *See id.* (explaining the National Academy of Science's position that scientifically sound and practical protocols for measuring air concentration and emissions rates are needed to guide enforcement decisions).

^{95.} *See* McAfee, *supra* note 29 (noting there is no protection from state air quality laws or nuisance suits).

^{96.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. at 40,018.

^{97.} See e.g. Ass'n of Irritated Residents v. EPA, 494 F.3d 1027 (D.C. Cir. 2007).

opportunities provided by the EPA for this agency action were insufficient.⁹⁸ The AFO CAFO's critics argue that the EPA's action did not follow APA requirements, and therefore, the Agreement should be vacated and declared invalid.⁹⁹ However, the EPA counters by arguing that this Agreement is not an example of "rulemaking," but rather a discretionary enforcement action. As established by federal case law, agency enforcement decisions are generally understood to fall within the discretion of that particular agency, free from APA requirements.¹⁰⁰ Therefore, if a court were to determine this action as an "enforcement" decision, the APA requirements would not apply.

Recently, the D.C. Circuit of the U.S. Court of Appeals ruled on this very issue after the Association of Irritated Residents brought suit against the EPA in regards to the AFO CAFO.¹⁰¹ On July 17, 2007, the D.C. Court of Appeals held that the Agreement was an example of an enforcement action, not a rulemaking procedure, and therefore not subject to the same APA procedures.¹⁰² The Court stated that "[t]he APA define[d] a 'rule' as 'an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy."¹⁰³ In contrast, the Court stated, "[t]he Agreement makes no determination of an AFO's compliance with the Acts [CAA, CERCLA, or EPRCA] and makes no definitive statement of enforcement or interpretive practices that EPA will apply in its regulatory decision making."¹⁰⁴ The Court makes particular note of the fact that the EPA had minimal data to determine what operations were in violation of emission laws.¹⁰⁵ Therefore, even this Court concludes that the Agreement was a reasonable avenue in which the EPA could bring the AFO industry into compliance with its federal emission statutes.¹⁰⁶

V. AIR QUALITY REGULATION ACTIVITIES IN STATES

As previously mentioned, SIPs are responsible for implementing federal CAA requirements.¹⁰⁷ Several states have adopted SIPs to ensure compliance with requirements of the federal law, while other states have enacted more com-

100. Heckler v. Chaney, 470 U.S. 821, 831 (1985) ("[A]n agency's decision not to prosecute or enforce . . . is a decision generally committed to an agency's absolute discretion.").

^{98.} *Id.* at 1030.

^{99.} Id.

^{101.} See Ass'n of Irritated Residents, 494 F.3d at 1027.

^{102.} Id. at 1031.

^{103.} Id. at 1033 (citing Administrative Procedures Act, 5 U.S.C. § 551(4) (2006)).

^{104.} Ass'n of Irritated Residents, 494 F.3d at 1034.

^{105.} *Id.* at 1046.

^{106.} See id.

^{107.} EPA, *supra* note 27, at 3.

Drake Journal of Agricultural Law [Vol. 13

prehensive laws and regulations that call for additional testing and monitoring of their AFO emissions.¹⁰⁸ Numerous states have passed measures to govern AFO air emissions, but several have yet to promulgate any regulatory systems.¹⁰⁹ Clearly, discrepancies between the individual SIPs have led to a lack of uniformity in terms of the expectations of AFO emissions from state to state.¹¹⁰ This Agreement is a way to level the playing field and create that much needed uniformity.

One state's enforcement history clearly illustrates the shortcomings of regulatory efforts in this area. California is a state with a history of severe and diverse air pollution problems.¹¹¹ For thirty years, California laws exempted "existing major livestock production or equipment used in crop growing from all environmental permitting requirements."¹¹² However, in 1994 the EPA notified the state that defects in its clean air program, due in large part to its agricultural exemption, had forced the EPA to withdraw federal approval of California's SIP program and implement a federal program until the state addressed the deficiencies.¹¹³ However, it became apparent to EPA officials that sufficient scientific information was lacking in the area of AFO's air emissions to issue any permits or even mandate pollution control requirements.¹¹⁴

Recently the state's legislature enacted SB 700 that removed the exemption for agriculture operations and set timelines for facilities to begin enforcing clean air permits.¹¹⁵ This statute regulates "crop growers, dairies, poultry farms, cattle ranches, food processing operations, and other agriculture-related businesses."¹¹⁶ These "facilities" are considered to be a group of larger livestock facilities in the state.¹¹⁷ The state claims that by focusing on the larger facilities throughout the state, the regulation will most efficiently address a large amount of the troublesome emissions.¹¹⁸

111. *Id.* at 13.

112. *Id.* at 14.

113. *See id.* (This occurred due to a notification and settlement of a lawsuit by citizen groups seeking to force EPA to impose air pollution controls.).

114. *Id.* (The EPA considered various options, but did not issue any permits in California before responsibility was returned to California after the enactment of California SB 700.).

115. S.B. 700, 2003-2004 Gen. Assem., Reg. Sess. (Cal. 2003).

116. COPELAND, *supra* note 25, at 14.

117. Id. at 15.

118. Id.

^{108.} COPELAND, *supra* note 25, at 16.

^{109.} *See id.* at 17 (discussing a recent survey of seven states and the actions they have taken to address AFO air emission regulations).

^{110.} See *id.* at 18 (discussing the fact that States base their standards for emissions on a variety of issues, including odor or nuisance, welfare effects, and health effects that vary in importance from state to state leading large variances in standards).

2008] *EPA Involvement in Animal Feeding Operations*

Many experts in California (as well as other areas around the country) have resisted efforts to implement regulations of emissions from agriculture sources.¹¹⁹ Several industry actors in the state contend that their state board should establish how much pollution comes from livestock operations before implementing the permitting requirements in SB 700.¹²⁰ Therefore, AFOs have been reluctant to even address these issues until a study is completed at the federal level to objectively declare which of these facilities are major sources of pollution.

The California scheme varies greatly from other systems around the country. For example, Iowa has established an ambient air quality standard that focuses specifically on hydrogen sulfide and its adverse health effects.¹²¹ While in Texas, a program governs water and air quality by "control[ling] the emission of odors and other air contaminants," but "does not have a specific air emission threshold for odors."¹²² These various regulatory schemes show the existence of wide-ranging, inadequate implementations of federal statutory law from SIP to SIP. While some state legislatures appear to be motivated to act in the area, other states have laws that appear more or less symbolic.¹²³ Without a comprehensive, industry accepted protocol for handling these emissions in place, the AFO community will continue to express substantial confusion when it comes to understanding their individual air emissions.

VI. SHORTCOMINGS OF PAST ENFORCEMENT SUITS

The attention the EPA has paid to the enforcement of federal air emission statutes against the AFO industry has been unacceptable. For example, even though courts have declared that these operations are subject to reporting requirements, the "EPA has enforced the CERCLA . . . and EPCRA reporting requirements against CAFO release of hazardous air pollutants in [only] two cas-

^{119.} *Id.*

^{120.} *Id.*

^{121.} Air Quality Bureau, Iowa DNR, Animal Feeding Operations (AFOs), http://www.iowadnr.com/air/afo/afo.html (last visited Mar. 7, 2008); 27 Iowa Admin. Bull. 274 (Aug. 18, 2004).

^{122.} COPELAND, *supra* note 25, at 17 (Texas' "hydrogen sulfide emission standard makes no specific reference to, or exception for, animal agriculture."). *See generally* Tex. Comm'n on Envtl. Quality, Sources of Air Pollution, http://www.tceq.state.tx.us/implementation/air/areasource/ Sources_of_Air_Pollution.html (last visited Mar. 7, 2008) (providing descriptions of applicable sources of air pollution considered by the Texas Commission on Environmental Quality).

^{123.} Braunig, *supra* note 19, at 1515 (suggesting that Iowa for example is one of many states that is greatly affected by powerful agriculture lobbyists in the environmental regulatory field).

300 Drake Journal of Agricultural Law

[Vol. 13

es."124 Additionally, in November 2001, the EPA announced an agreement resolving numerous claims against Premium Standard Farms (PSF) and the Continental Grain Company involving the Clean Water Act ("CWA"), CAA, CERCLA, and EPRCA.¹²⁵ This settlement required PSF to monitor their emissions of PM, VOCs, hydrogen sulfide, and ammonia.¹²⁶ Also, if their operations exceeded CAA thresholds, they were to notify the State of Missouri, and apply for the necessary CAA permits.¹²⁷ However, no fines or explicit mitigation measures were ordered.¹²⁸

In September 2006, the Department of Justice announced settlement claims against Seaboard Foods, a large pork producer located in several states.¹²⁹ In this instance, the government brought complaints for violations of reporting requirements under CERCLA and EPCRA.¹³⁰ Each building of this operation contained about 1,000 pigs, and "the daily manure produced by the five facilities combined [was] approximately 40-50 tons."¹³¹ Seaboard Foods agreed to pay \$205,000 for violations of the CWA, CAA, CERCLA, and EPCRA.¹³² However, the only mitigation effort the defendants made addressed the company's CWA violations.¹³³ These cases illustrate the way the EPA has chosen to compromise with AFOs in the area of air pollution as opposed to enforcing the applicable statutes.

Citizen suits are also available (and more widely utilized) to sue AFOs for violations of federal air emission laws. Recently, two cases have been adjudicated by environmental advocates claiming a failure by AFO operators to report their ammonia emissions.¹³⁴ The EPA, however, was not a party to either suit.¹³⁵ In fact, the "U.S. Court of Appeals for the 10th Circuit invited [the] EPA

EPA, Premium Standard Farms, Inc. and Continental Grain Company, Inc. Civil 125.

127.

- McEowen, supra note 129. See Complaint, supra note 129, at 2. 130.
- 131. McEowen, supra note 129; Complaint, supra note 129, at 5.
- 132. McEowen, supra note 129.

^{124.} COPELAND, supra note 25, at 19.

Settlement 1, (Nov. 19, 2001), http://www.epa.gov/compliance/resources/cases/civil/mm/psffs.pdf. 126. Id. at 2.

Id.

^{128.} See id. at 1.

^{129.} Roger McEowen, Federal Complaint Filed Against Seaboard Foods for Alleged Illegal Dumping of Hog Manure, AG DECISION MAKER, Sept. 2006, http://www.extension.iastate. edu/AgDM/articles/mceowen/McEowOthCourtsSept06c.html; Complaint at 2, United States v. Seaboard Foods LP, No. 5:06-cv-00990-HE (W.D. Ok. Sep. 14, 2006), http://www.extension. iastate.edu/AgDM/articles/mceowen/SeaboardPICComplaint.pdf.

^{133.} Id.

^{134.} COPELAND, supra note 25, at 19-20; Seaboard Farms, 387 F.3d at 1168; Tyson Foods, 299 F. Supp. 2d at 701.

COPELAND, supra note 25, at 20. See Seaboard Farms, 387 F.3d at 1169; Tyson 135. Foods, 299 F. Supp. 2d 693.

to file an amicus brief in the *Seaboard Farms* case, in order to clarify the government's position on the issues," but the EPA chose not to get involved.¹³⁶ These cases were opportunities for the EPA to make aggressive moves in working to circumvent AFO emissions. Instead, they did nothing.

These instances stand as clear examples of the EPA's past reluctance to be actively involved in an area within their enforcement authority. For years they have been deferring to states' SIPs, and simply assuming the problems would be addressed. In turn, absent a clear EPA position, the lawsuits that have been adjudicated have created growing concerns within the agriculture community as it tries to anticipate future liability.¹³⁷

VII. STATUS OF AGREEMENT AND MONITORING SYSTEM

As discussed, the agricultural industry plays a large role in implementing the monitoring study.¹³⁸ The Agricultural Air Research Council (AARC) was created by the industry to handle the monitoring fee paid by each AFO.¹³⁹ The AARC is responsible for choosing a Science Advisor and an Independent Monitoring Contractor (IMC) to work together in carrying out the nationwide monitoring protocol.¹⁴⁰ Additionally, the AARC is partnered with several important industry players, such as representatives from the National Chicken Council, National Milk Producers Federation, National Pork Board, and the United Egg Producers.¹⁴¹ These actors have the responsibility of choosing the sites that are monitored, overseeing the study by selecting advisors to conduct the monitoring, and drafting the comprehensive study design that will be submitted to the EPA for final approval.¹⁴² Over 2,600 agreements have been signed, and more than 14,000 swine, dairy, egg-laying and broiler chicken farms are represented across the country.¹⁴³ In June 2007, the EPA announced the beginning of their nation-

^{136.} COPELAND, *supra* note 25, at 20.

^{137.} *Id*.

^{138.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4958, Attachment B (Jan. 31, 2005).

^{139.} Karvosky, *supra* note 14, at 135; Purdue Univ., National Air Emissions Monitoring Study, Frequently Asked Questions, http://cobweb.ecn.purdue.edu/~odor/NAEMS/faqs.htm (last visited Mar. 3, 2008).

^{140.} Karvosky, *supra* note 14, at 135.

^{141.} Purdue Univ., *supra* note 139.

^{142.} Animal Feeding Operations Consent Agreement and Final Order, 70 Fed. Reg. 4958, Attachment B (Jan. 31, 2005).

^{143.} Press Release, EPA, EPA Collaborates with Farmers on the First Nationwide Study of Air Emissions from Animal Feeding Operations (June 14, 2007), http://www.epa.gov/oecaagct/ news/jun2007.html (click on the appropriate link under "June 14").

Drake Journal of Agricultural Law

[Vol. 13

wide monitoring study.¹⁴⁴ There are approximately twenty-four sites from ten different states that are set to be used to monitor and develop the emission estimating methodologies.¹⁴⁵ Currently, the monitoring period is set to be completed in September, 2008.¹⁴⁶

As previously mentioned, the AARC and industry actors are partnering with scientists and members of academia to conduct the two-year study. Researchers from eight different universities across the country are assisting by tracking the levels of pollutants most likely emitted from these animal production facilities.¹⁴⁷ Purdue University's Agricultural Department is one of the schools participating in the emission monitoring study.¹⁴⁸ The Purdue study is collecting its air emissions data by studying the concentrations of the regulated pollutants in the area, and calculating the "airflow rates through the barns or wind flows across lagoons, manure storages and corrals."¹⁴⁹ Then, the Purdue team reports its quarterly findings back to the EPA for compilation and research purposes.¹⁵⁰ Preliminary estimates have shown that many of the farms being studied exceed the CERCLA reporting requirement of one hundred pounds of ammonia released from a facility in any twenty-four hour period.¹⁵¹ However, much work still needs to be done for the EPA to ascertain precisely what sizes and types of farms are emitting harmful levels of emissions.

The overall goal of this study is to improve air quality by determining "the best practices to control industry-wide emissions."¹⁵² According to monitoring officials, at the conclusion of the study the EPA will develop and publish Emission-Estimating Methodologies for the use of the general public in regards to AFOs.¹⁵³ These will provide guidance to AFOs in presenting them with ways to ensure compliance with the federal statutes, as well as to establish an expecta-

^{144.} *Id.*

^{145.} EPA, Air Emissions Monitoring Study, June 14, 2007, http://www.epa.gov/ agriculture/airmonitoringstudy.html ("The farms monitored are in California, Indiana, Iowa, Kentucky, New York, North Carolina, Oklahoma, Oregon, Texas and Wisconsin."); Brent Newell, et al., Comments of the Association of Irritated Residents, Center on Race, Poverty & the Environment, Environmental Defense, Environmental Integrity Project, and Sierra Club on Animal Feeding Operations Consent Agreement and Final Order 17 (Mar. 1, 2005) (on file with the author).

^{146.} Nat'l Milk Producers Fed'n, Proposal to Fund the National Air Emissions Monitoring Study as Part of the Environmental Protection Agency Consent Agreement 2, *available at* http://www.nmpf.org/files/file/old_production/1-3_Summary_of_NAEMS.doc.

^{147.} EPA, *supra* note 145.

^{148.} Purdue Univ., *supra* note 139; Nat'l Milk Producers Fed'n, *supra* note 146.

^{149.} Purdue Univ., *supra* note 139.

^{150.} Id.

^{151.} Id.

^{152.} EPA, *supra* note 145.

^{153.} Karvosky, *supra* note 14, at 133.

303

tion that AFOs bring their operations into compliance with federal law within a reasonable amount of time.¹⁵⁴ Hopefully, the study will be able to provide indepth, process-based models that, if properly implemented, will ensure AFOs can adequately control their emission levels.

VIII. CONCLUSION

Since the EPA continued to fail in aggressively enforcing federal regulations with individual enforcement actions in the past, a change was needed. For more than twenty-five years, the EPA neglected to hold agricultural operations accountable for federal violations.¹⁵⁵ Now, public backlash from this Agreement has left the EPA with no choice but to honor its commitment to clean up the industry's air emissions.

The AFO CAFO is an agreement that is clearly unorthodox in the manner in which it deals with AFOs, an industry recognized for heavy levels of air pollution. However, individuals from all around the country are increasingly affected by the hazardous emissions of these operations, and it became evident that some modification was required. Due to the atypical relationship established between the EPA and AFOs, many environmental advocates, concerned legislators, and scientific scholars criticized the Agreement. However, critics need to consider the history of EPA enforcement against AFOs. Since the inception of federal statutes such as the CAA, CERCLA, and EPCRA, the EPA has in effect turned a blind eye to serious violations by agricultural operations in the area of air emissions. Certainly this agreement may have been created as another delay by the EPA for fulfilling their statutory duty, but this need not be the end result. According to the EPA's statements, in two years all AFOs will have at their disposal scientifically-accepted methodologies that will determine exactly how much hazardous emissions they are pumping into the air. Whether or not the studies explain efficient methods of mitigating emissions, AFOs will be on notice that they are in violation of federal statutes. It is then the EPA's responsibility to follow through on its commitment to protect human health and the environment. This agreement has eliminated the possibility for excuses or inaction from the EPA. The AFO CAFO was created as a mechanism for greatly reducing AFO emissions. Now it is the responsibility of the EPA to achieve that goal.

^{154.} *Id.*

^{155.} See COPELAND, supra note 25, at 19-20.