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August 5, 2005

VIA HAND DELIVERY

Stephen L. Johnson
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, MC 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

RE: Petition for Exemption
From EPCRA and CERCLA Reporting Requirements
For Ammonia Emissions from Poultry Operations

Dear Mr. Johnson:

The National Chicken Council ("NCC"), National Turkey Federation ("NTF"), and U.S. Poultry & Egg Association ("USPOULTRY") are nonprofit member organizations that represent the majority of broiler and turkey producers across the country. Attached hereto please find our petition for an exemption from EPCRA and CERCLA emergency release reporting requirements for ammonia emissions from poultry growing operations.

While our members take environmental obligations very seriously, they believe that the application of emergency release reporting requirements to ammonia emissions from poultry production operations is inappropriate, unwise public policy, which does not reflect the nature of poultry management practices, and does not improve environmental or public health outcomes in any way. Rather, it merely serves to burden more than 40,000 small, family-run businesses that operate poultry farms throughout the United States with requirements to file reports that will not be used, as well as potential liability for improperly reporting – or not reporting – ammonia releases because of the current lack of reliable emissions data. Application of reporting requirements to ammonia air emissions from poultry operations also will burden government emergency response agencies with the unnecessary duty of handling and processing a large volume of these notifications, which will undermine their ability to effectively address actual public health risks and release reporting that actually requires emergency response.

For these reasons, we are seeking an exemption to the application of CERCLA and EPCRA release reporting requirements with respect to routine ammonia emissions from poultry farms. The attached petition explains in detail our concerns and EPA's authority to grant the requested exemption. If we may provide further assistance, please feel free to contact us.

Sincerely,

George Watts, President
National Chicken Council

Alice Johnson, President
National Turkey Federation

Don Dalton, President
U.S. Poultry & Egg Association

Cc: Thomas P. Dunne, DAA OSWER (w/out attachments)
Barry N. Breen, DAA OSWER (w/out attachments)
Ann R. Klee, General Counsel (w/out attachments)
Debbie Dietrich, Director, OSWER Office of Emergency Management (w/out attachments)
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Craig Matthiessen, Associate Director, Regulation and Policy Development Division (w/attachments)
Lynn M. Beasley, Regulation and Policy Development Division (w/attachments)
Robert Kaplan, Director Multimedia Division, OECA (w/out attachments)
Jon Scholl, Counselor to the Administrator on Agriculture Policy (w/out attachments)
Karen Brown, EPA Small Business Ombudsman (w/out attachments)

Petition to the Environmental Protection Agency

Request for Exemption
from EPCRA and CERCLA Release Reporting Requirements
For Ammonia Emissions from Poultry Operations

Submitted on Behalf of the

Broiler & Turkey ("Poultry") Industry

by the

National Chicken Council, National Turkey Federation, and
U.S. Poultry & Egg Association

August 5, 2005

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INTRODUCTION AND OVERVIEW

This petition is submitted by the National Chicken Council[1] ("NCC"), U.S. Poultry & Egg Association[2] ("USPOULTRY") and the National Turkey Federation[3] ("NTF") on behalf of members in the broiler and turkey ("poultry") industry seeking exemption from the release reporting requirements under Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), and Section 304 of the Emergency Planning and Community Right-to-Know Act ("EPCRA") for ammonia air emissions from poultry operations.

As a result of recent legal developments regarding the application of CERCLA and EPCRA reporting requirements to family farm operations, poultry producers and farmers are in a no-win situation in which they are simultaneously vulnerable for noncompliance and yet uncertain about how to comply. As detailed below in Section II, two recent federal court decisions have reversed the U.S. Environmental Protection Agency's ("EPA's") long-standing view of what constitutes a "facility" under CERCLA for purposes of release reporting, with the consequence that farmers may be obligated, for the first time, to aggregate ammonia emissions among all poultry houses located at a farm in order to determine whether a reportable quantity has been released. In addition, one of those decisions, by the U.S. District Court for the Western District of Kentucky, ruled that: (1) even though farmers have no obligation to monitor emissions, they may have a duty to report releases based upon "constructive knowledge" of the scientific literature pertaining to past monitoring research; (2) the EPCRA exemption for "routine agricultural operations" does not apply to ammonia produced within poultry houses; and (3) integrators may be held liable as "persons in charge" under CERCLA, or "operators" under EPCRA, for reporting violations occurring at farms where poultry is raised for the integrator under contract. These rulings have created an untenable position for poultry producers and farmers. We have sought clarification and guidance from the Agency on these troubling issues, to no avail. As a result, we now seek a definitive resolution of the situation through this petition for rulemaking.

For the reasons set forth in this petition, poultry production operations, which utilize a dry litter system, should not be subject to the CERCLA and EPCRA release reporting requirements for ammonia air emissions. EPA should provide an administrative reporting exemption for ammonia air emissions from poultry operations similar to the one EPA provided

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1 The National Chicken Council ("NCC") is a nonprofit member organization representing companies that produce and process over 90 percent of the broiler/fryer chickens marketed in the United States. NCC promotes the production, marketing and consumption of safe, wholesome and nutritious chicken products both domestically and internationally. NCC serves as an advocate on behalf of its members with regard to the development and implementation of federal and state programs and regulations that affect the chicken industry.

2 The U.S. Poultry & Egg Association ("USPOULTRY") is the world's largest poultry organization, whose membership includes producers of broilers, turkeys, ducks, eggs and breeding stock, as well as allied companies. The Association focuses on research and education, as well as communications to keep members of the poultry industry current on important issues.

3 The National Turkey Federation ("NTF") is the national advocate for all segments of the turkey industry. NTF provides services and conducts activities which increase demand for its members' products by protecting and enhancing their ability to profitably provide wholesome, high-quality, nutritious products.

in 1998 for certain radionuclide releases. Specifically, we petition EPA to promulgate a regulation providing for an exemption from the notification requirements to be added at 40 C.F.R. § 302.6(c) for the category of releases of ammonia from poultry production operations.

Moreover, we respectfully seek an interim final rule to be promulgated expeditiously to provide for a more immediate solution for the more than 40,000 poultry growers currently at risk in the U.S. We believe the regulatory burden currently facing poultry growers in the U.S. and their local emergency response officials, coupled with the lack of any significant health risks posed by ammonia air emissions from poultry farms, provide EPA with the "good cause" required by the Administrative Procedures Act, 5 U.S.C. § 553(B), to adopt a regulatory exemption as an interim final rule pending full notice-and-comment rulemaking. In addition, we request that EPA immediately provide for such exemption through enforcement discretion while the interim final rulemaking process is pending.

To be clear, this petition does not seek any exemption from Clean Air Act-related standards or state and/or local air pollution control requirements of any kind. Our members fully recognize their obligations to comply with such requirements where applicable. At the present time, however, there are no Clean Air Act standards that trigger permitting or compliance efforts for dry litter poultry growers.

This petition presents a detailed explanation of why poultry farmers need and should be granted an exemption to CERCLA and EPCRA release reporting requirements. Specifically,

- **Section I of the Petition:**
  - describes poultry operations in general, detailing how ammonia is produced and controlled in those operations;
  - explains the incentive for poultry growers to limit ammonia emissions inside a poultry house; and
  - demonstrates that public exposure from ammonia emissions is insufficient to justify the regulatory burden of the release reporting requirements. Most importantly, Section I.D uses an EPA screening model to demonstrate how the quick dispersion of ammonia released from typical poultry houses ensures that ***public exposure to ammonia is insignificant, even at reasonably close distances to a poultry house***.

Section II of the Petition:

- outlines the recent legal developments that have necessitated an exemption from reporting requirements for poultry farmers, including:
  - Federal court rulings that, despite 20 years of regulatory history to the contrary, have implied that CERCLA and EPCRA release reporting requirements apply to ammonia emissions from poultry litter;
  - The Agency's reluctance to provide guidance clarifying the definition of "facility" under CERCLA and the application of the EPCRA routine agricultural operations exemption to poultry production operations.

- **Section III of the Petition:**
  - details EPA's statutory and regulatory authority to grant administrative reporting exemptions from CERCLA and EPCRA release reporting requirements, and describes how the Agency has exercised such authority in the past; and
  - demonstrates why ammonia air emissions from poultry operations warrant an exemption from CERCLA and EPCRA release reporting requirements by showing that:
    - ammonia emissions from poultry houses pose little or no risk to public health;
    - emergency response to ammonia releases from poultry houses is infeasible and inappropriate;
    - emergency reporting would unnecessarily burden state and local emergency response systems; and
    - emergency reporting unnecessarily burdens the poultry growing community, which predominately consists of small, family-run businesses.

Accordingly, the poultry industry submits this petition for rulemaking to seek from EPA a definitive and expeditious resolution of the situation facing the more than 40,000 poultry growers in the U.S. today.

I. AMMONIA EMISSIONS FROM POULTRY OPERATIONS ARE INSUFFICIENT TO JUSTIFY THE REGULATORY BURDEN OF CERCLA AND EPCRA REPORTING REQUIREMENTS

Section 103 of CERCLA requires a person in charge of a facility to immediately notify the National Response Center when there is a release of a hazardous substance in an amount equal to or greater than its reportable quantity ("RQ"). 42 U.S.C. § 9603; 40 C.F.R. § 302.6. In addition, the person in charge must immediately notify State and local response authorities, as required by section 304 of EPCRA. 42 U.S.C. § 11004; 40 C.F.R. § 355-40. CERCLA hazardous substances, and their RQs, are listed in 40 C.F.R. Part 302, Table 302.4. The RQ for ammonia releases is 100 pounds in 24 hours. Substantial penalties may apply under CERCLA and EPCRA for failure to report releases greater than the RQ amounts.

Members of the poultry industry are committed to meeting their environmental obligations, but requiring poultry farms to comply with release reporting obligations under CERCLA and EPCRA with respect to dilute ammonia air releases is unnecessary and inappropriate. It is inconsistent with the statutory purposes of these reporting obligations, and also inconsistent with twenty years of practice by the Agency and the agricultural community. Ammonia emissions from poultry farming operations are difficult to measure but clearly occur at low levels and are thereafter quickly dispersed. They pose little or no health risk, thus making collection of emergency response information from poultry houses burdensome and unnecessary.

This section provides background information on the poultry industry and its operations, including what is known about ammonia emissions from these operations and any health impacts, to demonstrate why CERCLA and EPCRA reporting requirements are unnecessary and emergency response is inappropriate in this context. Concern for both bird and farm family health has led to the development of poultry housing and ventilation practices that avoid unhealthy concentrations of ammonia within the facility. Further, following release of these low concentrations of ammonia via standard ventilation practices, rapid dispersion ensures that public exposure to ammonia is insignificant even at reasonably close distances to a poultry house. The lack of health or environmental impacts resulting from such insignificant exposure indicates that no emergency response to these emissions is necessary. Moreover, it is impossible for farmers to calculate accurate, site-specific measurements of such releases from individual houses on a specific family farm. Given the insignificant level of exposure, combined with the inappropriateness of emergency response and the burden and uncertainty to small farmers attempting to estimate daily, site-specific emissions, requiring emergency release reporting of such emissions is unnecessary.

A. The Poultry Industry

The U.S. is the world's largest producer and exporter of commercial poultry meat (which includes broilers, other chicken, and turkey). The total farm value of poultry production in 2004 was $28.9 billion, with broiler production accounting for the majority of the value at $20.4 billion. *See* United States Department of Agriculture ("USDA"), National Agricultural Statistics Service ("NASS"), *Poultry – Production and Value: 2004 Summary* at 1 (April 2005)(attached as Attachment 1). Broiler production is concentrated (approximately 70 percent) in a group of states stretching from Delaware south along the Atlantic coast to Georgia, then

west through Alabama, Mississippi, and Arkansas through to Texas. Production of turkeys is somewhat more scattered geographically. As detailed in the charts below, adapted from the USDA, NASS, *Poultry – Production and Value: 2004 Summary*, major broiler producing states include Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas and Virginia. Major turkey producing states include Arkansas, California, Indiana, Iowa, Minnesota, Missouri, North Carolina, South Carolina, Pennsylvania, and Virginia.

Broilers: Production, Price, and Value, By State and Total, 2004 [1] [2]

State	Number Produced *1,000 Head*	Pounds Produced *1,000 Pounds*	Price per Pound[3] *Dollars*	Value of Production *1,000 Dollars*
AL	1,052,000	5,470,400	0.440	2,406,976
AR	1,241,500	6,207,500	0.440	2,731,300
DE	240,700	1,492,300	0.460	686,458
FL	78,500	463,200	0.450	208,440
GA	1,298,900	6,494,500	0.440	2,857,580
KY	290,800	1,570,300	0.440	690,932
MD	284,600	1,366,100	0.460	628,406
MN	46,300	231,500	0.440	101,860
MS	827,800	4,387,300	0.440	1,930,412
NE	4,300	25,400	0.450	11,430
NY	2,600	14,600	0.450	6,570
NC	720,200	4,537,300	0.450	2,041,785
OH	41,600	224,600	0.450	101,070
OK	243,800	1,243,400	0.440	547,096
PA	133,500	707,600	0.460	325,496
SC	204,500	1,186,100	0.440	521,884
TN	195,900	999,100	0.440	439,604
TX	620,700	3,165,600	0.450	1,424,520
VA	263,000	1,341,300	0.440	590,172
WV	86,400	354,200	0.440	155,848
WI	33,800	152,100	0.450	68,445
Oth Sts [4]	829,250	4,161,850	0.473	1,969,802
Total [5]	8,740,650	45,796,250	0.446	20,446,086
19 Weekly Sts [6]	8,505,200	44,635,400	0.446	19,902,461

1 December 1, 2003, through November 30, 2004.
2 Broiler production including other domestic meat-type strains.
3 Live weight equivalent prices, derived from ready-to-cook (RTC) prices using the following formulas: RTC price minus processing cost X (dressing percentage) = live weight equivalent price.
4. CA, HI, IN, IA, LA, MI, MO, OR, & WA, combined to avoid disclosing individual operations.
5 Excludes States producing less than 500,000 broilers.
6 19 states in the weekly estimating program: AL, AR, CA, DE, FL, GA, KY, LA MD, MO, MS, NC, OK, PA, SC, TN TX, VA and WV.

Turkeys: Production, Price, and Value, By State and United States, 2004

State	Number Raised [1] *1,000 Head*	Pounds Produced *1,000 Pounds*	Price per Pound [2] *Dollars*	Value of Production *1,000 Dollars*
AR	28,500	527,250	0.43	226,718
CA	15,700	414,480	0.41	169,937
CT	5	127	1.35	171
IL	2,900	89,320	0.42	37,514
IN	13,300	409,640	0.42	172,049
IA	9,000	324,000	0.42	136,080
MD	750	13,275	0.43	5,708
MA	70	1,736	1.59	2,760
MI	5,000	188,000	0.37	69,560
MN	46,500	1,227,600	0.42	515,592
MO	21,500	666,500	0.42	279,930
NH	4	100	1.77	177
NJ	37	814	0.87	708
NY	580	13,746	0.43	5,911
NC	39,000	1,068,600	0.42	448,812
ND	1,000	26,400	0.40	10,560
OH	5,800	219,820	0.42	92,324
PA	12,000	234,000	0.48	112,320
SC	12,000	463,200	0.40	185,280
SD	4,500	150,750	0.38	57,285
VT	52	1,227	1.50	1,841
VA	19,700	435,370	0.42	182,855
WV	3,200	70,720	0.42	29,702
Oth Sts [3]	23,109	758,138	0.42	321,623
US	264,207	7,304,813	0.420	3,065,417

1 Based on turkeys placed Sep 1, 2003, through Aug 31, 2004. Excludes young turkeys lost.
2 CA, CT, DE, MD, MA, MI, NE, NH, NJ, ND, OH, PA, SC, SD, and VT are actual live weight prices. All other States are equivalent live weight returns to producers.
3 CO, DE, KS, NE, OK, OR, TX, UT, and WI combined to avoid disclosing individual operations.

Raising commercial poultry continues to be an agricultural operation dominated by the relatively small family farmer, with most production occurring under contract with a producer. The farmer or "grower" normally supplies the growout house with all the necessary heating, cooling, feeding and watering systems, and the labor. The producer supplies the chicks (or poults), feed, and veterinary medicines.

The number of broiler growers is estimated at over 32,000, while there are estimated to be more than 8,000 turkey growers, resulting in a total of more than 40,000 poultry growers in the U.S. *See* United States Department of Agriculture, National Agricultural Statistics Service, 2002 Census of Agriculture, *Table 27 – Poultry Inventory and Number Sold 2002 and 1997* (attached as Attachment 2). According to a survey of poultry contract growers conducted by the National Chicken Council and U.S. Poultry & Egg Association,[4] 92% of growers in the U.S. raise 125,000 birds or less each cycle, which is roughly equivalent to five or six poultry houses on site (depending on the age and the size of the houses).[5] As demonstrated in the chart below, nearly 60% of broiler growers have less than 75,000 birds, which is equivalent to three to four houses on site.

Distribution, by Size, of Broilers	
Number of Birds Grown Per Cycle (5-6 cycles per year)	**Percentage of Growers in U.S.**
1-25k	8.6
25k -50k	27.4
50k-75k	23.1
75k-100k	19.2
100k-125k	11.6
125k-150k	4.2
150k-200k	4.4
200k plus	1.4

The contract production system can provide a reliable income to growers, but, as with any commodity business, net margins are relatively thin. In addition, poultry houses represent long-term investments (30 years or more) and require substantial initial investments for

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[4] The survey provides a snapshot of 16,311 poultry growers around the nation; approximately were 500 turkey growers with the balance of responses from broiler growers. Portions of the survey results were published at Starkey, J., *CAFO Revisions: Regulation Without Purpose?*, WATT PoultryUSA (Jan. 2002). A copy of the survey questions is attached at Attachment 3.

[5] According to the survey by NCC and USPOULTRY, an average broiler grower has approximately 21,000 birds per house, although newer houses can have approximately 25,000 birds per house based on the placing density and the size of the house. The average turkey grower has 3.05 houses with 27,000 birds in each house. Note that most turkey growers likely use one poult house up to five weeks of age, when the birds are transferred to two growout houses.

growers. An "average"6 grower in the Southeast, for example, can expect a net cash flow of approximately $7,000-12,000 per house per year on an investment of $150,000-200,000 per house amortized over 15 years. *See* Cunningham, D., *2005-2006 Broiler Production Systems in Georgia: Costs and Returns Analysis* (prepared for the University of Georgia Cooperative Extension Service) (July 2005) (attached as Attachment 4). As a result, poultry growers—the majority of which are "mom-and-pop"-run family farms—operate on thin profit margins, with little flexibility to absorb unexpected costs.

Following are pictures of typical grower operations:

6 Note that grower income is competitive: a more efficient grower will receive a greater return than average, while a less efficient grower will receive less than average

B. Operations of a Typical Poultry Facility

Poultry operations include diverse agricultural activities, including feed storage, feeding and watering systems, animal housing and climate control, litter removal and re-use of litter by-product. The description below focuses on operations associated with the large, well ventilated barns called "houses" in which poultry is raised.

Following below are pictures of operations within typical poultry houses:

Poultry house floors are covered with a bedding material of about four to six inches in depth to absorb bird manure. Common bedding materials include pine shavings, rice hulls, peanut hulls, and sawdust, but a number of other similar type materials also are used. The bedding material combined with the deposited manure is called "litter." To minimize potential disease problems, litter is kept nearly dry. Excessive moisture enhances pathogen growth, and increases ammonia volatilization.

Once bedding material has been placed in the house, baby chicks are placed in the house as well. During the first few days, usually half of the poultry house is cordoned off, and brooder heaters are lowered in the house to provide the extra warmth needed by young birds. Automatic feeders and drinkers also are lowered to bird height, providing unrestricted access to water and feed at all times. Typically, once the birds are past the brooding phase, the brooder heaters are raised and, at about the same time, the birds are given access to the entire house. Birds tend to congregate close to the feeders and drinkers, so there is normally a greater accumulation of manure in the litter in these areas.

Ammonia production occurs as a result of the natural degradation of uric acid in bird manure. Uric acid production and, hence, ammonia production, increases with bird size, as the bird consumes more feed. Birds remain in the house for six to seven weeks and then are sent to the processing plant. There usually is a "down time" period of several days prior to introduction of the next flock. During this time, the grower will raise the drinkers and feeders, and typically will remove the top 1–2 inches of litter under these units through the entire length of the house. This normally is accomplished using a Bobcat type loader or other tractor device. Growers also remove any other area of litter that appears damp or wet. This process, variously called "caking out," "de-caking," or "crusting," will remove three to five tons of litter per house.

Fresh bedding material is brought in to replace the removed litter as needed, and many growers "mix" the old litter with the fresh bedding materials with a tractor and box or disc blade.

The houses are completely cleaned out on occasion, but the frequency varies depending on location, bedding materials, and so on. While there is no "standard" for this practice, most growers do so at least once every 1-3 years. Additionally, if there is a disease issue at a farm, the grower will conduct complete litter clean-out and disinfection of the house prior to placing additional chicks in the house. Litter is removed from the house via a Bobcat or other tractor device. It usually is loaded directly from the house to a spreader truck for land application with no additional storage. Some growers also have storage sheds, providing more flexibility in the timing of their clean-out and land application.

Many growers use litter amendments to control ammonia levels in the house and maximize bird performance, thus increasing the return on their investment. These products are acidic in nature and convert ammonia to ammonium, preventing volatilization, and normally are applied between flocks. Typically, their effectiveness at preventing volatilization only lasts about three weeks into the grow-out period. This early period is critical because small birds are sensitive to even short-term ammonia spikes to 25 ppm. *See* Lott, B., and Donald, J., *Ammonia: Can Cause Serious Losses Even When You Can't Smell It*, THE POULTRY ENGINEERING, ECONOMICS & MANAGEMENT NEWSLETTER, Issue 19, at 1 (Sept. 2002) ("Research has shown that high levels of ammonia will create about 5-10% runts in a flock.") (attached at Attachment 5); Estevez, I., *Ammonia and Poultry Welfare*, POULTRY PERSPECTIVES, Vol. 4, No. 1 at 2 (Spring 2002) (attached at Attachment 6). Since birds are fairly small during this early period, ventilation occurs less frequently, increasing the chances for a short-term ammonia spike. At about the time a litter amendment loses its effectiveness, the birds become larger, give off more heat and have more developed respiratory tracts, so that ventilation becomes more than sufficient to control ammonia levels.

Turkey production operations are similar to broiler operations, with two exceptions. First, young turkeys—poults or brooders—are raised in one house until about five weeks of age and then transferred to a growout house for finishing (until about 20 weeks for toms, 18 weeks for hens). Second, the rate of replacement of litter is more frequent: the brooder house litter is replaced completely between flocks, and the growout house litter is replaced once per year on average. This represents usage of the growout house litter by about two to three flocks of turkeys. Particularly with poult houses, where fresh bedding is used for each flock, even lower levels of ammonia can be anticipated.

C. Controlling Ammonia in Poultry Operations

Ammonia is a colorless, water-soluble byproduct of the microbiological decomposition of organic nitrogen compounds in manure. Ammonia is released to the air (i.e., volatized) during poultry raising operations. The main source of ammonia emissions from poultry operations is the nitrogen in proteins consumed in feed and excreted by the birds, primarily in the form of uric acid and fecal matter. Uric acid very quickly can be converted to ammonia (NH_3) by hydrolysis, mineralization and volatilization, while fecal matter is less readily converted.

Microbial degradation of uric acid in the litter is the primary source of NH_3 formation in poultry houses. The process involves several enzymes, including uricase and urease. With the addition of moisture, urea breaks down into NH_3. Because ammonia does not have an ionic charge, it is readily released into the atmosphere in gaseous form. It is estimated that 50-80% of the nitrogen in manure is converted to NH_3. In an acidic environment, NH_3 will protonate into nonvolatile ammonium (NH_4^+).

1. Factors Affecting Ammonia Production

Ammonia production is affected by the temperature, moisture, pH, and nitrogen content of the litter. Higher temperatures increase both bacterial activity and ammonia production. At higher pH levels, ammonia levels become more variable and generally increase. Ammonia also forms more quickly at higher moisture levels. Thus, growers must ensure that they properly ventilate to maintain litter dryness, keep adequate absorbent material in the litter, and use watering devices such as nipples that reduce the amount of moisture spilled while the birds are drinking.

2. Effects of Ammonia Concentrations on Animal Welfare

The lungs, airsacs and entire respiratory systems of chickens and turkeys must be healthy to stop bacteria from infecting them. The surfaces of the respiratory system are lined with microscopic fingers called villi which sway back and forth to push bacteria away from the lungs and airsacs. Ammonia can cause these villi to mat together and thus impede or prevent the carrying away of bacteria. Ammonia also can increase bacterial infection by damaging cells lining the respiratory tract. Birds exposed to ammonia are more susceptible to fowl cholera, infectious bronchitis, colisepticemia and other diseases.

Both concentration and exposure time influence the effect that ammonia can have on poultry health. Excessive concentrations in poultry houses will lower production due to increased disease susceptibility of the birds. Research has found that exposure of the birds to 20 ppm for long periods of time can result in a variety of disorders, such as snicking, tracheal irritation, air sac inflammation, conjunctivitis, and dyspnea. *See, e.g.*, Lott, B., and Donald, J., *Ammonia: Can Cause Serious Losses Even When You Can't Smell It*. As demonstrated by the bar graph[7] below, increased ammonia levels directly impact bird body weight, thereby impacting a grower's financial performance, as every fraction of a pound lost translates into dollars lost by the grower.

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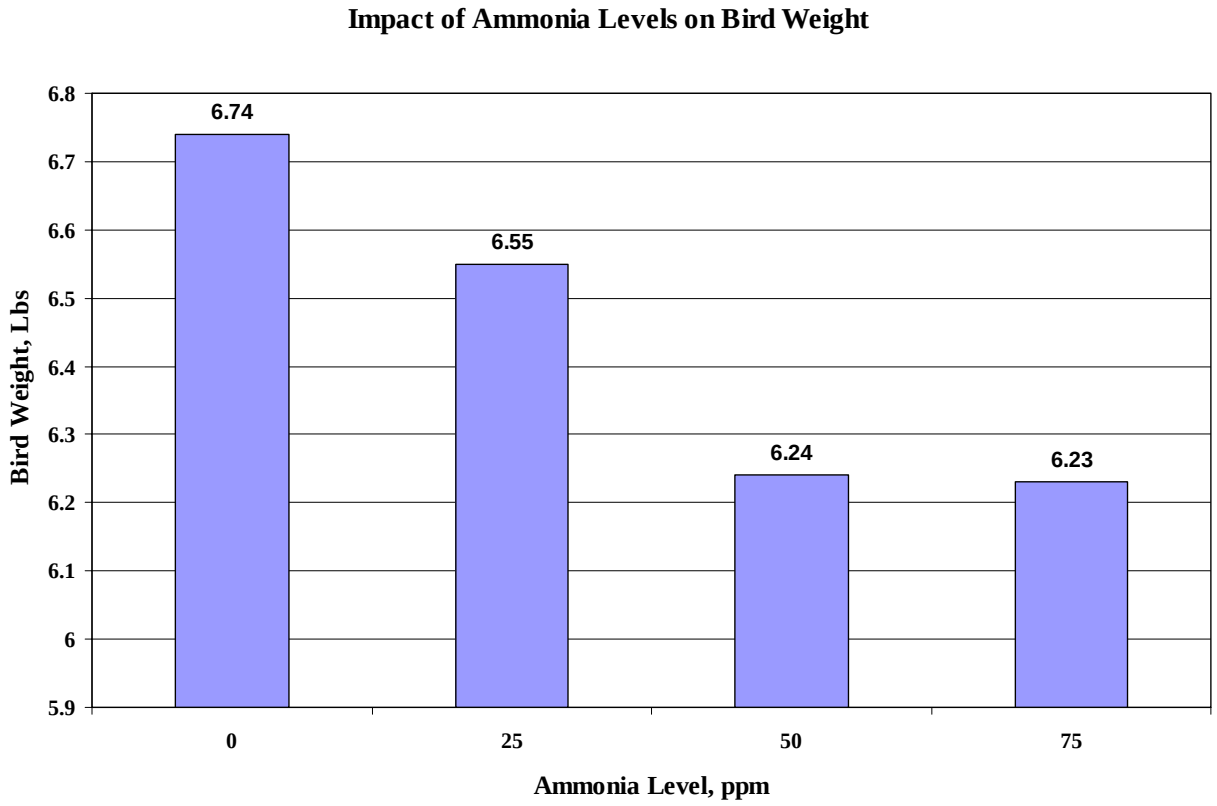
[7] The bar graph depicting the effects of increased ammonia levels on body weight is taken from Lott and Donald, *Ammonia: Can Cause Serious Losses Even When You Can't Smell It* at 3.



For these reasons, control of ammonia has become an important practice within the industry. Poultry welfare guidelines established by organizations and private companies such as the National Chicken Council and National Turkey Federation all contain standards and practices to control ammonia in poultry operations. For example, the National Chicken Council's *Animal Welfare Guidelines and Audit Checklist* at 4 (April 5, 2005)—endorsed by virtually every major poultry producer in the country—states that ammonia concentrations in a poultry house should not exceed 25 ppm, and sets 10 ppm as a goal. Similarly for turkey producers, the National Turkey Federation's *Animal Care Best Management Practices for the Production of Turkeys* at 23 (July 2004) indicates that levels should be kept below 25 ppm in order to protect the birds against respiratory problems and immunosuppression. Both of these guides also detail the importance of ventilation to control ammonia concentrations and moisture in the litter. (See excerpts from the NCC and NTF Guidelines, attached as Attachments 7 and 8).

Thus, poultry farmers are highly motivated to ensure that ammonia concentration levels in their poultry houses remain near or below 25 ppm. This is an economic imperative for them, and much of the industry literature is devoted to providing the informational resources to ensure that all poultry farmers achieve and maintain such low ammonia concentrations in their poultry houses. Attachments 5 and 6 are representative industry newsletters advising growers on these topics. They not only stress the economic value of avoiding elevated ammonia concentrations, and summarize studies documenting economic impacts when concentrations are allowed to exceed 25-50 ppm, they also provide extensive guidance on controlling ammonia levels.

3. Ammonia Levels Are Controlled On a Daily Basis Through Ventilation Practices

As detailed in the attached industry newsletters, the key to controlling ammonia production in poultry houses is control of litter moisture. While litter amendments can help, particularly when birds are younger, the primary and most important means of controlling moisture in the litter and maintaining low ammonia concentrations in the houses is through proper ventilation practices.

Poultry house ventilation equipment can be as simple as manually-adjustable curtains over sidewall openings, but increasingly includes various sizes and types of computer-controlled fans and inlets. The most important distinction is whether the system is fan-powered or relies on natural wind or air circulation. Natural ventilation is achieved by opening up the house as needed to allow outside breezes and inside convection currents to flow the right amount of air into and through the house. This usually is done by lowering (or raising) sidewall curtains, a practice often called "curtain ventilation." Because of its dependence on weather conditions, curtain ventilation does not permit a great deal of control over in-house temperature.

Fan-powered ventilation uses fans to bring air into and through the house, which generally allows more control over both the air exchange rate and the air flow-through pattern, depending on the configuration of fans and air inlets and the type of control used. In the U.S., the number of houses using only natural ventilation is declining, especially in warmer climates, but many houses equipped with fan-powered systems also have curtain sidewalls and use natural ventilation when outside weather conditions are favorable.

Modern poultry houses utilize several distinct fan-powered ventilation techniques in order to provide maximum bird comfort and maximum bird performance. These ventilation techniques are dependent on a number of variables.[8] Primarily, ventilation techniques are designed to control temperature at the desired level for the birds at their particular stage of growth. For example, newly placed chicks from the hatchery do best when the temperature is around 90°F for the first three to five days. After that, the desired temperature decreases fairly linearly about 4°F per week, to a temperature of about 70°F for a six- to seven-week old (market age) bird. So, over the course of the grow out cycle, the birds target temperatures will change by a range of 20°F.

Another variable affecting temperature control—and hence, ventilation techniques—is the amount of heat given off by the birds themselves. As they grow, birds produce more body heat. This increasing heat is further combined with normal seasonal and daily temperature variations. Given that birds produce more heat but desire cooler temperatures as they grow, a variety of ventilation techniques are necessary in poultry houses. In order to maintain the desired temperature, the ventilation requirements may change by an order of

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[8] The summary in the text of fan-powered ventilation techniques is based primarily on the *Poultry House Ventilation Guide* (ANR-956) prepared by Jim Donald for the Alabama Cooperative Extension System, Alabama A&M and Auburn Universities (Jan. 2001) (attached as Attachment 9). Figures 1-3 depicting the techniques also are taken from this publication. While written specifically about broilers, the concepts discussed in the Donald publication apply to production of turkeys as well.

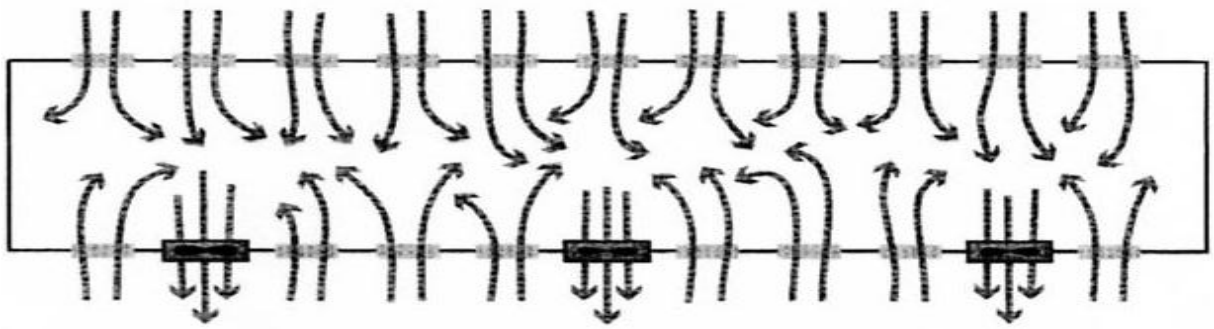
magnitude or more, and several techniques are necessary to address the full range of these requirements.

While temperature is the primary ventilation control parameter, there is a secondary ventilation consideration that also must be met—prevention of accumulation of moisture and ammonia in the house.9 Most of the time, a desired temperature target controls operation of the ventilation system, and the frequency of ventilation and volumetric flow of fresh air coincidentally maintains ammonia at acceptable levels. However, when ambient air temperatures are lower (e.g., in winter), the temperature considerations, standing alone, may not call for operation of the ventilation system for several hours at a time, particularly for younger birds who prefer warmer temperatures and do not give off much heat. Because this would allow unacceptable moisture and ammonia accumulation, the ventilation control system also incorporates a timer control for minimum ventilation frequency. *See* Donald, J., *Poultry House Ventilation Guide* (Jan. 2001). With small birds or during cold temperatures, this may be as little as operating ventilation fans for only 30 seconds every five minutes, but nonetheless, fresh air is frequently pulled in. At such times, the ventilation system is computer controlled. A series of temperature monitors provide information that dictates which and how many ventilation fans operation. Additionally, the computer has a default time program to provide the minimum ventilation required to control moisture and ammonia accumulation.

The ventilation techniques are briefly described below. Note that on a given day, a house may use all of these techniques, or it may use only one.

Power Ventilation (or Power Vent): With power ventilation, fans mounted on the side wall of the house (usually about 36" diameter fans, 4–8 per house, all on one side – see Figure 1) are used to exhaust house air, creating negative pressure (a slight vacuum) in the house. This negative pressure is sufficient to pull open the sidewall air intake ducts spaced evenly throughout the house. In this manner, fresh air is brought in evenly across the entire house, typically resulting in turn-over of the air inside the house in 5-10 minutes.

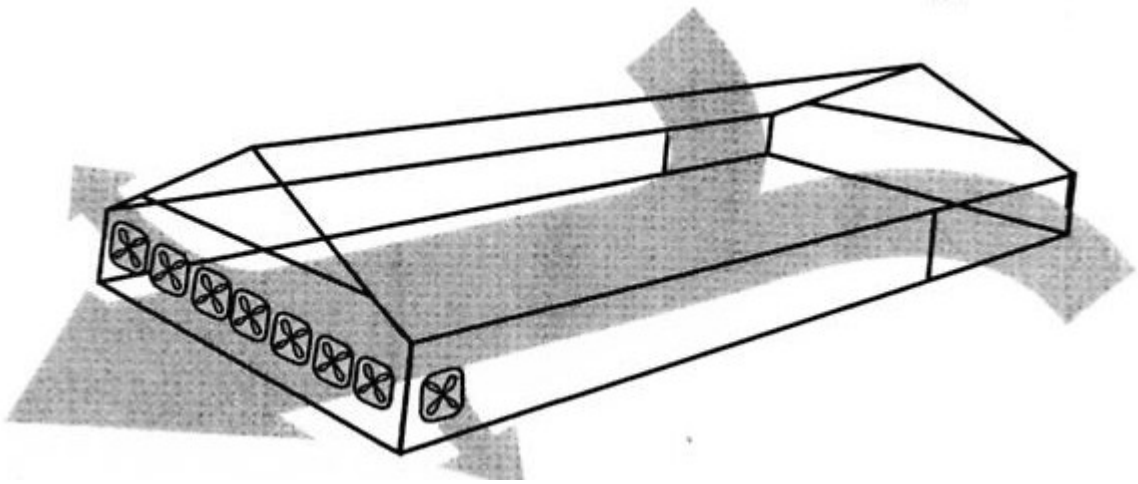
Figure 1 – Power Ventilation



9 Moisture and ammonia buildup are related. Excess moisture leads to damp litter; the dampness speeds the bacterial degradation of uric acid to ammonia.

Tunnel Ventilation: In tunnel ventilation, a series of fans (usually 6-8 fans, 48" or larger in diameter) are installed on one end of the poultry house. Tunnel air intakes are placed at the opposite end of the house (see Figure 2). The tunnel fans will create negative pressure when operating, and pull air longitudinally through the poultry house via the tunnel air intakes. With all tunnel fans running, the air turnover time is a minute or less.

Figure 2 – Tunnel Ventilation

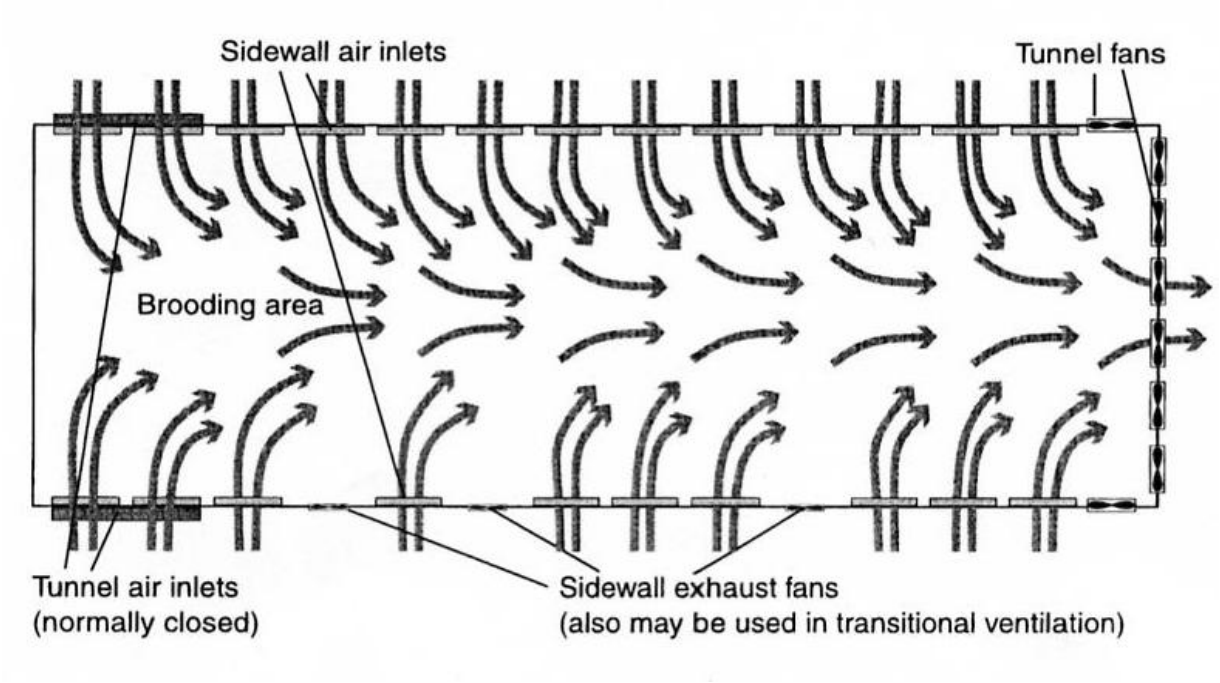


Tunnel ventilation produces a wind chill effect that can cool the birds 10°-12°F. Full tunnel ventilation produces a "wind speed" of 5-6 mph through the house. It is used more frequently as birds get larger and temperatures get warmer.

Transitional Ventilation: As the name implies, transitional ventilation is a combination of power ventilation and tunnel ventilation. Since, generally speaking, power ventilation is best when birds are small and temperatures are cool, while tunnel ventilation is more appropriate when birds are large and temperatures are warm, then transitional ventilation is required when conditions are between the two extremes. Consequently, transitional ventilation is used very often.

In transitional ventilation, a few tunnel fans are used along with a few power ventilation fans (see Figure 3). A negative pressure is created via the use of these fans. Rather than rely on the main tunnel intake ducts to supply fresh air, however, sidewall intake vents are used.

Figure 3, Transitional Ventilation



Tunnel Ventilation with Evaporative Cooling: This method of ventilation is exactly the same as tunnel ventilation, except intake air is first misted or "fogged" with water, and then pulled through a medium that optimizes evaporation. Since heat is needed to evaporate water, the resulting air temperature is reduced due to the heat removal. Evaporative cooling can lower air temperature 10°–15°F on a hot summer day. Taken together with the wind chill effect, the temperature of inbound air can be reduced by approximately 30°F.

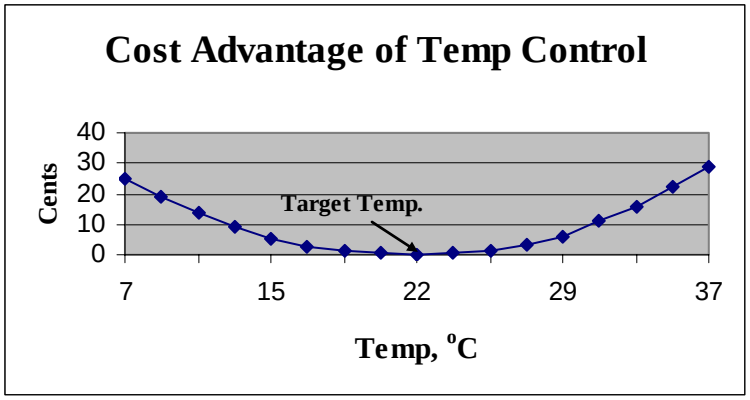
The following table gives estimated periods of time U.S. broiler houses stay in a combination power vent or transitional ventilation, versus tunnel vent and tunnel vent with evaporative cooling.

	Winter	**Spring/Fall**	**Summer**
Power/Transitional Vent	>95%	80	40
Tunnel Vent/Tunnel with Evaporation	< 5%	20	60

Most broiler houses have power ventilation capability, and about two-thirds are estimated to have tunnel system capabilities. The percentage of broiler houses that employ tunnel systems is anticipated to increase in the future. The numbers of turkey houses in the U.S. that utilize these active forms of ventilation will be lower than the broilers, particularly for tunnel systems, which are estimated to be in less than 10% of turkey houses. Many turkey houses still

use natural ventilation by raising/lowering side curtains, and therefore have no distinct exhaust point. 10

Consistently maintaining target temperatures, through the application of appropriate ventilation practices, is critical to yielding monetary returns from poultry production. As demonstrated in the chart below, the "cost of being wrong" with regard to temperature and ventilation has a direct and significant impact on the profit margin of poultry growers. The figure below provides a cents-per-bird loss per ^{o}F of temperature variation from the ideal temperature (adapted from Donald, J., *Poultry House Ventilation Guide* at 16 (Jan. 2001)).



Accordingly, proper control of poultry house temperatures—and thereby of ammonia concentrations—through proper ventilation not only makes sense from a bird health standpoint but also with respect to a grower's self interest in maximizing profits.

D. Ammonia Emissions From Poultry Operations Do Not Have Health or Environmental Impacts Requiring Emergency Response

As discussed further below, poultry growers are motivated to keep ammonia concentrations in poultry houses below threshold levels established for occupational exposure and human health. Since the concentrations of ammonia inside poultry houses do not exceed human health standards, ammonia air emissions outside poultry operations likewise are below levels established to protect human health. Further, the quick dispersion of ammonia once it is released to the outside ensures that ammonia emissions from poultry houses poses no significant risk to public health.

1. Human Health Standards Require that Occupational Ammonia Exposure Does Not Exceed 25-50 ppm

Growers diligently work to keep ammonia concentrations low in poultry houses to protect poultry productivity, health and welfare. Further, since poultry farms are almost exclusively family-owned and operated, the grower also is motivated to protect the farm family

10 Some broiler houses, particularly in northern areas, still utilize natural ventilation methods, similar to those used in the turkey industry.

from ammonia buildup.. In elevated concentrations, ammonia can be hazardous to the human respiratory system, skin and eyes. *See* United States Department of Labor, Occupational Safety and Health Administration ("OSHA"), *Safety and Health Topics: Ammonia* (Aug. 7, 2003), available at http://www.osha.gov/dts/chemicalsampling/data/CH_218300.html. For example, an ammonia concentration of 300 ppm is immediately dangerous to life, and greater than 2,500 ppm can prove lethal. *See* Malone, G., *Ammonia and Grower Health*, POULTRY PERSPECTIVES, Vol. 4, No. 1 at 3 (Spring 2002). For these reasons, occupational threshold levels for ammonia have been established by several organizations, and are generally recognized as a time weighted average 11 of 25-50 ppm.

The Occupational Safety and Health Administration's permissible exposure limit ("PEL") for general industry is a time weighted average of 50 ppm for an 8 hour exposure period. *See* General Industry Air Contaminants Standards, 29 C.F.R. 1910.1000 Z-1 Table. The National Institute of Occupational Safety and Health ("NIOSH") has established a time-weighted human threshold recommended exposure limit for ammonia of 25 ppm for 10 hours of exposure, and has set the level that is immediately dangerous to life or health at 300 ppm. *See* NIOSH *Pocket Guide to Chemical Hazards* (Feb. 2004). 12 The threshold limit value set by the American Conference of Governmental Industrial Hygienists ("ACGIH") is a time weighted average of 25 ppm, with a short-term exposure limit ("STEL") (15 minutes) of 35 ppm. *See* ACGIH, *Documentation of the Threshold Limit Values and Biological Exposure Indices, 7th edition* (2001). 13

The need to control ammonia to less than 25 ppm on a long term basis, and 50 ppm in the short term, is recognized by growers as not only necessary for bird health, but also for their health and the health of their families.

2. Ammonia Concentrations in Poultry Houses Do Not Exceed the Established Human Health Standards

As noted above, adverse human health effects from ammonia result from exposure to concentrations higher than the 25-50 ppm standards. Reliable scientific information about ammonia emissions from poultry houses is not available, a point which is detailed at length below. It is reasonable to assume, however, that poultry farmers must keep concentrations low within the house to protect human health and the productivity and health of the birds. In order to prevent high ammonia levels within the houses, growers observe their birds closely and diligently work to maintain the houses below the 25-50 ppm levels considered safe by OSHA and poultry industry literature. Indeed, a recent study conducted in conjunction with the California Air Resources Board found concentrations of ammonia in a typical poultry house ranged from 0.4 ppm to 6.5 ppm, depending on the date and time of sampling. *See* Summers,

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11 The time weighted nature of these standards acknowledges that short-term spikes in concentration may occur. While not routine, such spikes in concentration might occur in poultry houses for short durations (i.e., 5 minutes or less) once in a while (e.g., during minimum venting conditions in the winter).

12 For ammonia, this information can be found at www.cdc.gov/niosh/npg/npgd0028.html.

13 This information is cited by U.S. Dept. of Labor, Occupational Safety and Health Administration at www.osha.gov/dts/chemicalsampling/data/CH_218300.html.

M.D., et al., *Final Report: Quantification of Gaseous Emissions from California Broiler Production Houses* at 11 (Feb. 17, 2005).

Poultry operators implement ammonia control systems based upon a complex variety of unique factors, such as litter accumulation, litter moisture, bird type and age, brooding temperature program, external temperature conditions, and the degree of disease challenge they face, as well as the projected efficacy and return on the investment required. As noted previously, the primary cost-effective and efficient method of ensuring healthy indoor air quality is ventilation, which brings fresh air into the poultry house while ammonia or ammonium, water vapor, and carbon dioxide are removed with the exhaust air. For example, full tunnel ventilation is designed to "turn-over" the house air once per minute. *See* Donald, J., *Poultry House Ventilation Guide* at 12. Typically, a conservative rule of thumb is that it could take up to three times the "turn over" rate to achieve complete replacement of fresh air inside a house. 14 Therefore, a grower finding a house with 50 ppm ammonia could manually activate tunnel ventilation and, within three minutes, the level of ammonia within the house would become essentially zero.

3. Vented Emissions from Poultry Houses Rapidly Disperse to Very Low Concentrations

As demonstrated further below, once ammonia inside a house—already maintained at relatively low levels—is vented outside as emissions, it disperses quickly and does not pose any health risk. Given the frequency of ventilation, as described above, combined with the flow rate at which air inside the house is exhausted to the outside air, the concentrations of ammonia emitted at any one time from a poultry house generally would not approach 25 ppm, let alone 50 ppm, concentrations which are considered acceptable by OSHA and other health standards. The flow-rate—or "turn over" rate—of ventilation will ensure that the initial emission concentration will lessen rapidly over time. Consider the previous hypothetical example of a grower activating a tunnel ventilation system on discovery of 50 ppm concentration of ammonia in a house. Given a "turn-over" rate of the house air at once per minute, after one minute the concentration will have fallen to 17 ppm, at two minutes the concentration will be 5 ppm, and as noted above, at three minutes the concentration of ammonia will be essentially zero. Thus, exposure concentrations outside the house will always be less than inside the house because of rapid dispersion and diffusion.

There is not a significant risk of public exposure to unhealthy levels of ammonia emissions from poultry operations. This conclusion can be demonstrated using EPA's SCREEN3 dispersion model for estimating the air quality impacts of stationary sources. As noted in EPA's guidance manual, the SCREEN3 model was developed to "provide an easy-to-use method of obtaining pollutant concentration estimates." *See* United States Environmental Protection Agency, *SCREEN3 Model User's Guide* at 1 (EPA-454/B-95-004) (Sept. 1995). While the SCREEN3 model utilizes numerous assumptions and is intended to produce preliminary estimates the model can be referenced against health standards and used to

14 The generally accepted view is that a vessel will achieve 66% replacement after one turn over period has passed, 90% after two periods have passed, and then 99%+ (or essentially complete) replacement after three periods have passed.

determine whether health concerns are even remotely a possibility, given a substance's dispersion, or whether more complicated, site-specific analyses are necessary to determine health concerns.15 Utilizing EPA's SCREEN3 model, we prepared an analysis of ammonia concentration exposure as a function of release rate and distance from a typical poultry house.16

As demonstrated by the following table summary of the results of the SCREEN3 analysis, ammonia concentrations at fairly short distances from a typical poultry house do not approach levels even an order of magnitude close to the acceptable range of OSHA and other health standards (i.e., 25-50 ppm). For example, assuming a poultry house releases 100 pounds per day of ammonia at a constant rate, the concentration of ammonia at 30 meters away 17 is estimated at approximately 1.52 ppm—over an order of magnitude less than the lower end of the regulatory range of 25-50 ppm. At 100 meters away, the concentration drops dramatically to 0.36 ppm. Clearly, even with a release at the RQ level for ammonia (i.e., 100 lbs), which is substantially higher than any current emission estimates from one poultry house, the ammonia disperses quickly to concentrations well under the established human and poultry health standards of 25-50 ppm. Moreover, the exposure concentrations continue to decline dramatically as distances from the house increase.

	Ammonia Releases (lbs/day) (Resulting concentrations in ppm)						
Distance (meters)	**10**	**25**	**50**	**100**	**150**	**200**	**250**
30 (100 feet)	0.152	0.381	0.762	1.524	2.286	3.048	3.790
100	0.036	0.090	0.180	0.360	0.540	0.720	0.899
200	0.017	0.045	0.091	0.182	0.273	0.364	0.454
500	0.006	0.035	0.070	0.140	0.210	0.280	0.349
1000	0.004	0.038	0.076	0.152	0.228	0.304	0.381

The results of the SREEN3 modeling run are similar to actual results experienced in the field. A study conducted in eastern North Carolina in a location with a high density of large scale swine and poultry farms located between 2-4 kilometers away from the sampling site revealed even lower concentrations of ammonia (i.e., less than 8 parts per *billion*) over a several month period. *See* Robarge, W.P., McCulloch, R. and Cure, W., *Atmospheric Concentrations of Ammonia and Ammonium in the Vicinity of Animal Production Facilities in Eastern North*

15 The SCREEN model is intended to be a conservative, preliminary "screener" model. Regulators and regulated entities ordinarily compare the calculated concentration results to regulatory standards to determine whether further analysis is necessary to get a more accurate result.

16 The assumptions that were used in the poultry SCREEN3 analysis are attached at Attachment 10. A printout of the actual SCREEN3 analysis is attached at Attachment 11.

17 This is approximately 100 feet, comparable to the minimum set-back of most houses, given public road and utility rights of way and typical state or local set-back requirements.

Carolina, Proceedings 1999 Animal Waste Management Symposium at 366-67 (Jan. 27-28, 1999). The average ammonia concentrations from Robarge et al.'s study ranged from 0.0016 ppm during the fall to 0.0075 ppm during the summer. *See id*. The atmospheric concentration of ammonia measured in the Robarge study included ammonia emitted from effluent lagoons, land application of commercial fertilizers and manure, and swine housing units, as well as ammonia released from poultry houses. Nevertheless, the results of the Robarge study confirm the relatively quick atmospheric dispersion of ammonia air emissions that can be expected from poultry houses.

This quick dispersion of ammonia, coupled with the highway, roadway and utility rights of way and setback requirements that many states and localities establish for agricultural operations, including poultry, ensure that the public is not exposed to any significant health risk from ammonia releases at poultry operations. As described in the chart below detailing sample setback requirements, many state and local standards require a minimum setback of 100 feet or greater.

State	Setback	To	Cite
GA	100 ft	Property	GAC 393-3-6-.21
AL	165 ft	Property	AL 335-6-7-.20(6) (c)
VA	200 ft	Property	9VAC 25-31
AR	500 ft	Non-Grower Owned Dwelling	ADEQ Reg. #5
SC	1000 ft	Non-Grower Owned Dwelling	SC Code 61-43 Part 200
TX	1320 ft	Non-Grower Owned Dwelling	TAC 30-30-321-Subpart B
KY	1500 ft	Non-Grower Owned Dwelling	401KAR 5:072E

For example, South Carolina specifies that distances of 1000 feet must be maintained between a poultry operation and any occupied structure not owned by the poultry grower. In addition, poultry houses cannot be constructed in road rights-of-way, which helps ensure a natural buffer against exposure.

II. RECENT LEGAL DEVELOPMENTS HAVE COMPLICATED CERCLA AND EPCRA REPORTING REQUIREMENTS FOR POULTRY OPERATIONS

As discussed above, poultry farmers are almost exclusively small, family-run businesses who operate on a very narrow profit margin. Two recently decided court cases, together with the recently implemented Air Compliance Agreement ("ACA"), *see* 70 Fed. Reg. 4,958 (2005), have left these farmers with much confusion and potential liability risk regarding ammonia emissions from their operations.

A. Recent Decisions Expanding the Scope Of "Facility" for CERCLA Release Reporting Requirements are Inconsistent with Prior Policies and with the Purposes of Emergency Release Reporting Statutes

Under CERCLA, two alternative meanings are possible for the term "facility": a narrow definition referring to any building, structure or other discrete location; and a broad definition referring to any site or area where a hazardous substance has come to be located. *See* 42 U.S.C. § 9601(9). Since the law's enactment, for over twenty years, EPA's pronouncements have all indicated that individual poultry houses on a given farm site should be considered as separate "facilities" for the purpose of reporting requirements under CERCLA. In 2003, however, the U.S. District Court for the Western District of Kentucky issued a decision that defied the established practice by holding that, under CERCLA, an entire poultry production site qualifies as a facility, and that releases from all of the individual chicken houses on a site therefore must be aggregated to determine whether an RQ has been released. *See Sierra Club, Inc. v. Tyson Foods*, 299 F. Supp. 2d 693 (W.D. Ky. 2003). In 2004, the United States Court of Appeals for the Tenth Circuit, relying partly on the *Tyson* decision, reversed a lower court and also required that emissions from separate location on a farm be aggregated. *See Sierra Club v. Seaboard Farms*, 387 F.3d 1167 (10th Cir. 2004).

Although the Tenth Circuit in *Seaboard Farms* held that a "facility" included an entire farm site, the circumstances of the case involved facts that differ dramatically from typical poultry operations. The Dorman farm considered in that case consisted of eight buildings housing a total of 25,000 swine together with a liquid waste management system comprised of several lagoons, barns and land application areas. *Id.* at 1168. By contrast, typical poultry operations utilize dry litter that is confined to the poultry houses from which ammonia releases occur. While the Dorman operation considered in *Seaboard* managed wastes over outdoor areas of the site, poultry operations typically manage their litter within discrete structures. Thus, the *Seaboard Farms* decision, where the entire farm site—including operations that were completely outdoors—was deemed a facility, is not only distinguishable from the poultry farm context, but also is inappropriate when viewed against the regulatory history of CERCLA release reporting requirements.

The *Seaboard Farms* and *Tyson Foods* cases are simply bad law and bad policy that undermine effective emergency reporting and response. The historical practice of treating individual agricultural buildings as separate "facilities" under CERCLA § 103 not only is consistent with previous CERCLA guidance and case law, it is also good public policy.

1. Previous Regulatory History Supports a Narrow Scope of "Facility" for Emergency Reporting Purposes

Regulatory history from the past twenty years indicates that EPA uses the narrow definition of a "facility" for the purposes of CERCLA § 103 emergency release reporting. For example, in the preamble to the Agency rulemaking defining a "facility," EPA noted that while all releases of the same substance from a particular facility must be aggregated to determine if a reportable quantity has been exceeded, "[r]eleases from separate facilities . . . need not be aggregated." 50 Fed. Reg. 13,456, 13,459 (1985). In its Responses to Comments document, EPA elaborated on this preamble statement by clarifying that aggregation is not required for: "releases from separate tanks scattered throughout a plant, separate piping systems, separate buildings, or separate ponds or lagoons." United States Environmental Protection Agency, *Responses to Comments on the Notice of Proposed Rulemaking on Superfund Notification Requirements and the Adjustment of Reportable Quantities* at 730-3 (1985)(emphasis added).

Similarly, language in EPA's 1990 continuous release reporting regulations supports a narrow, non-aggregated definition of "facility." In the preamble, EPA explained that the option of aggregating multiple releases from different facilities into a single report was intended to *ease* reporting burdens, not create additional, unnecessary reporting burdens. *See* 55 Fed. Reg. 30,181 (July 24, 1990). Comments submitted on the proposed rule expressed concern that "the aggregation of release data from different facilities on contiguous grounds under common ownership would be inconsistent with the definition of 'facility' under CERCLA, and would be difficult because there are often different persons in charge of the various facilities." *Id.* EPA responded that "[t]he Agency did not intend to adopt the SARA Title III definition of facility [which includes "all buildings . . . located on a single site or on contiguous or adjacent sites . . . "]. *Id.* EPA further stated that "[t]he Agency agrees with the comment that CERCLA focuses on releases from a 'facility,' not releases from multiple facilities," and explained that it intended to allow the option of reporting multiple concurrent continuous releases in a single notification, so as to "lessen the reporting burden for many firms and entities by reducing the number of hazardous substance releases reported under the continuous release rule per facility owner/operator." United States Environmental Protection Agency, *Responses to Comments on the Notice of Proposed Rulemaking on Reporting Continuous Releases of Hazardous Substances* at 211-12 (May 1990) (emphasis added).

Guidance from EPA's 1997 *Continuous Release Guide* also supports the view that individual poultry houses are separate "facilities." "There may be one or more facilities at a particular site. For example, a site may be comprised of four facilities including one building, one lagoon, and two storage containers." *See* United States Environmental Protection Agency, *Reporting Requirements for Continuous Releases of Hazardous Substances: A Guide for Facilities on Compliance* at 1 (1997) (emphasis added). The *Guide* also provides:

> If you release an RQ or more of the same CERCLA hazardous substance from more than one facility (e.g., building, surface impoundment, or lagoon), the Continuous Release Rule (40 CFR 302.8(1)) provides you with two reporting options under CERCLA. To meet the requirements of CERCLA, you may either: 1) aggregate

> multiple concurrent releases of the same hazardous substance from contiguous or adjacent facilities and report them in a single notification; or 2) consider releases from each facility separately and submit separate reports on a facility-specific basis.

Id. at 4 (emphases added). The availability of these options—to aggregate facilities or not to aggregate facilities—further indicates that aggregation of separate structures on a farm site is not required.

Finally, in response to questions concerning the application of CERCLA release reporting requirements to situations involving multiple buildings on a single site, EPA indicated that releases from separate buildings on the same site are considered releases from separate "facilities":

> Question: Preamble language in the April 4, 1985, Federal Register defines 'concurrent releases' to be releases occurring in the same 24-hour period. Should numerous concurrent releases of the same hazardous substance occur at a contiguous plant or installation under common ownership, these release need not be reported individually. Rather, they should be reported in a single notification. The meaning of the term facility is defined in CERCLA Section 101(9) as '(A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.' The April 4, 1985, Federal Register, states that '... all concurrent releases of the same substance from a particular facility into the environment must be aggregated to determine if an RQ (reportable quantity) has been exceeded. Releases from separate facilities need not be aggregated.' If two separate buildings, 200 yards apart located on contiguous ground under common ownership, release the same hazardous substance in the same 24 hour period and each release is two pounds below the RQ, should these releases be aggregated (i.e., has an RQ been reached)?
>
> Answer: The Agency intended to simplify the notification requirements under Section 103 of CERCLA by allowing the regulated community the opportunity to report all concurrent releases of the same hazardous substance, from

> one contiguous plant or installation within the same 24-hour period, in a single phone call. In other words, the person in charge does not have to call the National Response Center twice if two releases of an RQ of the same substance occur in the same 24-hour period. One single phone call (reporting 2 releases) will meet the notification requirements. On the other hand, if less than an RQ of the same hazardous substance is released from two separate buildings in the same 24-hour period, notification will not be required, because less than an RQ was released from each facility. The amount of the substance released from each facility within common grounds will not have to be added for purposes of calculating an RQ.

United States Environmental Protection Agency, Office of Solid Waste and Emergency Response, *May 1990 Monthly Hotline Report* (1990) (emphases added).

2. A Narrow Definition of "Facility" Best Meets the Public Policy Purpose of Emergency Notification and Response

A broad definition of "facility" (i.e., an entire site with multiple buildings—or no buildings—and other locations), while consistent with the broad remedial purposes of CERCLA cleanups, will frustrate the purposes of emergency reporting under CERCLA § 103. The person in charge of one structure that released a less-than-reportable quantity will need to determine immediately whether any, and how much, of that particular substance was released from persons in charge of all other locations at the site. Such a system encourages not only delays in the reporting process, but also the filing of unnecessary reports from persons in charge who could not immediately obtain information from other buildings but who feared late reporting penalties and therefore would file precautionary notices for less-than-reportable releases. Thus, a broad interpretation of facility will likely result in thousands of reports on a consistent basis and could overwhelm the emergency reporting system and frustrate the purpose of CERCLA § 103.

B. The Kentucky District Court Wrongly Held that the Routine Agricultural Operations Exemption in EPCRA Does Not Apply to Ammonia in Poultry Operations

EPCRA requires reporting of listed substances that are released from a facility at which a "hazardous chemical" is produced, used or stored, 42 U.S.C. § 11004, but the term "hazardous chemical" is defined to exclude any "substance to the extent it is *used in routine agricultural operations.*" 42 U.S.C. § 11021(e)(5) (emphases added). However, the *Tyson Foods* case stunned the agricultural community by ruling that the presence of manure in poultry production operations is not eligible for the routine agricultural operations ("RAO") exemption from EPCRA reporting requirements. The Kentucky district court reasoned that poultry operations are not eligible because they do not "store gaseous ammonia in their chicken houses for agricultural *use*" and do not "*use* this ammonia in an agricultural operation." 299 F. Supp. 2d 693, 713-14 (emphases added).

1. Ammonia Is a Substance Used in Routine Agricultural Operation in Poultry Houses

Litter is a substance used by poultry operations in the routine raising of livestock to hold poultry manure. Manure is an unavoidable element of poultry production operations. It is a component of the litter, and is therefore a substance *used in RAO*. Ammonia is a natural result of the breakdown of poultry manure as it is stored in litter inside a poultry house. To argue that ammonia is not "used" in poultry operations is to argue that the litter is not "used" in poultry operations. The distinction is inappropriate and inaccurate. Ammonia, as an inescapable element of the litter, is a substance used in RAO and therefore should be exempt from EPCRA reporting. 18

If the RAO exemption does not cover the *emissions* from the litter as well as the litter itself, the exemption has no meaning or effect. Section 304 does not require reporting of the use of *any* chemical—used in RAO or not—unless it involves a *release*. Therefore, if the RAO exemption only applies to the substance when used in RAO, and not to the emissions/releases inherent in such use, it does not offer any exemption at all: only the emission/release is reportable in the first place.

The use of ammonia in poultry production can be analogized to land application of commercial fertilizers on farms, including anhydrous ammonia, a widely used and efficient source of nitrogen. The RAO exemption has always been applied to the routine operation of applying fertilizer. This is so even though some of the chemical is emitted into the air during storage and application, and after application some of the chemical is volatilized from the soil. Analogously, some ammonia is released into the air from litter during routine use of the litter as it accumulates in the poultry house, is stored after removal, or is applied to land. Even though some ammonia escapes into the air from poultry litter, the ammonia released during these routine operations is not a "hazardous chemical" and unless the operation otherwise uses some hazardous chemical not used in routine agricultural operations, the operation should be exempt from EPCRA emergency release reporting.

2. Regulatory History Supports the Application of the RAO Exemption to Litter and Other Substances Used in Poultry Production Operations

Statements by EPA support the view that the RAO exemption applies to the storage of manure and constituent substances in poultry production operations. In the preamble to the emergency reporting regulations, EPA stated that the definition of "hazardous chemical" under EPCRA "excludes any substance when used in routine agricultural operations" and "the term 'agricultural' is a broad term encompassing a wide range of growing operations, not just farms." 52 Fed. Reg. 38,344, 38,349 (1987). EPA emphasized the broad scope of the EPCRA exemption, which "was designed to eliminate reporting of fertilizers, pesticides, and other chemical substances when applied, administered, or *otherwise used* as part of routine agricultural

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18 Moreover, the RAO exemption covers substances during *storage* as well as during use. *See* 52 Fed. Reg. 38,344, 38,349 (1987) ("The exemption for substances used in routine agricultural operations applies to substances stored or used by the agricultural user.").

activities." *Id*. (emphasis added). Clearly, poultry litter is "otherwise used" in routine agricultural activities.

EPA also has explained, in describing the purpose of the EPCRA exemption, that "Because the general public is familiar with the application of agricultural chemicals as part of a common farm, nursery, or livestock production activities, and the retail sale of fertilizers, there is no community need for reporting of the presence of these chemicals." *Id*. The presence of manure and litter in poultry houses is no different from fertilizer stored in bulk in a barn. Due to common knowledge about the existence of these substances at an agricultural operation, there is no need for reporting their presence. Accordingly, they should be exempt from EPCRA reporting requirements.

3. Ammonia Emissions from Litter in Poultry Houses Should Be Exempt from EPCRA Release Reporting Requirements

Thus, the *Tyson Foods* holding unduly restricts the RAO exemption. The court erroneously focused only on the gaseous portion of the substances (i.e., the airborne ammonia) and ignored the fact that gaseous emissions are an inherent aspect of many exempted routine agricultural operations, including raising poultry. Treating the ammonia gases separately from the manure and litter used in the routine operation of poultry production casts doubt on what, if any, substances involved in raising livestock qualify for the RAO exemption. The uncertainty of the applicability of the RAO exemption to ammonia emissions has the potential to overwhelm the regulatory system with thousands of unnecessary release reports.

C. The Kentucky District Court Wrongly Held that "Constructive Knowledge" Can Create a Duty to File Emergency Release Reports

In *Tyson Foods*, the Kentucky district court held that "constructive knowledge of a release of a reportable quantity [of ammonia] creates a duty to report." 299 F.Supp.2d 693, 707-08. The court relied on a 1992 EPA ALJ decision in *Thoro Products* for the proposition that reporting is required even where a person lacks actual knowledge of an RQ release when "he or she possessed *knowledge of such circumstances* as would ordinarily lead upon investigation, in the exercise of *reasonable diligence* which a prudent person ought to exercise, to a knowledge of a release of an RQ …." *Id.*, citing *In the Matter of Thoro Products Co.*, EPCRA VIII-90-04, 1992 WL 143993, *11 (E.P.A. May 19, 1992) (emphasis added). The *Thoro* holding relied upon EPA's 1987 preamble discussion indicating that a duty to provide a release notification can arise when the owner/operator "should have known of the release." 52 Fed. Reg. 13,378, 13,393 (1987). According to *Thoro Products*, a violation occurs when a person fails to report a release "immediately after such knowledge was acquired *or may be constructed*." *Thoro Products*, at *11 (emphasis added).

The effect of this holding is that thousands of owner/operators and persons in charge of poultry farms could face potential liability if knowledge of ammonia RQ releases from their houses may be "constructed." Under the district court's reasoning, these persons could be deemed to have knowledge of circumstances that should lead them to undertake some sort of "reasonable diligence." And yet it is clear, as the ALJ observed in *Thoro Products*, that neither CERCLA nor EPCRA requires monitoring or measurement of ammonia releases. *See id.*. at

*10-11. More importantly, at present there is not a reliable scientific basis on which to conclude that any knowledge of "circumstances" should lead owners/operators or persons in charge of poultry farms to undertake an investigation or other "reasonable diligence" to quantify ammonia releases and provide release notifications. Indeed, the National Academy of Sciences ("NAS"), in a 2003 report to EPA, said that no reliable basis currently exists for estimating such emissions. *See* National Academy of Sciences, *Air Emissions From Animal Feeding Operations: Current Knowledge, Future Needs* at 8, 171 (2003) (noting that there "is a general paucity of credible scientific information on the effects of mitigation technology on the concentrations, rates and fates of air emissions from AFOs"). Over the next several years, EPA and researchers will be attempting to develop methods to estimate ammonia emissions. In the meanwhile, it does not make sense to place regulated entities under enforcement pressure to pursue uncoordinated diligence or investigative activities, provide precautionary notifications by the thousands, and/or perhaps duplicate the scientific investigation that EPA is endeavoring to develop and to fund through voluntary participation by the poultry industry.

D. The Kentucky District Court Found that Liability for Compliance with CERCLA and EPCRA Reporting Requirements Could Be Extended to the Poultry Companies that Contract with Small Poultry Growers

The National Chicken Council, National Turkey Federation, and U.S. Poultry and Egg Association are petitioning the agency to exempt poultry operations from CERCLA and EPCRA reporting requirements on behalf of the many small growers who are responsible for the many buildings in which the birds are grown. But the exemption also is necessary on behalf of the larger companies that contract with these growers for bird production because the Kentucky district court in the *Tyson Foods* case held that these companies may be liable for compliance with CERCLA and EPCRA reporting requirements at contract grower facilities as well. According to the court, by providing the birds and technical advice for their growth, such companies are sufficiently in a position to detect, and report a release of a hazardous substance from the contract grower facilities, thus meeting the statutory definition of a "person in charge" of these facilities under CERCLA, and the definition of "operator" under EPCRA. *See Tyson Foods*, 299 F. Supp. 2d 693, 719-21.

E. The Air Compliance Agreement Burdens Poultry Operators Without Clarifying What Constitutes Compliance with Release Reporting Requirements

EPA's ACA does not provide a suitable response to the dilemma described above. In the ACA, the Agency appears to have accepted implicitly, for the first time, that CERCLA and EPCRA reporting requirements may apply to ammonia releases from the agricultural sector, including poultry producers. This contributes to the serious problem for poultry farmers created by the judicial decisions in *Tyson* and *Seaboard*. The costs of entering into the Agreement are significant for the small family-owned farms that dominate the poultry business. Consequently, many small poultry farmers are unlikely to participate and will remain subject to the risk of civil penalties for CERCLA and EPCRA violations. Under the *Tyson* decision, our members also remain at risk due to their contractual relationships with those farmers. However, as there is no duty to monitor or measure ammonia emissions, and no reliable scientific methodologies for estimating emissions, poultry farmers have no way to ensure compliance.

III. EPA SHOULD EXEMPT POULTRY FARMS FROM REPORTING AMMONIA EMISSIONS UNDER CERCLA AND EPCRA

EPA should establish a narrow exemption from CERCLA and EPCRA release reporting requirements for poultry farms because such reporting is unnecessary to protect the public, unlikely to result in any remediation response, and imposes undue burdens on both poultry farmers and emergency response agencies. The exemption is within the Agency's discretion and is supported by precedent. A regulatory exemption would eliminate the unnecessary risk of enforcement liability for tens of thousands of small farmers.

A. EPA Has Authority to Establish Administrative Exemptions to CERCLA and EPCRA Release Reporting Requirements

The major purpose of the CERCLA and EPCRA release reporting requirements is to alert appropriate governmental officials to releases of hazardous substances that "may require a response to protect public health or welfare or the environment." *See* 60 Fed. Reg. 40,042 (1995). Releases of an RQ are treated as a trigger for "informing the government of a release so that appropriate governmental personnel can evaluate the need for a response action and can undertake any necessary response action in a timely fashion. *Id.* Thus, the focus of the release reporting requirements is on "immediate" reporting and "prompt" administrative response.

The administrative and regulatory burden imposed by specific reporting requirements should be weighed against the risk to public health and the benefit of necessary response actions. The risk and benefit of certain requirements may be so minimal that they are far outweighed by the administrative burden to review and evaluate the release and the burden imposed on the regulated community to report it. Moreover, some releases pose such little risk or are so inappropriate for immediate action that there is no logical basis for reporting the release in the first instance. Thus, EPA has determined that it has authority to grant administrative exemptions for reporting releases of hazardous substances (1) that pose little or no risk, or (2) for which a federal response is infeasible or inappropriate.

1. Statutory Authority for Exemptions

As EPA has previously determined, CERCLA §§ 102(a), 103 and 115 together (i.e., the provisions which give the Agency its general rulemaking authority under CERCLA) "provide EPA with authority to grant administrative reporting exemptions" to the reporting requirements of CERCLA and EPCRA. *See* 60 Fed. Reg. 40,042, 40043 (1995), *see also* 63 Fed. Reg. 13,461 (1998).

Legislative history underscores that Congress intended that implementation of CERCLA should be based on reasonable release reporting requirements. In 1980 CERCLA debates, Senator Randolph noted that reporting of certain releases should not be required "because requiring such persons to report would create an undue burden on the National Response Center or another Federal or State agency." 126 Cong. Rec. S14965 (Nov. 24, 1980). Similarly, in the House debate on the 1986 Conference Report, Rep. Snyder stated that: "Clearly, citizens and responsible health officials have a basic right to know about the presence and characteristics of chemicals within their community and regulatory jurisdiction. Just as

important, however, is the need to establish a reasonable and workable program that does not create a massive and unnecessary flow of paper." 132 Cong. Rec. H9572, H9575 (Oct. 8, 1986).

2. Regulatory Precedent: Radionuclides Exemption

EPA has previously granted an exemption from CERCLA and EPCRA release reporting requirements for certain radionuclide releases. *See* 63 Fed. Reg. 13,460 (1998). The exemption applied to releases of radionuclides from certain land holdings (parks, golf courses, etc.); certain land disturbance activities (farming, construction, mining); and certain coal ash-related activities (dumping, spreading, transportation). *See* 40 C.F.R. § 302.6(c); *see also* 63 Fed. Reg. 13,460 (1998) (final rule establishing radionuclide exemption after 1989 litigation and series of proposed rules); 64 Fed. Reg. 13,113 (1999).

In the Final Rule issuing the exemption, the Agency explained its source of authority and reasons for issuing the exemption:

> CERCLA sections 102(a), 103, and 115 together provide EPA with authority to grant administrative reporting exemptions. Such exemptions may be granted for releases of hazardous substances that pose little or no risk or to which a Federal response is infeasible or inappropriate. *Requiring reports of such releases would serve little or no useful purpose and could, instead, impose a significant burden on the Federal response system and on the persons responsible for notifying the Federal government of the release*. Through such reporting exemptions, therefore, the Federal response system is able to more efficiently implement CERCLA and EPCRA and more effectively focus on reports of releases that are more likely to pose a significant hazard to human health and the environment. 63 Fed. Reg. 13,461 (1998) (emphasis added).

The Agency stated that such exemptions advance the goal of reducing reporting burdens, in line with the Administration's regulatory reform initiatives, and "allow EPA to better focus its resources on the most serious releases, resulting in more effective protection of public health and welfare and the environment." *Id*. at 13,460. In response to public comments, EPA noted that eliminating the requirement to report releases of certain radionuclides would "not jeopardize the government's ability to respond to these releases, but rather [would] improve its ability to respond promptly to other releases that may be more serious." *Id*. at 13,463. Further, EPA concluded that the reporting exemptions would not undermine the development of public information or communities' ability to obtain information on hazardous substances:

> [T]he purpose of the CERCLA section 103 and EPCRA section 304 reporting requirements is to notify government personnel of releases of hazardous substances so that a timely decision can be made regarding the need for a response action to protect public health or welfare or the environment. *These reporting programs are not intended*

> *to serve as a source of public information on radiation sources and exposures.* The community right-to-know reporting requirements, toxic release inventory requirements, and related provisions under EPCRA sections 311, 312, and 313 remain in effect. Therefore, *the reporting exemptions will not significantly impact a community's ability and right to know about hazardous substances*.

Id. (emphasis added).

In addition to the 1998 radionuclide rule, EPA also is in the process of developing an administrative reporting exemption for NOx air releases from combustion and potentially other stationary sources in certain circumstances. As discussed in 67 Fed. Reg. 18,899 (2002) (guidance on federally permitted releases), EPA has indicated its intention to propose an exemption for emergency reporting of NOx air emissions from stationary sources, including utilities, and has granted "enforcement discretion" to sources that would otherwise have to report their NOx air releases "until the administrative reporting exemption process is complete." 67 Fed. Reg. at 18,900.

3. D.C. Circuit Upheld EPA's Authority to Grant Exemption

In *Fertilizer Inst. v. EPA*, 935 F.2d 1303 (1991), the D.C. Circuit Court of Appeals considered a challenge to EPA's authority to issue the radionuclide reporting exemption under CERCLA. The court upheld the challenge on procedural grounds, finding that EPA had failed to follow proper notice and comment procedures, but left the exemptions in place while EPA undertook the necessary public procedures. The court indicated that it was "reluctant to remove the exemptions" because the "removal of the EPA's exemptions may affect the EPA's ability to respond adequately to serious safety hazards." 935 F.2d at 1312. The court noted, in support of its action, that "One of the primary motivations behind the EPA's decision to provide for exemptions was the EPA's conclusion that the exempted entities posed little hazard to the environment, while EPA responses to releases caused by them could 'prevent [ ] timely responses to those releases that truly warrant a response.' 54 Fed. Reg. at 22,529." *Id*. at fn.6.

B. An Exemption For Ammonia Emissions From Poultry Operations Is Consistent With EPA's Standards For Issuing Reporting Exemptions

As described above, EPA's explications of its reasons for issuing the radionuclide rule reveal four criteria that are relevant to establishing a reporting exemption. These four criteria are:

1. Little or no risk to public health; or
2. Emergency response is infeasible or inappropriate; or
3. Reporting imposes an undue burden on the response system; or
4. Reporting imposes an undue burden on the regulated community.

As detailed further below, ammonia emissions from poultry operations are similar with regard to each of these four criteria to the emissions of radionuclides that EPA exempted from CERCLA and EPRCRA release reporting.

1. Ammonia Emissions from Poultry Houses Pose Little or No Risk to Public Health.

EPA exempted radionuclides because they are similar, continuous and low from all sources. *See* 63 Fed. Reg. at 13,462. Ammonia emissions from poultry farms are similar, continuous and low across all poultry farms. In addition, as detailed above, there is little or no evidence of public health risks, as ammonia is quickly dispersed when released from poultry operations. The relatively quick natural dispersion of ammonia, combined with the ventilation practices of poultry growers, ensure that ammonia levels outside of the farm site are low enough to prevent off-site public health impacts.

Ammonia emissions from poultry farms are in fact very similar to emissions from other agricultural sources that do not report under CERCLA and EPCRA, such as spreading of ammonia-based commercial synthetic or organic fertilizer and land application of litter or manure. Of the nearly 50 million tons of commercial fertilizer consumed in the U.S. annually, nearly 40 million tons contain nitrogen. *See* Battye, R., Battye, W., Overcash, C., and Fudge, S., *Development and Selection of Ammonia Emission Factors* at 3-1 (prepared for EPA, Aug. 1994) (attached as Attachment 12). It is estimated that between 40-70% of the applied nitrogen is actually taken up by the plant, with up to 30% of the nitrogen, depending on the type of nitrogen source, being volatized. *See* Semple, A., *Nitrogen Losses to the Environment—Addressing Volatilization* at 1 (AGROTRAIN International) (attached as Attachment 13). Applying this estimate to the U.S. figures suggests that upwards of 10 million tons of nitrogen are volatized from commercial fertilizer each year.

While data on emission levels from fertilizer use vary widely, there is no question that commercial application of synthetic fertilizers result in ammonia emissions through volatilization. *See* Battye, R. *et al*. at 3-1. Ammonia remains one of the most poorly characterized atmospheric trace compounds from fertilizers due to a variety of reasons. *See, e.g.*, Potter, C., and Krauter, C., *Summary of Potential Ammonia Emissions from Natural Soils and Crop Fertilizer Uses Common to California* (draft report prepared for the California Air Resources Board) (Aug. 1999) (attached as Attachment 14). Generally, however, NH_3 volatilization loss is highest where surface application of fertilizers is practiced. *See id*. at 4 (citation omitted).

Losses from commercial organic fertilizers also can be substantial. *See id*. at 5 (noting that liquid manure may result in losses of up to 90% of ammonium nitrogen from the

organic mixture depending on the intensity of sunlight during field application). 19 Stored organic manures and compost also emit ammonia. *See id.*

Moreover, as discussed above, poultry growers use diligent ventilation practices to ensure that concentrations of ammonia within poultry houses remain under the levels that may compromise bird health or pose risks to human health, approximately 25-50 ppm. The venting of relatively low ammonia concentrations from within the poultry house to the outside air cannot result in concentrations outside the poultry house any higher than the same levels found within. As demonstrated above in Section I.D, and based on the application of EPA's SCREEN3 model, ammonia emissions from poultry houses typically are very quickly dispersed over time and distance, resulting in insignificant exposure at reasonable distances from poultry houses.

2. Emergency Response to Ammonia Releases from Poultry Houses Is Infeasible and Inappropriate

The second criterion for establishing a reporting exemption is whether emergency responses to the emissions at issue would be infeasible and inappropriate. In the case of poultry-related ammonia emissions, the submission of individual release reports is not necessary for the government to reach the obvious conclusion that no response action is needed. Indeed, it is difficult to conceive of any useful response by emergency responders to a report that confirms (or, more likely, estimates) the existence of low-level ammonia emissions from poultry production operations—a fact widely known in agricultural communities. As detailed below, because available research shows substantial variability, farmers possess no actual knowledge of ammonia release quantities or reliable means of estimating such releases. In addition, a substantial portion of emissions from poultry houses may actually be in a form different from NH_3, which has a far higher RQ. Thus, requiring CERCLA and EPCRA reports on ammonia emissions would provide no useful information to agencies or the public, and thus would serve no useful purpose.

a) Because Available Research Shows Substantial Variability in Emissions, Farmers Have No Reliable Means of Estimation

The cost and uncertainty associated with determining reportable ammonia emissions levels from poultry operations make it impracticable to apply CERCLA and EPCRA reporting requirements to poultry farms. The average poultry farmer does not have the ability to determine emissions.

Ammonia emission rates from animal housing facilities are determined by multiplying the ammonia concentration in the building by the ventilation rate through the building. The amount of ammonia emitted from any given facility is a function of many variables. At any given time, the release of ammonia is very difficult to measure because it

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19 Collection, storage and application of poultry litter and manure result in significantly fewer ammonia emissions than other forms of animal manure, particularly liquid forms. In the United States, for example, EPA estimates that ammonia emissions from dry litter poultry (broiler/turkey) operations comprise only 8.5% of all animal agricultural emissions. *See* EPA, *National Emission Inventory—Ammonia Emissions from Animal Husbandry Operations*, DRAFT Report (Jan. 30, 2004) (providing emission rates, per species, that when multiplied by estimated populations results in about 207,000 tons per year total ammonia emissions for poultry).

requires precise knowledge of the concentration and the ventilation rate. Since the ventilation rate varies significantly from minute to minute, owing to the shifting use of ventilation practices described above, so will the concentration and the emission rates. In addition, concentrations of ammonia and emission rates are affected by litter handling methods (especially the frequency of removal), the growth of the animals during the production period (larger animals create more ammonia emissions) and many other factors, such as the type of housing system, the type of bedding material, the outside climate (outdoor temperature especially affects temperature, relative humidity and air exchange rates within a building) and the ventilation system (natural or mechanical) with the positioning of inlet and outlet openings determining the airflow pattern and hence the temperature and air velocity above ammonia emitting surfaces. The ventilation rate and pattern determine the ammonia levels within the facility generally as well as affect the amount or presence of any localized concentrations such as above the litter. In short, the amount of ammonia emitted from a livestock building is the sum of the net ammonia mass flows through all outlets. 20 Each mass flow is the product of the ventilation rate and the ammonia concentration. Both parameters must be measured at the same time to determine the ammonia emission. Research scientists have been conducting studies to determine these emissions rates, using a wide variety of techniques and very expensive specialized monitoring devices and equipment, with varying degrees of success (as discussed below, estimates vary more than an order of magnitude); and still the finding of the NAS was that scientifically valid emissions rates did not currently exist. *See* NAS Report, *Air Emissions From Animal Feeding Operations: Current Knowledge, Future Needs* at 8, 171 (concluding that the "existing emission factors for AFOs are generally inadequate because of the limited number of measurements on which they are based, as well as the limited generality of the models for which the emission factors have been developed"). How then is the average poultry farmer to measure, or even estimate, ammonia emission?

Research efforts to date have not produced reliable ammonia emission rates for poultry facilities. Even a brief discussion of the available research demonstrates that approaches and results vary widely, both across and within studies. For example, Groot Koerkamp measured the ventilation rates and ammonia concentrations in several livestock settings in Europe, and reported ammonia emission rates based on a model related to heat produced by the birds rather than a direct measure of house ventilation. *See* Koerkamp, G., et. al., *Concentrations and Emissions of Ammonia in Livestock Buildings in Northern Europe* (1998). Redwine et al. reported emission rates from four broiler houses in Texas by measuring ammonia concentrations within the houses at seven locations, and ventilation rates at 15 locations. *See* Redwine, J.S., et. al., *Concentration and Emissions of Ammonia and Particulate Matter in Tunnel – Ventilated Broiler Houses Under Summer Conditions in Texas* (2002). In 2003, scientists in the cooperative Initiative for Future Agriculture and Food System ("IFAFS") began presenting the results of their work. This group uses a device that performs continuous ammonia measurements and a portable unit that determines air flow from individual fans. Casey reported on results from studies in Kentucky, and Wheeler, et al. reported on results from studies in Pennsylvania. *See* Casey, K., Gates, R., Wheeler, E., Xin, H., Zajaczkowski, J., Topper, P., and Liang, Y., *Ammonia Emissions from Kentucky Broiler Houses during Winter, Spring and Summer,*

20 In curtain ventilation houses (i.e., non-tunnel ventilated houses) some releases will be as diffuse emissions, rather than from discrete outlets.

A&WMA's 97th Annual Conference & Exhibition (June 22-25, 2004); Wheeler, E.F., et al., *Ammonia Emissions from Broiler Houses in Pennsylvania During Cold Weather* (2003). *See also* Gates, R., Wheeler, E., and Xin, H., *Broiler House Emissions* (Excerpts from USDA-sponsored Project) (Dec. 17, 2003); Gates, R., Casey, K., Wheeler, E., Xin, H., Pescatore, A., Zajaczkowski, J., Bicudo, J., Topper, P., Liang, Y., and Ford, M., *Broiler House Ammonia Emissions: U.S. Baseline Data*, Multi-State Poultry Meeting (May 25-27, 2004).

A more recent study by Carey and Coufal also conducted in Texas, measured nitrogen emission losses from a total of 18 flocks raised consecutively over a 3 1/2 year period. Housing was similar to that used in modern commercial broiler production, and various litter management practices were evaluated. Ammonia loss was determined by mass balance, however, the study did not distinguish between ammonia gas and aerosol ammonium hydroxide emissions. *See* Carey, J., and Coufal, C., *Quantification of the Fate of Nitrogen in Commercial Broiler Production Systems* (Nov. 2004). A 2005 California study conducted by Fosters Farms in conjunction with the California Air Resources Board reveals a high variation in ammonia concentration and emission rates from a typical poultry house depending on the day and time measurements were taken. *See* M.D. Summers et al., *Final Report: Quantification of Gaseous Emissions from California Broiler Production Houses* at 11 (Feb. 17, 2005).

It is worth noting that even the average emission rates among these studies show tremendous variability. Of 13 studies conducted between 1992 and 2005, the emission rates varied by more than an order of magnitude—from **0.000160** to **0.002050** lb/day/bird. In addition, the studies themselves noted the variability of and, thus, the limitations of these crude emissions rates:

- The reported ranges of emissions within each study vary by several orders of magnitude. Where the ranges were not reported, the coefficients of variation suggested high variability in the measurements.

- All of the studies observed significant variation in emission rates over time. In particular, Casey, Redwine, and Gates observed that ammonia emissions increased with the ages of birds.

- The investigators noted significant variation in emissions among houses. Casey stated that "[t]here was high variability for emission rates among the houses, even for houses on the same farm." Casey, K., et al., *Ammonia Emissions from Kentucky Broiler Houses during Winter, Spring and Summer* at 1, 3. Koerkamp also observed "considerable variation . . . between commercial housing types of the same kind."

- Wheeler et al. observed that differences in litter and house management affected emission rates and stated "[t]here is a need for careful characterization of broiler house management and litter conditions so that variability among emission rates can be partially explained." Wheeler, E.F., et al, *Ammonia Emissions from Broiler Houses in Pennsylvania During Cold Weather* (2003). Sources of the variation may include differences in temperatures, ventilation rates, litter type (rice hulls or wood shavings), litter management (whether birds are grown on old

or fresh litter and whether the grower does full or partial clean-out after every flock), diet, and the ages of birds.

Because numerous, site-specific conditions affect ammonia emissions, it is extremely difficult—even for research investigators—to produce a reliable estimate for a specific house. Accordingly, these studies and others like them cannot be used to predict ammonia emissions from a particular poultry house on a particular day. Indeed, the 2003 NAS study was highly critical of using standardized methodologies to estimate emissions from individual facilities, indicating that the "complexities of various kinds of air emissions and the temporal and spatial scales of their distribution make direct measurement at the individual farm level impractical other than in a research context." NAS Report, *Air Emissions From Animal Feeding Operations: Current Knowledge, Future Needs* at 157.

b) Ammonia Emissions May be Far Below Estimated Amounts

In addition to the variability in emission rates discussed above, a more fundamental problem may exist when it comes to applying CERCLA and EPCRA reporting requirements to ammonia emissions from poultry operations. The emergency reporting requirements apply different reporting thresholds for gaseous ammonia and for aerosol in ammonium hydroxide (NH_4OH). *See* 40 C.F.R. § 302.4 (listing reportable quantities for releases of ammonia at 100 pounds and ammonium hydroxide at 1,000 pounds). It is likely that the instruments used in the studies discussed above do not differentiate between ammonia gas (NH_3) and aerosol ammonium hydroxide (NH_4OH).

The relative amounts of gaseous ammonia and aerosol ammonium hydroxide depend, in part, on the pH and the amount of water vapor present in the house. Relatively high humidity—or moisture content—coupled with carbon dioxide expired by the poultry tend to drive the distribution away from gaseous ammonia toward aerosol ammonium hydroxide. This is particularly during warmer temperatures when ammonia volatilization is greatest and the houses are using evaporative cooling tunnel ventilation. Therefore, a substantial portion of emissions from poultry houses actually may be in the form of aerosol ammonium hydroxide, which has a much higher threshold RQ than does gaseous ammonia. This is a distinction of major importance with regard to the federal reporting statutes.

For these reasons, emergency reporting of ammonia releases does not serve CERCLA's or EPCRA's statutory purposes. As noted above, EPA has made clear that the purpose of notifying emergency response personnel of hazardous releases is to allow a timely decision for a response action to protect human health and environment, not to serve as a source of public information on exposures. *See* 63 Fed. Reg. at 13,463. Ammonia emissions are continuous and low across all poultry farms, and quickly dispersed into environment. No emergency response is possible or necessary.

Further, ammonia release reporting would not serve as a useful source for public information. Such reports would add nothing to the public's knowledge of hazardous substances in nearby communities. As EPA has previously stated, in addressing the EPCRA routine agricultural operations exemption, "because the general public is familiar with the application of agricultural chemicals as part of . . . livestock production activities . . ., there is no community

need for reporting of the presence of these chemicals." *See* 52 Fed. Reg. 38,349 (1987). Certainly the public is as familiar with manure and ammonia emissions as a part of livestock production activities, including poultry operations, as it is with application of manure and commercial fertilizers to agricultural fields.

Poultry industry representatives sought the views of emergency response agencies in numerous states concerning this issue. The inappropriateness of any emergency response to ammonia emissions from poultry operations is reflected in the attached letter from State emergency response officials in Alabama (attached as Attachment 15). The State Emergency Management Agency ("EMA") of Alabama noted that they "would not anticipate undertaking any response to such notifications since the releases are routine . . . and are not amenable to any immediate corrective or mitigative measures." *See* Letter from B. Baughman, Director State of Alabama Emergency Management Agency, to K. Kirkpatrick (June 13, 2005).

3. Emergency Reporting Would Burden the Emergency Response System

The third relevant criterion for determining whether to establish an exemption is whether release reporting of ammonia emissions would burden the emergency response system and undermine responders' ability to address releases that may actually pose a significant hazard to human health and the environment. As with radionuclides from certain operations, this is true of ammonia emissions from poultry operations. Not only would such effort be expensive and burdensome to the agencies, it would serve no useful purpose with respect to estimating or addressing public health impacts. Indeed, it would seriously hamper the ability of responders to identify and deal with the CERCLA and EPCRA reports that do warrant emergency response, a result that would be dangerous to the public.

EPA noted in the preamble to the radionuclide proposed rule that

> A primary purpose of the emergency release reporting requirements under CERCLA is to provide "notification of releases so that the appropriate Federal personnel can evaluate the need for a Federal response action and undertake any necessary response." 50 Fed. Reg. 13456, 13457 (1985). Therefore, if the Agency determines that the Federal government would never, or only rarely, undertake removal or remedial action because of the risk posed, or the infeasibility of inappropriateness of a Federal response, a basis for exemption from the section 103 reporting requirements may exist.

See 57 Fed. Reg. 56,726 (1992).

Thus, reporting exemptions are intended to allow EPA to focus its resources on the most serious releases and to protect public health and welfare and the environment more effectively and efficiently. *See* 63 Fed. Reg. 13,463. If some 40,000 small poultry family farms must file reports every time an RQ is suspected of being exceeded, those States where poultry

farms are concentrated will be overwhelmed with paperwork. The uncertainties of ammonia emission estimates from poultry operations could make frequent filing the most logical course of action for farmers seeking to ensure compliance with reporting requirements and to insulate themselves from prosecution.

Poultry industry representatives sought the views of emergency response agencies concerning the burdens they would experience due to widespread reporting of ammonia emissions by poultry farmers. The attached letter from State EMA in Alabama supports the view that reporting of ammonia emissions from poultry operations would be a significant burden for these agencies, undermining their ability to serve their mission. The State EMA in Alabama stated that it "does not believe such notifications would be of value in performing [its] mission, and in fact may prove to be a hindrance." *See* Letter from B. Baughman, Director State of Alabama Emergency Management Agency, to K. Kirkpatrick (June 13, 2005).

4. Emergency Reporting Burdens the Regulated Community

The last relevant criterion is whether the reporting at issue irrationally burdens the regulated community. In addition to burdening emergency response agencies, a requirement to report ammonia emissions from poultry operations imposes a substantial and unjustified burden on poultry farmers themselves. Many are small farmers, operating on the margin and will little understanding of the liability and consequences associated with reporting, failing to report or improperly reporting CERCLA and EPCRA releases. Educating themselves on these requirements, combined with the additional paperwork and recordkeeping would be time consuming and costly. Moreover, because of the uncertainty of estimating such emissions and the wide range of existing emission rates discussed above, farmers would be required to file constantly to insulate themselves from prosecution based on error, thus incurring very heavy regulatory burdens. These additional costs would impact growers individually, as well as the industry as a whole. As the world's largest poultry exporter, the U.S. poultry industry faces continuous pricing pressure from competing nations. Any increased cost faced by the U.S. poultry industry will necessarily reduce our competitive export position, impacting not only small poultry farmers but also the U.S. corn and soybean farmers who supply poultry feed.

Nor is it true that poultry farmers have a practicable, alternative compliance option, continuous release reporting under section 103(f)(2) of CERCLA, which requires reduced reporting for amounts that are expected to be continuously released. This option, while theoretically available, is in fact more burdensome and potentially perilous than it sounds. As previously discussed, poultry farmers have no practicable way of estimating ammonia emissions and thus have no feasible way of providing the kinds of reports required even on a more limited basis.

The implementing regulations for continuous release reporting specify that, to qualify a release for reporting as a continuous release, the facility must establish a basis for asserting that the release is continuous as defined by the statute, and it must be reported for a period of time sufficient to establish the pattern of the release is continuous and stable. Once a facility determines a release is continuous, there are actually five kinds of notification required: (1) initial telephone notification to the NRC, SERC, and LEPC; (2) initial written notification to the appropriate EPA regional office, SERC, and LEPC within 30 days of the initial telephone

notification; (3) written follow-up report to the EPA regional office one year after initial written notification; (4) immediate reports to the NRC, SERC, and LEPC of any statistically significant increase (SSI) in the release, defined as releases above the upper bound of the previously reported normal range of the releases; and (5) notification of changes in the source or composition of the release. *See* 40 C.F.R. § 302.8.

Obviously, for small mom-and-pop-run poultry farms, complying with the continuous release reporting requirements is far from an easy task. Indeed, in the final rule implementing the continuous release reporting regulations, the agency estimated that the annual per-facility cost of complying with the regulations would be (in 1990) $510. *See* "Reporting Continuous Releases of Hazardous Substances," 55 Fed. Reg. 30166, 30183 (July 24, 1990). In the radionuclide rulemaking, EPA estimated that it would take a facility 8 hours per year to comply with the continuous release reporting requirements. *See* 63 Fed. Reg. 13471. To give up a full day of work, or more likely to pay for 8 hours of an environmental consultant's time, is a significant burden on small family farmers, particularly when there is no public welfare gain of any kind from filing such reports.

Moreover, the difficulties in estimating ammonia releases, discussed above, apply equally in the case of the continuous release reporting requirements. As previously documented, poultry farmers have no reliable way to estimate the normal range of their ammonia releases, nor to measure when releases outside such a normal range occur. 21 Any attempt to do so would be guesswork of the roughest kind. And yet these "guesses" would be on record, subjecting the farmer and integrators to potential liability in citizen lawsuits, as well as governmental enforcement actions, for the information contained in the reports and potentially subjecting the poultry farmers to other regulatory burdens on the basis of the reports. Again, these heavy burdens would be placed on small family farms who lack the current knowledge and resources to deal with them, without achieving any real benefits for the public health or welfare or the emergency response system.

C. The Proposed Exemption Meets Standard Rulemaking Tests

The executive orders and other administrative requirements applicable to agency rules are readily satisfied by the proposed reporting exemption. This section will briefly detail these requirements.

Executive Order 12866: If the regulatory action is "significant", it is subject to OMB review. Because the proposed exemption is deregulatory and would result in estimated net cost savings, the exemption is not a "significant regulatory action" under EO 12866.

Regulatory Flexibility Act: The RFA requires EPA to prepare a regulatory flexibility analysis for actions that have a significant adverse impact on small entities. Because the proposed exemption would not impose any new burdens on small farmers and will result in a cost savings, the Agency can certify that the rule will not have a significant impact and therefore does not require a regulatory flexibility analysis.

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21 Given the temporal variability of emissions, discussed above, it is not even clear whether a farmer–or anyone else–could establish that a release is "continuous and stable," as required by the regulations.

Paperwork Reduction Act: Because the proposed exemption would have no reporting or recordkeeping provisions, approval from OMB is not required. In addition, there is already an OMB control number associated with the exemption, since OMB has previously approved information collection requirements for CERCLA and EPCRA release reporting under the provisions of the Paperwork Reduction Act (44 U.S.C. § 3501) and has assigned them OMB control number 2050-0046.

Unfunded Mandates Reform Act: The UMRA requires EPA to assess the effect of regulatory actions on State, local and tribal governments and the private sector. Because this is a reporting exemption, it would not result in estimated costs of $100 million or more to either State, local or tribal governments in the aggregate, or to the private sector. In fact, the exemption would result in a costs savings. Therefore, no written statement or cost benefit analysis is needed.

Small Business Regulatory Enforcement Fairness Act: Because the exemption is not a "major rule" as defined by 5 U.S.C. § 804(2), no further action is required by the SBREFA except EPA must submit a report containing the exemption and other required information to the U.S. Senate, House and Comptroller General of the General Accounting Office prior to publication of the exemption in the Federal Register.

Executive Order 13132: EO 13132 requires EPA to develop an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. The proposed exemption does not have "Federalism implications" and will not have a substantial impact on State governments or the relationship between the Federal government and the States. If anything, the exemption would produce a cost savings for the States.

Executive Order 13171: EO 13171 requires consultation and coordination with Indian tribal governments. The exemption would not have tribal implications, and thus EO 13171 is not applicable.

Executive Order 13045: EO 13045 protects children from environmental health risks and safety risks. The proposed exemption is not an "economically significant" regulatory action under EO 13045 and will not affect children's health.

Executive Order 13211: EO 13211 addresses actions that significantly affect energy supply and distribution of use. The proposed exemption is not a "significant regulatory action" under EO 13211.

National Technology Transfer and Advancement Act: The exemption does not involve the use of technical consensus standards.

CONCLUSION

The poultry industry urges EPA to give its prompt attention to this petition, and to promulgate an administrative reporting exemption for CERCLA and EPCRA emergency release reporting for ammonia emissions from poultry farms. In addition, the poultry industry respectfully requests that EPA provide a more immediate solution for the 40,000 poultry growers currently at risk in the U.S. by adopting such a regulatory exemption as an interim final rule and by providing for enforcement discretion pending issuance of the interim final rulemaking.

Requested Relief: Specifically, the poultry industry requests that EPA:

(1) Open a rulemaking docket to propose a rule creating an administrative reporting exemption for CERCLA and EPCRA release reporting for ammonia air emissions from poultry farms;

(2) Issue an interim final rule providing for such an administrative reporting exemption for poultry farms pending the close of the rulemaking process;

(3) Provide enforcement discretion for poultry growers pending issuance of the interim final rule.

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