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HAZARDOUS SUBSTANCE RELEASES AND REPORTING UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA) AND THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (EPCRA)

HEARING

BEFORE THE

SUBCOMMITTEE ON ENVIRONMENT AND HAZARDOUS MATERIALS

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

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[1] Mr. Deal did not submit a prepared statement for the record in time for printing.
[2] Assistant Administrator Bodine did not answer submitted questions for the record.
[3] Under Secretary Rey did not answer submitted questions for the record.

HAZARDOUS SUBSTANCE RELEASES AND REPORTING UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA) AND THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (EPCRA)

WEDNESDAY, SEPTEMBER 24, 2008

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENVIRONMENT AND HAZARDOUS MATERIALS,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:34 a.m., in room 2123 of the Rayburn House Office Building, Hon. Gene Green (chairman) presiding.

Members present: Representatives Green, Solis, Butterfield, Barrow, DeGette, Shadegg, Hall, Deal, Radanovich, and Sullivan.

Staff present: Richard A. Frandsen, Caroline Ahearn, Karrin Hoesling, Rachel Bleshman, Drew Wallace, Jerry Couri, and Garrett Golding.

OPENING STATEMENT OF HON. GENE GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. GREEN. Good morning. I call this meeting to order. Today we have a hearing on Hazardous Substance Releases and Reporting under the Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as the Superfund, and the Emergency Planning and Community Right-to-Know Act, also known as EPCRA. For the purposes of making opening statements, the chair and the ranking members of subcommittee and full committee will each be recognized for 5 minutes, and all other members of the subcommittee will be recognized for 3 minutes. Members may waive their right for an opening statement, and we will instead add 3 minutes to their time for questions for the first round of questions. Since we have one panel, we will have the opportunity to ask two rounds of questions.

Without objection, all members have two legislative days to submit opening statements for the record instead of the usual five, since hopefully we may not be in session five more days. The chair now recognizes himself for an opening statement.

I would like to welcome our witnesses on today's panel and thank you for coming. Hazardous releases and reporting requirements are

important areas of our jurisdiction, and any significant issues that arise under the Superfund program are high priority for this subcommittee. I would like to start by sharing a recent story that illustrates the importance of government action to prevent and respond to hazardous releases.

On Monday, I toured Baytown, Texas, one of the hardest hit areas of Hurricane Ike. It is actually in our congressional district. The storm surge of about 10 feet went up Galveston Bay into the Sanderson River, causing serious destruction. Hurricane Ike likely caused hazardous releases. One constituent showed me where contaminated flood water damaged his property.

While I was there, the constituents called Baytown's local hazmat crew to come and dispose of a barrel of some unknown substance or unknown product that floated ashore in his neighborhood. And it was just a plastic barrel that is commonly used in our industry.

This experience made me very concerned about Superfund sites that may have been impacted by Hurricane Ike. All members of the subcommittee should be concerned that the EPA Superfund database lists only 100 sites in this country where human exposure to toxic substances is not under control.

In my own backyard, there is a new Superfund site that should be added to the list of the uncontrolled human exposures. The storm surge from Hurricane Ike may have made uncontrolled human exposures even worse at this particular site. In East Harris County, an old paper mill dump subsided into the Sanderson River many years ago and was recently discovered and listed on the Superfund National Priorities List.

The EPA site status summary states sediment water tissue samples show elevated levels of dioxins. The fish consumption advisory from the Texas Department of Health is in place, and despite the advisory, residents are continuing to consume fish and crabs from the river, and even Galveston Bay, the upper reaches of Galveston Bay. While EPA has not made a final determination, the information definitely indicates an uncontrolled human exposure.

I am deeply concerned that these dioxins could have been spread to an even wider area by the storm surge from Hurricane Ike. The Sanderson River drains into Galveston Bay, which produces more seafood than any other estuary except the Chesapeake.

Like the Sanderson River, new fish advisory warnings about health risks have gone into effect in Galveston Bay. EPA should act swiftly in all sites with uncontrolled human exposure, especially if that are at risk of disturbance. If potentially responsible parties move slowly, EPA should use its own resources to take prompt action and seek recovery in court as provided by the law.

If our subcommittee finds a lack of resources contributing to the uncontrolled human exposure and slowdown in cleanup, I will support the reinstatement of the Superfund fee for the trust fund. Reinstatement could be revenue neutral and different from the previous structure, but Superfund sites must be cleaned up nationwide.

The focus of today's hearing is EPA's controversial proposed rule to provide a highly unusual exemption from Superfund reporting requirements for air emissions, from animal waste at all farms.

The law requires all facilities to report all air releases and hazardous chemicals above certain reportable quantities. In my view, the concern with this proposed exemption is not that your average farm or ranch should file reports based on animal waste. The controversy arises when the exemption applies to all large animal waste facilities or concentrated animal feeding operations, known as CAFOs.

The agriculture sector has been very successful at providing our nation with a great food supply and at low prices by taking advantage of the economy's scale CAFOs just like other economic sectors. CAFOs store very large amounts of animal waste in concentrated facilities, which does not occur naturally or at most farms. Due to their size and concentration, studies show that these facilities emit large amounts of hazardous ammonia, hydrogen sulfide and as a result, some Federal public health professionals believe individuals living near or working in CAFOs may face health concerns including chronic respiratory, neurological, and other problems.

In one recent incident, hydrogen sulfide releases from a dairy caused the evacuation of several nearby families. The law requires reporting because emergency response removal and hazardous release controls depend upon accurate information in order to protect public health and the environment.

EPA plans to exempt all CAFOs from reporting any hazardous substance emission before EPA finishes a multi-year, multi-state, state-of-the-art study, to determine emissions from CAFOs. Today we are releasing a GAO report which questions EPA's proposed rule based on EPA's lack of the needed data for the study. I am highly skeptical of EPA's proposal to exempt CAFOs from Superfund and the EPCRA reporting for similar reasons.

Putting the lack of data aside, I also am skeptical of the EPA's authority for a blanket exemption like this where Congress did not provide one. These exemptions are so rare that the courts have apparently never considered the question. The focus of our hearing is not intended to portray large agricultures producers or CAFOs in a negative way. Instead, our focus is whether CAFOs with large concentrated waste facilities should meet the same hazardous reporting obligations as facilities in other sectors of the economy.

With that, I will gladly yield 5 minutes to our ranking member, Congressman Shadegg.

OPENING STATEMENT OF HON. JOHN B. SHADEGG, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARIZONA

Mr. SHADEGG. Thank you, Mr. Chairman, and thank you for holding today's hearing. Today we are discussing the role of concentrated animal feeding operations under the Comprehensive Environmental Response Compensation and Liability Act, CERCLA, and the Emergency Planning and Community Right-to-Know, EPCRA. We are also discussing Superfund sites more generally.

While these topics are expansive and likely deserve separate hearings, I look forward to the testimony of our witnesses and to being further educated on the topic.

According to 1997 census of agriculture, there are 1.2 million farms. Of these farms, 238,000 are defined as feeding operations. Of those 238,000 animal feeding operations, less than five percent

are classified as concentrated animal feeding operations. However, concentrated animal feeding operations raised more than 40 percent of U.S. livestock.

As we all know, food prices have skyrocketed within the past few years. Between June 2005 and June 2008, the prices for eggs have increased 68.6 percent. Prices for whole milk have increased 20.9 percent, and prices for chickens have increased 9.9 percent. And these prices affect the poorest 20 percent of Americans the most, those who can barely pay their grocery bills and who struggle to get by each month.

In this context, we must carefully consider additional regulations on our agricultural industry that may increase costs for the consumers to be sure they are warranted. I would like to clarify that we are not here today discussing the removal of air quality standards, and we are not discussing allowing farms to emit more pollutants. We are not discussing the removal of clean air protections.

What we are discussing is a proposed exemption from reporting requirements. I think it is also important to add that we are not addressing the reporting of emissions into the water but rather into the air, and we are discussing clean air protections, not the issues regarding clean water.

As I understand it, the reporting requirements are mainly used for emergency response. However, we will hear from some other witnesses there are logistical questions about how you would appropriately respond to increased flatulence from livestock. Furthermore, as we will hear from EPA, the agency has never had to initiate a response from any notifications regarding hazardous substance released to the air where animal waste at farms was the source of that release.

We must carefully examine the logic and policy implications of reporting and regulating—let me suggest—the natural bowel movements of all livestock. While it is important that we safeguard the quality of our air and that we focus our efforts in the most effective and logical areas. More generally, I am interested in the status of our Superfund program, and I would like assurances that our Superfund sites, including these sites, are being addressed with due diligence and with careful attention to both the cost of implementing the program and the burden proposed on the industry. I look forward to hearing the testimony of our witnesses on these subjects.

Thank you, Mr. Chairman. I yield back.

Mr. GREEN. Thank you. Next for an opening statement is Congressman Barrow.

OPENING STATEMENT OF HON. JOHN BARROW, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF GEORGIA

Mr. BARROW. Thank you, Mr. Chairman, and thank you for calling this hearing. This whole subject is particularly important to me because, believe it or not, I am the only member of the House of Representatives who serves on both the Agriculture Committee on the one hand and the Committee on Energy and Commerce on the other. For all 435, I am the only one who serves on both those committees. And I worked hard trying to secure election to those two

committees because they each deal with the same subject, and oftentimes they don't talk to each other.

And I thought somebody in this shop ought to be following the conversations in both that have something to do with the folks back home, because farmers back home and the folks who are producing food, they don't care and they don't understand jurisdictional differences. They don't care whether the regulations coming at them is coming from the E and C Committee or coming from the Ag Committee. They don't know or care about that, but if it affects them back home, they want to make sure somebody up in Washington is looking out for their interests and trying to follow the ball on both sides of the committee jurisdictional divide.

This is what I understand about what we are going to talk about today, and the sense that I have is that something is in the air that we ought to just drop a reporting requirement either because it hasn't been tried or because it was tried and found wanting. And there is some uncertainty about which of these two it is.

The idea that we should drop a reporting requirement because we have never responded to one in the past and probably won't respond to any one in the future seems to me to be sort of a backwards way of looking at this. What I would like the witnesses to address is whether there is a need for a monitoring requirement. And if so, how that should be allocated or imposed based on mom-and-pop operators on the one hand or big old CAFOs on the other. Should we distinguish between those when it comes to monitoring?

And if there should be a monitoring requirement, should there be a reporting requirement? And again we should try to draw a common sense distinction between small operators that are de minimis in terms of the impact they have on the environment, and big operators that might be a legitimate subcommittee concern. That is what I want to have addressed today, and if you all can do that, it will help us carry on this conversation and also help me mediate between the concerns of the folks back home as their concerns are being addressed by both Energy and Commerce Committee folks on the one hand and Agriculture Committee folks on the other.

With that, Mr. Chairman, I yield back. Thank you.

Mr. GREEN. Thank you. Our next opening statement is Congressman Deal.

Mr. DEAL. Thank you, Mr. Chairman. I will submit my opening statement for the record and add to my time for questions.

Mr. GREEN. Thank you. Now our chair is pleased to recognize our vice chair of the subcommittee, Congresswoman Solis.

OPENING STATEMENT OF HON. HILDA L. SOLIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. SOLIS. Thank you, Mr. Chairman, for having a hearing today. I want to also welcome our witnesses that are here. According to the GAO, some large farms can produce more raw waste than the human population of a large U.S. city. As an example, a very large hog farm with as many as 800,000 hogs generates more than one and a half times the sanitary waste produced by 1.5 million residents of Philadelphia, Pennsylvania in one year.

This manure waste can pose significant risk to public health and to the environment. More than 29 states have linked groundwater contamination to CAFOs. Waste also emits toxic gases, such as hydrogen sulfide and ammonia, and contains more than 150 pathogens such as E. coli and salmonella. A variety of health problems faced by neighbors of huge, industrial farms has been linked to the vast amounts of concentrated animal waste.

In 2004, EPA scientists reported that acute respiratory irritation and effects of the central nervous system could be caused in a downwind population subjected to hydrogen sulfide emissions from wastewater lagoons. In North Carolina, hog farms in recent years have been concentrated in eastern North Carolina, a relatively poor region in the state with a large rural African-American population. This has led to a growing concern that the environmental and health impacts of factory farms, large ones, are disproportionately born by poor, low-income, and minority communities.

Just this summer, releases from the Excel Dairy in Minnesota forced the evacuation of residents near the dairy from their homes as emissions were deemed a public health hazard. I am concerned about EPA's proposal to exempt CAFOs from reporting requirements included in the Superfund and the Emergency Planning and Community Right-to-Know Act.

Without reporting requirements, first responders and health providers will be without critical information. The national association, which represents members and staff of state emergency response commissions, wrote that the EPA's proposal, and I quote, "endangers responders and the public by denying them information they would use to protect themselves from hazardous releases."

I am also concerned by the findings that will be presented today by the GAO. The GAO found that EPA lacks the information it needs to effectively regulate CAFOs and has yet to assess the extent to which these pollutants may be impairing human health and the environment.

In addition to the risk posed to these first responders and public health officials, I have serious questions on the basis of this proposal to begin with. Under existing regulations, only those emissions exceeding 100 pounds must be reported. In 2005, the EPA offered animal feeding operations an opportunity to sign a voluntary consent agreement and final order.

Under the agreement, animal feeding operations are required to report any releases above the reportable quantity once emission protocols have been established. In return participating operations will receive a limited release from enforcement for certain past and ongoing violations.

Given the risk to public health and first responders from emissions and the existing flexibility, I believe a blanket exemption from reporting is irresponsible and an unnecessary risk. I look forward to hearing from our witnesses, and I yield back the balance of my time, Mr. Chairman.

Mr. GREEN. I thank my colleague from California. Our next opening statement is from Congressman Butterfield.

OPENING STATEMENT OF HON. G.K. BUTTERFIELD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. BUTTERFIELD. Thank you very much, Mr. Chairman. I apologize for being late, but you know what it is all about when you are multitasking. I thank you very much for holding this hearing.

This subject is very important, Mr. Chairman, without a doubt. It is a subject that deserves attention and requires congressional oversight. The Environmental Protection Agency should play a role in the regulation of ammonia and hydrogen sulfide releases into the air. EPA entered into the air compliance agreement with close to 14,000 farms, and to roll back the environmental requirements intended to protect public health and the environment, in my humble opinion, would be a mistake. However, I am disappointed by the report from the GAO on the pork industry, and I feel the need to speak against what I view are some of the inaccurate characterizations of the environmental performance of my state, North Carolina, the state's pork producers.

North Carolina is the second largest pork producing state in the Nation, and our pork producers are good neighbors who care about the environment. We care about the animal well being in their communities and state. They have worked very hard to build a responsible industry. These farmers are major contributors to my state's economy and are proud to produce high quality, safe food for people here and around the world.

I agree with the need for Federal regulations, as do pork producers who supported the Air Compliance Agreement. However, contrary to the GAO report, North Carolina pork producers already comply with a very comprehensive and mandatory statewide livestock permitting program, which is one of the most aggressive in the nation. The permit application is 14 pages in length and contains detailed requirements for management of swine manure.

Furthermore, by law each of our swine facilities must receive two onsite inspections each year, one by our Division of Water Quality and the other by the Division of Soil and Water Conservation. There are 2,200 swine farms in the state that have a comprehensive general permit, and I happen to have a copy of each and every one of these permits here with me today. We were able to obtain a copy of these permits simply by requesting this information from the Division of Water Quality.

Relative to pork producers environmental performance in our state, several groups try to paint a scary picture of CAFOs simply on the basis of the quantity of manure our animals produce on a volume or pounds basis relative to cities and communities. I am not sure I got that right, but I am going to submit it for the record.

GAO takes the same approach, and I am disappointed in their report as a result. These efforts fail to make a reasonable and accurate reflection of what modern manure management practices mean on our farms for environmental performance. How farmers manage and use animal manure is the most meaningful predictor of their environmental performance. I recognize and applaud the effort of this subcommittee to deal with the EPA's rollback. I oppose a full-scale exemption for hazardous release reporting by CAFOs given the demonstrated health effects associated with their

releases of the hazardous substances ammonia and hydrogen sulfide.

And we would be remiss if we did not recognize the great strides made by the pork industry to become a more responsible and responsive group of farmers. I only ran over by 13 seconds, Mr. Chairman. Thank you very much.

[The prepared statement of Mr. Butterfield follows:]

STATEMENT OF HON. G.K. BUTTERFIELD

The Environmental Protection Agency should play a role in the regulation of ammonia and hydrogen sulfide releases into the air. EPA entered into the Air Compliance Agreement with close to 14,000 farms, and to roll back the environmental requirements intended to protect public health and the environment would be a mistake.

However, I am disappointed by the report from the Government Accountability Office on the pork industry, and I feel the need to speak against what I view as some of the inaccurate characterizations of the environmental performance of my state's pork producers. North Carolina is the second largest pork producing state in the nation, and our pork producers are good neighbors who care about the environment, animal well-being and their communities and state. They have worked very hard to build a responsible industry. These farmers are major contributors to my state's economy and are proud to produce high quality, safe food for people here and around the world.

I agree with the need for federal regulations, as do pork producers who supported the Air Compliance Agreement. However, contrary to the GAO report, North Carolina pork producers already comply with a very comprehensive and mandatory state-wide livestock permitting program, which is one of the most aggressive nationwide. The current permit application is 14 pages in length and contains detailed requirements for management of the swine manure management system. Furthermore, by law, each of our swine facilities must receive two on-site inspections per year, one by our Division of Water Quality (the regulatory agency) and the other by our Division of Soil and Water Conservation (the technical resource agency). There are 2,239 swine farms in the state that have a comprehensive general permit, and I happen to have a copy of each and every one of these permits, more or less, here with me. I were able to obtain a copy of these permits simply by requesting this public information from the Division of Water Quality.

Relative to pork producers' environmental performance in our state, several groups try to paint a scary picture of CAFOs simply on the basis of the quantity of manure our animals produce on a volume or pounds basis relative to cities and communities. GAO takes this same approach and I am disappointed in their report as a result. These efforts fail to make a reasonable or accurate reflection of what modern manure management practices mean on farms for environmental performance. How farmers manage and use animal manure is the most meaningful predictor of their environmental performance.

I take some issue with GAO's attempt to characterize the 5-county region in our state as a regional cluster that has too much manure relative to the cropland in use by those pork farms. This is an old mischaracterization of manure nutrient use in the state, dating from the mid-1990's and resulting from incorrect information about the types of hay grown. I believe that the natural resource professionals at the USDA have done their own more recent analysis that indicates GAO's calculations are not correct. I would appreciate GAO working with USDA to review their own analysis and issue a correction to their final report should that prove necessary. I say this for several reasons:

- Farmers' nutrient management plans are certified by technical specialists (designated by the State of North Carolina) as having sufficient land available to the CAFO for the proper application for crop production.
- Each operation must have land available to apply its nutrients on a fully agronomic basis - they have to do it right.
- Furthermore, GAO fails to note that failure to use this manure properly, at sound agronomic rates, can mean Federal fines under the Clean Water Act CAFO rule of $32,500 a day, giving them further incentive to comply.

They certainly have the land and crops to comply as well. Using North Carolina Department of Agriculture's estimates of available hayed and grazed land in the five counties, the total potential for nitrogen uptake on this land is an estimated 25 mil-

lion pounds. This far exceeds the approximately 13 million pounds produced by swine operations in this region. In addition, there are many thousands of acres of cropland utilizing crops such as corn and small grains, which have significant nitrogen needs to ensure they can effectively and profitably use all these nutrients.

Lastly, I want to mention further attempts in the state to derive greater value from animals' manure. During the 2007 session of the North Carolina General Assembly, the pork producers worked hard to get provisions incorporated in legislation that would promote renewable energy projects. The first was the provision that was placed in Senate Bill 1465 that established the ″Swine Farm Methane Capture Pilot Program″. The provision would provide that up to 50 farms could participate in the program which is setup to capture methane and generate electricity to sell to a public utility in the state. Currently over 200 farms in the state have registered as having an interest in participating in the program. In addition, a Renewable Energy and Energy Efficiency Portfolio Standard was passed during the 2007 session that provided for the use of swine manure to meet the new standard.

I recognize and applaud the effort of this subcommittee to deal with the EPA's rollback. I oppose a full-scale exemption for hazardous release reporting by CAFOs given the demonstrated health effects associated with air releases of the hazardous substances ammonia and hydrogen sulfide. However, we would be remiss if we did not recognize the great strides made by the pork industry to become a more responsible and responsive group of farmers.

Mr. GREEN. I thank my colleague from North Carolina. That concludes the opening statements by members and now we will turn to our witness panel for today's hearing. First up is Susan P. Bodine, Assistant Administrator of the U.S. Environmental Protection Agency for Solid Waste and Emergency Response. Next we will have Mark E. Rey, Under Secretary for Natural Resources and the Environment, U.S. Department of Agriculture. And for the Agency for Toxic Substances and Disease Registry, joining us is Mark Johnson, a Senior Environmental Health Scientist. And our final witness is from the Government Accountability Office, Ms. Anu Mittal, a lead author of today's GAO report on concentrated animal feeding operations.

We will now recognize each of our witnesses in turn for 5-minute statements summarizing their prepared testimony. The prepared testimony submitted in advance of the hearing will be made part of the record.

And before we begin, I would like to make a unanimous consent request. I ask unanimous consent to include the following documents in the record. First the letter dated March 18, 2008, from Mr. Dingell and Ms. Solis to the EPA and EPA's response dated April 17, 2008. Second, a letter dated March 27, 2008, from Timothy R. Gablehouse and the National Association of SARA Title III Program Officials to the EPA. And third, a January 28, 2008, Congressional Research Service memorandum to the House Energy and Commerce Committee, entitled Emergency Planning Committee Comments on Poultry Petition. And fourth, a letter dated September 19, 2008 from the Agency for Toxic Substances and Disease Registry and the Minnesota Department of Health to the EPA and the Minnesota Pollution Control Agency. Is there objection?

[The information appears at the conclusion of the hearing.]

Mr. SHADEGG. Mr. Chairman, I reserve the right to object and for now I will object because our staff has not been able to see and read all those documents. So pending their ability to do so, I would object to their inclusion in the record.

Mr. GREEN. I am aware we gave these to you about 15 minutes ago, but would be glad to hold off on introducing them into the record so you have a chance to review them.

Mr. SHADEGG. We have lots of speed readers, but we have been using them for other purposes.

Mr. GREEN. Okay, Assistant Administrator Bodine, we will begin with you.

STATEMENT OF SUSAN P. BODINE, ASSISTANT ADMINISTRATOR, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, ENVIRONMENTAL PROTECTION AGENCY

Ms. BODINE. Thank you, Mr. Chairman and members of the subcommittee. I thank you for inviting me to appear today to talk about the requirements for notification of releases of hazardous substances under both CERCLA, the Comprehensive Environmental Response Compensation and Liability Act, as well as under EPCRA, which is the Emergency Planning and Community Right-to-Know Act, as well as EPA's proposed rule to exempt air releases of hazardous substances from animal waste, that is manure, from these notification requirements.

In addition, Mr. Chairman, pursuant to your question in your invitation letter to me, we have provided to you a summary of the status of EPA's air compliance agreement, the status of NPL sites that were impacted by Hurricane Ike, and a chart of EPA's Superfund construction completion since 1993.

In addition, you had asked for the reports filed under CERCLA and EPCRA since the year 2000 for releases from animal feeding operations. What I have, and I would like to provide this for you right now, is a summary of reports since 2000 to the National Response Center. EPA doesn't actually get reports that are filed under EPCRA. We don't have those reports. But the National Response Center gets the CERCLA reports, and I have the summary to provide to you for the record.

This summary is our best estimate—your question related to animal feeding operations. The staff had to look at the reports and look at the kind of release that is reported to determine whether it was from a farm or not a farm because the NRC doesn't actually collect facility information. So I have that summary here.

Now, back to discussing the reporting requirements. Under CERCLA, a person in charge of a facility has to report if a hazardous substance has been released into the environment in excess of a reportable quantity in a 24-hour period. That report goes to the Coast Guard headquarters. It is the National Response Center.

The purpose of that report is to notify the Federal Government of the release so Federal emergency response personnel can decide whether an action is necessary to be taken. Now, under Section 304 of EPCRA, a facility owner/operator has to report a release of an extremely hazardous substance. That report goes to local emergency planning committees as well as to the state emergency response commission. And again, for the same purpose. The report serves the purpose of letting those officials make a determination of whether a response is appropriate.

As Congressman Shadegg noted, EPA has never initiated a response to any notice to the National Response Center of a release

of ammonia, hydrogen sulfide or any other hazardous substance from animal waste at farms.

Back in December of 2007, the agency published a proposed rulemaking that proposed to exempt from both CERCLA, Section 103, as well as the EPCRA 304 requirements, releases to the air where the source is animal waste at farms. The rationale is explained in that proposal. The rationale is based on the purpose of those reporting requirements. It is an emergency response program. The purpose is to notify emergency response personnel of a release so they can determine whether to respond. The rationale also is based on information that we had about whether a response to that kind of a report would be very likely.

Again, we are not talking about water. We are talking about releases to air. We are not talking about other sources of hazardous substances that may be present. We are talking about manure, and in addition, the proposal only would create an administrative reporting exemption. It doesn't affect any of the EPA's other authorities, whether it is our response authorities under 104, or liability that might occur under Section 107 of CERCLA. Again, any authorities that the Agency has to deal with an issue is retained, and the proposal deals just with the reporting requirement.

There was a public comment period of 90 days. It closed on March 27. We are currently evaluating comments, and when we have a final proposal, we will have a response to comments document that will be in the record.

And that concludes my statement. I would be happy to answer any questions.

[The prepared statement of Ms. Bodine follows:]

TESTIMONY OF
SUSAN PARKER BODINE
ASSISTANT ADMINISTRATOR
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE SUBCOMMITTEE ON
ENVIRONMENT AND HAZARDOUS MATERIALS
UNITED STATES HOUSE OF REPRESENTATIVES

SEPTEMBER 24, 2008

Mr. Chairman and members of the Committee, I am Susan Parker Bodine, Assistant Administrator for the Office of Solid Waste and Emergency Response at the Environmental Protection Agency (EPA). Thank you for inviting me to appear today to discuss the requirements for notification of released hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Emergency Planning and Community Right-To-Know Act (EPCRA) and the Agency's proposed rule to exempt air releases of hazardous substances from animal waste at farms from those notification requirements.

BACKGROUND

Under the CERCLA section 103(a) notifications requirements, the person in charge of a vessel or facility from which a CERCLA hazardous substance has been released into the environment in a quantity that equals or exceeds its reportable quantity (RQ) must immediately notify the National Response Center (NRC) of the release. A release is reportable if an RQ or more is released into the environment within a 24-hour period. This notification requirement serves as a trigger for informing the Federal government of a release so that Federal personnel

can evaluate the need for a response in accordance with the National Contingency Plan (NCP) and undertake any necessary response action in a timely fashion.

The NRC is located at the United States Coast Guard headquarters and is the national communications center for the receipt of all pollution incident reporting. The NRC is continuously staffed for processing activities related to the receipt of the notifications. The NCP regulations require notifications of discharges and releases by telephone and authorize the NRC to immediately relay telephone notices of discharges (i.e., oil) or releases (i.e., hazardous substances) to the appropriate predesignated federal on-scene coordinator (OSC). The NRC receives an average of approximately 34,000 notifications of releases or discharges per year, 99 percent of which are relayed to EPA.

Under the EPCRA section 304(a) emergency notification requirements, three release scenarios require notification.

1. First, if a release of an extremely hazardous substance occurs from a facility at which a hazardous chemical is produced, used, or stored, and such release requires a notification under section 103(a) of CERCLA, the owner or operator of a facility shall immediately provide notice to the community emergency coordinator for the Local Emergency Planning Committees (LEPC) for any area likely to be affected by the release and to the State Emergency Response Commission (SERC) of any State likely to be affected by the release.

2. EPCRA section 304(a) also requires the owner or operator of the facility to immediately provide notice under EPCRA section 304(b) for either of the following two scenarios:

a. If the release is an extremely hazardous substance, but not subject to the notifications under section 103(a) of CERCLA.

b. If the release is not an extremely hazardous substance and only subject to the notifications under section 103(a) of CERCLA.

EPCRA notification is given to the community emergency coordinator for each LEPC for any area that is likely to be affected by the release, and the SERC of any state that is likely to be affected by the release. Through these notifications, state and local officials can assess whether a response action to the release is appropriate. The EPCRA section 304 notification requirements apply only to releases that have the potential for off-site exposure and that are from facilities that produce, use or store a "hazardous chemical," as defined by regulations promulgated under the Occupational Safety and Health Act of 1970 (OSHA)(29 CFR 1910.1200(c)) and section 311 of EPCRA.

Upon receipt of a notification from the NRC, EPA determines whether a response is appropriate. If it is determined that a response is appropriate, the NCP regulations describe the roles and responsibilities for responding to the release. To date, EPA has not initiated a response to any NRC notifications of ammonia, hydrogen sulfide, or any other hazardous substances released to the air where animal waste at farms is the source of that release.

EPA's PROPOSED RULE

On December 28, 2007, the Agency proposed an administrative reporting exemption from the CERCLA section 103 notification requirements and the EPCRA section 304 emergency notification requirements for air releases of hazardous substances from animal waste at farms. The scope of the proposed rule was limited to releases of hazardous substances to the air from animal waste at farms. Specifically, the Agency proposed an administrative reporting exemption from the CERCLA section 103 and EPCRA section 304 notification requirements as implemented in the Code of Federal Regulations (CFR).

However, nothing in the proposal changes the CERCLA section 103 or EPCRA section 304 notification requirements for releases of hazardous substances to the air from any source other than animal waste at farms, as well as releases of hazardous substances from animal waste to any other environmental media, such as water, or at any other facilities other than farms (e.g., meat processing plants, slaughter houses, or tanneries). Similarly, EPA did not propose to exempt ammonia releases from ammonia storage tanks at farms. Thus, CERCLA and EPCRA notification requirements remain if there is a release of stored animal waste into water (e.g., a lagoon burst). Notifications of a release to water would alert the government to an emergency situation that could pose serious environmental consequences if not immediately addressed. Because such releases are likely to result in a response action from Federal, state or local governments, releases to water were not included in the proposed rule and would remain reportable if such a release is at or above the RQ for the hazardous substance.

In addition, the proposal did not propose to limit the Agency's authority under CERCLA sections 104 (response authorities), 106 (abatement actions), 107 (liability), or any other provisions of CERCLA and EPCRA to address releases of hazardous substances from animal waste at farms.

The public comment period for the proposed rule lasted 90 days and closed on March 27, 2008. Through the public comment process, the Agency received approximately 12,900 comments. A substantial number of those comments (about 11,600) came in the form of 15 mass mail campaigns that either supported or opposed the proposed rule. EPA also received comments from persons on matters which were not proposed. For example, some commenters expressed general opposition to removing air quality and clean air standards; removing clean air protections; reducing pollution or emission standards; and allowing farms to emit more pollutants. As noted previously, the Agency's December 2007, proposal was limited to the notification requirements under CERCLA section 103 and EPCRA section 304.

EPA'S RATIONALE FOR THE PROPOSED RULE

EPA's rationale for the proposed rule is based on the purpose of notifying the NRC, and SERCs and LEPCs when a hazardous substance is released, and then the likelihood that a response to that release would be taken by any government agency. As discussed above, EPA has never initiated a response to any NRC notifications of ammonia, hydrogen sulfide, or any other hazardous substances released to the air where animal waste at farms is the source of that release.

Several states and localities have indicated that such response actions are unlikely to be taken as a result of a notification of air releases of hazardous substances from animal waste at farms. Specifically, EPA received 8 comment letters and a number of e-mail comments from state and/or local emergency response agencies in response to our proposed rule which agreed with the proposal to not require such notifications. The Agency also received 26 comment letters from state and/or local emergency response agencies in response to the December 2005, Federal Register notice that acknowledged receipt of a rulemaking petition from the National Chicken Council, the National Turkey Federation, and the U.S. Poultry and Egg Association which commented that certain notifications under CERCLA and EPCRA were unnecessary. Those commenters supported granting an exemption from CERCLA and EPCRA reporting requirements because they were aware of the operations in their jurisdictions, were concerned about the resource implications of receiving the notifications (i.e., having to process the notifications), and would not conduct a response as a result of the notifications.

In addition, the Agency received comments from 17 state agricultural departments in support of the proposed rule. EPA also received 5 comment letters from government officials and the National Association of SARA Title III Program Officials (NASTTPO) that the proposed rule was not appropriate, however, none of the officials suggested that a response action should or would be taken, as a result of emergency reporting.

Finally, notwithstanding EPA's experience regarding NRC notifications of hazardous substances released to the air from animal waste, the Agency solicited comment on whether there might be a situation where a response would be triggered by such a notification of the release of

hazardous substances to the air from animal waste at farms, and if so, what an appropriate response would be. EPA wanted to consider such comments before developing a final rule. Several commenters expressed the belief that there are no conditions where manure related releases of emissions would trigger a response. Other commenters suggested that responses may be needed; however, they did not describe what an appropriate response would be.

CONCLUSION

EPA is currently evaluating comments received during the proposed rule's public comment period and will address and respond to certain comments as we proceed through the rulemaking process. EPA will develop a response-to-comment document that will respond to all of the comments received. The response-to-comment document will be available to the public through the Superfund Docket associated with the rulemaking. Let me assure you that EPA is actively working and will consider all of the comments received to ensure that any final rule is protective of human health and the environment, specifically regarding CERCLA and EPCRA notification requirements for releases of hazardous substances.

Air Compliance Agreement Summary

In 2006, EPA entered into administrative enforcement consent agreements with approximately 2,600 respondents that owned and/or operated animal feeding operations ("AFOs"). The goals of the consent agreements were to ensure the respondents' compliance with the Clean Air Act, the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), and the Emergency Planning and Community Right-to-Know Act ("EPCRA"); to reduce air pollution; and to create a national methodology for estimating AFO air emissions. This methodology will assist the Agency in assuring compliance with the Clean Air Act, CERCLA, and EPCRA. Under the consent agreements, respondents settled their potential violations of certain Clean Air Act provisions and CERCLA and EPCRA reporting requirements by paying a civil penalty and agreeing to participate in and be responsible for funding a portion of a national AFO air emissions monitoring study.

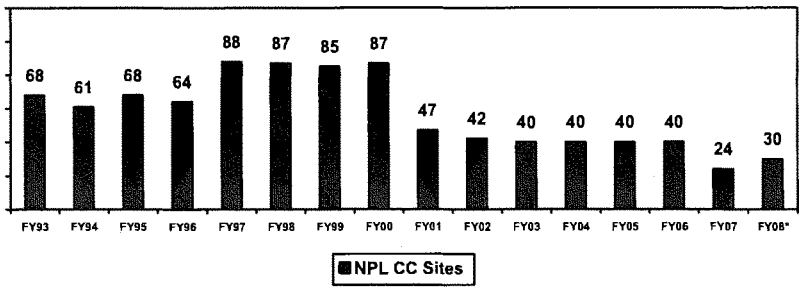
The two-year national air emissions monitoring study ("monitoring study") commenced with the collection of data at 24 sites during the summer/fall of 2007. The monitoring study is measuring ammonia, hydrogen sulfide, particulate matter, and volatile organic compounds emissions at AFOs across the country that represent all major types of swine, dairy, and poultry (egg laying and broiler chicken) operations. The monitoring study's two-year timeframe is intended to account for weather and other variable conditions. EPA is currently conducting technical system audits at each site to ensure the monitoring is being performed according to the approved plans, constructing and populating the database to house the information collected, and planning for the development of an emission-estimating methodology. The study's data collection phase should conclude by late 2009.

Within 18 months of the data collection phase's conclusion, EPA plans to develop and publish an emission-estimating methodology to assist the Agency and AFOs in determining the amount of emissions/releases from AFOs. Following EPA's publication of the emission-estimating methodology, respondents must utilize the methodology to determine their amount of emissions/releases and whether they need to apply for and comply with Clean Air Act permits and install any necessary control technology, and report qualifying ammonia and hydrogen sulfide releases under CERCLA and EPCRA.

If a respondent fails to certify to EPA that Clean Air Act permitting and control requirements do not apply to its facility, or apply for and comply with any necessary Clean Air Act permits based on the application of the emission-estimating methodology to its emissions, the respondent loses the agreement's release and covenant not to sue for any violations of Clean Air Act requirements and CERCLA and EPCRA's reporting requirements. Additionally, if a respondent fails to certify to EPA that its emissions/releases are below the reportable quantity (RQ) or appropriately report qualifying releases above the RQ based on the application of the emission-estimating methodology, the respondent loses the agreement's release and covenant not to sue for any violations of CERCLA and EPCRA's reporting requirements and for Clean Air Act requirements.

ATTACHMENT

Superfund Annual Construction Completions



*EPA's FY 2008 goal for construction completions is 30.

TABLE - ESTIMATED NUMBER OF FARM-RELATED CERCLA REPORTS
(National Response Center downloaded data)

Year	Hydrogen Sulfide Episodic Farm-Related	Hydrogen Sulfide Continuous Release Farm-Related	Ammonia Episodic Farm-Related	Ammonia Continuous Release Farm-Related
2000	0	10	2	29
2001	0	0	12	147
2002	0	0	0	0
2003	0	0	0	0
2004	0	25	6	42
2005	0	9	2	16
2006	0	141*	8	141*
2007	0	0	0	4

*Reported as releasing both ammonia and hydrogen sulfide.

The National Response Center (NRC) does not capture the "industry type" in its database of release notifications. Therefore, there is not a searchable field within the database(s) for animal feeding operations.

The methodology to estimate the number of reports filed under CERCLA with respect to releases from animal feeding operations (i.e., farm-related) of hydrogen sulfide and ammonia is as follows:

1. Data from the National Response Center (NRC) was downloaded for each of the calendar years (CY). http://www.nrc.uscg.mil/download.html
2. The data from the NRC spreadsheets (downloaded) were sorted by material name (i.e., hydrogen sulfide and ammonia).
3. Spreadsheets were then reviewed to eliminate any notifications that were immediately recognizable as not farm or animal feeding operations. Particular attention being paid to the incident comment field.
    a. For example, "PROCESSING LINE LEAKED DUE TO CORROSION." is probably not from a farm or animal feeding operation, whereas,
    b. "ROUTINE CONTINUOUS RELEASES FROM TREATMENT PONDS AND ASSOCIATED SWINE PROCESSES AT SWINE FARM.," is likely to be from a farm or animal feeding operation.
    c. The "responsible_org_type" field of the spreadsheets has entries such as:
        i. Private enterprise
        ii. Public utility
        iii. Private citizen
        iv. Unknown

d. Again, for the purposes of capturing information during the call, the NRC does not ask the reporting party what type of facility had the release. Therefore, farm or animal feeding operation is not a searchable field.

4. Because of the methodology used to count the reported releases, the chart contains estimated numbers of reports.

Mr. GREEN. Dr. Johnson.

STATEMENT OF MARK JOHNSON, SENIOR ENVIRONMENTAL HEALTH SCIENTIST, AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY - REGION 5

Mr. JOHNSON. Good morning, Mr. Chairman and members of the committee. Thank you for inviting me to testify today. My name is Mark Johnson. I am the Assistant Director for Science, in the division of regional operations for the Agency for Toxic Substances and Disease Registry, known as ATSDR. We are a Federal agency within the Department of Health and Human Services. Joining me today is Lieutenant Commander Michelle Colledge, who is an Environmental Health Scientist in the ATSDR regional office in Chicago.

In this testimony, I will provide the committee with a summary of ongoing ATSDR assessments of community exposures to emissions from a concentrated animal feeding operation, CAFO. The Excel Dairy Farm is a CAFO that is located outside of Thief River Falls in northwest Minnesota. In May 2008, the Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Health received complaints about odors and health effects from the residents living near the Excel Dairy Farm. People were reporting nasal congestion, sore throats, itchy eyes, trouble breathing, headaches, and nausea that they associated with emissions from the numerous waste lagoons at the dairy.

In early June 2008, a group of citizens reported to the state health department that they had used a portable hydrogen sulfide monitor to measure the concentrations in the areas around the Excel Dairy facility and nearby residences. Since early June, the state has been continuously monitoring the levels of hydrogen sulfide at two locations near the Excel property line. During that time, the concentration of hydrogen sulfide has frequently exceeded the Minnesota ambient air quality standard of 30 parts per billion averaged over 30-minute periods and frequently exceeded 90 parts per billion, the maximum concentration that the state's instruments were able to measure.

Based on this information, both the state of Minnesota and U.S. EPA Region 5 had taken enforcement actions against Excel Dairy. At the request of the U.S. EPA Region 5, ATSDR evaluated the existing data and determined that there was a need to collect more information about community exposures to better characterize health hazards.

In early June, ATSDR staff initiated an exposure investigation to collect continuous sampling data for hydrogen sulfide at three residential locations that were in close proximity to the dairy. ATSDR there focused on hydrogen sulfide because of the volumes present in CAFO air emissions, its physical properties, and a toxicity associated with exposure to hydrogen sulfide.

Stationary monitors were placed at both outdoor and indoor locations at two of these homes. Over the three-week period, the monitors detected a maximum hydrogen sulfide concentration in outdoor air of 480 parts per billion. To evaluate exposures for potential health impacts, ATSDR uses what is referred to as a minimum risk level, MRL, which is defined as an exposure level that is estimated

to be without health impact for any individual for a specific period of time.

For hydrogen sulfide, the acute MRL is based on the demonstration of an airway constriction among individuals with asthma who were exposed to 2,000 parts per billion of hydrogen sulfide for 30 minutes. From this study, we have derived an MRL value of 70 parts per billion for screening purposes.

The monitoring data at the residences nearest to the waste lagoons showed that the 30-minute average concentrations of hydrogen sulfide in outdoor air exceeded that value for a cumulative total of six to eight hours. Although ATSDR did not conduct a formal health study to evaluate the health of people living near the dairy, the symptoms described by the residents were consistent with the known acute health effects of hydrogen sulfide, including difficult breathing, eye irritation, dizziness, nausea, and headaches.

Based on the concentrations that were detected, we have concluded that these conditions pose a public health hazard to residents near the dairy. We recommend taking immediate actions to reduce emissions from the facility, to establish a monitoring program to evaluate the effectiveness of those actions, and for Excel Dairy to restrict access to the waste lagoons onsite to reduce direct exposures to children who may be living there.

ATSDR and the state health department communicated these findings, conclusions, and recommendations to the state, to the U.S. EPA, and to Excel Dairy owners in writing last Friday. Mr. Chairman, I would ask to submit this letter for the record, which I think you have already consented to that request.

In conclusion, under certain conditions, exposure to chemicals emitted from CAFOs can result in adverse health effects. In the case of Excel Dairy, community exposures to periodic elevations of hydrogen sulfide levels were determined to be a public health hazard. Thank you for the opportunity to comment on this important public health issue.

[The prepared statement of Mr. Johnson follows:]

STATEMENT OF MARK JOHNSON

Mr. Chairman and Members of the Committee, thank you for inviting me to testify today. My name is Mark Johnson. I am the Assistant Director for Science, in the Division of Regional Operations at the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR is a federal agency within the United States Department of Health and Human Services. The mission of ATSDR is to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances.

In this testimony, I will provide the committee with information regarding the current and past actions of ATSDR in evaluating potential health risks posed by Concentrated Animal Feeding Operations (CAFOs); describe what is known about emissions from this type of operation; describe the toxicity of and potential health effects from exposure to the primary constituents of CAFO emissions; provide a summary of ATSDR's on-going public health activities and findings; and summarize our recommendations to protect the health of residents living around the Excel Dairy in Thief River Falls, Minnesota.

CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOS)

EPA estimates that animal feeding operations produce about 500 million tons of manure per year from over 250,000 feeding operations. Individuals who work at or live in close proximity to some CAFOs may face health concerns.

Emissions from animal waste are comprised of a complex mixture of chemicals and gases such as hydrogen sulfide and ammonia. Some residents who live in areas surrounding CAFOs report odors, respiratory symptoms, and neurological effects. Given the multiple pathways for release of contaminants from CAFOs, people may be exposed to these chemicals through inhalation of air or dust, direct contact with soil, ingestion of drinking water, or dermal contact with surface water.

At CAFOs where ATSDR has conducted assessments, irritant contaminants such as hydrogen sulfide, ammonia, and reduced sulfides (known as mercaptans) have been detected in air emissions. In a recent assessment at a CAFO facility in southwest Minnesota, the Minnesota Department of Health and ATSDR concluded that exposure to hydrogen sulfide at the site was a public health hazard. Among the chemicals that are emitted from the storage, handling, and decomposition of animal wastes, hydrogen sulfide is of great concern for potential exposure. This is due to the volume of hydrogen sulfide emissions from some CAFOs, the physical properties of hydrogen sulfide, and the toxicity associated with hydrogen sulfide exposure.

EFFECTS OF HYDROGEN SULFIDE EXPOSURE

Hydrogen sulfide is a colorless, flammable gas that is heavier than air and has the potential to accumulate close to the ground surface where people can be exposed. People can smell hydrogen sulfide at levels as low as 0.5 parts per billion (ppb). The odor is usually characterized as smelling like ″rotten eggs″ or ″sewage.″ Natural sources account for approximately 90 percent of the hydrogen sulfide in the atmosphere. Background concentrations of hydrogen sulfide in outdoor air are typically less than 1 ppb.

Information about the health effects of chemical exposure is summarized in the ATSDR Toxicological Profile for a specific chemical (website: *http://www.atsdr.cdc.gov/toxpro2.html*). Based on a review of the known toxicity of a chemical, a critical study is selected to represent the health effect that could occur at the lowest level of exposure or a level that is not associated with an effect. That information, in conjunction with the application of uncertainty factors, is used to determine a Minimum Risk Level (MRL), defined as an exposure level that is estimated to be without a health effect for any individual for a specific period of exposure. ATSDR develops MRLs for exposures that are of an acute duration (up to 14 days), intermediate duration (14 days to 1 year) and chronic duration (greater than 1 year). For hydrogen sulfide, the acute MRL of 70 ppb is based on the effect of airway constriction among asthmatic individuals who were exposed to 2,000 ppb hydrogen sulfide for 30 minutes. The intermediate MRL of 20 ppb is based on toxicity to olfactory neurons in exposed laboratory animals. This information is presented in ATSDR's Hydrogen Sulfide Toxicological Profile, which was updated in 2006 (*http://www.atsdr.cdc.gov/toxprofiles/tp114.pdf*).

Adverse health effects associated with short-term exposures to hydrogen sulfide concentrations above the MRL include airway constriction in individuals who have asthma, decreased lung function, eye irritation, dizziness, nausea, and headache. Acute exposures to high concentrations (greater than 100,000 ppb) may result in pulmonary edema and physical collapse.

The state of Minnesota has a health-based Ambient Air Quality Standard under their State Implementation Plan (SIP) that requires that there be no more than two 30-minute periods of hydrogen sulfide above 30 ppb in 5 days, or no more than two periods of hydrogen sulfide above 50 ppb in any year.

SUMMARY OF ATSDR INVESTIGATION AT THE EXCEL DAIRY

The Excel Dairy is a dairy farm, operating outside Thief River Falls in Marshall County in northwest Minnesota, which has a capacity for over 1,500 animals. The Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Health (MDH) received complaints in the past and most recently in early May 2008 about odors and health effects from residents living near Excel Dairy farm. The health effects mentioned by residents included upper respiratory effects (such as nasal congestion and sore throats), itchy eyes, trouble breathing, headaches, and nausea. In early June 2008, the MDH received data from concerned citizens that included measurements of elevated levels of hydrogen sulfide in the ambient air in their community. The residents had rented a portable monitor to measure hydrogen sulfide at a residence near the Excel Dairy facility. They reported many periods of hydrogen sulfide readings in the hundreds of ppb, and some readings over 1,000 ppb.

Since early May 2008, the Minnesota Pollution Control Agency (MPCA) has been monitoring the levels of hydrogen sulfide at locations near the Excel Dairy property line. MPCA has been using stationary monitors for the measurement of hydrogen

sulfide concentrations in ambient air. The concentration of hydrogen sulfide has frequently exceeded the Minnesota Ambient Air Quality Standard of 30 ppb over 30 minute periods, and frequently exceeded 90 ppb. Since the MPCA instruments only quantified the hydrogen sulfide concentrations in the air up to 90 ppb, the actual peak concentrations are not known.

The Region 5 Office of the U.S. Environmental Protection Agency (USEPA) also received health and odor complaints from citizens, beginning in the second week of June 2008. USEPA requested assistance from the ATSDR Regional Office to interpret this data and to provide an evaluation of potential hazards posed by inhalation exposure to hydrogen sulfide for residents living near the Excel Dairy.

At the request of MDH, ATSDR agreed to conduct an Exposure Investigation to evaluate the exposures that nearby residents were experiencing. An exposure investigation is one approach ATSDR uses to develop better characterization of past, current, and possible future human exposures to hazardous substances in the environment and to evaluate existing and possible health effects related to those exposures more thoroughly. ATSDR exposure investigations are not meant to substitute for a monitoring program that would be conducted for regulatory or operational management purposes.

In July 2008, ATSDR staff initiated continuous sampling for hydrogen sulfide levels at three residential locations in close proximity to the Excel Dairy. Stationary monitors were placed at both outdoor and indoor locations at two of these locations. The monitors detected a maximum hydrogen sulfide concentration in outdoor air of 480 ppb. Over a three-week period, the 30-minute average concentrations of hydrogen sulfide in ambient air exceeded the ATSDR acute minimum risk level (70 ppb) for a cumulative total of 6-8 hours at the residences closest to the facility (0.2-0.3 miles from the nearest lagoon).

On June 20, 2008, the Minnesota Attorney General and the MPCA filed a complaint seeking a temporary injunction against the Excel Dairy owner to address operational shortfalls contributing to these ambient releases of hydrogen sulfide. On July 18, 2008, the USEPA issued a Notice of Violation to the owner of the Excel Dairy farm for exceeding the state standard.

The ATSDR evaluation is limited to the measurement of hydrogen sulfide in ambient and indoor air at only 3 locations, during a limited time period. Although ATSDR did not conduct a formal health study to evaluate the health of people living on or near Excel Dairy, the symptoms described by the residents to ATSDR and MDH staff were not inconsistent with the known acute health effects of hydrogen sulfide exposure. Based on the fact that the concentrations of hydrogen sulfide detected by ATSDR and MPCA frequently exceeded state air quality standards and ATSDR's acute MRL, ATSDR and MDH concluded that these conditions pose a public health hazard to citizens living in the vicinity of Excel Dairy. ATSDR uses the ″public health hazard″ conclusion for sites at which long-term exposures to hazardous substances or conditions could result in harmful health effects. No data have been provided to ATSDR or MDH to determine the concentration of hydrogen sulfide exposure that individuals who work or live on the Excel Dairy property may experience.

Based on this assessment, ATSDR recommended that Excel Dairy should take action immediately to implement improved emission control measures that will significantly reduce the levels of exposure to hydrogen sulfide gas released from onsite operations. To verify the effectiveness of these emission control measures in reducing the release of hydrogen sulfide gas, MPCA and Excel Dairy should coordinate to implement an air monitoring program. Finally, Excel Dairy should restrict access to lagoons to reduce direct exposures to trespassers and children living on-site.

CONCLUSIONS

In conclusion, chemicals emitted from CAFOs can result in public exposure and the potential for adverse health effects. Hydrogen sulfide is among the chemicals that pose the greatest concern for exposure. In the case of Excel Dairy, after receiving reports of health concerns from local residents, ATSDR and the state of Minnesota Pollution Control Agency conducted air sampling and found that levels of hydrogen sulfide in the air exceeded the ATSDR acute MRLs and the Minnesota Air Quality Standards. ATSDR communicated recommendations to the state, to USEPA, and to Excel Dairy owners to reduce exposures to hydrogen sulfide and to monitor the effectiveness of measures taken to reduce emissions.

Thank you for the opportunity to testify on this important public health issue.

DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

Agency for Toxic Substances
and Disease Registry
Atlanta, GA 30333

MINNESOTA MDH DEPARTMENT OF HEALTH

September 19, 2008

Cheryl Newton
Acting Director, Air and Radiation Division
United States Environmental Protection Agency, Region 5
77 W. Jackson Blvd., MS ATSD-4J
Chicago, IL 60604

Gaylen Reetz
Director, Regional Division
Minnesota Pollution Control Agency
520 Lafayette Road
St Paul, MN 55155

Dear Ms. Newton and Mr. Reetz:

We are writing to inform you of the finding of a public health hazard associated with community exposures to hydrogen sulfide air emissions from the Excel Dairy, Excel Township, Marshall County, Minnesota (near Thief River Falls, MN). This conclusion is based on air monitoring data collected by the Minnesota Pollution Control Agency (MPCA) and by the Agency for Toxic Substances and Disease Registry (ATSDR) during an Exposure Investigation (EI). A more formal and complete Exposure Investigation report, including more detailed descriptions of methodologies and results, will be available later this year.

Background

The Excel Dairy under the ownership of The Dairy Dozen of Veblen, South Dakota has been permitted since 2006. The Dairy has a capacity of 1544 animal units or 1100 cows over 1,000 pounds (milked or dry) (Permit MN0068594). The Dairy has 3 free-stall barns, a sand separator building, a feed storage pad, and 3 earthen manure storage basins or lagoons. The lagoons are either uncovered or incompletely covered, and are thought to be the major source of odors and emitters of hydrogen sulfide (H_2S) at the facility. Approximately 12 families live within 1 mile of the Excel Dairy.

The Minnesota Department of Health (MDH) and the Minnesota Pollution Control Agency (MPCA) received complaints from citizens about odors, health effects and hydrogen sulfide (H_2S) emissions originating at the Dairy. Citizen health complaints included upper respiratory effects (such as nasal congestion and sore throats), itchy eyes, trouble breathing, nausea and headaches.

In response to these complaints, MPCA installed two continuous air monitors (CAMs) at the fence line to the northeast (May 6, 2008) and to the west (May 19, 2008) of the on-site manure lagoons at Excel Dairy. MPCA also installed meteorological equipment at the northeast site. Figure 1 shows the relationship of MPCA air monitoring equipment to the Dairy. Since the range of the MPCA H_2S monitors were from 0-90 ppb, air concentrations in excess of 90 ppb could not be quantified. As a result, the maximum concentrations at those locations are unknown.

Minnesota Ambient Air Quality Standards (MAAQS) require that there be no more than two 30 minute periods of H_2S above 30 ppb in 5 days, or no more than two 30 minute periods of H_2S above 50 ppb in any year (Minnesota Administrative Rules 7009.0080). Standards are applicable at the property boundary of the facility, and/or at locations to which the general public has access. Large livestock facilities are exempt from these requirements for a maximum of 21 days per calendar year during and for 7 days after manure is removed from barns or manure storage facilities. Operators of livestock facilities claiming this exemption are required to provide notice to either the MPCA or the county feedlot officer. The MPCA may not require air emissions modeling for a type of livestock system that has not had a hydrogen sulfide emission violation (Minnesota Statutes 116.0713). MDH has promulgated a subchronic Health Risk Value (HRV) for hydrogen sulfide of 7 ppb for a period of 13 weeks (Minnesota Administrative Rules 4717.8000-4717.8600).

Over a 4 month period (May-Sept), MPCA monitoring data showed the hydrogen sulfide levels exceeded 30 ppb for 15.5 hours (cumulative) at the northeast monitor location and for 172.5 hours (cumulative) at the west monitor location. Furthermore, despite the fact that the maximum concentrations for the MPCA data are not known, the average concentration over that period exceeded the subchronic HRV of 7 ppb.

The Minnesota Attorney General and the MPCA filed an Interim Order for injunctive relief against the Excel Dairy owner on June 20, 2008 to address operational shortfalls contributing to these ambient releases of hydrogen sulfide. As you are aware, these exceedences also prompted the Notice of Violation issued by USEPA to Excel Dairy owners on July 18, 2008.

Toxicity of Hydrogen Sulfide

Of all of the chemicals that are emitted from the storage, handling, and decomposition of animal wastes, hydrogen sulfide is one of the most important. This is due to the fact that large amounts of hydrogen sulfide gas are produced under anaerobic conditions and that is a gas that is heavier than air. As a result, it has the ability to accumulate in low-lying areas and when meteorological conditions lead to less air mixing. The odor threshold for hydrogen

sulfide ranges from 0.5 to 300 ppb. Adverse health effects associated with short-term exposures to hydrogen sulfide include airway constriction in individuals who have asthma, decreased lung function, eye irritation, dizziness, nausea, and headache. Acute exposures to high concentrations (greater than 100 ppm) may result in pulmonary edema, physical collapse, and death (ATSDR, 2006). Although many of these effects from acute exposure are reversible, exposure to high concentrations for even a short period can lead to long-lasting neurological impacts.

Long-term or repeated episodic exposures to hydrogen sulfide are likely to result in the same types of reversible effects observed with acute exposures, such as irritation of nose and respiratory tract, headaches and nausea (cf. MDH, 2008, Collins and Lewis, 2000). There is only limited epidemiological data assessing the potential for irreversible effects from chronic exposures low level (below 1 ppm). However, several studies and case reports have observed neurological effects with such low level exposure (ATSDR, 2006).

ATSDR Exposure Investigation

A group of citizens acquired a Jerome 631-X meter (instrument for measuring hydrogen sulfide in air), and developed a protocol to document readings of hydrogen sulfide. This citizen group submitted data to MDH, showing many periods of hydrogen sulfide in the hundreds of parts per billion (ppb), and on one occasion citizens submitted data with periods in excess of 1,000 ppb of H_2S. These detections were reported as various locations near residences and areas outside of the Excel facility.

Based on a request from MDH to collect more data about community exposures to hydrogen sulfide, ATSDR approved the request for an Exposure Investigation (EI) on June 19, 2008. On July 9, 2008, ATSDR staff initiated sampling for hydrogen sulfide levels at three residential locations in proximity to the Excel Dairy (Figure 1). The sampling instruments, known as Single Point Monitors, were placed at both outdoor and indoor locations at these locations. The monitors detected the concentration of hydrogen sulfide continuously throughout the day for a 2-3 week period at each location. In addition, the two MPCA monitoring stations continued to collect data during the ATSDR EI at the fence line to the northeast and west of the onsite manure lagoons.

Although hydrogen sulfide is the target contaminant for the EI, it is acknowledged that over 80 chemicals are known to be emitted to air from dairy operations. In addition to hydrogen sulfide, chemicals that could contribute to odors and irritation include ammonia and other reduced sulfur compounds including dimethyl sulfide and dimethyl disulfide (Filipy et al., 2006).

Results from EI

In addition to the MPCA air standard for hydrogen sulfide (no more than two 30 minute periods of H_2S above 30 ppb in 5 days, or no more than two 30 minute periods of H_2S above 50 ppb in any year), the air monitoring data were compared to the ATSDR Minimal Risk Levels (MRLs) for acute or intermediate exposures. The acute MRL for hydrogen sulfide

exposure is 70 ppb is based on respiratory effects in humans resulting from a 30 minute exposure. The intermediate MRL is 20 ppb, based on neurological effects in animals resulting from exposure over a 10 week period. Other comparison criteria are summarized in Table 1. Background concentrations of hydrogen sulfide in outdoor air are typically less than 1 ppb (ATSDR, 2006).

The data indicate that both ATSDR and MPCA health based guidelines were exceeded at all five ATSDR and MPCA sampling locations. At ATSDR sampling locations S1 and S3, where monitoring occurred over a 15 day period from July 16-July 31, ambient air concentrations reached levels up to 481 ppb, with many periods where air concentrations were over 100 ppb. Furthermore, many of these episodes of elevated hydrogen sulfide concentrations lasted for many hours. During a two week period, ambient concentrations of hydrogen sulfide at Site 3, the residence in closest proximity and most affected by site releases, exceeded the acute ATSDR MRL for over 8 hours (cumulative), but the average concentration over that time did not exceed the intermediate ATSDR MRL.

During this same period, the 30 min average concentrations at the MPCA Site 2 monitor (west of facility and closest to the manure lagoons) exceeded the acute ATSDR MRL for 10.5 hours. The MPCA air quality standards for H_2S were exceeded over 300 times at the MPCA monitoring stations before, during, and after the EI (May-Sept). Comparison of the MPCA data to longer duration criteria (e.g. ATSDR Intermediate MRL) is limited because the maximum concentrations were not quantifiable with their monitoring.

Child Health Considerations

Citizens have reported the presence of children on the Dairy site. During the EI, ATSDR and MDH staff noticed a toddler onsite in at a mobile home. It is unknown whether or not workers and their families live onsite. Manure lagoons are unrestricted and easily accessible to workers and their families. Therefore, children living on or near this site may be at risk for elevated exposures to hydrogen sulfide.

Conclusions

Although ATSDR did not conduct a formal health study to evaluate the health of people living on or near Excel Dairy, the symptoms described by the residents to ATSDR and MDH staff were consistent with the known acute health effects of hydrogen sulfide exposure. Based on the air monitoring data collected by during the EI and by MPCA, ATSDR and MDH conclude that inhalation exposure to hydrogen sulfide poses a *public health hazard* to area residents.

No data has been provided to ATSDR or MDH to determine the concentration of hydrogen sulfide exposure that individuals who work or live on the Excel Dairy property may experience. However, given their proximity to the source of emissions, the exposure of these individuals may be a significant health concern.

Recommendations

1) Excel Dairy should take action immediately to implement improved emission control measures that will significantly reduce the levels of exposure to hydrogen sulfide gas released from onsite operations.

2) MPCA and Excel Dairy should coordinate to implement an air monitoring program to verify the effectiveness of emission control measures in reducing the release of hydrogen sulfide gas.

3) Excel Dairy should restrict access to lagoons to reduce physical hazards and direct exposures to trespassers and children living on-site.

ATSDR and MDH are available to consult further with U.S. EPA and MPCA on remediation efforts at this site. If you have any questions, please contact Mark Johnson at the ATSDR Region 5 Office (312-886-0840) or Rita Messing at MDH (651-201-4916).

Sincerely,

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Hon. Norm Coleman, US Senate
Hon. Amy Klobuchar, U.S. Senate
Hon. Collin Peterson, U.S. House of Representatives
Hon. Leroy Stumpf, Minnesota Senate
Hon. Dave Olin, Minnesota House of Representatives
Hon. Jim Vickerman, Minnesota Senate
Hon. Satveer Chaudhary, Minnesota Senate
Hon. Ellen Anderson, Minnesota Senate
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The Dairy Dozen

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Filipy, J. et al., 2006. Identification and quantification of volatile organic compounds from a dairy. *Atmospheric Environment 40:* 1480-1494.

MDH, 2008. Memo from Rita B. Messing to John Linc Stine.

Table 1: Guidelines for hydrogen sulfide exposures

	Exposure Value	Exposure Period/Intent
State of Minnesota	30 ppb, no more than twice in 5 days	Ambient Air Quality Standard, not to be exceeded except for exceptions noted in Minnesota Laws.
State of Minnesota	50 ppb no more than twice per calendar year	Ambient Air Quality Standard, not to be exceeded except for exceptions noted in Minnesota Laws.
ATSDR	70 ppb	Acute Minimal Risk Level—value for up to 14 days of exposure. Exposures below this value are not expected to result in non cancerous adverse health effects
ATSDR	20 ppb	Intermediate Minimal Risk Level—value for between 15-365 days of exposure. Exposures below this value are not expected to result in non-cancerous adverse health effects
State of Minnesota	7 ppb	Health Risk Value (HRV) — Subchronic exposure (up to 13 weeks)
California EPA	30 ppb	Reference Exposure Limit (REL) —Acute exposure, up to 1 hr
AIHA	100 ppb	ERPG-1—The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild, transient adverse health effects or without perceiving a clearly defined objectionable odor
USEPA	1.4 ppb	Reference concentration (RfC): concentration for a substance in air that EPA considers unlikely to cause noncancer health effects over a lifetime of chronic exposure.
WHO	14 ppb	Medium-term tolerable concentration: The level at which exposure could occur for up to 90 days without appreciable risk of adverse health effects.

Figure 1. Excel Dairy with ATSDR and MPCA Monitoring Stations.

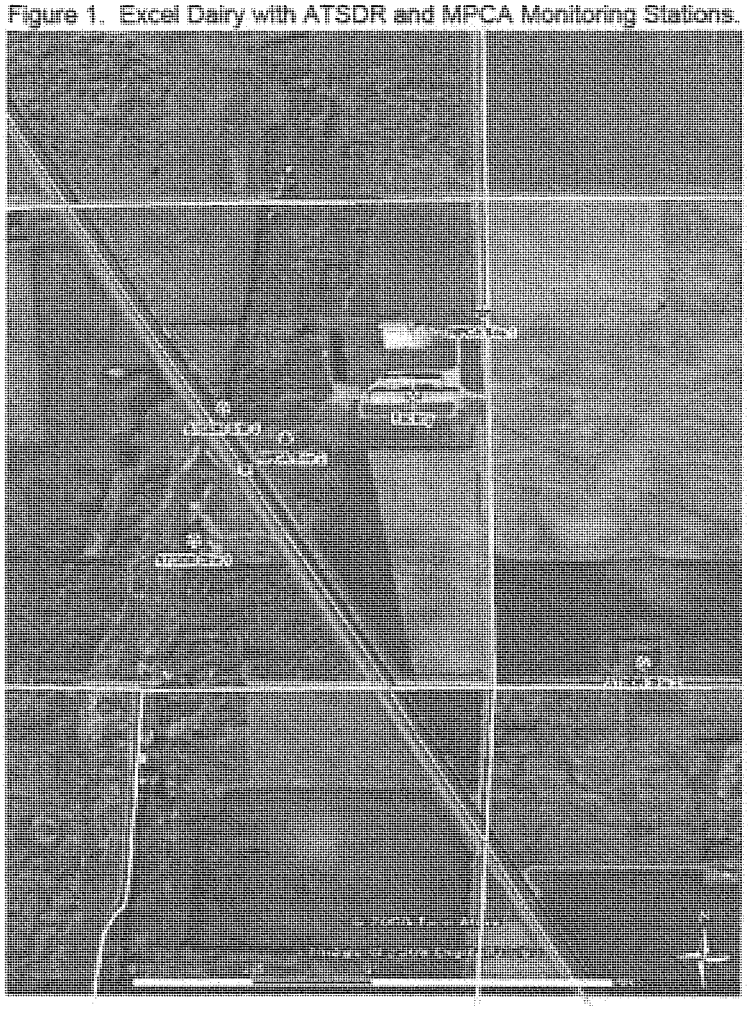
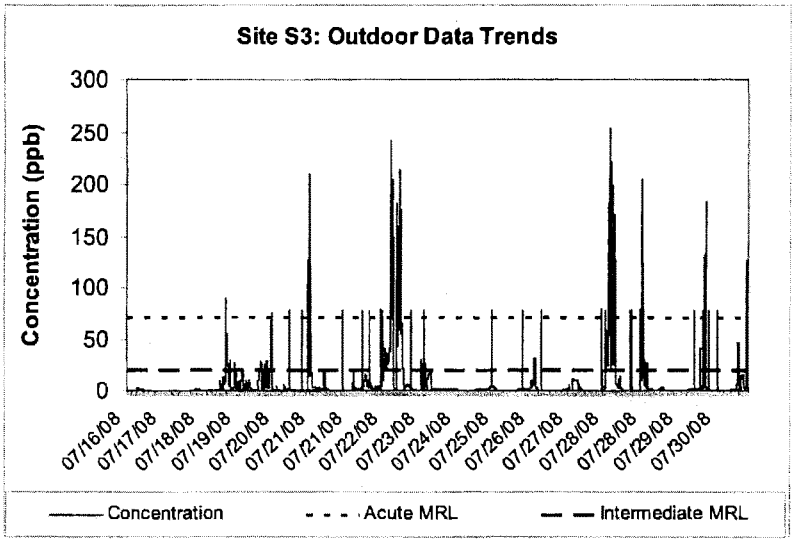


Figure 2: Data trends for most adversely affected ambient air during the ATSDR Exposure Investigation- Residential Monitoring Site 3



Mr. GREEN. Mr. Rey.

STATEMENT OF MARK E. REY, UNDER SECRETARY FOR NATURAL RESOURCES AND THE ENVIRONMENT, U.S. DEPARTMENT OF AGRICULTURE

Mr. REY. Thank you for the opportunity to appear before the committee to describe the activities of the Department of Agriculture in providing assistance to farmers and ranchers in addressing air and water quality issues, particularly as it relates to livestock operations.

EPA's enforcement actions related to air emissions from CAFOs have been based on violations of the Clean Air Act and reporting requirements under CERCLA and EPCRA. Historically, CERCLA and EPCRA were implemented to address hazardous substances that, when released into the environment, may present substantial danger to the public health welfare or the environment. Application of these statutes to address air emissions from CAFOs is a recent phenomenon.

One difficulty for the agricultural community with the application of these statutes to CAFOs is that in determining whether CAFO air emission thresholds have been exceeded. In the early part of this decade, EPA commissioned a National Academy of Sciences study on air emissions from animal feeding operations. NAS published a report in 2003, and the most significant recommendation of the NAS study was the need to develop a process-based model of CAFOs to more accurately estimate the air quality impacts of these operations.

To support the conduct of this study, EPA and USDA held a joint meeting in November of 2003 with a number of scientists, CAFO representatives, and environmentalists. Meetings were held after the initial meeting to develop a scientifically-sound monitoring protocol. Following publication in the Federal register, EPA conducted signup opportunities in selected sites for the study. In 2007, the state-of-the-art mobile laboratories were positioned on selected CAFOs and began data collection.

It is anticipated the data collection efforts will conclude in 2009 and EPA will begin the development of their emissions estimation methodology. This methodology is the first step in the EPA's process to develop a more comprehensive estimation technique recommended by the National Academy of Scientists, a processed-based model which will aid in the development of any needed air emission requirements from CAFOs which will thereafter be science-based requirements.

Recently, relative to this area, USDA was sent a copy of a draft GAO report. USDA agriculture and air quality experts reviewed the draft report to determine its accuracy. Based on that review, a total of 14 pages of comments were drafted and submitted to GAO on the draft report. I will submit the entirety of those comments for the record of this hearing. They are summarized in our statement for the record, but fundamentally, the GAO analysis was, in our view, one, conducted over too short a time period, two, appears to be a relatively superficial investigation and analysis, three, did not adequately involve agriculture and air quality experts both within USDA and outside of government, and, four, fails

to allow for the inclusion of USDA's comments that would have corrected some of the inaccuracies in the report. At best, these findings represent operations as they were conducted decades in the past.

Today there are numerous programs at USDA that assist farmers and ranchers to ensure better management of all of our natural resources including the air and water quality implications of CAFOs. A summary of those programs, the investments that have been made at Congress's direction, are provided in my statement for the record.

USDA has enjoyed, over the last several years, a positive working relationship with EPA, working together to resolve regulatory challenges. With specific regard to CAFOs, we have been working together under a unified national CAFOs strategy throughout the past 10 years that directs a number of joint agency efforts to deal with air and water quality implications from CAFOs. I will submit a copy of that strategy for the record as well.

Now, I think probably it is worthwhile to comment a little bit on the Excel Dairy situation, which is the only situation that has been identified thus far that released enough emissions that triggered a CERCLA or EPCRA requirement. What happened on the ground affected what happened in the air, and the things that happened on the ground at Excel Dairy should not have happened under a normally permitted CAFO.

Essentially Excel Dairy went bankrupt. They were allowed by the state of Minnesota to leave manure in their pits. That manure festered in a straw-based solution for 3 to 5 years before a successor in interest reopened the dairy. That successor in interest was allowed to reopen the dairy without cleaning up the old manure or expanding the size of the pits to accommodate a twofold increase in the number of animals.

The mixture of the old manure that had been fermenting for 3 to 5 years and the new manure is what likely caused a spike in hydrogen sulfide emissions to the level that previous witness indicated. Had the state of Minnesota been properly operating the permitting process for the dairy, both before Excel went bankrupt and after a successor in interest took over, their likely wouldn't have been that level of emission.

Mr. GREEN. Mr. Rey, please conclude.

Mr. REY. I am concluding. Thank you for the opportunity to offer my testimony.

[The prepared statement of Mr. Rey follows:]

STATEMENT OF MARK REY

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to appear before the Committee to describe the activities of the United States Department of Agriculture (USDA) in providing assistance to farmers and ranchers in addressing water quality, particularly as it relates to livestock operations. As Under Secretary overseeing the Natural Resources Conservation Service (NRCS), I have experienced firsthand some of the excellent conservation work that farmers, ranchers, and other private landowners are performing by working hand-in-hand with local NRCS staff and our many partners.

Through the technical and financial assistance NRCS delivers, our employees work in partnership with private landowners to take proactive steps to improve

water quality and help them comply with local, State and federal regulatory requirements across the Nation.

HELPING PEOPLE HELP THE LAND

For over 70 years, NRCS has been committed to working with America's private landowners through a locally led, voluntary, cooperative conservation approach. Because of this ″ground-up″ approach to helping people, we describe NRCS as ″helping people help the land.″ Working closely with America's agricultural producers requires a commitment to providing high quality service resulting in improved environmental benefits and a healthier landscape.

CHALLENGES OF APPLYING CERCLA AND EPCRA TO CAFOS

While many of the initial complaints were driven by odor issues, EPA enforcement actions and the citizen suits related to air emissions from CAFOs (Concentrated Animal Feeding Operations) have been based on violation of the Clean Air Act (CAA) and the reporting requirements under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Emergency Planning and Community Right-To-Know Act (EPCRA).

Historically, CERCLA and EPCRA were implemented to address hazardous substances that when released into the environment may present substantial danger to the public health, welfare or the environment. Application of these statutes to address air emissions from CAFOs is a recent phenomenon. One difficulty for the agricultural community with the application of these statutes to CAFOs is in determining whether CAFO air emission thresholds have been exceeded.

In the early 2000s, EPA commissioned a National Academy of Sciences (NAS) study on air emissions from animal feeding operations. This analysis was commissioned because EPA understood the limits of its scientific knowledge of air emissions from these types of operations. NAS published its report, entitled ″Air Emissions From Animal Feeding Operations: Current Knowledge, Future Needs,″ in 2003. The most significant recommendation of the NAS study was the need to develop a process-based model of CAFOs to more accurately estimate the air quality impacts of these operations.

Prior to the issuance of the NAS study, CAFO operators/farmers approached EPA about the enforcement of environmental laws governing air emissions, and the limits of EPA's knowledge of their operations. These operators offered to participate in, and fund, a two-year study in exchange for a limited ″covenant not to sue″ for failure to report on-site quantities in excess of the reportable quantity. As a result of these discussions, over 2,600 CAFO operators entered into a Consent Agreement and Final Order, an administrative enforcement settlement with EPA, whereby they agreed to pay a civil penalty for violations of the CAA, CERCLA and EPCRA, and participate in and be responsible for funding a portion of the National Air Emissions Study (NAEMS) study. In exchange, EPA agreed not to bring civil enforcement actions against the participating CAFO owners/operators for past and ongoing violations of the CAA, CERCLA and EPCRA as long as they ultimately come into compliance under the terms of the Consent Agreement.

To support the conduct of the NAEMS study, EPA and USDA held a joint meeting in November 2003 at the USDA Beltsville, MD, research facility. A number of scientists, CAFO representatives and environmentalists were in attendance. In addition, staffs from USDA and EPA with air quality and agricultural experience were also in attendance. Over the 2.5 days of the meeting, a strategy for developing the testing protocol was developed. Following this strategy, multiple conference calls and meetings were held with attendees from the initial meeting to develop a scientifically sound monitoring protocol. As a result of that effort, the Consent Agreement and the monitoring protocol were published in the Federal Register.

Following publication in the Federal Register, EPA conducted sign-up opportunities and selected sites for the NAEMS study. In 2007, the state-of-the-art mobile laboratories were positioned on selected CAFOs and began data collection. It is anticipated that data collection efforts will conclude in 2009 and EPA will begin the development of their emission estimation methodology. This emission estimation method is the first step in EPA's process to develop the more comprehensive (and more accurate) estimation technique recommended by NAS - a process-based model. It is our understanding that EPA will use additional information to help in their development of the process-based model, which will occur at a later date.

It should be noted that USDA supports EPA's effort to develop a sound scientific basis for accurately determining CAFO impacts on air quality. The use of sound science to determine agricultural impacts helps to sustain a viable agricultural economy and a healthy environment.

CAFOs AND THE GAO AUDIT

As part of the audit process, GAO conducted limited interviews with agriculture and air quality experts at USDA. For some reason, GAO sought information from unidentified experts not associated with CAFO programs conducted at USDA.

Recently, USDA was sent a copy of the draft GAO report. USDA agriculture and air quality experts reviewed the draft report to determine its accuracy. Based on that review, a total of fourteen pages of comments were crafted and submitted to GAO on the draft report. These comments identified numerous incorrect statements and calculation errors that mischaracterize CAFO impacts and EPA's efforts to gather sufficient information in the NAEMS study to more accurately characterize CAFO emissions.

In general, GAO's draft report suffers from many inaccuracies, including erroneous assumptions, faulty information and uncited references. Moreover, we believe that GAO missed an important opportunity to correctly present CAFO producers as environmentally responsible citizens - a fact demonstrated by the evidence to date. We believe that there should have been more time dedicated to preparing the draft report, as well as consistent input from experts at USDA and EPA and better use of the wide variety of written materials currently available.

The draft report contains many factual errors. The following are a few examples:

•GAO states that on any one day the hog population of the five North Carolina counties referenced in their draft report is over 9 million hogs producing almost 19 million tons of manure per year. This is a factual error based on an inaccurate estimate of swine populations. The 19 million ton figure for yearly manure production is off by as much as 30 to 40 percent. According to our estimates, the actual amount of manure produced is 11.4 to 13.3 million tons per year.

•The assertion that insufficient land exists in the five county area to utilize the nutrients from the manure produced by the swine industry which is leading to water quality degradation is incorrect. The Cape Fear River system in North Carolina drains three of the largest swine producing counties in the United States that constitute over 70% of the swine production in North Carolina. The Black and South rivers, part of the Cape Fear River system, are classified by the North Carolina environmental agencies as ″Outstanding Resource Water,″ a rating that signifies excellent water quality as defined by the North Carolina Division of Water Quality.

•The draft report indicates that ″the contamination may have occurred because the hog farms are attempting to dispose of excess manure but have little available cropland that can effectively use it.″ In fact, every single permitted swine operation in North Carolina has a Certified Animal Waste Management Plan and waste treatment structure that has been certified as sufficient to treat the total volume of manure produced as well as account, by land application on growing crops, for all plant available nitrogen produced by the operation.

•The GAO draft report characterizes USDA's Agricultural Air Quality Task Force as a Federal agency rather than a Federal Advisory Committee that operates under the mandate established by Congress in the 1996 FAIR Act and is governed by the Federal Advisory Committee Act. The Agricultural Air Quality Task Force (AAQTF) is a Federal Advisory Committee (not an ″agency″) that makes recommendations to the Secretary of Agriculture. The AAQTF cannot enter into any MOU with EPA as has been indicated in the draft GAO report.

The GAO analysis was: (1) conducted over too short a time period, (2) appears to be a poor investigation and analysis, (3) did not adequately involve agriculture and air quality experts at USDA and (4) fails to allow for inclusion of USDA's comments that would correct the errors contained in the draft report. At best, these findings represent operations as they were conducted decades in the past. The vast majority of CAFOs are very well run from an environmental standpoint.

Today, there are numerous programs at USDA that assist farmers and ranchers to ensure better management of all natural resources, including water and air quality. Below are a few examples of recent activities that we have undertaken that demonstrate our commitment to address these issues:

•In 2007, NRCS helped farmers and ranchers develop over 5,100 and apply over 4,400 Comprehensive Nutrient Management Plans (CNMPs) for livestock manure management, bringing the total CNMPs written with NRCS assistance since 2002 to 33,600 and CNMPs applied to 21,400.

•Developed United States Department of Agriculture (USDA) policy on market-based incentives and signed a Partnership Agreement with the U.S. Environmental Protection Agency (EPA) to further the market-based approach.

•Provided technical assistance to help farmers and ranchers treat over 47 million acres of working lands to improve or enhance soil quality, water quality, water management, wildlife habitat, and air quality.

•Provided conservation technical assistance to nearly 1 million customers throughout the Nation.

These activities are a direct outcome of programs supported and authorized by Congress. These programs include, but are not limited to:

•Conservation Technical Assistance (CTA) Program - a voluntary, incentive-based program of conservation activities where a producer identifies the unique resource concerns of his or her operation as a starting point and develops a conservation plan. This conservation plan is the foundation of locally-led, cooperative conservation.

•Environmental Quality Incentives Program (EQIP) - a flagship working lands conservation program. The objective of EQIP is to optimize environmental benefits. The program provides technical and financial assistance to landowners that face serious natural resource challenges in their management of cropland, grazing lands, forestland, livestock, and wildlife habitat.

In FY 2007, over 66 percent or $520 million of EQIP funds was obligated for assisting livestock producers. Of that amount, over one-fourth ($141 million) went to confined livestock operations.

Figure 1 provides details about the confined livestock operations which benefited from EQIP funding in FY 2007.

FIGURE 1

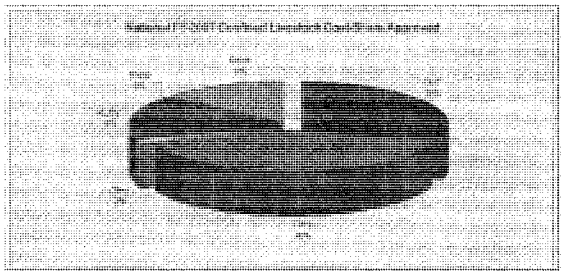
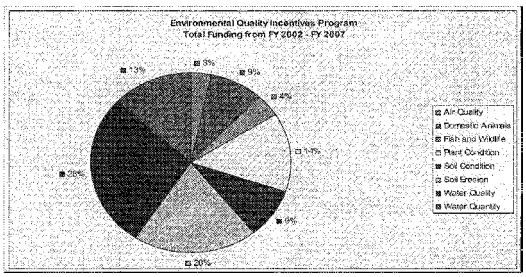


Figure 2 demonstrates the broad range of natural resource issues that EQIP addresses, including 28 percent of funding going toward water quality improvement practices.

FIGURE 2



•Conservation Security Program (revised as the new Conservation Stewardship Program in the 2008 Farm Bill) - a voluntary program that provides financial and technical assistance for the conservation, protection, and improvement of natural resources on tribal and private working lands. The Conservation Stewardship Program is a working lands program that offers incentives for higher levels of conservation to those producers who have already achieved progressive stewardship throughout their operations.

We have made significant progress in helping people help the land by providing technical and financial support to the Nation's agricultural producers. But while we have excellent information about our program outputs, we still are working to quan-

tify our data on the environmental outcomes of our programs and improve our practices, where warranted.

Starting in 2003, NRCS, in collaboration with other USDA and Federal agencies, initiated the Conservation Effects Assessment Project (CEAP) to scientifically assess the environmental and related outcomes from Farm Bill conservation programs at both the national and watershed scale.

The national assessment initially focuses on water quality, soil quality, and water conservation benefits from cropland programs, including the Conservation Reserve Program. Using the National Resources Inventory data, supplemented by farmer surveys and verified by USDA computer models, CEAP will estimate national benefits from conservation practices and programs. In addition to the cropland component, CEAP includes wetlands, grazing lands and wildlife components in the assessment of conservation benefits from Farm Bill programs To date, the CEAP analysis discussed here assessed the land application of manure (regardless of the source of the manure). It assessed nutrient losses and soil enhancements from the application of manure. Other aspects of manure management that may occur on a CAFO were not assessed.

In terms of outputs, farmers and ranchers are making important gains in conservation on working lands. They have applied conservation systems to over 57 million acres of cropland and over 108 million acres of grazing lands, and improved 56 million acres of fish and wildlife habitat. We will use the CEAP data to more precisely measure the results and actual outcomes we are helping our customers achieve.

In addition to our internal efforts to improve the environmental footprint of CAFOs, USDA and EPA staffs work collaboratively to ensure that EPA guidelines, policies and regulations are based on sound science. USDA staff work with EPA staff to provide them with a better understanding of current agricultural conservation systems and practices so that if regulation is warranted, the requirements will result in real environmental benefits. These are but a few examples of our work to ensure a healthy environment and a safe food supply for the public.

CHALLENGES OF REGULATIONS

Mr. Chairman, USDA has enjoyed a positive working relationship with the United States Environmental Protection Agency (EPA) in recent years, working together to resolve regulatory challenges.

USDA provided extensive consultation to EPA as they developed revised rules in response to the Second Circuit decision in Waterkeeper v. EPA. During the course of this assistance, USDA and EPA have developed a very effective partnership. The agencies have agreed to the same approaches for nutrient management plans so that they can be used for both USDA programs and EPA regulations. EPA has become a full partner with USDA and Purdue University in the development of the Manure Management Planner software that will enable faster and more accurate production of Comprehensive Nutrient Management Plans.

EPA has also proposed to use two USDA software products in the revised rule to support a demonstration of ″no discharge″ from the production facility of a Concentrated Animal Feeding Operation. These software products are the Soil, Plants, Air and Water model and Agricultural Water Management model. These models are able to assess whether or not a discharge will occur from a CAFO under greater than 100-year frequency rainfall combined with a properly installed Comprehensive Nutrient Management Plan.

USDA is updating internal technical policy on Comprehensive Nutrient Management Plans so that it reflects the streamlining efforts referenced above and coordinates terms with EPA.

The messages and concerns of private agriculture producers are being heard and we have established the right kind of dialogue to ensure that both solid science and the day-to-day realities of farming operations are being heard in EPA's regulatory actions. However, I want to take a moment to express a few concerns regarding some of the assertions that have been associated with further regulatory activities.

While great strides have been made, there contiues to be a need to improve estimation of CAFO emissions so that they and potential environmental impacts are correctly characterized. USDA supports EPA's NAEMS study as a step forward to develop methods to more accurately estimate CAFO emissions. Finally, there is a great need to establish agriculturally appropriate regulatory definitions for terms such as ″source,″ ″contiguous property,″ ″discrete facilities,″ and other terms used to determine the applicability of regulations. It is only through an appropriate characterization of agricultural emissions and a clear understanding of regulatory language that agricultural operations can fairly and appropriately be engaged to com-

ply with current and future regulations. With source appropriate regulatory requirements and a clear understanding of those requirements, farmers and ranchers can continue to provide the safest, most abundant, and reasonably priced food supply while meeting the commitment to conserve our natural resources.

SUMMARY

I am proud of the work and the conservation ethic our people exhibit day in and day out as they go about the job of achieving conservation on the ground. Through Cooperative Conservation, we have achieved a great deal of success. We are sharply focusing our efforts and will work together with our partners to continue to make improvements to water and air quality. We are demonstrating that voluntary, incentive-based conservation program work and expansion of regulatory requirements is not always necessary. I look forward to working with you, as we move ahead in this endeavor.

This concludes my statement. I will be glad to answer any questions that Members of the Subcommittee might have.

Mr. GREEN. Thank you. Our next witness is Ms. Mittal.

STATEMENT OF ANU MITTAL, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Ms. MITTAL. Mr. Chairman and members of the subcommittee——

Mr. GREEN. You want to—yes.

Ms. MITTAL. Sorry. Mr. Chairman and members of the subcommittee, thank you for inviting us to participate in your hearing today. At your request, my testimony will summarize the findings of the GAO's report that you released today on air and water pollution associated with concentrated animal feeding operations, known as CAFOs.

As you know, CAFOs can produce thousands of tons of manure a year, and if this manure is not properly managed, it can result in the release of a variety of harmful substances into the environment. Our report's findings also provide important context for evaluating EPA's recent proposal to exempt farms that have releases of hazardous substances from manure from CERCLA and EPCRA's reporting requirements.

First we tried to determine how many CAFOs are in operation and how much manure they actually produce. Unfortunately because no Federal agency collects data on CAFOs, no one knows exactly how many CAFOs are in operation. What we do know is that the number of large farms that raise animals increased by 230 percent between 1982 and 2002 and the number of animals raised on these farms has also increased. So we would expect that CAFOs have also experienced similar growth trends.

What is more troubling, however, is that EPA does not have accurate, consistent, and complete data on the number, location, and size of those CAFOs that have been issued an NPDES permit even though we are not talking about the Clean Water Act today. Without this information, EPA cannot effectively regulate discharges from CAFOs.

Although we do not know exactly how many CAFOs are in operation, we can estimate the amount of waste an individual operation can generate. As you would expect, the amount of manure produced

by a CAFO depends on a number of factors, including the type and number of animals raised and the feeding practices employed.

A minimum-sized CAFO raising 82,000 layers, therefore, can produce about 2,800 tons of manure a year. While on the other extreme, a CAFO with 800,000 hogs can produce more than 1.6 million tons of manure a year. 1.6 million tons of manure, as has already been mentioned, is more than one and a half times the human sanitary waste produced by the city of Philadelphia. For CAFOs that produce such large amounts of manure, hazardous substance releases can become a real issue.

We also looked at the research that has recently been completed linking pollutants released by CAFOs to impacts on human health and the environment. We identified at least 34 studies that have researched this linkage and found that the majority of these studies established either a direct or an indirect link between specific air and water pollutants released by CAFOs and human health and environmental impacts. Only 7 of the 34 studies that we looked at found no such linkage.

EPA has been regulating CAFOs under the Clean Water Act for almost 30 years and has long recognized the potential impacts that CAFO water pollutants can have on human health and the environment. It is only recently that EPA has become concerned about similar impacts for air pollutants released by CAFOs. However, EPA has yet to assess the extent of these impacts for either water or air pollutants because it lacks data on the characteristics of CAFOs nationwide and the amount of pollutants they are actually releasing.

EPA told us that it does not have the resources to collect the nationwide data that it needs for water pollutants, but for air pollutants, a 2-year monitoring study was recently initiated in 2007 that is being funded largely by the industry.

We also found that with regard to CAFO air pollutants that may be regulated under the Clean Air Act and are subject to CERCLA and EPCRA requirements, EPA is still years away from having the air emissions protocols that it needs. The air emissions monitoring study was supposed to provide EPA with scientific and statistically valid data needed to develop air emissions protocols by 2011. However, we identified several concerns with how the study is structured and being implemented that, if not addressed immediately, may result in EPA not obtaining the data that it needs to develop these protocols.

In this regard, the timing of EPA's decision to exempt farms from EPCRA's and CERCLA's reporting requirements is a concern. Because the monitoring study has not been completed, EPA does not know the extent to which hazardous substances are actually being released by animal feeding operations.

In addition, EPA has not yet decided if it will aggregate all of the emissions occuring on an animal feeding operation, or if the emissions will be considered separately to decide if an operation has exceeded allowable limits.

In conclusion, Mr. Chairman, given the dramatic changes that have occurred in the structure of the animal production industry, it is disconcerting that EPA lacks reliable data on the number, location, and size of CAFOs and the amounts of pollutants that they

release. Without this information, EPA can neither effectively monitor the harmful substances released by these operations, nor can they conduct the necessary assessments of how these substances impact human health and the environment.

This concludes my prepared statement. I would be happy to respond to any questions that you might have.

[The prepared statement of Ms. Mittal follows:]

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on Environment and Hazardous Materials, Committee on Energy and Commerce, House of Representatives

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CONCENTRATED ANIMAL FEEDING OPERATIONS

EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality

Statement of Anu K. Mittal, Director
Natural Resources and Environment

GAO-08-1177T

GAO

Highlights

[illegible]

Why GAO Did This Study

Concentrated animal feeding operations (CAFOs) are large livestock and poultry operations that raise animals in a confined situation. CAFOs may improve the efficiency of animal production, but the large amounts of manure they produce can, if improperly managed, degrade air and water quality. The Environmental Protection Agency (EPA) regulates CAFOs and requires CAFOs that discharge certain pollutants to obtain a permit.

This testimony summarizes the findings of a September 4, 2008 GAO report (GAO-08-944) on (1) trends in CAFOs, (2) amounts of waste they generate, (3) findings of key research on CAFOs' health and environmental impacts, (4) progress made in developing CAFO air emission protocols, and (5) the effect of recent court decisions on EPA's regulation of CAFO water pollutants. GAO analyzed U.S. Department of Agriculture's (USDA) data from 1982 through 2002 for large farms as a proxy for CAFOs, reviewed studies, EPA documents, laws, and regulations, and obtained the views of federal and state officials.

What GAO Recommends

In the September 2008 report, GAO recommended that EPA complete the inventory of permitted CAFOs, evaluate the air emissions monitoring study, and establish a strategy and timetable for developing a process-based model for measuring CAFO air emissions. EPA partially agreed with GAO's recommendations.

To view the full product, including the scope and methodology, click on GAO-08-1101T. For more information, contact John R. Stephen, (202) 512-3841, stephenjr@gao.gov.

September 24, 2008

CONCENTRATED ANIMAL FEEDING OPERATIONS

EPA Needs More Information and a Clearly Defined Strategy to More Effectively Protect Air and Water Quality

What GAO Found

Because no federal agency collects accurate and consistent data on the number, size, and location of CAFOs, GAO could not determine the exact trends for these operations. However, using USDA data for large farms that raise animals as a proxy for CAFOs, it appears that the number of these operations increased by about 230 percent, from about 3,600 in 1982 to almost 12,000 in 2002. The number of animals raised on large farms also increased during this 20-year period, but the rate of increase varied by animal type. Moreover, EPA does not have comprehensive, accurate data on the number of permitted CAFOs nationwide. As a result, the agency does not have the information that it needs to effectively regulate these CAFOs. EPA is currently working with the states to establish a new national data base.

The amount of manure generated by large farms that raise animals depends on the type and number of animals raised, but these operations can produce from 2,800 tons to 1.6 million tons of manure a year. Some large farms that raise animals can generate more manure annually than the sanitary waste produced by some U.S. cities. Manure can be used beneficially to fertilize crops; but according to some agricultural experts, when animal feeding operations are clustered in certain geographic areas, the manure they produce may not be effectively used as fertilizer on adjacent cropland and could increase the potential of pollutants reaching nearby waters and degrading water quality.

Since 2002, at least 68 government-sponsored or peer-reviewed studies have been completed that examined air and water quality issues associated with animal feeding operations and 15 have directly linked air and water pollutants from animal waste to specific health or environmental impacts. EPA has not yet assessed the extent to which pollutants from animal feeding operations may be impairing human health and the environment because it lacks key data on the amount of pollutants being discharged by these operations.

Considered a first step in developing air emission protocols for animal feeding operations, a 2-year nationwide air emission monitoring study, largely funded by the industry, was initiated in 2007. However, the study, as currently structured, may not provide the scientific and statistically valid data it was intended to provide and that EPA needs to develop these protocols. In addition, EPA has not yet established a strategy or timetable for developing a more sophisticated process-based model that considers the interaction and implications of all emission sources at an animal feeding operation.

Two recent federal court decisions have affected EPA's ability to regulate water pollutants discharged by CAFOs. The 2005 *Waterkeeper* decision required EPA to abandon the approach that it had proposed for regulating CAFOs in 2003. Similarly, the *Rapanos* decision has complicated EPA's enforcement of CAFO discharges because EPA believes that it must now gather more evidence to establish which waters are subject to the Clean Water Act's permitting requirements.

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss our recently issued report on concentrated animal feeding operations (CAFO).[1] As you know, CAFOs are large animal livestock and poultry operations that raise animals in confined situations. While CAFOs have improved the efficiency of the animal production industry, they have also raised environmental and health concerns because the large amounts of manure they can produce, if not properly managed, may degrade air and water quality. Animal manure can be, and frequently is, used beneficially on farms to fertilize crops and restore nutrients to soil. However, if manure and wastewater from animal feeding operations are improperly managed, pollutants such as nitrogen, phosphorus, bacteria, and organic matter could enter nearby water bodies and could potentially impair human health and damage the environment. Improperly managed manure can also result in emissions to the air of particles and gases, such as ammonia and hydrogen sulfide, which could also result in potentially harmful environmental and human health effects.

The Environmental Protection Agency (EPA) has the authority under several federal laws to regulate water and air pollutants from CAFOs. EPA has specific authority under the Clean Water Act to regulate CAFOs like any other industry if they discharge into federally regulated waters.[2] Such CAFOs must obtain permits, from EPA or the states that EPA has authorized to administer this act, that stipulate how they will manage their discharges. In contrast, three other laws—the Clean Air Act, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERLCA), and the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)—while not specifically citing CAFOs as regulated entities, provide EPA with certain authorities related to air emissions from these operations.

Our testimony today summarizes the following five issues that we examined in our recent report: (1) trends in CAFOs; (2) the amount of waste they generate; (3) the findings of recent key academic, industry, and government research on the impacts of air and water pollutants from

[1]GAO, *Concentrated Animal Feeding Operations: EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality from Pollutants of Concern*, GAO-08-944 (Washington, D.C.: Sept. 4, 2008).

[2]Section 502(14) of the Clean Water Act specifically defines point sources of pollution to include CAFOs.

CAFOs on human health and the environment, and the extent to which EPA has assessed the nature and severity of such impacts; (4) the progress that EPA and the states have made in regulating and controlling the emissions of, and in developing protocols to measure, air pollutants from CAFOs that could affect air quality; and (5) the extent to which recent court decisions have affected EPA and the states' ability to regulate CAFO discharges that impair water quality. In conducting this work, we reviewed laws and regulations, federal and state agencies' documents, and met with officials from EPA and the U.S. Department of Agriculture (USDA), industry, citizen and environmental groups, and academia. We also spoke with state officials and visited CAFOs in eight states.[3] In addition, we analyzed USDA data for large farms as a proxy for CAFOs, conducted library and Internet searches to identify key studies completed since 2002 on air and water pollutants from animal waste, and contacted state officials in all 50 states to determine which states had developed air emission regulations applicable to CAFOs and how recent court decisions had affected their ability to regulate CAFO discharges that impair water quality. We conducted our work between July 2007 and August 2008 in accordance with generally government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary we found the following:

- Determining the trends in the number of CAFOs over time is difficult because no federal agency collects consistent, reliable data on CAFOs. However, USDA data for large farms that raise animals can serve as a proxy for estimating trends in the number and size of CAFOs. Using these data, we found that the number of these operations appears to have increased by about 230 percent from 1982 through 2002, from about 3,600 to almost 12,000. Moreover, the number of animals per farm increased, but the increase varied by animal type, with hog farms showing the largest increase at 37 percent. Although EPA has been compiling data from its regional offices in an effort to develop information on the number of permitted CAFOs nationwide, we found that the data are inconsistent and inaccurate and do not provide necessary information on the number and

[3]These states were Arkansas, California, Colorado, Iowa, Maryland, Minnesota, North Carolina, and Texas.

characteristics of permitted CAFOs. We recommended that the agency develop a complete and accurate inventory of permitted CAFOs and incorporate appropriate internal controls to ensure the quality of the data. EPA concurred with this recommendation and stated that it is currently working with its regional offices and the states to develop and implement a national data system to collect and record facility-specific information on permitted CAFOs.

- While the amount of manure generated by large farms that raise animals depends on the type and number of animals raised, such farms can produce from over 2,800 tons to more than 1.6 million tons of manure a year. In order to provide a perspective on how much manure these operations produce, we compared the manure from some large farms that raise animals with sanitary waste produced by the populations of some U.S. cities. For example, a very large hog farm raising as many as 800,000 hogs—of which there are at least two in the United States—could generate more than 1.6 million tons of manure annually, or more than one-and-a-half times the sanitary wastes produced by the about 1.5 million residents of Philadelphia, Pennsylvania. While we recognize that manure can be a valuable resource used as fertilizer, some agricultural experts and government officials have raised concerns about the amount of manure produced by large feeding operations located within a specific geographic area. When such clustering of large operations occurs, the manure they produce may not be effectively used as fertilizer on adjacent cropland and could increase the potential for pollutants to reach nearby waters and degrade water quality.

- At least 68 government-sponsored or peer-reviewed studies have been completed on air and water pollutants from animal feeding operations since 2002. Of these 68 studies, 15 directly linked air and water pollutants from animal waste to specific health or environmental impacts, 7 found no impacts on human health and the environment, and 12 identified indirect linkages. Thirty-four other studies focused on measuring the amount of water or air pollutants from animal feeding operations that are known to cause harm to humans or the environment. However, EPA has not yet assessed the extent to which air and water pollutants from CAFOs may be impairing human health and the environment because it lacks key information on the amount of pollutants discharged by these operations.

- The ongoing national air emissions monitoring study is considered a first step in developing protocols for measuring and quantifying air pollutants emitted by animal feeding operations. While EPA believes that this 2-year study, initiated in 2007, will provide a scientific basis for estimating air emissions from animal feeding operations, concerns have been raised that

the study, as currently structured, may not provide EPA with the scientific and statistically valid data that it needs to develop these protocols. For example, the study does not include all of the combinations of animal types and geographic regional pairings recommended by EPA's expert panel that would be representative of the animal feeding operations in the United States. Furthermore, EPA has not yet established a strategy or timetable for developing a more sophisticated process-based model that the National Academy of Sciences believed is needed to ensure that the interaction and implications of all emission sources at an animal feeding operation are accounted for. Finally, some EPA actions have made it unclear at this time how the agency intends to regulate air emissions from animal feeding operations once the current air emissions study is complete. For instance, EPA has not decided if it will aggregate the emissions occurring on an animal feeding operation or if the emissions from barns and manure storage areas will be considered separately when determining if an operation has exceeded air emissions thresholds. Moreover, in December 2007, EPA proposed a rule to exempt all releases of hazardous substances, such as ammonia and hydrogen sulfide, to the air from manure on farms, including animal feeding operations, from reporting requirements of certain federal laws. We recommended that EPA take a number of actions to address the concerns that we identified with the ongoing air emissions study. EPA partially agreed with our recommendations and described a number of actions that it has underway to address them.

- Two recent federal court decisions have affected EPA's ability to regulate water pollutants discharged by CAFOs. First, in the 2005 *Waterkeeper Alliance Inc. v. EPA* decision, the U.S. Court of Appeals for the Second Circuit set aside a key provision of a CAFO rule EPA had issued in 2003. This rule would have provided EPA with comprehensive information on the universe of CAFOs and their operations and would have subjected a large number of previously unregulated CAFOs to monitoring and reporting requirements as well as periodic inspections. However, the court concluded that EPA did not have the authority under the Clean Water Act to require CAFOs that were not discharging, or proposing to discharge, pollutants into federally regulated waters to apply for permits. The decision has forced EPA to revise its 2003 rule for permitting CAFOs and return to its approach in which CAFO operators determine for themselves whether they need to apply for a federal permit. To help identify unpermitted discharges, EPA must rely on other means to acquire information about CAFOs that are illegally discharging pollutants, such as following up on citizen reports of potential pollutants. Second, the 2006 Supreme Court decision—*Rapanos v. United States*—has complicated EPA's enforcement of CAFO discharges. This decision has made

determination of Clean Water Act jurisdiction over certain types of waters more complex and, according to EPA, has required the agency to gather significantly more evidence to establish which waters are considered federal waters and subject to the Clean Water Act's permitting requirements. EPA enforcement officials told us that since the *Rapanos* decision the agency may be less likely to take enforcement actions since it may be more difficult to prove that a water body is federally regulated.

Background

The livestock and poultry industry is vital to our nation's economy, supplying meat, milk, eggs, and other animal products. However, the past several decades have seen substantial changes in America's animal production industries. As a result of domestic and export market forces, technological changes, and industry adaptations, food animal production that was integrated with crop production has given way to fewer, larger farms that raise animals in confined situations. These large-scale animal production facilities are generally referred to as animal feeding operations. CAFOs are a subset of animal feeding operations and generally operate on a much larger scale.

Most agricultural activities are considered to be nonpoint sources of pollution because the pollution that occurs is in conjunction with soil erosion caused by water and surface runoff of rain or snowmelt from diffuse areas such as farms or rangeland. However, the Clean Water Act specifically designates point sources of pollution to include CAFOs, which means that under the act, CAFOs that discharge into federally regulated waters are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. These permits generally allow a point source to discharge specified pollutants into federally regulated waters under specific limits and conditions. EPA, or the states that EPA has authorized to administer the Clean Water Act, are responsible for issuing these permits.[4]

In accordance with the Clean Water Act's designation of CAFOs as point sources, EPA defined which poultry and livestock facilities constituted a CAFO and established permitting requirements for CAFOs. According to EPA regulations, first issued in 1976, to be considered a CAFO a facility

[4]Currently, 45 states are authorized to administer the NPDES permit program and their programs must be at least as stringent as the federal program. EPA has retained program authority for Alaska, Idaho, Massachusetts, New Hampshire, and New Mexico. Oklahoma has been authorized to issue permits for most sources, but not CAFOs.

must first be considered an animal feeding operation. Animal feeding operations are agricultural operations where the following conditions are met:

- animals are fed or maintained in a confined situation for a total of 45 days or more in any 12-month period, and
- crops, vegetation, forage growth, or post harvest residues are not sustained during normal growing seasons over any portion of the lot.

If an animal feeding operation met EPA's criteria and met or exceed minimum size thresholds based on the type of animal being raised, EPA considered the operation to be a CAFO. For example, an animal feeding operation would be considered a CAFO if it raised 1,000 or more beef cattle, 2,500 pigs weighing more than 55 pounds, or 125,000 chickens.[5] In addition, EPA can designate an animal feeding operation of any size as a CAFO if it meets certain criteria, such as being a significant contributor of pollutants to federally regulated waters.[6]

In January 2003, we reported that although EPA believed that many animal feeding operations degrade water quality, it had placed little emphasis on its permit program and that exemptions in its regulations allowed as many as 60 percent of the largest operations to avoid obtaining permits.[7] In its response to our 2003 report, EPA acknowledged that the CAFO program was hampered by outdated regulations. The agency subsequently revised its permitting regulations for CAFOs to eliminate the exemptions that allowed most animal feeding operations to avoid regulation. The revisions, issued in February 2003, also known as the 2003 CAFO rule, resulted, in part, from the settlement of a 1989 lawsuit by the Natural Resources Defense Council and Public Citizen. These groups alleged that EPA had failed to comply with the Clean Water Act. EPA's 2003 CAFO Rule included the following key provisions:

[5]40 C.F.R. § 122.23(b).

[6]Federally regulated waterways include waters of the United States as defined in 33 C.F.R. §328.3(a)(1)-(7) and may include rivers, wetlands, impoundments, the territorial seas, andwaters used in interstate commerce.

[7]GAO, *Livestock Agriculture: Increased EPA Oversight Will Improve Environmental Program for Concentrated Animal Feeding Operations*, GAO-03-285 (Washington, D.C.: Jan. 16, 2003).

- *Duty to apply.* All CAFOs were required to apply for a permit under the Clean Water Act unless the permitting authority determined that the CAFO had no potential to discharge to federally regulated waters.

- *Expanded CAFO definitions.* All types of poultry operations, as well as all stand-alone operations raising immature animals, were included in the 2003 CAFO Rule.

- *More stringent design standard for new facilities in the swine, poultry, and veal categories.* The 2003 rule established a no-discharge standard for new facilities that could be met if they were designed, constructed, and operated to contain the runoff from a 100-year, 24-hour storm event.

- *Best management practices.* Operations were required to implement best management practices for applying manure to cropland and for animal production areas.

- *Nutrient management plans.* CAFO operations were required to develop a plan for managing the nutrient content of animal manure as well as the wastewater resulting from CAFO operations, such as water used to flush manure from barns.

- *Compliance schedule.* The 2003 rule required newly defined CAFOs to apply for permits by April 2006 and existing CAFOs to develop and implement nutrient management plans by December 31, 2006.[8]

According to EPA officials, the 2003 rule was expected to ultimately lead to better water quality because the revised regulations would extend coverage to more animal feeding operations that could potentially discharge and contaminate water bodies and subject these operations to periodic inspections.

Three laws provide EPA with certain authorities related to air emissions from animal feeding operations, but, unlike the Clean Water Act, they do not specifically cite CAFOs as regulated entities. The Clean Air Act[9] regulates any animal feeding operation, regardless of size, that exceeds established air emission thresholds for certain pollutants. For example, in certain specific situations, hydrogen sulfide, ammonia, or particulate

[8]In July 2007, EPA extended these deadlines to February 27, 2009.

[9]The Clean Air Act, 42 U.S.C. §§7401-7671q.

matter may be regulated. In addition, Section 103 of CERCLA and Section 304 of EPCRA[10] require owners or operators of a facility to report to federal, state, or local authorities when a "reportable quantity" of certain hazardous substances, such as hydrogen sulfide or ammonia,[11] is released into the environment. Together, CERCLA's and EPCRA's reporting requirements provide government authorities, emergency management agencies, and citizens the ability to know about the source and magnitude of hazardous releases.

EPA also works with USDA to address the impacts of animal feeding operations on air and water quality and human health. In 1998, EPA entered into a memorandum of understanding with USDA that calls for the agencies to coordinate on air quality issues related to agriculture and share information. In addition, in 1999, the two agencies issued a unified national strategy aimed at having the owners and operators of animal feeding operations take actions to minimize water pollution from confinement facilities and land application of manure. To help minimize water pollution from animal feeding operations and meet EPA's regulatory requirements, USDA, through its Natural Resources Conservation Service, provides financial and technical service to CAFO operators in developing and implementing nutrient management plans.

The Number of Large Farms Raising Animals Has Increased, but Specific Data on CAFOs Are Not Available

Because no federal agency collects accurate and consistent data on the number, size, and location of CAFOs, it is difficult to determine precise trends in CAFOs. According to USDA officials, the data USDA collects for large farms raising animals can be used as a proxy for estimating trends in CAFOs nationwide. Using these data, we determined the following:

- Between 1982 and 2002, the number of large farms raising animals increased from about 3,600 to almost 12,000, or by about 234 percent. Growth rates varied dramatically by animal type. For instance, broiler chickens farms showed the largest increase, almost 1,200 percent, followed by hogs at more than 500 percent. In comparison, beef cattle farms grew by only 2 percent and layer chicken farms actually declined by 2 percent.

[10]CERCLA, Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended at 42 U.S.C. §§9601-9675)and EPCRA, Pub. L. No. 99-499, Tit. III, 100 Stat. 1728 (codified as amended at 42 U.S.C. §§11001-11050).

[11]Each of these hazardous substances has a reportable quantity of 100 pounds in a 24-hour period.

- The size of these farms also increased between 1982 and 2002. The layer and hog sectors had the largest increases in the median number of animals raised per farm, both growing by 37 percent between 1982 and 2002. In contrast, large farms that raised either broilers or turkeys only increased slightly in size, by 3 and 1 percent, respectively, from 1982 to 2002.

- The number of animals raised on large farms increased from over 257 million in 1982 to over 890 million in 2002—an increase of 246 percent. Moreover, most of the beef cattle, hogs, and layers raised in the United States in 2002 were raised on large farms. Specifically, 77 percent of beef cattle and 72 percent of both hogs and layers were raised on large farms.

We also found that EPA does not systematically collect nationwide data to determine the number, size, and location of CAFOs that have been issued permits nationwide. Instead, since 2003, the agency has compiled quarterly estimates obtained from its regional offices or the states on the number and types of CAFOs that have been issued permits. However, these data are inconsistent and inaccurate and therefore do not provide EPA with the reliable data that it needs to identify permitted CAFOs nationwide. Without a systematic and coordinated process for collecting and maintaining accurate and complete information on the number, size, and location of CAFOs nationwide, EPA does not have the information it needs to effectively monitor and regulate these operations. In our report, we recommended that EPA develop a national inventory of permitted CAFOs and incorporate appropriate internal controls to ensure the quality of the data it collects. In response to our recommendation, EPA stated that it is currently working with its regional offices and states to develop and implement a new national data system to collect and record facility-specific information on permitted CAFOs.

Large Farms That Raise Animals Can Produce Thousands of Tons of Manure Each Year, and Regional Clustering of Farms Can Exacerbate Manure Management Problems

The amount of manure a large farm that raises animals can generate primarily depends on the types and numbers of animals raised on that farm, but can range from over 2,800 tons to more than 1.6 million tons a year.[12] To further put this in perspective, the amount of manure produced by large farms that raise animals can exceed the amount of sanitary waste produced by some large U.S. cities.[13] For example:

- A dairy farm meeting EPA's large CAFO threshold of 700 dairy cows can create about 17,800 tons of manure annually, which is more than the about 16,000 tons of sanitary waste generated per year by the almost 24,000 residents of Lake Tahoe, California.
- A large farm with 800,000 hogs could produce over 1.6 million tons of manure per year, which is one and a half times more than the annual sanitary waste produced by the city of Philadelphia, Pennsylvania—about 1 million tons—with a population of almost 1.5 million.[14]

Although manure is considered a valuable commodity, especially in states with large amounts of farmland, like Iowa, where it is used as fertilizer for field crops, in some parts of the country, large farms that raise animals can be clustered in a few contiguous counties. Because this collocation can result in the separation of animal from crop production, there is less cropland on which manure can be applied as a fertilizer. A USDA report first identified this concern as early as 2000, when it found that between 1982 and 1997, as livestock production became more spatially concentrated, when manure was applied to cropland, crops were not fully using the nutrients in manure, and this could result in ground and surface water pollution from the excess nutrients.[15] According to the report, the number of counties where farms produced more manure nutrients, primarily nitrogen and phosphorus, than could be applied to the land

[12]The amounts of manure reported are estimates. The actual amount of manure produced by an animal will vary based on, among other things, feeding programs, feed used, climatic conditions, production techniques, and animal genetics.

[13]Human sanitary waste includes urine and feces only; it does not include any other household sewage wastes such as water from washing dishes or clothes or water used for showers or flushing.

[14]EPA officials told us that the agency has identified a hog farm of this size and USDA officials told us that they are aware of two hog farms of this size.

[15]R. L. Kellogg, C.H. Lander, D. C. Moffitt, and N. Gollehon. *Manure Nutrients Relative to the Capacity of Cropland and Pastureland to Assimilate Nutrients: Spatial and Temporal Trends for the United States.* (Washington, D.C.: December 2000).

without accumulating nutrients in the soil increased. As a result, the potential for runoff and leaching of these nutrients from the soil was high, and water quality could be impaired. Agricultural experts and government officials who we spoke to during our review echoed the findings of USDA's report and provided several examples of more recent clustering trends that have resulted in degraded water quality. For example, according to North Carolina agricultural experts, excessive manure production from CAFOs in five contiguous counties has contributed to the contamination of some of the surface and well water in these counties and the surrounding areas.

USDA officials acknowledge that regional clustering of large animal feeding operations has occurred, but they told us that they believe producers' implementation of nutrient management plans and use of new technologies, such as calibrated manure spreaders and improved animal feeds, have resulted in animal feeding operations more effectively using the manure being generated and reducing the likelihood that pollutants from manure are entering ground and surface water. However, USDA could not provide us with information on the extent to which these techniques are being used or their effectiveness in reducing water pollution from animal waste.

Studies Have Identified Impacts of Pollutants from Animal Waste, but EPA Has Not Assessed the Extent of Such Impacts

Since 2002, at least 68 government-sponsored or peer-reviewed studies have been completed on air and water pollutants from animal feeding operations. Of these 68 studies,

- *15 directly linked pollutants from animal waste generated by animal feeding operations to specific health or environmental impacts.* Eight of these 15 studies were water quality studies and 7 were air emissions studies. Academic experts and industry and EPA officials told us that only a few studies directly link CAFOs with health or environmental impacts because the same pollutants that CAFOs discharge also often come from other sources, including smaller livestock operations; row crops using commercial fertilizers; and wastes from humans, municipalities, or wildlife, making it difficult to distinguish the actual source of the pollution.

- *7 found no impacts on human health or the environment from pollutants emitted by CAFOs.* Four of these 7 studies were water quality studies and 3 were air emissions studies. According to EPA and academic experts we spoke with, the concentrations of air and water pollutants discharged by animal feeding operations can vary for numerous reasons, including the type of animal being raised, feed being used and the manure management

system being employed, as well as the climate and time of day when the emissions occur.

- *12 made indirect linkages between air and water pollutants and health and environmental impacts.* While these studies found that animal feeding operations were the likely cause of human health or environmental impacts occurring in areas near the operations, they could not conclusively link waste from animal feeding operations to the impacts, often because other sources of pollutants could also be contributing.

- *34 of the studies focused on measuring the amounts of water or air pollutants discharged by animal feeding operations that are known to cause human health or environmental impacts at certain concentrations.* Of the 34 studies, 19 focused on water pollutants and another 15 focused on measuring air emissions from animal feeding operations.

While EPA recognizes the potential impacts that water and air pollutants from animal feeding operations can have on human health and the environment, it lacks the data necessary to assess how widespread the impacts are and has limited plans to collect the data that it needs. For example, with regard to water quality, EPA officials acknowledged that the potential human health and environmental impacts of some CAFO water pollutants, such as nitrogen, phosphorus, and pathogens, are well known. However, they also stated that EPA does not have data on the number and location of CAFOs nationwide and the amount of discharges from these operations. Without this information and data on how pollutant concentrations vary by type of operation, it is difficult to estimate the actual discharges occurring and to assess the extent to which CAFOs may be contributing to water pollution. Although EPA has recently taken some steps that may help provide some of these data, agency officials told us that EPA currently has no plans to conduct a national study to collect information on CAFO water pollutant discharges because of a lack of resources.

Similarly, with regard to air quality, more recently, EPA has recognized concerns about the possible health and environmental impacts from air emissions produced by animal feeding operations. In this regard, prompted in part by public concern, EPA and USDA commissioned a 2003 study by the National Academy of Sciences (NAS) to evaluate the scientific information needed to support the regulation of air emissions

from animal feeding operations.[16] The NAS report identified several air pollutants from animal feeding operations, such as ammonia and hydrogen sulfide, that can impair human health. The NAS report also concluded that in order to determine the human health and environmental effects of air emissions from animal feeding operations, EPA and USDA would first need to obtain accurate estimates of emissions and their concentrations from animal feeding operations with varying characteristics, such as animal type, animal feed, manure management techniques, and climate. In 2007, the 2-year National Air Emissions Monitoring Study was initiated to collect data on air emissions from animal feeding operations as part of a series of consent agreements that EPA entered into with individual CAFOs. This study, funded by industry and approved by EPA, is intended to help the agency determine how to measure and quantify air emissions from animal feeding operations. The data collected will in turn be used to estimate air emissions from animal feeding operations with varying characteristics. According to agency officials, until EPA can determine the actual level of air pollutants being emitted by CAFOs, it will be unable to assess the extent to which these emissions are affecting human health and the environment.

It Is Unclear if EPA's Efforts to Develop Air Emissions Protocols for Animal Feeding Operations Will Be Effective and Whether EPA Intends to Regulate These Emissions in the Future

The National Air Emissions Monitoring Study is intended to provide a scientific basis for estimating air emissions from animal feeding operations and to help EPA develop protocols that will allow it to determine which operations do not comply with applicable federal laws. According to EPA, although it has the authority to require animal feeding operations to monitor their emissions and come into compliance with the Clean Air Act on a case-by-case basis, this approach has proven to be time and labor intensive. As an alternative to the case-by-case approach, in January 2005, EPA offered animal feeding operations an opportunity to sign a voluntary consent agreement and final order, known as the Air Compliance Agreement. Almost 13,900 animal feeding operations were approved for participation in the agreement, representing the egg, broiler chicken, dairy, and swine industries. Some turkey operations volunteered but were not approved because there were too few operations to fund a monitoring site, and the beef cattle industry chose not to participate. In return for participating in this agreement and meeting certain requirements, EPA agreed not to sue participating animal feeding

[16]National Academy of Sciences, *Air Emissions from Animal Feeding Operations: Current Knowledge, Future Need.* (Washington, D.C.: National Academies Press, 2003).

operations for certain past violations or violations occurring during the National Air Emissions Monitoring Study.[17]

Although EPA told us that the National Air Emissions Monitoring Study is the first step in developing comprehensive protocols for quantifying air emissions from animal feeding operations, we found that the study may not provide EPA with the data that it needs for the following three reasons.

- The monitoring study may not be representative of the vast majority of participating animal feeding operations and will not account for differences in climatic conditions, manure-handling methods, and density of operations because it does not include the 16 combinations of animal types and geographic regional pairings recommended by EPA's expert panel. EPA approved only 12 of the 16 recommended combinations, excluding southeastern broiler, eastern layer, midwestern turkey, and southern dairy operations.

- Selection of monitoring sites has been a concern since the selection plan was announced in 2005. At that time, many agricultural experts, environmental groups, and industry and state officials disagreed with the site selection methodology. They stated that the study did not include a sufficient number of monitoring sites to establish a statistically valid sample. Without such a sample, we believe that EPA will not be able to accurately estimate emissions for all types of operations. More recently, in June 2008, the state of Utah reached an agreement with EPA to separately study animal feeding operations in the state because of the state's continuing concerns that the National Air Emissions Monitoring Study will not collect information on emissions from operations in Rocky Mountain states and therefore may not be meaningful for those operations that raise animals in arid areas.

- Agricultural experts also have raised concerns that the National Air Emissions Monitoring Study does not include other sources that can contribute significantly to emissions from animal feeding operations. For example, the monitoring study will not capture data on ammonia

[17]EPA placed certain conditions and limits on its agreement not to sue animal feeding operations participating in the Air Compliance Agreement. For example, EPA can continue to pursue cases that present an imminent and substantial endangerment to public health, welfare, or the environment. In addition, EPA's covenant not to sue only covers emissions from agricultural livestock and livestock waste and does not extend to generators or land application of animal waste.

emissions from feedlots and manure applied to fields. According to these experts, feedlots and manure on fields, as well as other excluded sources account for approximately half of the total ammonia emissions emitted by animal feeding operations.

Furthermore, USDA's Agriculture Air Quality Task Force has recently raised concerns about the quantity and quality of the data being collected during the early phases of the study and how EPA will eventually use the information.[18] In particular, the task force expressed concern that the technologies used to collect emissions data were not functioning reliably. At its May 2008 task force meeting, the members requested that the Secretary of Agriculture ask EPA to review the first 6 months of the study's data to determine if the study needs to be revised in order to yield more useful information.

EPA acknowledged that emissions data should be collected for every type of animal feeding operation and practice, but EPA officials stated that such an extensive study is impractical. Furthermore, they stated that the selected sites provide a reasonable representation of the various animal sectors. EPA has also indicated that it plans to use other relevant information to supplement the study data and has identified some potential additional data sources. However, according to agricultural experts, until EPA identifies all the supplemental data that it plans to use, it is not clear if these data, together with the emissions study data, will enable EPA to develop comprehensive air emissions protocols.

EPA has also indicated that completing the National Air Emissions Monitoring Study is only the first part of a multiyear effort to develop a process-based model for predicting overall emissions from animal feeding operations. A process-based model would capture emissions data from all sources and use these data to assess the interaction of all sources and the impact that different manure management techniques have on air emissions for the entire operation. For example, technologies are available to decrease emissions from manure lagoons by, among other things, covering the lagoon to capture the ammonia. However, if an operation spreads the lagoon liquid as fertilizer for crops, ammonia emissions could increase on the field. According to NAS, a process-based model is needed

[18]The Agricultural Air Quality Task Force, created in accordance with the 1996 farm bill, is charged with advising the Secretary of Agriculture with respect to providing oversight and coordination related to agricultural air quality, and consists of leaders in farming, industry, health, and science.

to provide scientifically sound estimates of air emissions from animal feeding operations that can be used to develop management and regulatory programs. Although EPA plans to develop a process-based model after 2011, it has not yet established a timetable for completing this model and, therefore, it is uncertain when EPA will have more sophisticated approaches that will more accurately estimate emissions from animal feeding operations.

Moreover, two recent EPA decisions suggest that the agency has not yet determined how it intends to regulate air emissions from animal feeding operations. Specifically:

- In December 2007, EPA proposed exempting releases to the air of hazardous substances from manure at farms that meet or exceed the reportable quantities from both CERCLA and EPCRA notification requirements. According to EPA, this decision was in part a response to language in congressional committee reports related to EPA's appropriations legislation for 2005 and 2006 that directed the agency to promptly and expeditiously provide clarification on the application of these laws to poultry, livestock, and dairy operations. In addition, the agency received a petition from the several poultry industry organizations seeking an exemption from the CERCLA and EPCRA reporting requirements for ammonia emissions from poultry operations on the grounds that ammonia emissions from poultry operations pose little or no risk to public health, and emergency response is inappropriate. In proposing the exemption, EPA noted that the agency would not respond to releases from animal wastes under CERCLA or EPCRA nor would it expect state and local governments to respond to such releases because the source and nature of these releases are such that emergency response is unnecessary, impractical, and unlikely. It also noted that it had received 26 comment letters from state and local emergency response agencies supporting the exemption for ammonia from poultry operations. However, during the public comment period ending on March 27, 2008, a national association representing state and local emergency responders with EPCRA responsibilities questioned whether EPA had the authority to exempt these operations until it had data from its monitoring study to demonstrate actual levels of emissions from animal feeding operations. This national association further commented that EPA should withdraw the proposal because it denied responders and the public the information

necessary to protect themselves from dangerous releases.[19] Furthermore, the proposal also seems to be a departure from EPA's past regulatory enforcement actions that have included charges of failing to comply with the release reporting requirements when bringing claims against producers for violating several environmental laws and is also contrary to one of the stated goals of the Air Compliance Agreement. We believe that the timing of this proposed exemption, before the National Air Emissions Monitoring Study has been completed, calls into question the basis for EPA's decision.

- EPA has also recently stated that it will not make key regulatory decisions on how certain federal air regulations apply to animal feeding operations until after 2011, when the National Air Emissions Monitoring Study is completed. For example, according to EPA, the agency will not issue guidance for several more years defining the scope of the term "source" as it relates to animal agriculture and farm activities. According to EPA, it has not yet decided if it will aggregate the emissions occurring on an animal feeding operation as one source or if the emissions from the barns, lagoons, feed storage, and fields will each be considered as a separate source when determining if an operation has exceeded air emissions' reportable quantities. Depending on the approach EPA takes, how emissions are calculated could differ significantly. For example, according to preliminary data EPA has received from an egg-laying operation in Indiana, individual chicken barns may exceed the CERCLA reportable quantities for ammonia. Moreover, if emissions from all of the barns on the operation are aggregated, they might be more than 500 times the CERCLA reportable quantities.

To address the various concerns that we identified with the ongoing air emission monitoring study, we recommended that EPA (1) reassess the study to ensure that it will provide valid data which the agency can use to develop air emissions protocols and (2) provide stakeholders with information on the additional data that it plans to use to supplement the study. In addition, we recommended that EPA establish a strategy and timetable for developing a process-based model that will provide more sophisticated air emissions estimating methodologies for animal feeding operations. EPA responded that it has developed a quality assurance plan for the study but did not address other issues that we identified in our

[19]The National Association of SARA Title III Program Officials. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986, after the first 6 years of the program.

report, such as the validity of the study's sample and the omission of other sources that can contribute significantly to the air emission from animal feeding operations. Furthermore, although EPA concurred with the need to identify supplemental data and establish a strategy and timetable for developing a process-based model and described actions that it has underway, the agency provided no indication of when it will complete its plans to either identify the data it will use to augment the monitoring study or develop a process-based model.

Two Federal Court Decisions Have Affected EPA's and Some States' Ability to Regulate Water Pollutants Discharged by CAFOs

Two federal court decisions—*Waterkeeper Alliance Inc. v. EPA* and *Rapanos v. United States*—have affected EPA and some states' abilities to regulate CAFOs for water pollutants.

Waterkeeper Alliance Inc. v. EPA (Waterkeeper)

In its 2005 *Waterkeeper* decision, the U.S. Court of Appeals for the Second Circuit set aside a key provision of EPA's 2003 CAFO rule requiring every CAFO to apply for a permit. Under the 2003 rule, large numbers of previously unregulated CAFOs were required to apply for permits and would have been subject to monitoring and reporting requirements imposed by the permit as well as periodic inspections. According to EPA, the 2003 rule would have expanded the number of regulated CAFOs from an estimated 12,500 to an estimated 15,300, an increase of about 22 percent, and would have provided EPA with more comprehensive information on the number and location of CAFOs, enabling the agency to more effectively locate and inspect these operations nationwide.

However, in 2003, both environmental and agricultural groups challenged EPA's 2003 rule. The court agreed with the environmental groups' arguments that, among other things, EPA's 2003 rule did not adequately provide for public review and comment on a CAFO's nutrient management plan and instructed EPA to revise the rule accordingly. The court also agreed with the agricultural groups' arguments that EPA had exceeded its authority under the Clean Water Act by requiring CAFOs that were not discharging pollutants into federally regulated water to apply for permits

or demonstrate that they had no potential to discharge and therefore set aside the rule's permitting requirements for those CAFOs that did not discharge.

The *Waterkeeper* decision, in effect, returned EPA's permitting program to one in which CAFO operators are not required to apply for a NPDES permit unless they discharge, or propose discharging, into federally regulated waters. As a result, EPA must identify and prove that an operation has discharged or is discharging pollutants in order to require the operator to apply for a permit. To help identify unpermitted discharges from CAFOs, EPA officials told us that they have to rely on other methods that are not necessarily all-inclusive, such as citizens' complaints, drive-by observations, aerial flyovers, and state water quality assessments that identify water bodies impaired by pollutants associated with CAFOs. According to EPA officials, these methods have helped the agency identify some CAFOs that may be discharging as well as targeting inspections to such CAFOs.

As a result of the *Waterkeeper* decision, EPA proposed a new rule in June 2006 requiring that (1) only CAFO operators that discharge, or propose to discharge, apply for a permit, (2) permitting authorities review CAFO nutrient management plans and incorporate the terms of these plans into the permits, and (3) permitting authorities provide the public with an opportunity to review and comment on the nutrient management plans. According to EPA officials, the final rule is currently being reviewed by the Office of Management and Budget, but at the time we issued our report, these officials were uncertain when this review would be completed and the final rule issued.

State water pollution control officials have expressed some concerns that EPA's new 2006 rule will place a greater administrative burden on states than the 2003 rule would have. In an August 2006 letter to EPA, the Association of State and Interstate Water Pollution Control Administrators noted that the "reactive" enforcement that EPA will now follow will require permitting authorities to significantly increase their enforcement efforts to achieve the level of environmental benefit that would have been provided by the 2003 rule. These officials believe that requiring EPA and the states to identify CAFOs that actually discharge pollutants into federally regulated water bodies will consume more resources than requiring all CAFOs to apply for a permit.

Moreover, although the *Waterkeeper* decision has affected EPA's ability to regulate CAFOs' water pollutant discharges, state officials we contacted

indicated that this decision has not had the same impact on their ability to regulate these operations. As table 1 shows, the impacts of the *Waterkeeper* decision have ranged from having little impact on state regulation to impairing state CAFO programs.

Table 1: State Officials' Views of the Impact of the Waterkeeper Decision on Their CAFO Programs

Impact of Waterkeeper	Number of states reporting impact
Waterkeeper had little or no impact	16
Reduced the number of CAFOs with permits	15
Impaired state program	10
Waiting for EPA to issue revised rule	9
Prompted state legislature to require permits for CAFOs	1

Source: GAO analysis of state officials' responses

Rapanos v. United States (Rapanos)

Although the *Rapanos* case arose in the context of a different permit program, the scope of EPA's pollutant discharge program originates in the same Clean Water Act definition that was at issue in the case. As a result, the decision has complicated the agency's enforcement of CAFO regulations. According to EPA enforcement officials, the agency will now be less likely to seek enforcement against a CAFO that it believes is discharging pollutants into a water body because it may be more difficult to prove that the water body is federally regulated. According to EPA officials, as a result of the *Rapanos* decision, EPA must spend more resources developing an enforcement case because the agency must gather proof that the CAFO has not only illegally discharged pollutants, but that those pollutants have entered federally regulated waters. The difficulties EPA has experienced were highlighted in a March 4, 2008, memorandum in which EPA's Assistant Administrator for Enforcement and Compliance Assurance stated that the *Rapanos* decision and national guidance issued by EPA to ensure "nationwide consistency, reliability, and predictability in their administration of the statute" in light of the Supreme Court's decision has resulted in significant adverse impacts to the clean water enforcement program. According to the memorandum, the Rapanos decision and guidance negatively affected approximately 500 enforcement cases, including as many as 187 cases involving NPDES permits.

In conclusion, Mr. Chairman, EPA has regulated CAFOs under the Clean Water Act for more than 30 years, and during this time it has amassed a significant body of knowledge about the pollutants discharged by animal feeding operations and the potential impacts of these pollutants on human health and the environment. Nevertheless, EPA still lacks comprehensive and reliable data on the number, location, and size of the operations that have been issued permits and the amounts of discharges they release. As a result, EPA has neither the information it needs to assess the extent to which CAFOs may be contributing to water pollution, nor the information it needs to ensure compliance with the Clean Water Act. More recently, EPA has also begun to address concerns about air pollutants that are emitted by animal feeding operations. The nationwide air emissions monitoring study, along with EPA's plans to develop air emissions estimating protocols, are important steps in providing much needed information on the amount of air pollutants emitted from animal feeding operations. However, questions about the sufficiency of the sites selected for the air emissions study and the quantity and quality of the data being collected could undermine EPA's efforts to develop air emissions protocols by 2011 as planned. A process-based model that more accurately predicts the total air emissions from an animal feeding operation is still needed. While EPA has indicated it intends to develop such a model, it has not yet established a strategy and timeline for this activity.

Mr. Chairman, this concludes my prepared testimony. I would be happy to respond to questions that you or Members of the Subcommittee may have.

Contact and Staff Acknowledgments

Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony. For further information about this testimony, please contact Anu Mittal, Director, Natural Resources and Environment (202) 512-3841 or mittala@gao.gov. Key contributors to this testimony were Sherry McDonald, Assistant Director; Kevin Bray, Paul Hobart; Holly Sasso; Carol Herrnstadt Shulman; James Turkett; and Greg Wilmoth.

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Mr. GREEN. Thank you. That concludes all our opening statements, and we will start off with our two rounds of questioning regarding the proposed CAFO air rule, and then move on—I will start with the CAFO air rule and move on to Superfund oversight.

My first two questions on the CAFO air rule are for Ms. Mittal and GAO, and please answer yes or no. Is your opinion that the EPA's proposed air emissions reporting rule is a departure from past regulatory enforcement actions including the air compliance agreement?

Ms. MITTAL. Yes, we believe it is.

Mr. GREEN. Do you think that EPA should obtain more data on CAFO emissions and potential human health effects before exempting them from hazardous air release?

Ms. MITTAL. Yes, we believe they should.

Mr. GREEN. My next question on the CAFO proposed air rule is for Assistant Administrator Bodine, and again please answer yes or no as well. Does EPA plan to seek more information on the potential health impacts of CAFO releases before finalizing the rule?

Ms. BODINE. No.

Mr. GREEN. Okay, has EPA submitted the final rule to the Office of Management and Budget?

Ms. BODINE. No.

Mr. GREEN. Okay, does the Administration intend to issue a final rule before November 1?

Ms. BODINE. A decision on the final rule has not been made. It is still a proposal within EPA.

Mr. GREEN. Okay, I know White House chief of staff Joshua Bolton issued a memo stating that federal agencies should not issue final rules after November 1. And do you know if EPA intends to follow that directive in this case?

Ms. BODINE. I don't know. We haven't sent it to OMB yet.

Mr. GREEN. Okay, I would like to ask some other Superfund-related questions because this is our last chance for this year, and these questions again are for our Assistant Administrator. Your office provided us with a chart of Superfund construction sites since 1993, which we will distribute on the dais.

And unfortunately the chart shows that a climb from 60 to 80 completed cleanups in the 1990's to 30 or less in the last 2 years. Do you know how many Superfund sites have reached construction complete status in 2008 compared to the goal of 30 provided in the administration's budget?

Ms. BODINE. The fiscal year is not over yet. Our goal this year is 30. We have 30 sites that are candidates, and I am very optimistic that we will reach that goal. There is at least one site I am aware of where we are doing the confirmatory sampling and so we can make sure that, in fact, everything is cleaned up as it is supposed to be. So it is going to come down to the last days of the fiscal year. So I don't have a definitive answer for you right now, but I am very, very optimistic that we will have them.

Mr. GREEN. The last day of the fiscal year is next week.

Ms. BODINE. Yes, in fact, that is exactly right.

Mr. GREEN. Do you have any idea of the number of the 30 that you have now? Do we have 20 or 10 or anything at all?

Ms. BODINE. We have the final reports from the region in for all 30. But, as I mentioned, I am aware that there is some sampling that we are waiting for at least one site. So I can't give you a dispositive answer at this point.

Mr. GREEN. Okay, we will contact you after the close of this year. Does availability of funding have any impact on the number of sites that you can complete?

Ms. BODINE. Each year, at least since 2004, the Agency has posted on its website the number of projects that we start in that year and if there are projects that we didn't start because of availability of funding, we put that information up on the web as well. In FY 2004 and 2005 and 2006 there were some unfunded projects. In FY 2007, we were able to start them all, but you could assume that if a project isn't started in a particular year, if the start moves to a later year that would then ultimately, 3 years later perhaps, impact when a project would be completed.

So in terms of what we are providing funding for in this year and our construction completions this year, I don't believe funding was an issue. The question is was there something that we didn't start back in FY 2004 but that could have been done this year.

Mr. GREEN. Could you provide our committee with a written response explaining why EPA is not able to achieve the greater results that addresses the impacts of funding availability and any cost increases that have been since, for example, 2004?

Ms. BODINE. Yes.

Mr. GREEN. Appreciate that. My time is almost over. I have another line of questions. I will wait until the second panel. The Chair recognizes our ranking member, Congressman Shadegg.

Mr. SHADEGG. Thank you, Mr. Chairman. Mr. Rey, I am going to begin with you. I would like to learn a little bit more about the incident at the dairy that was referred to. As I understand it, you said that is the only incident that you are aware of in which there was an emission of either of these two pollutants from manure arising from a CAFO, that is the topic we are talking about?

Mr. REY. The only instance that I am aware of where the emissions exceeded what would be the reportable quantity under CERCLA or EPCRA.

Mr. SHADEGG. Ms. Mittal, are you aware of other emissions?

Ms. MITTAL. We were not made aware of any other incident, and that is why the National Air Emissions Monitoring Study is so important for this effort because this study is going to provide EPA with that kind of information.

Mr. SHADEGG. How long has the law required these kind of reports?

Ms. MITTAL. Which kind of reports, sir?

Mr. SHADEGG. The EPA is proposing to waive the current requirement for notification.

Ms. MITTAL. Right.

Mr. SHADEGG. Mr. Rey, maybe you know the answer. How long has the law required these kind of reports?

Mr. REY. I think they have been required since some of the litigation over CERCLA and EPCRA about 2003.

Mr. SHADEGG. So we have 4 years—4 or 5 years of reports, and in that 5 years, the only one we know of is the one involving this dairy?

Mr. REY. That is my understanding.

Mr. SHADEGG. Dr. Johnson, do you know of others?

Mr. JOHNSON. Our agency is not involved in reviewing CAFOs in general. We review assessments as they are presented to us for our opinions. We have only done three or four assessments over the past several years.

Mr. SHADEGG. But your answer would be you don't know of any others?

Mr. JOHNSON. No, I don't.

Mr. SHADEGG. Okay, Ms. Bodine?

Ms. BODINE. In response to the chairman's request in the invitation letter, we have provided, and I have it for the record, a summary of reports that have been sent in to the National Response Center from facilities that we—by looking at what was being reported, we are estimating are coming from animal feeding operations or farms. And so, yes, there have been a number of reports that have been filed with respect to hydrogen sulfide and ammonia. And I have that.

Mr. SHADEGG. Well, my question isn't have there been reports filed on it. The law requires reports be filed. That is what you propose to exempt. My question is Mr. Rey says there has only been one that exceeds the standards. And is that correct, or is that incorrect?

Ms. BODINE. I am going to assume that the people were reporting because they thought they had exceeded the reportable quantity. But I would have to actually look and see exactly what the report is. But if they had exceeded the reportable quantity, then the obligation to report would arise.

Mr. SHADEGG. Okay, I want to clarify. One report goes to the Coast Guard?

Ms. BODINE. Yes, under CERCLA Section 103, it goes to—the National Response Center is manned by the Coast Guard, correct. And then they send the reports out. Most of them they send out to EPA.

Mr. SHADEGG. And the other report goes to local emergency agencies. Is that correct?

Ms. BODINE. Under EPCRA, that is correct. It goes both to the local and to the state agencies.

Mr. SHADEGG. And what you testified was that in no instance has a report to a local emergency agency resulted in a response?

Ms. BODINE. I testified that no report that came through the Coast Guard to EPA has resulted in a response. We are not aware of any report to the locals that resulted in a response, but we don't get those reports.

Mr. SHADEGG. Mr. Rey, as I understood from your testimony, what happened at this dairy should never have happened if the state had been applying the law properly with regard to the operations of this dairy to begin with. Can you explain what reports——

Mr. REY. It is our judgment that in the water quality permitting process that the state uses, not just Minnesota but other states as

well, the dairy operator that went bankrupt should have been required to finish the cleanup of the pits. And in any event, even if that hadn't happened, the new permitting for the successor in interest, the company that took over from Excel, should have been required to clean up those pits before the permit was granted to operate the dairy.

So I think my point is that if the permitting process for water quality had worked properly, then our judgment is there wouldn't have been a spike in hydrogen sulfide emissions because we think that spike was the result of the mixing of the older waste that had been fermenting for some time with the new waste of the new operator.

Mr. SHADEGG. Are the operators of these facilities required to follow a management plan that is what they are going to do with this manure over time, sell it, process it?

Mr. REY. A comprehensive nutrient management plan or a manure management plan is part of the requirements for their clean water permit.

Mr. SHADEGG. And that plan should reveal quantities, disposal, whether or not these kind of buildups are going to occur?

Mr. REY. Generally speaking.

Mr. SHADEGG. One last question if I might, Mr. Chairman. Both Mr. Rey and Ms. Mittal referred to a study to be completed in 2009. You are both referring to the same study?

Ms. MITTAL. Yes.

Mr. REY. Yes.

Mr. SHADEGG. And, Ms. Mittal, you have concerns about its protocols?

Ms. MITTAL. Yes.

Mr. SHADEGG. Thank you.

Mr. GREEN. The Chair recognizes Congressman Barrow for three minutes.

Mr. BARROW. Thank you, Mr. Chairman. I am still trying to get a handle on whether or not what we are proposing to abandon here is something that has effectively been tried, been tried in a reasonably effective manner, or whether it has been tried and found wanting. And a part of the confusion arises out of the fact that we have reporting requirements fixed by law, by statute, affirmative requirement by law. And we have monitoring requirements, the best I can figure out, that are basically not enforceable as a matter of law but only as a result of contract, essentially what is an agreement to enter into a monitoring program, for purposes of trying to decide what kind of regulations are more appropriate in the future.

But what I hear and what I am hearing from folks back home is that the monitoring requirements that a lot of folks felt kind of coerced to enter into as a result EPA's efforts to beef up enforcement in this area are way over broad in the sense that it covers a lot of de minimis operations, a lot of operations that really probably aren't as serious as others.

What concerns me is we have a lot of CAFOs thrown in with a lot of mom-and-pop operations and apparently a monitoring requirement that is so burdensome and so troublesome that it causes more trouble than trying to get the useful information Ms. Mittal says we need to have in order to decide where to go from here.

And so I just want somebody on the panel to tell me if there is any effort being made to try and reassess the current monitoring program to decide whether or not we can focus its efforts or limit it just to CAFOs, operations that are big enough to worry about. Has any consideration been given to that?

Ms. MITTAL. Well, I can definitely start. The concern that we are trying to raise through our report is that traditionally we have considered animal feeding operations or farms to be low sources of emissions. And what we are seeing is this dramatic shift in the industry, where you have larger farms, very large size farms with very large numbers of animals producing very large quantities of manure.

And so our traditionally held belief that these farms are not a major source of emissions may no longer hold true.

Mr. BARROW. But the trend you are describing though, to my way of thinking, suggests that a large number of small time producers aren't a big deal. It is the huge concentrations in these big operations that are a big deal.

Ms. MITTAL. And that——

Mr. BARROW. You have a 2-year-old monitoring program. We are halfway through it. It has a lot of small mom-and-pop operations thrown in with the big guys. And I could tell you the push back and the perceived lack of utility in the monitoring program for a lot of folks. That supports the EPA position we don't need to do anything about this because we aren't going to respond to these anyhow. We never have so far.

Ms. MITTAL. Well, I think that is the concern we have with the exemption, that it is very broad and it covers all establishments, even the very large ones. And we don't have information. We don't have good complete information on how many emissions are actually occurring at these very large operations. So that is one of our concerns with the EPA exemption, that it may be premature since we don't have data yet. The study is not completed yet, and we don't know the extent to which emissions are actually occurring.

Mr. BARROW. Anybody want to respond to that? Ms. Bodine, can you give us some feedback in response to that?

Ms. BODINE. The rationale for our rule is based on the fact that these reporting requirements are for the purposes of managing an emergency response program——

Mr. BARROW. I recognize——

Ms. BODINE [continuing]. And not——

Mr. BARROW [continuing]. The difference between acute and chronic, between something that is released all of a sudden like and something that is just kind of constantly seeping and the difficulties of monitoring and the burdens of responding to both. But you got to recognize that something that builds up over a long time is just as much of a concern as something that comes out all at once.

Ms. BODINE. And then the question is what purpose is served by reports versus whether or not the information that is being gathered under the air compliance monitoring study will be relevant for determining whether or not regulations, actual controls, would need to be required. And that would be information that would be relevant information coming out of the study. The reporting re-

quirements that are the subject of our proposed rule have nothing to do with controlling emissions. It is a report. They don't have anything to do with monitoring. It is a report.

Mr. BARROW. I know. I understand that, but the purpose of the report is to make it possible for folks to respond, if there is a need to——

Ms. BODINE. The purpose of the report—they go to the emergency response community, and the purpose is to determine whether a response is necessary.

Mr. BARROW. Well, here is the concern that I have. Clearly, we have to make a common sense distinction between the mom-and-pop operator, the small family farm, and the CAFO. And clearly we have to recognize that monitoring requirements that don't lead to any kind of reporting when something is bad is worthless. And reporting requirements that don't have the effect of monitoring are worthless because you report—something you don't know about it, you can't report it. So we have to apply some common sense and figure out how to do this.

I am concerned though when a cop says because I don't issue any citations, therefore there ought not be a law on speeding. That is a concern to me, and I don't know how much folks are speeding or not speeding because you can't tell that because we are not issuing any citations. If that is going to be the measure of whether or not there is speeding going on out there, you might have a lot of wrecks going on and still not have any effective means of dealing with it.

Thank you. I yield back the balance of my time.

Mr. GREEN. Our next questions are from Congressman Deal.

Mr. DEAL. Thank you, Mr. Chairman. I want to follow up on the excellent analysis that my fellow Georgian, Mr. Barrow, has made because he and I both have small family farm operations. It my congressional district, it probably has the largest concentration of numbers of boiler producers in the entire country. We call ourselves the poultry capital of the world.

And I want to direct this to you, Ms. Bodine. I am going to precede it with some statements of fact that we think are correct and then ask you to comment on a few things. First of all is that University of Georgia recently completed a study that measured the actual levels of ammonia in the air at a larger than average poultry farm.

Research concluded that at very close distances to the poultry houses, even as close as 100 feet, the concentration of ammonia was around one part per million the great majority of the time. The highest level measured was only a few parts per million. Most important is that the level of airborne ammonia measured by the University of Georgia study was, first of all, far below the current OSHA workplace exposure limits for ammonia, and, two, even lower than the very conservative minimum risk level of 1.7 parts per million set by the Agency for Toxic Substances Disease Registry.

The question is this: with these kinds of extremely low concentrations of naturally occurring, rapidly dispersing ammonia on poultry farms, should EPA be concerned that these farms, which

are mostly family-owned farms, are posing an emergency in the same way a chemical explosion or a hazardous spill might?

Ms. BODINE. In our proposed rule, we looked at the kinds of emissions that were coming from farms and found the characterization as you depicted—they were constant, relatively constant emissions that, as you said, are dispersed. Then we looked at the history of response and whether or not we would expect there to be an emergency response akin to a derailment or an explosion. We determined that for the purposes of the proposed rule that no, in fact, there would be no response. And that is the basis, that is the rationale for the proposed rule.

Mr. DEAL. And that leads us to a no conclusion on that, a conclusion of no, they don't pose the same degree of hazards or concerns. Second question is should a poultry farm that generates near zero levels of ammonia in the air be required to notify emergency response officials at the state, local, and Federal level that their operations are posing a danger warranting a response under the same rules that would apply to the larger chemical or toxic spills?

Ms. BODINE. I would again have to refer you back to our proposed rule. What the agency proposed was that we would provide an administrative reporting exemption for the hazardous substance emissions that were from animal waste.

Mr. DEAL. And your proposal is on the premise that they don't or should not justify that kind of emergency report.

Ms. BODINE. That the reports aren't necessary for our emergency response program——

Mr. DEAL. Yes.

Ms. BODINE [continuing]. Is the rationale for the rule.

Mr. DEAL. Have emergency responders overwhelmingly told the EPA that losing the 304 reports will cripple emergency response on farms?

Ms. BODINE. Our own emergency responders have told us that they wouldn't respond. In terms of comments that we have received, we did receive comments from Mr. Gablehouse, who is the president the National Association of SARA Title III officials, opposing the rule. His comments didn't say that the reports were required for a response, but they opposed the rule.

We also received some individual comments from a number of individuals, state and local entities, that supported the rule. So we had mixed comments—there is the association on the one hand and then the individuals on the other. We had mixed comment on that.

Mr. DEAL. All right, my second question is, first of all, as you know, states and even local communities have legislated through state law or zoning ordinances requirements to change the set back requirements for animal operations so that there is a sufficient buffer between, say for example, a poultry house or turkey barn, and neighboring properties or residents.

This, of course, can place additional burdens on the owners of the property and the operators of the poultry operations with respect to whether and how they can expand their operations. I am sure you are aware that some of these decisions regarding set back distances have been made at local and state levels. Have these requirements and the buffering role that play a factor, have they

played a factor in your decision as to how to address the emergency notification as it relates to poultry and other farming operations?

Ms. BODINE. I don't believe we did a systematic analysis of set back requirements, no. Again the rationale for our rule was these are reports for an emergency management program that we didn't see were going to lead to an emergency response.

Mr. DEAL. Based on the study I have just cited from the University of Georgia on the relatively low emissions and the fact that if they are separated by set back requirements from neighbors or residential communities, I believe that that is already playing a very large part in the fact that you are not receiving complaints in most of the areas that we see these poultry type operations in place.

So I think they have played a positive role in trying to minimize any degree of concerns and any complaint process that might be otherwise activated. Mr. Chairman, I would yield back the balance of my time.

Mr. GREEN. Thank you. Before we go forward with Congressman Solis, the ranking member brought up an issue earlier about the reporting requirements that were—they have been on the books since 1986, and EPA is enforcing them against CAFOs starting about 5 years ago. So it has actually been a law for a number of years. The Chair recognizes Congresswoman Solis.

Ms. SOLIS. Thank you, Mr. Chairman. I just want to also clarify for the record when we had a subcommittee hearing in the House on November 16 of 2005, we asked EPA if they had any knowledge of any qualitative risks or studies that might have been done affecting health risks. And their answer was no, and that is noted on page 155. So I would draw the members' attention to that.

And on page 156, EPA was further asked if they had any information regarding triggering of reporting requirements and what that meant with respect to the operational size of these farms. And apparently at the time, they said they had no information. No information. And then 2 years later, on December 28, of 2007. They are proposing a rule that would disallow any reporting for the larger CAFOs. So I think that it seems as though the blind is leading the blind. There is no information on which to base this rulemaking.

And I wanted to ask our GAO representative if she would elaborate on what some of the issues are here with data gaps. You kind of pointed that out, but what does that mean? I mean I clearly understand where Mr. Barrow is coming from with smaller facilities. And now to know that there really isn't adequate information to assess any of this with any great degree, why are we rushing to this? And what implications does that have for us?

Ms. MITTAL. That was one of the things that we heard throughout our study was that EPA does not have complete information on the number, size, and location of CAFOs and the amount of pollutants that they release, whether it is air or water. Obviously in this case, we are talking about air pollutants. So they do not have that information. They cannot therefore do the assessments that you just mentioned in terms of health and environmental impacts because they first need to know how many releases are actually occurring.

The other issue that I have already mentioned is the fact that the air emissions monitoring study was supposed to provide a significant amount of statistically valid and scientifically based data, so that the agency could know how many—what quantity and what types of air emissions are coming from CAFOs. So we would think at a minimum we would need that information from the air emissions monitoring study to be complete before proceeding with the proposed exemption.

The other issue that I raised in my testimony was the fact that EPA has not yet decided what will be considered a source of an emission at an animal feeding operation, whether individual——

Ms. SOLIS. Her mike went off, Mr. Chairman.

Ms. MITTAL. It says on. The green light is on.

Ms. SOLIS. So can you see—I don't want my time to run out.

Mr. GREEN. Yeah, we will give you—did somebody turn the mike down? Okay, we need you to turn it just a little bit higher so we can hear. We don't want the feedback, but we also don't want the—we want to be able to hear the testimony. Okay, continue.

Ms. MITTAL. The last issue that I mentioned was that EPA has still not made a decision about what is considered a source for an animal feeding operation. If you look at just one barn, you may have a certain amount of emissions. But when you look at all of the barns put together, you may have a completely different profile.

Early indications that we have seen from preliminary data from the study that is ongoing is that some of the barns that EPA is monitoring do have emissions that exceed the reportable quantity. And if you add all of the emissions from all of the barns, you have 500 times the reportable quantities.

So we are very concerned about the timing of this proposal.

Ms. SOLIS. My next question is for Mr. Johnson and your involvement in the incident that occurred out in—what you were just talking about in Minnesota. And what triggered your response? How did that happen?

Mr. JOHNSON. Our involvement is about a number of situations either because we are involved from a Superfund involvement in which it provides our authority. But also we could be petitioned by citizens, by states, and by other EPA programs. In this case, it was a specific request from U.S. EPA and the Air Enforcement Program to review the data that had been assembled by the state environmental agency and also by the citizens and for us to render a public health hazard determination.

Ms. SOLIS. So EPA notified you?

Mr. JOHNSON. That is correct, and it became a collaboration between us and the Minnesota Department of Health to conduct that assessment.

Ms. SOLIS. But is there any other incidents that might come up where EPA doesn't tell you and you go out and find that there is hazardous exposure here in the air and you do not maybe notify EPA because you haven't been prompted by them? What happens in those situations?

Mr. JOHNSON. Right, and that situation is where we are petitioned by a community in which we conduct an assessment. We may, in certain cases, actually do our own sampling if we think there is a need to do that, to inform a decision about public health

hazards. In most cases though, if we feel there is a need for some intervention to occur, we need to work with an agency that can conduct that intervention since we have no regulatory authority.

So in most cases if we think an action is needed, we will work with either U.S. EPA or state authorities to make sure that those actions are taken.

Ms. SOLIS. So there could be actions that we are just not aware of that could have been given to state authorities? Because what I am concerned about here is that we are trying to point out that this the only case that we know of in Minnesota, and that is really hard for me to believe that there weren't any other incidences that might have come up. And I just want to be clear on what that process is and what triggers EPA to get involved as opposed to the community's right to know.

Someone calls you and they say hey, we have a problem here. Then you go to, say itis our state EPA, and they then don't notify the Federal EPA. That could very well happen. I would like to know if EPA has—is there any way to collect that data. And that is probably one of the bigger gaps that exist as well. That big gap where no one is telling Federal EPA about these incidences that have occurred, maybe on smaller farms or larger farms, I would imagine probably the larger ones, means that we are just not aware. And that really disturbs me. If we are moving so quickly down this path where we want to complete rulemaking here without having the right tools and information.

So, Mr. Chairman, I just have to state that I am very, very reluctant to see that the administration would move forward, especially after November. I mean I just think it is outrageous.

Mr. GREEN. I think that has been reflected in not only our line of questions but also in our statements. So thank you. Is there a response? Because obviously we need to have as quick as we can. We expect a vote in about 10 minutes.

Mr. REY. Well, I think I would like to clarify a couple things for the committee.

Mr. GREEN. As brief as possible please.

Mr. REY. First of all, CAFOs aren't all big. Under certain circumstances, a mom-and-pop operation with less than 300 cows has been and can be designated as a CAFO. So we are not talking about a reporting requirement that is only going to apply to large operations.

Second, many of the data gaps and concerns that we have been hearing about are concerns related to emissions monitoring and control through the Clean Air Act, not concerns that are relevant to a release of a hazardous emission.

To follow Mr. Barrow's analogy, we are not arguing over speed limits here. We are arguing over a requirement that after you have a wreck, you call the ambulance company. Presently we are calling the ambulance company whether we have a wreck or not, and we have only had one wreck over 5 years.

Mr. GREEN. The time has expired. Congressman Hall.

Mr. HALL. Thank you, Mr. Chairman. I will try to be as brief as I can be. Ms. Bodine, I want to ask you, excuse me, a series of questions, and I would like for your answer to be a one-letter answer. And I would like for it to begin with a Y and end with an

E—with an S if possible, and not begin with an N and end with an O. So help me along if you can because I am up in years, and I don't have much time.

I am one of the few remaining members of Congress who served as a conferee on the 1986 amendments to CERCLA which created, as you know, the Emergency Planning and Community Right-To-Know Act and the emissions reporting requirements that we are discussing right here today. So correct me if I am wrong, but didn't we include in that legislation a list of hazardous substances for which emissions reporting is not required under CERCLA RFS?

Ms. BODINE. Emissions reporting not required?

Mr. HALL. Yes.

Ms. BODINE. I know there is a list of hazardous substances for which emissions is required, and there are exemptions. But I——

Mr. HALL. But we included in the legislation a lot of hazardous substances for which emissions reporting is not required.

Ms. BODINE. Okay.

Mr. HALL. They are in there.

Ms. BODINE. Okay.

Mr. HALL. Will you stipulate a yes with me?

Ms. BODINE. I would have to check and answer, but I am going to take your word for it.

Mr. HALL. Not an irrebuttable yes, but just a soft yes.

Ms. BODINE. Okay.

Mr. HALL. And I am over the first one here. And didn't we create several exemptions from the definition of the word or the term release that include one, any release that results in exposure to persons solely within the workplace, and emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline, pumping station? And I am reading from the Act.

Ms. BODINE. Yes.

Mr. HALL. And that is good. And I want everyone to understand I am not trying to speak poorly of the automobile industry here because I agree with my friend, Mr. Dingell, on their exemptions. And it is a good thing that automobiles are exempt from CERCLA law, and I just think we need to make sure that our farmers are getting a fair deal here as well. I don't want a yes to that.

That being said, isn't it true that there are many hazardous substances in automobile exhaust emissions that can make you very sick or even give you cancer or maybe kill you like carbon monoxide and oxides of nitrogen?

Ms. BODINE. I don't know the answer because I am not with the air program.

Mr. HALL. I will stipulate a yes with you ——

Ms. BODINE. You will stipulate a yes.

Mr. HALL [continuing]. And give you a chance to correct it if you want to later. So we have exempted car and truck owners from reporting these emissions even though we know they can make you sick or kill you, in spite of the fact that in our cities, hundreds of thousands or even millions of these vehicles emitting these lethal substances may be concentrated in a very small geographic region and located very close to millions of people. Easy yes, right?

Ms. BODINE. That——

Mr. HALL. All right, and do you——

Ms. BODINE. There are exemptions from the definition of release. In the statute, yes.

Mr. HALL. You are doing your best to be helpful.

Ms. BODINE. Yes.

Mr. HALL. And I appreciate it. Do you believe that these auto exhaust emissions contribute to air pollution in some areas of the United States where air quality does not meet Federal Clean Air Act standards?

Ms. BODINE. I can't speak on the clean air program. I would have to——

Mr. HALL. I will write a yes in there for that. That is good enough for me. Even though you admit autos pollute the air, threaten human health, and are now concentrated in very large numbers in relatively small numbers, do you see the need for us to modify Superfund and remove the exemptions so that auto owners would begin reporting their emissions to EPA?

Ms. BODINE. No, I don't see that.

Mr. HALL. That is a no, and that is a good no.

Ms. BODINE. Okay.

Mr. HALL. Now, if your proposed rule moves forward to exempt large, confined animal feeding operations from reporting requirements on ammonia and hydrogen sulfide, do you believe this will weaken your ability in the future to regulate these emissions if the nationwide testing, now underway on these emissions, prove you need to regulate CAFO emissions?

Ms. BODINE. No, it won't affect that at all.

Mr. HALL. So no, and I believe all the necessary authority under the Federal Clean Air Act to regulate as necessary, you believe you have it, don't you?

Ms. BODINE. The Clean Air Act provides authority.

Mr. HALL. All right, I yield back my time, and I sure do thank you for those clear and concise answers that you have given. I yield back my time.

Mr. GREEN. I thank my colleague from Texas, and I guess it is a difference between me driving my car and if I drive 1,000 cars and put them all in a barn and run them all day. Our next questioner is Congresswoman DeGette.

Ms. DEGETTE. Thank you very much, Mr. Chairman. Just to refocus the hearing a little bit. We are talking about the reporting requirements under CERCLA and EPCRA for emissions on farms of reportable quantities of materials, which is 100 pounds per day. Correct, Ms. Bodine?

Ms. BODINE. Yes.

Ms. DEGETTE. Thank you. Now, I have in my hand the letter dated March 27, 2008 that the chairman tried to enter into the record, and I would hope that the minority would now allow this to be entered in because it is a letter from Tim Gablehouse, who is an old friend of mine back from my days of practicing law, who happens to be the president of the SARA Title III program officers, which is the state emergency response commissions, the tribal emergency response commissions, and the local emergency planning committees, various Federal agencies, and private industry.

Mr. Chairman, for a long time, I thought Tim was a Republican, but I now think he might be a Democrat. But, you know, this is

a group of people—it is not a partisan group. It is a group of officials who are really concerned about the community's right to know. And they are concerned, when there are emissions, that the local communities, Commerce City, Colorado, and some of these smaller communities, that their local emergency responders can figure out what is happening.

And so therefore they very strongly support reporting, and what this letter says in the introduction is the NASTTPO organization doesn't take a position on environmental compliance record of animal feeding operations, but what they think is that this proposed rule threatens the integrity of the accidental release reporting system.

And what they say is EPA misses the point when it says that first responders rarely respond to releases from farms. They only respond when they know that the facilities are the source. And the point that this organization of local responders is making is that the 911 call that comes in from the member of the public in the dark of night, that is reporting a foul or chemical odor, rarely contains the information of the source. Somebody is sitting at home, they have this smell, and they call up 911.

And then what happens is the responders are forced to guess at that source. Immediate release reporting by facilities under EPCRA provides crucial information to responders, and without information, responders are forced to blindly drive through an area, not knowing what they are looking for. Is it a vehicle accident? Is it a facility release? Or is it something worse? Is it bioterrorism? And that is why the local responders think it is so important that these amounts be reported.

And so I guess my question, and anybody who wants to answer it, Ms. Bodine or Dr. Johnson, whoever. Here is my question. Don't you think it is relevant that our first responders have some sense of the source of an odor? Especially if the odor could be a chemical that is a threat to public health?

Ms. BODINE. I would like to respond to that, and Mr. Gablehouse's comments are in the administrative record, and of course they are relevant. And we are considering all comments. The section that you just read from his comments are confusing but indicate to me that in fact if the local emergency responder knew that the source was manure that they wouldn't respond and that it was the lack of information about the source that created the uncertainty that is referred to there.

So, of course, if we went final with our proposal to exempt, then they would know that the source wasn't manure and, in fact, was something else. These are confusing comments.

Ms. DEGETTE. That is just absolutely Alice-in-Wonderland thinking because if somebody smells—if there, in fact, is an emission that is a reportable emission from a farm, which frankly, under the law, it is 100 pounds per day. So that is a lot. Then if you exempt, if the EPA exempts farms, then the local—but there is still the smell. Even though it is exempted, it doesn't mean the smell goes away.

So then the people are reporting there is a smell, but if you have no reporting requirement, then that smell—then the release hasn't

been reported and therefore the local authorities have no idea where it is from.

Ms. BODINE. Again, I found these comments confusing as to the point——

Ms. DEGETTE. Well, have I cleared it up at all?

Ms. BODINE. Because the comments——

Ms. DEGETTE. If they don't have to report the event, then the local responders do not know that there has been a release. So then if a community member calls up and says there is a smell, they don't know because it hasn't been reported. That is what Tim Gablehouse is trying to say.

Ms. BODINE. And what is not in the comments is that the purpose of that report would then lead to a response to an air emission from manure. There is nothing in the comments that says that they would respond to release of an emission from manure.

Ms. DEGETTE. The other thing, and maybe someone else can answer this question, is there is actually after that comment quite a long legal analysis which concludes that under these two statutes that this rulemaking exceeds the EPA's rulemaking authority and that it would be arbitrary and capricious. And I am wondering if EPA or anybody else has had their attorneys look at this to see if, in fact, this is within the boundaries of EPA's rulemaking authority.

Ms. BODINE. Yes, of course, our proposed rule went through our general counsel's office.

Ms. DEGETTE. I am sorry? Your proposal what?

Ms. BODINE. Our proposed rule went through our general counsel's office.

Ms. DEGETTE. And was there a legal opinion on that?

Ms. BODINE. Our general counsels believe we have the authority to——

Ms. DEGETTE. Was there written legal opinion on that, Ms. Bodine?

Ms. BODINE. I would have to——

Ms. DEGETTE. If you can please check. And if there was, can you please provide it to this committee within 20 days of this hearing? Thank you very much. Now——

Mr. REY. If I might try to——

Ms. DEGETTE. Sure.

Mr. REY [continuing]. Elaborate a little bit on——

Ms. DEGETTE. Yes.

Mr. REY [continuing]. The quandary I think you are having.

Ms. DEGETTE. I am not having a quandary.

Mr. REY. I think one of the things we are finding is that 100 pounds may generate a smell, but it is not going to generate other significant human health effects.

Ms. DEGETTE. Well, actually, Mr. Rey, 100 pounds could also generate particulate matter that might be hazardous to someone's health.

Mr. REY. Not on the basis of the data we have seen so far, and I will submit for the record——

Ms. DEGETTE. That would be great.

Mr. REY [continuing]. The analysis on that. So what responders would be doing is saying, okay, there is a smell, but it is not the

kind of thing that suggests an imminent hazard that we are going to respond to——

Ms. DEGETTE. But if you don't——

Mr. REY [continuing]. Unlike the Excel situation.

Ms. DEGETTE. If you don't make them report, then they don't know if there is a problem or not because they don't know where it is coming from.

I just have one last question, and it is actually for you because you had testified earlier that these CAFOs are not big, that they are only 300 cows. So I am wondering if you can tell me for the record, since the reportable quantity amount for ammonia and hydrogen sulfide is 100 pounds per day, would that be generated by a farm with 300 cows?

Mr. REY. It could be because——

Ms. DEGETTE. Well, what——

Mr. REY [continuing]. Size alone isn't a function of——

Ms. DEGETTE [continuing]. Would the other considerations be?

Mr. REY. The most——

Mr. GREEN. If you will finish very quickly. We have less than five minutes for a vote.

Mr. REY. The most important consideration would be whether the facility is being operated properly. Excel wasn't that big a facility, but it wasn't operated properly.

Ms. DEGETTE. So we should exempt them?

Mr. REY. No, we shouldn't exempt them.

Mr. GREEN. Okay, Congressman Sullivan, we are going to take a recess while we can go vote and come back. Or you can do so right now.

Mr. SULLIVAN. I can be quick.

Mr. GREEN. Great.

Mr. SULLIVAN. Ms. Bodine, we have met before, and you have been to Tulsa and everything.

Ms. BODINE. Yes.

Mr. SULLIVAN. And I have written letters to talk about getting the EPA involved. And we have a problem with the poultry litter has gotten in our streams and watershed and lakes. And the city of Tulsa, for example, has to spend upwards of $100 million just to treat it.

I guess what my question is is that EPA won't get involved in something because there is a lawsuit going on, and I guess it is hard for me to understand. I guess EPA—but your Environmental Protection Agency is for the nation, isn't it, United States?

Ms. BODINE. Yes, sir.

Mr. SULLIVAN. Okay, and there are two states having a dispute right now. I guess it is hard—I guess what is the criteria—well, here is another example. I had a homebuilder call me not long ago and said that some people complained because the silt fences had holes in them and got some dirt in the stream. And the EPA people from Dallas came up and fined them.

Ms. BODINE. Um-hum.

Mr. SULLIVAN. If you entered into a lawsuit with those neighborhood association that did that, would you not get involved then in that? Or what kind of level does it take of polluting someone's

water source to get the EPA to actually act and try to mediate the situation without a lawsuit?

Ms. BODINE. In the instance of your construction facility, there are storm water requirements that, if the silt fence wasn't there, weren't being met. In the situation with the lawsuit by the Attorney General in the state of Oklahoma, it is my understanding—again this is pollution to water. This doesn't have anything to do with our release reporting exemption.

But the release is from what we call non-point sources of pollution, that means that they are not—they wouldn't be subject to Federal regulatory authority. But because this is a water case, I am not the expert on this case. And I would like to——

Mr. SULLIVAN. But if someone is dumping tons of animal waste, chicken, poultry litter and renderings into our water supply, is that not something that is not considered bad or——

Ms. BODINE. If that is the fact pattern, then I would assume that would be a discharge. But I would have to go back, see what the facts are, and then respond.

Mr. SULLIVAN. So if there wasn't a lawsuit—so it is really a——

Ms. BODINE. So the question is is there a Federal regulation——

Mr. SULLIVAN. But the reason the EPA is not getting involved in this to mediate between the states in the United States is because of a lawsuit that is taking place right now?

Ms. BODINE. No, if there was a Federal requirement that wasn't being complied with, the agency could get involved. The question, I guess, this is a dispute between two states.

Mr. SULLIVAN. Well, would contaminating a whole state's water supply be considered something that——

Ms. BODINE. Depends on whether or not it is regulated, whether or not it would be from a point source. And that is the fact pattern that I would need to go back and check.

Mr. SULLIVAN. But you think contaminating a state's water supply would be more problematic than a silt fence not being properly put up? That the EPA would get involved in that but not in someone—I mean water is a basic——

Ms. BODINE. If the source is from a point source, then EPA regulations apply. If the source is from a non-point source, EPA regulations don't apply.

Mr. SULLIVAN. Do you understand that that would be hard for someone to understand?

Ms. BODINE. I appreciate that, yes.

Mr. SULLIVAN. And also, Doctor, what kind of health concerns are there with abundance of phosphorus and nitrogen in the water and poultry litter and renderings of chickens and things like that, blood, all that in the water? We have seen it causes a smell and all that, but can pfiesteria cause any problems with the humans?

Mr. JOHNSON. Again, our agency is assessing chemical exposure. Obviously pfiesteria and other types of exposures could be of a health concern. We would have to refer that to experts at CDC to provide a more formal response to that.

Mr. SULLIVAN. But as a doctor, would you drink water that had chicken poop in it?

Mr. JOHNSON. No.

Mr. SULLIVAN. No? Do you think that someone that drank water with chicken poop in it could get sick?

Mr. JOHNSON. Yes.

Mr. SULLIVAN. Okay, I appreciate that. Thank you.

Mr. GREEN. I thank the gentleman. We will stand in recess. We have one vote in probably about 15 minutes. You can take a break.

[Recess.]

Mr. GREEN. The committee will come back into session, and I want to thank our witnesses. You know one of our jobs is also to vote on the floor, and every once in a while, we have to do that. But particularly today since we are considering the CR and we want to make sure we continue to fund our agencies in the future.

Congressman Butterfield is not here, and was our last questioner, but if he comes in, we will obviously give him the courtesy. I have a few questions to our Assistant Administrator. In August I went with EPA Region six staff to visit the San Jacinto waste pits site by boat and received an update on the site status including a letter sent to potential responsible party and another party of interest. And I want to thank the EPA for doing that. Could you briefly provide an update on any progress since then as such, whether there has been any progress of the potentially responsible party? And if it is a lengthy response, could you please respond in writing and just summarize?

Ms. BODINE. Yes, Mr. Chairman, I would like to respond in writing so I can make sure I am getting the most up-to-date information to you.

Mr. GREEN. Great. Thank you. And I discussed in my opening statement the impact of Hurricane Ike on the Superfund sites is a serious concern. How many Superfund sites in Texas and Louisiana were impacted, potentially impacted by Hurricane Ike?

Ms. BODINE. In Texas, it is 29 NPL sites. In Louisiana, I believe it is 17. Let me double check that. These are the facility sites that were in the path of the hurricane.

Mr. GREEN. Okay, thank you. When will EPA investigate the sites both in Louisiana and Texas?

Ms. BODINE. In Louisiana, all 17 sites have already been investigated. In Texas, we have investigated seven of the sites, and the remaining are scheduled to start actually today, the remaining investigation. So we expect that work to be done within the next 10 days.

Mr. GREEN. What would be the worst case scenario for a hurricane impact on a Superfund site, such as a hazardous waste dump impacted by a storm surge?

Ms. BODINE. It is going to depend on how far along a remedy is at the site. Obviously what we are very concerned about is that we don't have hazardous substances that have been in control moving off-site or moving in an uncontrolled situation.

Mr. GREEN. Okay, when the results of these investigations are complete, can you provide our committee with a response on the findings including any recommendations for action to control the hazardous releases?

Ms. BODINE. Yes, certainly.

Mr. GREEN. Thank you. There are over 100 Superfund sites in the United States where human exposure to hazardous waste is

not under control. EPA has been subject to some criticism for the continued uncontrolled human exposure at these sites. Does EPA have a national plan to prioritize these sites and address these uncontrolled human exposures?

Ms. BODINE. Definitely we place a priority on controlling human exposures.

Mr. GREEN. Are there any certain types of sites such as groundwater mitigation or sites in urban areas that are more likely to be uncontrolled human exposure sites than others?

Ms. BODINE. There are sites where it is easy to cut off human exposure. You could simply cap or put in a fence because the standard for whether human exposure is under control is whether there is exposure. That doesn't mean you have cleaned the site up, but first and foremost you cut off the exposure. The sites that are the hardest to do that are sites where the reason for the human exposure is consumption of fish, and people are violating fish consumption advisory.

Mr. GREEN. That brings up a great point, and my concern is when you instruct the EPA Region six to determine whether the San Jacinto waste pit site is a source of uncontrolled human exposure as quickly as possible. And I don't know if you are familiar with that site.

Ms. BODINE. I have some familiarity with it. I do understand that the issue there, dioxin and furans, has to do with the fact that there is fish consumption. And from the information that I read, which is that people are eating the fish notwithstanding a fish consumption advisory, that would be under our guidance not under control. It is the region that makes that determination. So we can follow up and make sure that they evaluate that and follow our guidance.

Mr. GREEN. Okay, thank you, and I appreciate your following up. And again could you provide the committee with a written response of EPA's actions in fiscal year 2008 to address the outstanding number of ongoing human exposure sites?

Ms. BODINE. I would be happy to do that.

Mr. GREEN. Is that possible?

Ms. BODINE. Yes.

Mr. GREEN. Ms. Mittal, is there anything else you would like to add on the proposed rule including whether the EPA should delay the rule?

Ms. MITTAL. I think the points that I made earlier are the concerns that we have, that EPA should definitely wait until they have the national air emissions monitoring study completed, they know actually how many emissions are happening from these CAFOs, and they also have made some decisions about what is considered a source for air emissions.

Mr. GREEN. Okay, USDA, any other comments before I lose my 7 seconds?

Mr. REY. Again I think the major comment is that question has just been raised, or questions that are more germane to regulating CAFO emissions under the Clean Air Act. What we are talking about here are reporting requirements under CERCLA and EPCRA, and I don't think we lack the information that we need to make a determination there. We have 5 years of experience.

Mr. GREEN. Thank you. My time has expired, and I yield to the ranking member.

Mr. SHADEGG. Thank you, Mr. Chairman. I have actually five written questions I would like to submit. Most of them are to Ms. Bodine. As a matter of fact, I think all of them are. And I will submit those for the record if I might.

I just want to go over a couple of points that have come up in questioning by the witnesses. First of all, Ms. Bodine or Mr. Rey, how long is this report? How detailed is the report that you are proposing not be required to be filed? How detailed is that? How long is it? How long does it take to fill it out or could it take? Range of hours, range of minutes, range of days?

Ms. BODINE. Yes, there is a reporting burden associated with these reports. It doesn't require monitoring, but it does require an estimate based on best professional judgment. So the reporting burden is based on the number of hours, and per notice, it would be $166.99, so about $167 per notice if they are reporting.

Mr. SHADEGG. And do they have to have equipment to monitor this?

Ms. BODINE. No, we don't require equipment. We don't require monitoring. They can use best professional judgment.

Mr. SHADEGG. Which is why you said the people who reported before may have believed they were over the reporting requirement without necessarily knowing it because they don't have equipment to know precisely. Is that correct?

Ms. BODINE. That is correct.

Mr. SHADEGG. Mr. Rey, do you have a comment on that, on what is involved in the report?

Mr. REY. Yeah, just a general comment. We are trying to bring these facilities into the best air and water quality compliance possible, and we are imposing a lot of new requirements on these facilities. So where we can target our efforts to engage farmers and ranchers in something that is meaningful, that is where we want to be putting our focus and not charging them a couple hundred bucks a pop for something that has proved largely meaningless over a five-year period.

Mr. SHADEGG. Good point. Is there a penalty for not—if the rule EPA proposes is not passed or adopted and the reporting requirement for emissions from manure remains in place, is there a penalty for not complying with this report?

Ms. BODINE. Yes. It actually goes up occasionally because it is adjusted. But yes, there are penalties of $27,000 plus a day.

Mr. SHADEGG. $27,000 plus a day?

Ms. BODINE. That would be the maximum.

Mr. SHADEGG. Okay, there is a discussion here that no government agency knows the size, location or—I am sorry, the number, size, location of CAFOs. And the GAO report actually says no Federal agency collects reliable data on CAFOs. It could not determine the trend of these operations over the past 30 years. Is that correct, Mr. Rey?

Mr. REY. No. In fact, had we had the opportunity to spend more time with GAO, we could have given and did give them in our written comments on their draft report the precise information that they desired. Moreover, much of that information is generated by

the National Agriculture Statistical Service. The next Ag census is going out in February, so if there is information that either EPA or GAO or HHS wants, we can include that in the next census. We know how many CAFOs there are. We know which ones are under permit.

Mr. SHADEGG. Yes?

Ms. BODINE. And I believe GAO's criticism was that that wasn't in a database. The CAFOs are regulated under the Clean Water Act. That information is in the permits, but right now, we don't have a database with all of that information in it.

Mr. SHADEGG. Fair enough. There is some discussion by Ms. DeGette about exempting farms and about exempting the Excel Dairy. I am sorry she is not still here, but no witness is proposing exempting farms or exempting dairies. You are proposing exempting emissions from manure piles. If, in fact, a farm or a dairy has an emission of these toxics or these materials from something else, they have a storage tank on their facility that emits this kind of pollutant, not an emission from a manure pile but from some sort of storage tank, your rule would not exempt the requirement that that be reported, correct?

Ms. BODINE. Correct.

Mr. SHADEGG. Mr. Rey, is that also correct?

Mr. REY. That is correct.

Mr. SHADEGG. So to the extent that Ms. DeGette was concerned that we were just going to exempt farms or dairies, at least, Mr. Rey, you were asked, and you said no, you wouldn't do that. You wouldn't propose doing that, and that is not what the rule proposes doing, correct?

Mr. REY. Correct.

Mr. SHADEGG. I have one last quick point. It is probably not a question. But in pursuing regulation—I think, Mr. Rey, this falls upon your point, if the burden of the regulated community with reporting what turns out to be useless or unnecessary information, isn't there a danger that we burden the system?

For example, I understand there are some 34,000 reports a year to the Coast Guard currently being filed and that enforcing this might result in thousands of additional reports of level exceedences from manure piles, which we would ascertain have little or no health effects. Would that be correct, Mr. Rey?

Mr. REY. That would be correct.

Mr. SHADEGG. Ms. Bodine?

Ms. BODINE. Again it would depend on how many of those facilities were reporting, but yes, it is definitely a potential for many reports. And that is a cost to the government as well. Again the cost per notice to the government is about $40 per notice.

Mr. SHADEGG. My last point is Ms. DeGette was also concerned that we would exempt these reports and that therefore we would not be forcing an emergency agency to respond. Nothing in the current law would force an agency to respond. If they get a report, as Ms. DeGette laid out, of an odor, they can call an agency, the local responder, local fire department, and say we have a toxic smell. In the presence of this report or the absence of this report, they have to make a decision whether to respond. If there were a report that said we filed a report, the odor came from manure, that might, in

fact, encourage them not to go respond because they are not worried about odor from manure piles.

On the other hand, if they called and said you know there is no report that has been filed from this CAFO saying that they had an emission, they couldn't rely on that as a reason not to respond because in point of fact, that might suggest there is even more danger. Am I not correct? Do you follow my point, Mr. Rey?

Mr. REY. I think that is basically correct.

Mr. SHADEGG. Maybe it was too complicated. The point is——

Mr. REY. No.

Mr. SHADEGG [continuing]. If anything, a report that the odor is from a manure pile, I think is going to encourage at least a first responder type agency to say we are not going to go do that. We are not going to go look at the manure emission. Maybe that is Dr. Johnson's problem, you know, and maybe he wants to know because maybe he wants to find out if there really are health effects. And it is not a problem that first responders, I would suggest, are going to run to. Dr. Johnson, you had——

Mr. JOHNSON. To add to that, I certainly—as an agency, when we do assessments, we value the information that the community needs to have to make their own decisions about their exposure and their health risks. So we would support those efforts to inform them. We don't have a formal opinion about the specific regulations, but it is something we value a great deal.

Mr. SHADEGG. Thank you very much. I yield back my time.

Mr. GREEN. Ms. Mittal, do you have any quick response to the GAO?

Ms. MITTAL. I do, sir. I continue to be concerned about how USDA mischaracterized the work that we did, and I want to put it on the record that we used USDA's census of agriculture data when we determined the trends in CAFOs. USDA does not collect information on CAFOs.

What they collect is information on large farms that raise animals, and we used that information. We worked with their analysts for over a year, and in the end we provided information that is a proxy for the number of CAFOs that are in the United States. There is no Federal database on CAFOs.

Mr. GREEN. Thank you. Let me reiterate my unanimous consent request included earlier in the information we provided.

Mr. SHADEGG. The only issue is the letter to which Ms. DeGette referred, which is the letter from Mr.—what is his name?

VOICE. Gablehouse.

Mr. SHADEGG. Right, National Association of SARA Title III Program Officials, a letter from Mr. Gablehouse. I have no problem putting that in the record. I am a little concerned that it is a part of all of the comments that were submitted in the record, and it seems to me if we put this document in the record—and I have no idea how those comments got—then maybe we are obligated to put in all of the comments, all the public comments in the record. If you will stipulate to that, that——

Mr. GREEN. Yes, just that letter is what I am requesting, not all the public comments. Ms. Bodine?

Ms. BODINE. We received a lot of comments. That would be a lot of paper in your record.

Mr. GREEN. We don't intend to put all the public comments in the record.

Mr. SHADEGG. And I understand you don't. You want to put in what you like.

Mr. GREEN. Well, you can put in, and I will agree to put in what you like.

Mr. SHADEGG. Well, why don't we put in—why don't we ask Ms. Bodine to write a summary of the comments and put that in the record so it tells us, you know——

Mr. GREEN. Okay, what I will do, you know, your statement is already in the record——

Ms. BODINE. Yes.

Mr. GREEN. —the information. But if the second letter is a problem, we will pull that out, and I asked for the letter that both Chairman Dingell and Ms. Solis sent in the third and fourth and leave out the second.

Mr. SHADEGG. I am proposing we put this in and that we put in a summary of the public comments from Ms. Bodine.

Ms. BODINE. A response is also going to be extremely voluminous. If we could give your staff a list of comments and they could pick and choose.

Mr. SHADEGG. Well, I will withdraw my objection.

Mr. GREEN. Okay, no objection. I thank you, and the committee stands in recess.

[Whereupon, at 12:37 p.m., the Subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

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Committee on Energy and Commerce
Washington, DC 20515–6115

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March 18, 2008

The Honorable Stephen L. Johnson
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20036

Dear Administrator Johnson:

On December 28, 2007, the Environmental Protection Agency (EPA) issued a notice of proposed rulemaking and requested comments on a proposed reporting exemption for air releases of hazardous substances from animal waste under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, and the Emergency Planning and Community Right-to-Know Act (EPCRA). According to the December 28, 2007, Federal Register Notice, the EPA had received a petition from the National Chicken Council, National Turkey Federation, and U.S. Poultry and Egg Association in 2005 seeking an exemption from CERCLA and EPCRA reporting requirements for ammonia emissions from poultry operations.

As a major part of its justification for the proposed exemption, EPA points to 26 comment letters from State and/or local emergency response agencies that supported granting the poultry petition – that is, exempting poultry operations from CERCLA and EPCRA reporting requirements for ammonia emissions. The Congressional Research Service (CRS), however, has found that of the 26 comments, 17 from the local emergency planning commissions (LEPCs) and one from a State emergency response commission (SERCs) were essentially identical in text. Two other comments provided general information about responses to release notifications from poultry operations but did not specifically take a position on the poultry petition and one other comment asked for more information.

Overall, according to the CRS "the 26 represent only a small fraction of the 4,491 LEPCs and SERCs that are included in EPA's database." In fact, the 26 represent only .6 percent of the total LEPCs and SERCs.

Curiously, the EPA continues to ignore the opposition of State and local air pollution control agencies to the proposed exemption for Animal Feeding Operations (AFO) (attached

letter dated March 20, 2007, from Executive Director S. William Becker to Representative Dingell). The March 20, 2007, letter from Mr. Becker on behalf of these agencies stated:

> We do not believe a blanket exemption is warranted given the demonstrated health effects associated with ammonia and hydrogen sulfide, the amounts of manure produced by AFOs and the usefulness of the data contained in CERCLA and EPCRA reports to State and local air agencies and the people living near these facilities.

In proposing this exemption for ammonia and hydrogen sulfide, the EPA is turning a blind eye to the very real health effects that can be caused by air releases of these two hazardous substances.

On October 17 and 18, 2007, the EPA issued a press release in two separate cases where penalties were assessed for failure to report a release of ammonia that exceeded the reportable quantity of 100 pounds. In the press release the EPA described the health consequences as follows:

> Exposure to high concentrations of ammonia can cause severe burns on the skin, eyes, throat and lungs. Breathing low levels of ammonia can cause coughing, as well as nose and throat irritation. Ammonia also plays a role in the formation of particulate air pollution, which has been linked to numerous health problems, including chronic bronchitis and lung disease.

Some animal feeding operations have reported ammonia emissions at levels that far exceed the reporting threshold of 100 pounds/day such as 15,500 pounds (Three Mile Canyon Farms), 710 pounds/day (Desert Rose Dairy), 250 pounds/day (Seaboard Farms, Dorman Dow facility), 5,700 pounds/day (Premium Standard Farms Somerset Facility).

EPA scientists have also examined potential acute health effects from hydrogen sulfide emissions from feedlot wastewater lagoons. In 2004, EPA scientists reported that the assumed 100 pounds/day hydrogen sulfide emission rate appears likely to create downwind concentrations that substantially exceed the threshold for mild adverse effects. The EPA analysis indicated that acute respiratory irritation and effects to the central nervous system could be caused in downwind receptor populations to a distance of 0.6 to 1.8 kilometers. (See attached Memorandum from Roy L. Smith dated February 19, 2004.)

On February 29, 2008, a panel of experts from the Pew Commission on Industrial Farm Animal Production informed Congress that "the vast amounts of animal waste and byproducts from such facilities pose significant risks to human health and the environment, requiring greater – not lesser – scrutiny." The expert panel stated that "the toxics gas emissions can be harmful – and even fatal – to farm workers and surrounding communities." According to the panel, "studies of residents living near industrial food animal productions facilities have documented

increased rates of neurobehavioral and neuropsychiatric abnormalities." The two year investigation of AFOs led the panel to conclude as follows:

> Monitoring is a basic component of strategies to protect the public from harmful effects resulting from contamination or disease yet monitoring systems in industrial food animal production are inadequate – a situation that makes mandatory reporting of toxic emissions even more important.

The reporting requirements of CERCLA and EPCRA are the only source of information providing emissions data for significant releases of ammonia and hydrogen sulfide. There are no specific Federal regulations under the Clean Air Act (CAA) that limit or control emissions of hydrogen sulfide from AFOs; and ammonia is not a regulated pollutant. There are no nationally applicable Federal regulations restricting emissions of ammonia from AFOs.

We also note that in 2006, EPA entered into the Animal Feeding Operations Air Compliance Agreement with approximately 13,900 farms in 42 States. This Air Compliance Agreement was challenged in the case of *Association of Irritated Residents, et al* vs. *Environmental Protection Agency*, 494 F. 3d 1027 (U.S. Court of Appeals for the District of Columbia, July 17, 2007.) In its brief to the Court of Appeals, EPA stated that the consent agreements provide that the AFO will determine their emissions using the appropriate methodology and come into compliance with all applicable CAA, CERCLA, and EPCRA requirements once EPA publishes emissions methodologies. The agreements granted participating AFOs a covenant not to sue and release from liability for certain potential past and ongoing CAA, CERCLA, and EPCRA violations. EPA further assured the Court of Appeals that "the release and covenant are contingent on the participating AFOs full compliance with the consent agreement, including undertaking whatever actions may be required to come into compliance with any applicable statutory requirements."

Now, EPA is proposing to eliminate the statutory reporting requirements under EPCRA and CERCLA. This raises extremely disturbing questions about whether the agency gave these animal feeding operations immunity from enforcement to allow time for the agency to move forward with a blanket exemption from the very reporting requirements under CERCLA and EPCRA that were the subject of the Animal Feeding Operation Air Compliance Agreement.

For all of the above reasons, the proposed reporting exemption for air releases from farms appears ill-considered and contrary to the public interest. To assist us in better understanding the basis for the proposed rule, we request responses pursuant to Rules X and XI of the Rules of the House of Representatives to the following questions by close of business March 27, 2008.

1. The original 2005 petition submitted by the National Chicken Council, National Turkey Federal, and U.S. Poultry and Egg Association sought an exemption only for ammonia emission reporting. It did not include hydrogen sulfide.

Has EPA received any petitions from other persons, companies or industries seeking a reporting exemption for hydrogen sulfide air releases from farms? If so, please provide any such petition or communication. If not, please explain the basis upon which EPA expanded the scope of the original petition to propose an expanded exemption that includes hydrogen sulfide and other hazardous substances.

2. On December 27, 2005, EPA acknowledged receipt of the petition from the National Chicken Council, et al, and requested public comment. Has the EPA ever requested public comment prior to issuing the proposed exemption on the merits of exempting hydrogen sulfide and other hazardous substances from the CERCLA and EPCRA reporting requirements? If so, explain when and how this was done and provide the comments received.

3. If the EPA finalizes exemptions from CERCLA and EPCRA reporting requirements, what prevents an AFO, or all the participating AFOs, from opting out of the agreement?

4. In reference to ammonia and hydrogen sulfide and other pollutants emanating from AFOs, the Court of Appeals for the District of Columbia has stated that "generally, an AFO emits these pollutants in proportion to its size; the more animals it houses, the more it pollutes."

   If burden reduction was a factor in EPA's proposed rule, why didn't EPA consider limiting the exemption to small family farms rather than providing an exemption for large corporate concentrated animal feeding operations?

5. Is EPA aware of any small farm operations, as opposed to large-scale industrial AFOs, that have triggered the reporting requirements for ammonia and hydrogen sulfide? If so, please provide a description of the reported emissions.

6. Does an episodic release notification for ammonia or hydrogen sulfide require anything other than a telephone call to the National Response Center? If so, please explain what else is required?

7. Are the emissions of hydrogen sulfide and ammonia from farms, and particularly large concentrated animal feeding operations, within the range of typical background concentrations in the air? If so, please explain in detail how you arrive at this conclusion.

8. Can EPA estimate how many animals would produce emissions of hydrogen sulfide and ammonia that would be expected to exceed the reporting requirement of 100 pounds/day?

9. Has any EPA employee or contractor hired by EPA conducted any analysis of the health effects from ammonia and hydrogen sulfide emissions from AFOs subsequent to the analysis conducted by Dr. Roy L. Smith of EPA's Office of Air Quality Planning and Standards on February 19, 2004? If so, please provide any such analysis, review, or report.

10. By what date does EPA expect to publish its methodologies for estimating emissions from AFOs that are being developed pursuant to the Air Compliance Agreement?

11. Has the EPA investigated the circumstances under which six local jurisdictions and/or local emergency response authorities (Luray, Virginia; Clinton, NC; Leesport, PA; Elizabethtown, NC; Dover, DE; Washington, AR) in five different States filed the identical comments under the name of six different officials? If not, please indicate whether EPA intends to investigate the circumstances of the identical nature of these comments in determining how much weight is given to each individual comment.

12. Until the EPA publishes the methodologies for estimating emissions, how is it able to determine whether there would be a significant number of notifications from the animal feeding operation sector? If EPA is able to currently make such a determination please provide the detailed basis for such determination for poultry, pork, and cattle livestock.

13. Did the Kentucky District Court in *Sierra Club Inc.* vs. *Tyson Foods*, 299 F. Supp. 2d.693 (W.D.Ky. 2003) hold that larger companies that contract with bird growers for bird production may be liable for compliance with CERCLA and EPCRA reporting requirements at contract grower facilities?

14. How many poultry farmers participated in the Air Compliance Agreement? Of the total numbers of participating poultry farmers how many are small family-owned farms and how many are larger companies?

15. Under the terms of the Air Compliance Agreement, participating AFOs agreed to pay a civil penalty, to be responsible for the payment of funds to the national air emissions monitoring study, and make certain farms available for monitoring.

    Did every participating AFO make a payment to support the national air emissions monitoring study? If so, what was the average payment and the total collected?

Should you have any questions regarding this letter, please contact us or have your staff contact Richard A. Frandsen with the Committee on Energy and Commerce staff at (202) 225-2927.

Sincerely,

John D. Dingell Chairman	Albert R. Wynn Chairman Subcommittee on Environment and Hazardous Materials	Hilda L. Solis Vice Chair Subcommittee on Environment and Hazardous Materials

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable John B. Shadegg, Ranking Member
Subcommittee on Environment and Hazardous Materials

NACAA
national association of clean air agencies

March 20, 2007

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

Dear Representative Dingell:

We are writing in response to recent testimony provided by EPA Administrator Stephen Johnson before the House Energy and Commerce Committee regarding EPA's plan to exempt emissions of air pollutants from manure from reporting requirements under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Emergency Planning and Community Right to Know Act (EPCRA). Administrator Johnson indicated at a hearing held on March 8, 2007, that state and local officials implementing Title III of the Superfund Amendments and Reauthorization Act consulted by EPA did not object to eliminating the CERCLA and EPCRA reporting requirements for ammonia and hydrogen sulfide emissions from manure.

However, what Mr. Johnson failed to mention is that EPA staff also sought the input of state and local air pollution control agencies, who voiced a different view. During a conference call EPA's Office of Solid Waste and Emergency Response held with the National Association of Clean Air Agencies (NACAA) on November 9, 2006, we expressed several concerns to EPA about exempting from EPCRA and CERCLA the reporting of emissions of ammonia and hydrogen sulfide from manure, which we discuss below:

- Ammonia and hydrogen sulfide are air pollutants with demonstrated health effects. Human exposure to ammonia triggers respiratory problems, causes nasal and eye irritation and in large enough amounts can be fatal.[1] It also contributes directly to the formation of fine particulate matter ($PM_{2.5}$), which causes severe health effects in people, including death, heart attacks and increased severity of asthma attacks, as well as visibility impairment.[2] Hydrogen sulfide is a toxic air

[1] Schiffman, S.S., et al., *Health Effects of Aerial Emissions from Animal Production and Waste Management Systems*, available at http://www.cals.ncsu.edu/waste_mgt/natlcenter/summary.pdf and Agency for Toxic Substances and Disease Registry, "Public Health Statement for Ammonia" (September 2004), available at http://www.atsdr.cdc.gov/toxprofiles/phs126.html#bookmark05.
[2] EPA, "Review of the National Ambient Air Quality Standards for Particulate Matter: Policy Assessment of Scientific and Technical Information," (OAQPS Staff Paper) (December 2005), available at http://www.epa.gov/ttn/naaqs/standards/pm/data/pmstaffpaper_20051221.pdf.

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pollutant that can cause severe health effects, even death, at high concentrations of exposure.[3] As reported in the *Dayton Daily News*, "At least 24 people in the Midwest have died from inhaling hydrogen sulfide and methane from manure since the 1970s, including fifth-generation Michigan dairy farmer Carl Theuerkauf and four members of his family, who collapsed one by one in 1989 after breathing methane gas from a manure pit."[4]

- Air emissions from animal farming operations (AFOs) are not trivial. AFO ammonia emissions represent *half* the U.S. ammonia emissions inventory.[5] Monitoring conducted of Premium Standard Farms (PSF) by EPA (under a settlement agreement) in 2004 shows that PSF releases 3 million pounds of ammonia annually from barns and lagoons at its Somerset facility, making it the fifth largest industrial emitter of ammonia in the country.[6] In Iowa, the greatest number of air complaints the state air agency receives concern emissions from manure storage pits. Iowa monitored ten homes for ammonia and hydrogen sulfide emissions and recorded high ammonia emissions on a regular basis and high hydrogen sulfide emissions periodically.[7]

- AFOs produce millions of tons of manure each year. According to EPA, AFOs generate approximately 500 million tons of waste each year, three times more raw waste than is generated yearly by people in the U.S.[8] Thus, manure is not a minor source of air emissions.

- Given the paucity of monitors in rural states, CERCLA and EPCRA reports may be the only source of information to people affected by excessive air emissions from AFOs.

- EPA is currently conducting a monitoring study to collect information about the air emissions from AFOs and to determine whether air emissions from AFOs, including emissions from manure, warrant regulation. EPA should not consider a blanket exemption from reporting requirements for air pollutant emissions from manure while data on this very subject is being collected. (Farms participating in this monitoring study have already received a waiver from enforcement of

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[3] Agency for Toxic Substances and Disease Registry, "Public Health Statement for Hydrogen Sulfide" (July 2006), available at http://www.atsdr.cdc.gov/toxprofiles/phs114.html.
[4] Wagner and Sutherly, "The supersizing of America's livestock farms," *Dayton Daily News* (December 1, 2002).
[5] National Research Council, "Air Emissions from Animal Feeding Operations: Current Knowledge, Future Needs" (pre-publication copy released Dec. 12, 2002), at p. 42
[6] Premium Standard Farms, *Air Emissions Monitoring Completion Report* (Nov. 17, 2004) and EPA, "Toxics Release Inventory" (2004), available at http://www.epa.gov/triexplorer.
[7] Iowa Department of Natural Resources Ambient Air Monitoring Group, "Results of the Iowa DNR Animal Feeding Odor Study" (January 2006).
[8] 68 *Federal Register* at pp. 7179-80.

CERCLA and EPCRA reporting provisions for air emissions of hydrogen sulfide and ammonia.)[9]

- We are also concerned about the precedent this action will set with respect to application of the Clean Air Act to air emissions from manure.

In our discussions with EPA, we suggested other means for reducing the perceived regulatory burden and uncertainty with respect to CERCLA and EPCRA: EPA could determine a size threshold for farms, based on animal units, below which a farm might reasonably assume its air emissions of ammonia and hydrogen sulfide were below CERCLA and EPCRA reporting thresholds. We do not believe a blanket exemption is warranted given the demonstrated health effects associated with ammonia and hydrogen sulfide, the amounts of manure produced by AFOs and the usefulness of the data contained in CERCLA and EPCRA reports to state and local air agencies and the people living near these facilities.

On a related issue, we understand that legislation has been introduced to exempt from CERCLA and EPCRA reporting of all air pollutant emissions from manure. We would oppose such a statutory exemption for the same reasons cited above. A legislative exemption is even more problematic because such an exemption would require legislative action to be reversed, as opposed to an EPA interpretation that could be changed administratively.

Please feel free to contact me at 202-624-7864 if you have any questions.

Sincerely,

S. William Becker
Executive Director

[9] 70 *Federal Register* at p. 4963. Specifically, EPA covenants not to sue participating AFOs – whether or not they are actually monitored – for "civil violations of CERCLA section 103 or EPCRA section 304 from air emissions of Hydrogen Sulfide (H_2S) or Ammonia (NH_3) that are not singular unexpected or accidental releases such as those caused by an explosion, fire or other abnormal occurrence."

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF AIR QUALITY PLANNING AND STANDARDS
EMISSION STANDARDS DIVISION
RESEARCH TRIANGLE PARK, NC 27711

February 19, 2004

SUBJECT: Update of my memo of June 3, 2003 ("Screening-level Acute Risk Estimates for Emissions of Hydrogen Sulfide and Ammonia from Hypothetical Feedlot Wastewater Treatment Lagoons") to reflect the revision of the acute exposure guideline level for hydrogen sulfide

FROM: Roy L. Smith, Ph.D.
Risk and Exposure Assessment Group (C404-01)

THRU: Dave Guinnup, Leader
Risk and Exposure Assessment Group (C404-01)

TO: Sally L. Shaver, Director
Emission Standards Division (C504-03)

Preface

As you requested, I have updated the following analysis of feedlot wastewater treatment lagoons to reflect the development of a new, less stringent AEGL for hydrogen sulfide. I've edited only the text relating to that standard, plus minor clarifying changes to reflect the elapsed time.

Introduction

In response to your request of 1 April 2003, this memo examines potential acute health effects from ammonia and hydrogen sulfide emissions from feedlot wastewater lagoons.

The analysis estimated acute inhalation exposure and risk, assuming lagoon emissions of 100 pounds per day of each compound. The procedure used the SCREEN3 air dispersion model to estimate concentrations of ammonia and hydrogen sulfide downwind from hypothetical wastewater lagoons of 1 and 2 acres. These estimated concentrations were then compared with appropriate acute dose-response assessment benchmarks associated either with no adverse effects, or with mild reversible respiratory irritation. The release parameters used as inputs to the dispersion model were generally conservative, and it was assumed that a person could be exposed for one hour at the downwind point of highest concentration.

The results of the analysis suggest that daily emission of 100 lb. of ammonia would produce downwind concentrations that slightly exceed no-effect levels but would not reach levels associated with respiratory irritation, even near a lagoon. In contrast, daily emission of 100 lb. of hydrogen sulfide would produce concentrations substantially exceeding both no-effect and mild-effect thresholds for about a mile downwind.

Methods

1. Dispersion Modeling

The SCREEN3 model is EPA's recommended single source Gaussian plume model, which provides maximum ground-level concentrations for point, area, flare, and volume sources. The model requires inputs for emission rate, source release height, source type (point, area, or volume), receptor height, and land use (urban or rural). SCREEN3 modeling runs were made for 1-acre (64 m by 64 m) and 2-acre lagoons (90 m by 90 m), sizes typical of such impoundments. The release height was set at zero (because lagoons are at ground level) and the receptor height was also assumed to be zero. The modeled emission rate was 100 pounds per day, equal to the RQ. The modeling results (which apply both to ammonia and hydrogen sulfide) are shown in Table 1.

Table 1. Modeled concentrations of ammonia or hydrogen sulfide downwind of typical feedlot wastewater lagoons.

Downwind Distance (m)	Ambient Concentration ($\mu g/m^3$)	
	1-Acre	2-Acre
100	3980	3067
200	2014	1502
300	1347	1021
400	992.2	770.3
500	767.6	612.1
600	612.7	501.9
700	501.2	421.1
800	422.5	362.5
900	361.7	316.1
1000	313.5	278.4
1100	275.8	248.1
1200	245	222.8
1300	219.2	201.2
1400	197.5	182.8
1500	179.2	166.8
1600	163.3	153
1700	149.7	140.9
1800	137.8	130.2
1900	127.3	120.8
2000	118.2	112.5
2100	110.4	105.4
2200	103.5	99.11
2300	97.27	93.36
2400	91.67	88.14
2500	86.59	83.43
2600	81.94	79.1
2700	77.7	75.1
2800	73.81	71.46
2900	70.25	68.1

Downwind Distance (m)	Ambient Concentration (µg/m³)	
	1-Acre	2-Acre
3000	66.98	65.01
3500	54.5	53.12
4000	45.55	44.53
4500	38.87	38.08
5000	33.72	33.09

2. Acute Dose-Response Assessments

To determine whether these estimated ambient concentrations could cause adverse acute health effects in humans, I compared them to acute dose-response assessment values from the following four sources, summarized in Table 2.

- US Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR, which is part of the US Department of Health and Human Services, develops and publishes Minimum Risk Levels (MRLs) for toxic substances. The MRL is defined as an estimate of daily human exposure to a substance that is likely to be without an appreciable risk of adverse effects (other than cancer) over a specified duration of exposure. Exposures above an MRL do not necessarily represent a threat, and MRLs are therefore not intended for use as predictors of adverse health effects or for setting cleanup levels. MRLs are published as part of pollutant-specific toxicological profile documents, and also in a table of "comparison values" that ATSDR regularly updates and distributes (available on-line at http://www.atsdr.cdc.gov/mrls.html).

- California Environmental Protection Agency (CalEPA). The CalEPA Air Resources Board has developed dose-response assessments for many substances, including reference exposure levels (RELs) for acute inhalation exposure. CalEPA defines the REL as a concentration level at (or below) which no health effects are anticipated, a concept that is substantially similar to that of ATSDR's MRLs. CalEPA's acute RELs are available on-line at: http://www.oehha.ca.gov/air/acute_rels/index.html.

- National Advisory Committee for Acute Exposure Guideline Levels (NAC). EPA's Office of Prevention, Pesticides and Toxic Substances established the NAC in 1995 to develop Acute Exposure Guideline Levels (AEGLs) and supplementary information on hazardous substances for federal, state, and local agencies and organizations in the private sector concerned with emergency planning, prevention, and response. The NAC is a discretionary Federal advisory committee that combines the efforts of stakeholders from the public and private sectors to promote efficiency and utilize sound science. AEGLs for a substance take the form of a matrix, with separate ambient levels for mild (AEGL-1), moderate (AEGL-2), and severe (AEGL-3) effects. Each of the effect levels are provided for as many as four different exposure periods, typically 0.5, 1, 4, and 8 hours. Table 2 provides only the 1-hour AEGL-1s for ammonia and hydrogen sulfide. The NAC formally proposed AEGL for ammonia in January, 2001, and published the AEGL for hydrogen sulfide as an interim value (i.e., after public review and revision) in July, 2003.

- American Industrial Hygiene Association (AIHA). AIHA has developed emergency response planning guidelines (ERPGs) for acute exposures at three different levels of severity of health effects. These guidelines (available on-line through the US Department of Energy at http://www.bnl.gov/scapa/scapawl.htm) are conceptually similar to AEGLs in that they represent concentrations for exposure of the general population for up to 1 hour associated with effects expected to be mild or transient (ERGP-1), irreversible or serious (ERPG-2), and potentially life-threatening or lethal (ERPG-3). Table 2 below includes only ERPG-1 values.

While dose-response assessments from any of these sources may reasonably be used as benchmarks in acute health risk assessments, readers should note that these assessments represent two different types of endpoint. The ATSDR MRL and Cal EPA REL concentrations are ambient levels at which *no adverse effects* are expected, whereas the AIHA ERPG-1 and NAC/AEGL-1 are levels at which *mild, reversible effects* may occur. Therefore, the ERPG-1 and AEGL-1 values will generally be higher than REL or MRL values, and the threshold for mild effects will probably occur somewhere between the two sets of values.

Table 2. Acute dose-response assessments for ammonia and hydrogen sulfide.

Acute Benchmark	H_2S ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	Source	Definition
REL	42	3,200	California Environmental Protection Agency	A concentration or dose at (or below) which no health effects are anticipated.
MRL	98	1,184	Agency for Toxic Substances and Disease	An estimate of daily human exposure to a substance that is likely to be without appreciable risk of adverse effects over a duration ranging from 24 hours to two weeks.
ERPG-1	139	17,413	American Industrial Hygiene Association	The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to one hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor.
AEGL-1	710	17,413	National Advisory Committee for Acute Exposure Guideline Levels	The 1-h airborne concentration of a substance at or above which it is predicted that the general population could experience mild odor, taste, or other sensory irritations.

The endpoint for the four ammonia assessments was irritation of the respiratory tract, eyes, and mucus membranes. This irritation, if not severe enough to cause burns, usually disappears in a few hours to a few days after exposure ceases. The endpoint for the hydrogen sulfide assessments was similar respiratory and mucus membrane irritation, but the effects may persist longer and be accompanied by additional effects to the central nervous system (e.g., memory problems, headaches, and dizziness).

Results and Discussion

The SCREEN3 modeling results (Table 1) showed that the 1-acre lagoon would produce higher concentrations than the 2-acre lagoon at all downwind locations, assuming the same

emission rate from each. The discussion below therefore focuses on the 1-acre lagoon.

For ammonia, the modeled concentrations exceeded the REL at 100 m, and exceeded the MRL at locations less than 400 m. The ERPG-1 and AEGL-1 levels were not exceeded. For hydrogen sulfide, all four acute benchmarks were exceeded downwind to a distance of 600 m (where the ambient level dropped below the AEGL-1). The ERPG-1 was exceeded to 1800 m, the MRL to 2300 m, and the REL to 4500 m.

Because the MRL and REL are no-effect levels, and slight exceedances do not necessarily indicate a likelihood of adverse effects, the results for ammonia suggest that acute respiratory irritation to a downwind receptor would be either mild or nonexistent, even close to the lagoon. Therefore, the assumed 100 lb/d emissions from a 1-acre lagoon should not create adverse acute health effects to offsite receptors.

The modeled concentrations for hydrogen sulfide exceeded 1-h no-effect benchmarks by one to two orders of magnitude within 1000 m of the lagoon, and did not descend below the mild-effect AEGL-1 until 600 m downwind. Given this degree and geographic scope of exceedance, it is likely that emission of 100 lb/d of hydrogen sulfide from a 1-acre lagoon could cause acute respiratory irritation and effects to the central nervous system in downwind receptor populations to a distance of 0.6 to 1.8 kilometers.

In summary, it appears that the assumed ammonia emission rate would result in ambient air concentrations at nearby downwind locations that approach, but do not exceed, the threshold for acute respiratory irritation. The 100-lb/d ammonia emission rate therefore appears to be appropriately protective, though not overprotective. The assumed 100 lb/d hydrogen sulfide emission rate appears likely to create downwind concentrations that substantially exceed the threshold for mild adverse effects.

cc: Dave Guinnup
Michele Laur
Randy Waite
Mark Morris
Elvis Graves

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 1 7 2008

OFFICE OF CONGRESSIONAL AND
INTERGOVERNMENTAL RELATIONS

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Dingell:

Thank you for your letter of March 18, 2008, requesting that EPA respond to a number of questions to assist you in understanding the basis for the proposed rule, "CERCLA/EPCRA Administrative Reporting Exemption for Releases to Air of Hazardous Substances from Animal Waste." The proposed rule was published in the Federal Register on December 28, 2007, and had a 90-day public comment period that closed on Thursday March 27, 2008 (*See* 72 FR 73700). I appreciate your interest in this matter.

Enclosed are responses to the questions posed in your letter. I hope this information will be useful to you and the Members of the Committee. Again, thank you for your letter. If you have further questions, please contact me or your staff may call Carolyn Levine, in EPA's Office of Congressional and Intergovernmental Relations, at (202) 564-1859.

Sincerely,

Christopher P. Bliley
Associate Administrator

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 1 7 2008

OFFICE OF CONGRESSIONAL AND
INTERGOVERNMENTAL RELATIONS

The Honorable Hilda L. Solis
Vice Chair
Subcommittee on Environment and Hazardous Materials
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

Dear Congresswoman Solis:

Thank you for your letter of March 18, 2008, requesting that EPA respond to a number of questions to assist you in understanding the basis for the proposed rule, "CERCLA/EPCRA Administrative Reporting Exemption for Releases to Air of Hazardous Substances from Animal Waste." The proposed rule was published in the Federal Register on December 28, 2007, and had a 90-day public comment period that closed on Thursday March 27, 2008 (*See* 72 FR 73700). I appreciate your interest in this matter.

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Sincerely,

Christopher P. Bliley
Associate Administrator

Enclosures

EPA Responses to March 18, 2008
Questions from House Committee on Energy and Commerce
Subcommittee on Environment and Hazardous Materials

1. **The original 2005 petition submitted by the National Chicken Council, National Turkey Federation, and U.S. Poultry and Egg Association sought an exemption only for ammonia emission reporting. It did not include hydrogen sulfide. Has EPA received any petitions from other persons, companies or industries seeking a reporting exemption for hydrogen sulfide air releases from farms? If so, please provide any such petition or communication. If not, please explain the basis upon which EPA expanded the scope of the original petition to propose an expanded exemption that includes hydrogen sulfide and other hazardous substances.**

   While not a formal rulemaking petition, EPA received a December 2003 letter and attachment from the National Cattlemen's Beef Association asking EPA to address both ammonia and hydrogen sulfide. A copy is enclosed. In addition, EPA has received a number of communications requesting a general approach and not limited to ammonia emissions. These include provisions in Congressional Committee reports: (Senate Report 108-353, September 21, 2004, House Report 109-80, May 13, 2005 and Senate Report 109-80, June 10, 2005), and individual Congressional correspondence.

2. **On December 27, 2005, EPA acknowledged receipt of the petition from the National Chicken Council, et al, and requested public comment. Has the EPA ever requested public comment prior to issuing the proposed exemption on the merits of exempting hydrogen sulfide and other hazardous substances from the CERCLA and EPCRA reporting requirements? If so, explain when and how this was done and provide the comments received.**

   No. EPA has not requested public comment on the merits of exempting hydrogen sulfide and other hazardous substances from the CERCLA and EPCRA reporting requirements prior to issuing the proposed exemption. The proposed exemption was available for public comment for 90 days.

3. **If the EPA finalizes exemptions from CERCLA and EPCRA reporting requirements, what prevents an AFO, or all the participating AFOs, from opting out of the agreement?**

   AFO owners/operators ("Respondents") participating in the AFO Air Compliance Agreement ("agreement") are legally bound by the agreement's terms. If a Respondent fails to comply with any of the agreement's terms, the Respondent loses the agreement's release and covenant not to sue for any past and/or ongoing Clean Air Act, CERCLA, and EPCRA violations. Thus, a Respondent opting out of the agreement could become subject to enforcement for any such violations, including past violations. Since EPA's announcement of the proposed exemption, no Respondents have opted out of the agreement.

4. **In reference to ammonia and hydrogen sulfide and other pollutants emanating from AFOs, the Court of Appeals for the District of Columbia has stated that "generally, an AFO emits these pollutants in proportion to its size; the more animals it houses, the more it pollutes."**

   If burden reduction was a factor in EPA's proposed rule, why didn't EPA consider limiting the exemption to small family farms rather than providing an exemption for large corporate concentrated animal feeding operations?

   While burden reduction was a factor that the Agency considered, the Agency's basis or rationale for proposing the exemption is not dependent on the size of the farm. That is, a response at all farms (no matter the size) associated with the release of a hazardous substance to the air is unnecessary, impractical and unlikely, as we describe in the preamble to the proposed rule (see 72 FR 73704, December 28, 2007). However, to the extent that EPA receives comments that raise this as an option, the Agency will consider it before we make any final decisions.

5. **Is EPA aware of any small farm operations, as opposed to large-scale industrial AFOs, that have triggered the reporting requirements for ammonia and hydrogen sulfide? If so, please provide a description of the reported emissions.**

   CERCLA and EPCRA do not require facilities to provide the size of the facility when they report. Thus, EPA does not know the relative size of the operations that submit release notifications under CERCLA and EPCRA.

6. **Does an episodic release notification for ammonia or hydrogen sulfide require anything other than a telephone call to the National Response Center? If so, please explain what else is required?**

   The regulations that implement the CERCLA section 103 notification requirements, 40 CFR 302.6, require the person in charge of the facility to immediately notify the National Response Center (NRC) as soon as he or she has knowledge of any episodic release that is equal to or exceeds the reportable quantity (RQ).

   The regulations that implement the EPCRA section 304 emergency notification requirements, 40 CFR 355.40, require notifications to State emergency response commissions (SERCs) and local emergency planning committees (LEPCs) - that are likely to be affected by the release - as well as a followup report that provides greater detail about the release.

7. **Are the emissions of hydrogen sulfide and ammonia from farms, and particularly large concentrated animal feeding operations, within the range of typical background concentrations in the air? If so, please explain in detail how you arrive at this conclusion.**

   Emissions and air concentrations of a pollutant are not directly comparable, because emissions have units of "mass per time period," while concentrations have units of "mass per volume." Moreover, the term "background concentration" has more than one

possible meaning. It can mean, for example, "upwind concentration," "global average concentration," or "concentration in an area far from large anthropogenic sources." These can be different.

With that said, like any anthropogenic source of air pollutants, the concentration of hydrogen sulfide and ammonia close to the emission source (lagoon surface, barn exhaust fan, surface of feed pile, etc.) generally will be higher than that of the upwind or surrounding air; for a large source, it would likely be much higher. However, pollutant concentrations emitted from a source are rapidly diluted as they mix with the atmosphere, react to form other chemical compounds, and/or are removed by deposition (an important factor for ammonia in particular). As a result, downwind concentrations eventually approach the upwind concentration. The distance required to come close to this concentration depends on a number of factors, such as atmospheric conditions, source emission rate, and topography, as well as the characteristics of the gas of concern (ammonia or hydrogen sulfide). For gases with long atmospheric residence times, emissions from one source can affect the upwind concentration for a second source, so saying that downwind concentrations from the second source have approached the upwind concentration is not necessarily saying that concentrations have reached "background concentration levels" as some use that term.

8. **Can EPA estimate how many animals would produce emissions of hydrogen sulfide and ammonia that would be expected to exceed the reporting requirement of 100 pounds/day?**

   No. Due to the variations in farm management and manure management practices, and the uncertainty in current factors used for estimating emissions, we do not have a widely accepted emission factor or emission methodology that would provide an estimate of the number of animals that would trigger the reporting requirements. (Note: For the purposes of the Air Compliance Agreement **only**, we have said Respondent operations with 10 times the EPA's Office of Water CAFO size cutoffs must prepare a one-time report for ammonia.) Under the terms of the Air Compliance Agreement, respondents may wait until data are collected and estimating methodologies developed before making any applicability determinations for reporting under CERCLA and EPCRA. A goal of the Air Compliance Agreement is to develop an emissions methodology for both of these compounds.

9. **Has any EPA employee or contractor hired by EPA conducted any analysis of the health effects from ammonia and hydrogen sulfide emissions from AFOs subsequent to the analysis conducted by Dr. Roy L. Smith of EPA's Office of Air Quality Planning and Standards on February 19, 2004? If so, please provide any such analysis, review, or report.**

   To the best of our knowledge, no EPA employee or contractor has conducted any additional analysis of the health effects from ammonia and hydrogen sulfide subsequent to the analysis of February 19, 2004.

10. By what date does EPA expect to publish its methodologies for estimating emissions from AFOs that are being developed pursuant to the Air Compliance Agreement?

The data collection taking place under the Air Compliance Agreement will extend for two years from date of startup at each monitoring site location. The sites came online at different times throughout the Spring/Summer/Fall of 2007; data collections are scheduled to be complete at all sites in Fall 2009. Pursuant to the timeline in the agreement, EPA expects to publish emission estimating methodologies on its web site approximately 18 months after the completion of data collection. Respondents have 120 days following publication of the estimating methodologies to initiate efforts to comply with any applicable requirements.

11. Has the EPA investigated the circumstances under which six local jurisdictions and/or local emergency response authorities (Luray, Virginia; Clinton, NC; Leesport, PA; Elizabethtown, NC; Dover, DE, Washington, AR) in five different States filed the identical comments under the name of six different officials? If not, please indicate whether EPA intends to investigate the circumstances of the identical nature of these comments in determining how much weight is given to each individual comment.

It is not unusual for EPA to receive identical comments from multiple commenters. Such comments are often the product of a "letter writing" campaign supported by an association or organization; other times such comments are the result of an internet "form letter." Our initial review of the comments received for the proposed rule, "CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances from Animal Waste," reveals that a number of organizations (e.g., Sierra Club, Tyson Foods) encouraged their constituents to comment to EPA. Generally, EPA notes each individual commenter and treats each comment as a statement that the person who signed the comment letter agrees with the message contained in the letter. EPA does not generally investigate the circumstances under which identical comments were received and we do not intend to do so for the comments received on this proposed rule.

12. Until the EPA publishes the methodologies for estimating emissions, how is it able to determine whether there would be a significant number of notifications from the animal feeding operation sector? If EPA is able to currently make such a determination please provide the detailed basis for such determination for poultry, pork, and cattle livestock.

As noted previously, EPA does not have a widely accepted emission factor or methodology that would provide an estimate of the number of animals that would trigger the reporting requirement. Thus, until such an emission factor or methodology factor is developed, EPA would look to the large number of animal feeding operations (approximately 13,900 farms in 42 States) that entered into the Animal Feeding Operations Air Compliance Agreement as an indication of the potential universe of facilities notifying the NRC on a daily basis.

13. Did the Kentucky District Court in *Sierra Club Inc.* vs. *Tyson Foods*, 299 F. Supp. 2d.693 (W.D.Ky. 2003) hold that larger companies that contract with bird growers for bird production may be liable for compliance with CERCLA and EPCRA reporting requirements at contract grower facilities?

The Court in *Sierra Club* held that the "larger" Tyson Chicken Company could be held liable for compliance with the CERCLA and EPCRA reporting requirements at contract grower facilities, but the determination seemed to be fact specific. There, Tyson Chicken was involved in the grower's facility design and equipment specifications; it provided baby chicks, feed, technical support, medicine and veterinary care; it advised on appropriate ammonia levels and ventilation practices; and its technical advisors were present on a weekly basis, giving them the capacity to timely discover releases and minimize the alleged environmental damage. The Court, however, did not determine the liability of the parent company, Tyson Foods, perhaps because sufficient facts were not presented at the time of the hearing. Accordingly, whether a larger company that contracts with a bird grower may be liable for compliance with CERCLA and EPCRA reporting requirements at the contract grower's facilities could depend on the facts presented.

14. How many poultry farmers participated in the Air Compliance Agreement? Of the total numbers of participating poultry farmers how many are small family-owned farms and how many are larger companies?

There are 259 poultry AFO owners/operators ("Respondents,") participating in the Air Compliance Agreement ("agreement"). The 259 poultry industry Respondents represent 218 egg industry Respondents and 41 broiler chicken industry Respondents. Each Respondent may have signed up more than one AFO (*i.e.*, farm) under the agreement. The 218 egg industry Respondents represent 2,693 farms and the 41 broiler chicken industry Respondents represent 5,752 farms. EPA cannot state how many of the 259 poultry industry Respondents are small family-owned farms and how many are larger companies because the agreement was structured in a way that did not identify whether a Respondent was a small family-owned farm or a larger company. Instead, the agreement classified the sizes of the farm(s) that each Respondent signed up under the agreement.

15. Under the terms of the Air Compliance Agreement, participating AFOs agreed to pay a civil penalty, to be responsible for the payment of funds to the national air emissions monitoring study, and make certain farms available for monitoring.

Did every participating AFO make a payment to support the national air emissions monitoring study? If so, what was the average payment and the total collected?

Industry trade groups for each animal sector participating in the Air Compliance Agreement ("agreement") contributed their sector's share of the $14.8 million in funding for the monitoring study with funds provided by their sector's producers. Each sector's share of the monitoring study was based on the cost to complete the monitoring for that sector. The swine industry's portion was $6 million; the dairy industry's portion was $5 million; the egg industry's portion was $2.8 million; and the broiler chicken industry's portion was $1 million.

December 10, 2003

The Honorable Michael O. Leavitt
Administrator
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Application of Clean Air Act Major Source Permit Programs and CERCLA/EPCRA Release Reporting Requirements to Cattle Operations.

Dear Administrator Leavitt:

In the course of the last year members of your staff, as well as representatives of the Office of General Counsel, have taken the time to meet with and to assist representatives of the National Cattlemen's Beef Association ("NCBA") tasked to address NCBA members' concerns with complying with Clean Air Act major source permitting requirements and CERCLA/EPCRA release reporting requirements for cattle operations. NCBA itself, through its air working group, has devoted extensive resources and study to the air quality concerns that have been expressed by its members and others. Our meetings with Ms. Shaver and representatives of EPA's Emissions Standards Division in October 2002, with Mr. Holmstead and Mr. Wehrum of EPA's Office of Air and Radiation, and Mr. Page of EPA's Office of Air Quality Planning and Standards in December 2002, and with Ms. Horinko and representatives of EPA's Office of Solid Waste and Emergency Response and Office of General Counsel in April 2003, reviewed and discussed in considerable depth the potential requirements of EPA's major source Clean Air Act permit programs and CERCLA's and EPCRA's release reporting requirements for cattle operations. The consultation and advice of your staffs is greatly appreciated. It has and will continue to assist NCBA members with voluntary compliance with applicable laws.

The purpose of this letter is to convey NCBA's understanding of the Clean Air Act's major source permitting and CERCLA/EPCRA's release reporting requirements to the cattle operations of our members, and to seek your concurrence either formally or informally, through ruling or policy guidance as you deem appropriate. NCBA would like to be able to confirm its understanding of the application of these laws by EPA to cattle operations, and to convey that understanding to its membership.

One of the results of NCBA's consultation with EPA and its own review has been to define and to limit carefully the activities of NCBA members on which we seek your general confirmation of NCBA's understanding and position. The "Cattle Operations" treated in the attached White Paper and Addendum of supporting authorities include only the grazing and feeding of cattle in open-air pastures and feedlots. The primary wastes from these operations, manure and urea, are beneficially recycled as fertilizer. No barns or wastewater lagoons are included in "Cattle Operations" as defined for purposes of your consideration of this issue in NCBA's White Paper. The only ponds involved are precipitation retention ponds. Similarly, Cattle Operations do not include any sources of non-fugitive emissions that exceed the thresholds for the Clean Air Act's major source permit programs, namely those of Title V, Prevention of Significant Deterioration ("PSD") and nonattainment New Source Review ("NSR"). This carefully limited definition of Cattle Operations accurately describes the open-air pasturing and feeding operations of the overwhelming majority of NCBA members.

Based on Cattle Operations as defined and limited in attached White Paper and Addendum, NCBA seeks EPA's concurrence in its understanding that:

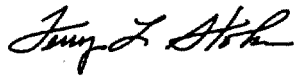
1. The Clean Air Act's major source permit programs (Title V, PSD & NSR) do not require permits for Cattle Operations.

2. The release reporting requirements of CERCLA and EPCRA do not apply to Cattle Operations.

NCBA's basis for its understanding is spelled out in the attached White Paper and Addendum of supporting legal authorities, which was developed based upon our consultation with EPA and others.

One of NCBA's primary concerns is that Cattle Operations not be confused with other operations whose compliance EPA is also assessing. It is our belief that Cattle Operations present a clear and straightforward application of law to facts that may be readily addressed by EPA. If NCBA can be of any further assistance, or provide any further information, please contact me at 303-694-0305, or Ms. Tamara Thies at 202-347-0228. Again, we thank you for your help and consideration of NCBA's request.

Very truly yours,



Terry Stokes, CEO
National Cattlemen's Beef Association

cc: Jeffrey R. Holmstead
Marianne L. Horinko
Bill Wehrum
Bill Harnett
Sally Shaver

Enclosures (2)
White Paper
Addendum

NCBA WHITE PAPER ON APPLICABILITY OF (1) CERCLA, /EPCRA RELEASE REPORTING AND (2) CLEAN AIR ACT PERMIT REQUIREMENTS.

This NCBA White Paper addresses the concern expressed by many NCBA members with respect to compliance with Clean Air Act major source permit requirements and the application of release reporting requirements under CERCLA/EPCRA to the cattle operations of most of its members, namely open-air grazing and feeding of cattle in pastures or feedlots. Over the last year NCBA staff and its Air Working Group have devoted themselves to resolving those compliance issues for open pasture and open-air, cattle feeding operations with precipitation runoff retention and settling ponds, but no animal feeding barns or wastewater lagoons or major point sources, such as stationary diesel engines exceeding applicable permit thresholds ("Cattle Operations"). An intensive and detailed legal and technical review has led NCBA to conclude that such cattle operations (1) are not subject to Clean Air Act major source permitting requirements, and (2) were not intended to be covered, and either are already, or should be, exempted from CERCLA/EPCRA release reporting requirements. This White Paper summarizes NCBA's position and basis for these conclusions. The attached Addendum on legal authorities provides more detail on the legal and factual basis for NCBA's position.

CLEAN AIR ACT PERMIT REQUIREMENTS

NCBA's analysis of the Clean Air Act's major source or major stationary source permit programs (namely the Title V, Prevention of Significant Deterioration ("PSD"), and non-attainment New Source Review) concludes that Cattle Operations do not require any of those permits. The reason for this is that the emissions from Cattle Operations are almost entirely fugitive emissions. The non-fugitive emissions of even the largest Cattle Operation do not approach the permit's thresholds for these permits. Fugitive emissions from Cattle Operations do not count in determining whether the permit thresholds of these permit programs apply. As a result, it will serve no useful purpose for determining permit thresholds or applicability to attempt to quantify fugitive emissions from Cattle Operations.

Cattle Operations are "minor sources" under the Clean Air Act. In addition, EPA has acknowledged that there are no scientifically sound emissions

factors or quantification or modeling techniques currently in existence that are adequate for regulatory determinations.

Finally, many if not most states with significant cattle operations already have in place conservation laws and air quality control regulations requiring best management practices and controls for cattle operations. Local nuisance and odor problems are more appropriately left to state and local authority.

CERCLA AND EPCRA RELEASE REPORTING

CERCLA and EPCRA's release reporting requirements, read fairly and in accordance with their purpose, do not apply to Cattle Operations. Those laws, adopted in response to Love Canal and Times Beach, were designed to deal with synthetic, man-made, manufactured and produced chemicals, and the hazardous wastes resulting from modern chemical technology. The legislative history contains a litany of references to Congress' purpose to cover such hazardous waste facilities. Congress treated cattle, livestock and agricultural operations as valuable resources that may be adversely affected by such chemicals and releases, and may be compensated for their losses, with explicit exemptions for the application of fertilizer to cropland or the use of pesticides.

Congress also created an exclusion from response (clean up) action for "naturally occurring substances" that we believe covers the ammonia from flatulence, urination, defecation, and the bacterial decomposition of manure and urea, as well as the formation of whatever hydrogen sulfide and ammonia may evolve from precipitation runoff that contacts the urea, manure or soils and is collected in precipitation runoff retention ponds. The legislative history of this exemption makes explicit reference to "animal wastes."

The clear purpose of release reporting under CERCLA and EPCRA is to provide immediate notice to government agencies, enabling emergency response action by them. In accordance with EPA's interpretation of this exclusion, and precedent that has excluded golf courses and farms from release reporting requirements for radionuclides, as well as established rules of statutory construction, NCBA submits that Cattle Operations are within the naturally occurring substances exclusion from EPA's response authority. CERCLA and EPCRA should not be interpreted to require release reporting that the agencies receiving it are prohibited from responding to; to do so would be wasteful, superfluous and futile.

In addition, EPA has excluded from release reporting those operations where response actions are infeasible or inappropriate, even where they are not explicitly exempted as naturally occurring substances, fertilizer or pesticides. It has done so, for instance, with radionuclides from dumping of coal and coal ash, and coal ash piles at power plants and industrial operations, as well as those from most mining operations. Cattle Operations, even if covered as "facilities" "releasing" "hazardous substances," and even if not within the naturally

occurring substance exclusion, are very clearly with EPA's established grounds for exemption from release reporting, which include (1) continuous low level emissions over large areas, (2) rapid dispersion in the environment, and (3) acceptable exposure risk, all of which make response action infeasible or inappropriate. Congress explicitly recognized the low risk of low-level, continuous ammonia releases. Ammonia and hydrogen sulfide are not listed as hazardous air pollutants under the Clean Air Act.

Based on the results of NCBA's work, NCBA is requesting that EPA provide a clear ruling, or explicit guidance, that Cattle Operations are not subject to Clean Air Act major source permitting requirements or release reporting requirements under CERCLA/EPCRA.

RTC
Addendum Attached.

3107150_1.DOC

National Association of SARA Title III Program Officials

Concerned with the Emergency Planning and Community Right-to-Know Act

March 27, 2008 Electronically Submitted

Superfund Docket
Environmental Protection Agency
Mail Code: [2822T]
1200 Pennsylvania Ave, NW
Washington DC 20460

Re: Comments to Docket ID No. EPA-HQ-SFUND-2007-0469

Dear EPA:

The National Association of SARA Title III Program Officials (NASTTPO) is made up of members and staff of State Emergency Response Commissions (SERCs), Tribal Emergency Response Commissions (TERCs), Local Emergency Planning Committees (LEPCs), various federal agencies, and private industry. Members include state, tribal, or local government employees as well as private sector representatives with Emergency Planning and Community Right to Know (EPCRA) program responsibilities, such as health, occupational safety, first response, environmental, and emergency management. The membership is dedicated to working together to prepare for possible emergencies and disasters involving hazardous materials, whether they are accidental releases or a result of terrorist attacks.

It is NASTTPO's position that this proposal endangers responders and the public by denying them information they would use to protect themselves from hazardous chemical releases. We feel strongly that EPA should withdraw this proposal.

Timothy R Gablehouse
President
410 17th St, Ste 1375
Denver CO 80202
(303) 572-0050

INTRODUCTION

As an organization, NASTTPO is not taking a position on the environmental compliance record of confined animal feeding operations or farms. Rather, NASTTPO is commenting because we believe the proposed action threatens the integrity of the accidental release reporting system. EPA misses the point when it notes that first responders rarely respond to releases from "farms". That is only true when they know such facilities are the source.

The 911 call that comes in from a member of the public in the dark of night reporting a foul or chemical odor rarely contains information on the source. The responders are forced to guess at that source as they gage their response. "Immediate" release reporting by facilities under EPCRA provides crucial information to those responders. Without such information responders are forced to blindly drive through an area not knowing what they are looking for – is it a vehicle accident, a facility release or something worse will be the question in their minds.

EPA acknowledges that many of the hazardous chemicals that may be released by "farms" are the same as those that may be released during a vehicle or facility accident. The public and responders cannot distinguish between a hazardous chemical coming from a facility exempted under this proposal versus other sources without a report. It is frankly offensive for EPA to assume that responders somehow will be able to figure this out on a dark night and, therefore, not which to respond when the source is a "farm".

ANALYSIS

CERCLA and EPCRA, combined, require any person in charge of a facility from which a hazardous substance has been released in a reportable quantity to immediately notify federal, state, and local governments. See 42 U.S.C.A. § 9603 (2002) and 42 U.S.C.A. § 11004 (2002). Ammonia ("NH4") and Hydrogen Sulfide ("H2S") are listed hazardous substances under CERCLA. 40 C.F.R. § 302.4, see also Sierra Club v. Seaboard Farms Inc., 387 F.3d 1167,

1170 (10th Cir. 2004). EPA has set the RQ for ammonia and hydrogen sulfide at one hundred pounds per day. 40 C.F.R. § 302.4. Courts have uniformly interpreted the term facility under CERCLA to encompass for any purpose, including reporting requirements imposed by § 103, "the entire site." Sierra Club v. Seaboard Farms Inc., 387 F.3d 1167, 1169, 1176-78 (U.S. Ct. App. 10th Cir. 2004) (holding that the farm in its entirety, as opposed to individual barns or lagoons, constituted a "facility" under CERCLA Section 103 reporting requirements,)); see also Sierra Club, Inc. v. Tyson Foods, Inc., 299 F.Supp.2d 693, 710 -11 (W.D. Ky. 2003) (holding that "for purposes of the CERCLA Section 103 reporting requirements, each chicken production operation, including the separate chicken houses, is a facility)). Therefore, owner/operators of a facility have a duty to aggregate the quantity of all releases within the site and report if the aggregated amount exceeds the daily RQ. Seaboard Farms Inc., 387 F.3d at1169, 1176-78; see also Tyson Foods, Inc., 299 F.Supp.2d at 710 -11 (holding that "[e]missions from the separate poultry houses are required to be added together to determine if a reportable quantity has been reached for the facility")).

Farms produce animal waste that results in the release of hazardous substances to the air, mainly ammonia and hydrogen sulfide, both of which are by-products of the break-down of animal waste. When animal waste is stored in a lagoon, pit, or stockpile, at times they emit both ammonia and hydrogen sulfide in an amount that exceeds the RQ, triggering reporting requirements under CERCLA and EPCRA. The instant proposal entitled "CERCLA/EPCRA Administrative Reporting Exemption for Air Releases of Hazardous Substances from Animal Waste" (hereinafter, "Animal Waste ARE") would completely exempt farms from all administrative reporting duties under these statutes when the RQ was met or exceeded. In addition to emitting odors many view as objectionable, these facilities also emit particulate pollution that causes adverse respiratory and heart problems. See Association of Irritated Residents v. E.P.A., 494 F.3d 1027, 1028-29 (Cir. D.C., 2007).

Courts conduct a well-delineated analysis to determine the validity of an agency's rule. First, they determine whether or not the agency is acting within the scope of its statutory authority. Next, they analyze whether or not the agency followed the proper procedure. Finally, they review the agency's action under an arbitrary and capricious standard. If the rule falls within the scope of the agency's rulemaking authority, was enacted using the proper procedure, and based on competent evidence, the court gives deference to the agency and will uphold the rule.

I. EPA DOES NOT HAVE EXPRESS STATUTORY AUTHORITY TO EXEMPT FARMS FROM REPORTING AIR RELEASES OF HAZARDOUS SUBSTANCES FROM ANIMAL WASTE

First, this memo analyzes whether EPA has the statutory authority to exempt farms from the reporting requirements for air releases of hazardous substances from animal waste as established in CERCLA and EPCRA.

Courts have broadly interpreted EPA's rulemaking authority under environmental regulations. Bluewater Network v. E.P.A., 370 F.3d 1, 11 (Cir. D.C. 2004). When conducting an analysis of statutory authority under such, courts primarily concern themselves with whether or not EPA has shown that it has "examined the relevant data and articulate[d] a satisfactory explanation for its action including a rational connection between the facts and the choice made." Bluewater Network, 370 F.3d at 11 (citing Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). The statutory language of 42 U.S.C.A. § 9602 clearly illustrates that Congress intended to mandate the reporting of releases of hazardous substances on a quantity basis when it directed that EPA "shall promulgate regulations establishing that quantity" and set a low threshold of one pound for all listed hazardous substances in the interim. 42 U.S.C.A. § 9602(a)-(b). However, to date, no court has directly addressed the question of whether "EPA's decision to exempt certain entities and industries and not others lacks a rational basis and the exemptions are therefore arbitrary and

capricious." See Fertilizer Institute, 935 F.2d at 1310 (stating that the rule was not enacted using the proper notice and comment procedures, so it was unnecessary to address this claim)).

In Bluewater Network, the applicable statute was the Clean Air Act ("CAA"). CAA § 213(a)(3) gives EPA the authority to "promulgate (and from time to time revise) regulations containing standards applicable to emissions from those classes or categories of ... vehicles..." Bluewater Network, 370 F.3d at 12. The court first held that EPA's decision to group snowmobiles with other land-based recreational vehicles with similar characteristics was within its authority because "EPA has discretion to define "reasonable "categories or classes" of vehicles under § 213(a)(3). Bluewater Network, 370 F.3d at 17. In addition, the court held that EPA's snowmobile-only contribution finding was "supported by evidence" because it was based on data EPA compiled from the states of Alaska, Washington, and Michigan showing CO levels on certain snowmobile-traveled roads and trails. Bluewater Network, 370 F.3d at 15.

In contrast, CERCLA § 102(a) gives EPA the authority to: "promulgate regulations establishing that quantity of any hazardous substance the release of which shall be reported pursuant to section 9603 of this title." 42 U.S.C.A. § 9602(a). Hazardous substance is defined as any substance listed in 42 U.S.C.A. § 9601(14) and any other substance that "may present substantial danger to human health or welfare or the environment" when released. Id. The section goes on to state that EPA *may* fix one RQ regardless of the medium into which the hazardous substance is released. Id. Therefore, unlike CAA § 213(a)(3), CERCLA § 102(a) does not give EPA the discretion to promulgate reporting requirements according to "reasonable "categories or classes," but only expressly allows for EPA to establish different RQ's for each medium.

EPA addresses the single RQ issue in its proposal. 72 FR at 73702-03. EPA explains that the RQ of 100 pounds for ammonia is based on its aquatic toxicity level. Id. EPA determined that ammonia's mammalian toxicity level, based on inhalation data, should be set at a RQ of 1000 pounds. Id. EPA goes onto explain that it most commonly uses the single RQ

approach afforded in § 102(a) because it is the simplest and least confusing approach to reporting. Id. at 73703. However, under the single RQ approach the lowest RQ across all mediums is the RQ used. Id. at 73702-03. While EPA implies that the single RQ method is the only option *feasibly available* to them, they are empowered to set a RQ for each medium. 42 U.S.C.A. § 9602(a). Thus, if EPA chose, it could set a 1,000 pound RQ for air releases of ammonia. However, from the statutory language, it does not appear that Congress intended to empower EPA to set RQs on a source by source basis. As seen in CAA § 213(a)(3), Congress has used this methodology before, and it follows that Congress was aware of this option but chose not to exercise it.

Thus, it is unlikely that a reviewing court, based on a reading of the plain language of CERCLA and EPCRA would hold that EPA has express statutory authority to specifically exempt farms from reporting air releases of hazardous substances from animal waste.

II. EPA IMPROPERLY INTERPRETS ITS STATUTORY AUTHORITY UNDER CERCLA TO ALLOW IT TO EXEMPT FARMS FROM REPORTING AIR RELEASES OF HAZARDOUS SUBSTANCES FROM ANIMAL WASTE

EPA has interpreted its authority under CERCLA to respond to releases of hazardous substances to mean that it may grant administrative reporting exemptions (AREs) when the release either: (1) poses little or no risk to human health and the environment or (2) that federal response to such a release is either (a) impracticable or (b) inappropriate.

A. EPA May Exempt the Release of a Hazardous Substance from CERCLA/EPCRA Reporting Requirements if EPA Shows That the Release Poses Little or No Risk to Human Health and the Environment

A review of EPA's application of its two-prong *OR* test for the basis on which it rests its decision to promulgate an ARE shows that to date the agency has never treated the test as an *OR* test, but in the past has only promulgated ARE's when both prongs were met.

EPA is allowed to determine what substances pose sufficient danger to the public to require inclusion on CERCLA's hazardous substance list. U.S. v. Serafini, 750 F.Supp. 168, 171 (M.D. Pa. 1990). The Court of Appeals for the District of Columbia (hereinafter, "the court") has uniformly held that EPA has the authority to add or remove a toxic chemical from the "hazardous substances" list applicable to certain environmental statutes. See, e.g., Dithiocarbamate Task Force v. E.P.A., 98 F.3d 1394, 1396, 1402 (Cir. D.C. 1996) (holding that adding a substance to the hazardous substances list is proper when EPA meets the minimum standards required by the APA and the governing statute); A.L. Laboratories, Inc. v. E.P.A., 674 F.Supp. 894, 899-900 (Dist. D.C. 1987) (holding that removal of hazardous substances that were listed due to a clerical error was proper in the absence of EPA presenting evidence indicating that the substance were in fact hazardous)).

The governing statute regarding listing procedures is CERCLA and EPCRA adopts CERCLA's list of hazardous substances for itself. 42 U.S.C.A. § 11104(a). Through EPCRA §§ 304 and 328 any administrative reporting exemption to CERCLA would likewise apply to EPCRA's reporting requirements. 42 U.S.C.A. §§ 11104, 110048. CERCLA and EPCRA present a simple formula for assessing reporting requirements for listed hazardous wastes: One who is in charge of a facility from which a CERCLA hazardous substance is released in a quantity that equals or exceeds the RQ must immediately notify the National Response Center ("NRC") of the release. 42 U.S.C.A. § 9603(a). Likewise, under EPCRA the release must also be simultaneously reported to the state and local emergency planning committees. 42 U.S.C.A. § 11104(a)-(b).

As a practical matter, however, EPA has concluded that in some instances these broad sweeping reporting requirements are over-inclusive and in response has granted exemptions. See 63 FR 13459. Exemptions to the reporting requirements imposed by CERCLA § 103 and EPCRA § 304 exist. Statutory exemptions exist for federally permitted releases. 42 U.S.C.A. § 9603(a). A federally permitted release exception applies to all air releases that are subject to

either a permit or a control regulation imposed by the Clean Air Act ("CAA"). 67 FR 18899, at 18904. EPA also utilizes Administrative Reporting Exemptions ("ARE's") when it deems that the release either: (1) poses little or no risk to human health and the environment or (2) that federal response to such a release is either (a) impracticable or (b) inappropriate. See 63 FR 13460 at 13461.

EPA first asserted that CERCLA § 102(a), 103, and 115 "together provide EPA with the authority to grant administrative reporting exemptions" ("ARE's") in its Administrative Reporting Exemption for Certain Radionuclide Releases ("Radionuclide ARE") published on March 19, 1998. Id. EPA went on to explain that "such exemptions may be granted for releases it deems either: (1) pose little or no risk to human health and the environment or (2) that federal response to such a release is either (a) impracticable or (b) inappropriate. Id. Finally, EPA purported that by granting ARE's EPA could decrease the burden imposed on the Federal response system by these useless reports. Id. Instead EPA believed that ARE's would allow the federal response system to "more efficiently implement CERCLA and EPCRA and effectively focus on reports of releases that are more likely to pose a significant hazard to human health and the environment." Id.

To date, EPA has only enacted a full ARE for "naturally occurring radionuclides releases from undisturbed land holdings, from certain land disturbance activities (construction, farming, and most types of mining), and to or from coal and coal ash piles." Id. at 13472. EPA declared that its authority to grant an ARE to these "categories of releases" came from CERCLA §§ 102(a), 103, and 115. See 63 FR 13461, at 13461, 13474. The exemptions were first promulgated in final rule 54 FR 22524 on May 24, 1989. However, the final rule was challenged in Fertilizer Institute v. U.S. E.P.A., 935 F.2d 1303, 1310 (Cir. D.C. 1991). See 63 FR 13461, at 13461. Although the court held that the ARE was not promulgated through the proper notice and comment procedures, it nevertheless left the exemptions in place while EPA undertook notice and comment rulemaking. Id. The court stated its reasoning for allowing the exemption

to remain in place was in part due to the fact that "one of the primary motivations behind EPA's decision to provide for exemptions was EPA's conclusion that the exempted entities posed little hazard." Fertilizer Institute, 935 F.2d at 1312.

After conducting a period of notice and comment, on March 19, 1998, EPA published a final rule that not only kept the exemptions in place as promulgated in the 1989 rule, but in some instances broadened them. 63 FR at 13461-62. EPA gave three reasons for its broadening of the exemptions. Id. at 13462. First, EPA presented data showed that the concentrations of the hazardous substances in the materials being exempted were in the range of "typical" background concentrations found in rock and soil throughout the U.S., thereby concluding that they did not pose a threat to human health and the environment. Id. at 13461-62, 13464-65. Next, EPA concluded that a response to these releases was "very unlikely and possibly infeasible or inappropriate due to the concentration level findings and additional evidence that these releases were "continuously low, spread over large areas, and widely dispersed." Id. at 13461-62. Finally, EPA asserted that its intention in adopting broader reporting exemptions was to allow EPA to focus its resources on the most serious releases in order to protect public health more effectively and efficiently, while simultaneously eliminating unnecessary reporting burdens. Id.

In 2006, EPA published a final rule that provided an ARE for certain air releases of Nitrogen Oxides ("NOX ARE"). EPA purported that its statutory authority for the rule came from the broad authority it was delegated under CERCLA "to respond to releases or threats of releases of hazardous substances from vessels and facilities." 71 FR 58525, at 58526. The rule was enacted to relieve small facilities (those not required to hold a federal permit for NOX because the level released from those facilities is so minimal that it does not pose a risk to human health or the environment) from the reporting of NOX releases that exceeded the RQ. Id. at 58526. However, the ARE did not fully excuse reporting of an air release of NOX. Id.

The final rule raised the RQ from 10 pounds to 1,000 pounds per 24 hours and was applied to all air releases from combustion or combustion-related activities. Id. at 58527. EPA explained that it chose this level because it was the threshold that the human health risk data supported. Id. at 58528. In addition to its evaluation of the data that a 1,000 pound RQ for NOX would not endanger human health, EPA also based its conclusion to enact the ARE on data that showed a CERCLA response to the report of a release below this level was "very unlikely and possibly infeasible or inappropriate." Id. at 58527. EPA supported this assertion on the basis that a release below 1,000 pounds is generally below the level regulated by the Clean Air Act ("CAA") and that EPA itself does not generally respond to reports at this level. Id.

In its Animal Waste ARE proposal, similar to its Radionuclide and NOX ARE's, EPA again purports that under CERCLA it has the broad authority to respond to releases of hazardous substances. EPA specifically relies on §§ 102(a), 103, and 115 for the authority to grant the Animal Waste ARE. 72 FR at 73701. EPA asserts that the "agency has previously granted such AREs where the Agency has determined that a federal response to such a release is either or impracticable or unlikely." 72 FR at 73701 (citing the Radionuclide ARE, 63 FR 13460). However, EPA fails to mention that the Radionuclide ARE was also premised on rock and soil data that showed that the concentrations of the hazardous substances in the materials being exempted did not pose a threat to human health and the environment. See 63 FR at 13461-62, 13464-65. Unlike the Radionucliude and NOX AREs, in its Animal Waste ARE, EPA presents no data that the releases of hazardous substances from animal waste on farms that it proposes to exempt do not pose a threat to human health or the environment.

In light of the fact that there is currently no available evidence that EPA can leverage to show that the Animal Waste ARE is based on valid data, see § III(A), that shows the proposed exempted-releases pose little or no risk to human health and the environment, EPA cannot meet the first prong of its two-prong ARE test.

B. EPA May Not Solely Rest it Basis for the Exemption on Evidence that Federal Response to Animal Waste Releases are Unlikely

Due to EPA's application of its two-prong *OR* test as an *AND* test and in light of the legislative purpose behind CERCLA and EPCRA, see § III(A), EPA cannot solely base the Animal Waste ARE on evidence that a federal, state, or local response to the release of a hazardous substance from animal waste at a farm is *unlikely*.

When explicit numerical benchmarks exist within the governing statute and the applicable regulations ignore those benchmarks because of the weight and consideration it gives to "softer" issues, EPA has retained too much discretion and thus its decision becomes arbitrary and capricious. Dithiocarbamate Task Force, 98 F.3d at 1402. In Dithiocarbamate Task Force, RCRA was the governing statute and EPA had issued rules that specifically laid out procedures for identifying hazardous waste subject to RCRA. Dithiocarbamate Task Force, 98 F.3d at 1396-97; see also 40 CFR 261. The rules both set forth threshold levels and laid out various factors that EPA was to consider when making a listing determination. Dithiocarbamate Task Force, 98 F.3d at 1397. The court struck down EPA's addition of certain carbamates because EPA failed to abide by the benchmark figures and did not "adequately address listing factors." Dithiocarbamate Task Force, 98 F.3d at 1402. Directly on point, in Fertilizer Institute, the court stated that its reasoning for allowing the Radionuclide ARE to remain in place was in part due to the fact that the ARE would allow EPA to possibly respond more adequately to serious safety hazards, but only because it was convinced that "one of the primary motivations behind EPA's decision to provide for exemptions was EPA's conclusion that the exempted entities posed little hazard." Fertilizer Institute, 935 F.2d at 1312.

EPA expressly states that its sole rationale for the Animal Waste ARE is based on the purpose behind CERCLA and EPCRA to notify federal, state and local authorities of these releases based on the likelihood of whether of not one of these bodies would respond to the

report. 72 FR at 73704. In the Animal Waste ARE, EPA presents evidence that shows a Federal Response to the notification of ammonia or hydrogen sulfide release from animal waste is unlikely. Id. EPA cites the fact that to date EPA has not initiated a response to any NRC notifications of ammonia or hydrogen sulfide when animal waste is the source of the release. Id. Further, EPA has received letters from state and local emergency response agencies stating that they too would not initiate an emergency response action in their jurisdiction for the same. Id. Moreover, EPA's proposal asks commenters that support continued reporting to describe why these reports are useful if there is no federal response. However, EPA does acknowledge that it has set a RQ level of 1000 pounds for ammonia in regard to its mammalian toxicity level due to inhalation. Similar to Dithiocarbamate Task Force, EPA ignores its own "benchmark" figures, 1000 pound RQ for mammalian toxicity of inhaled ammonia, and bases its proposal on "softer" issues, such as administrative efficiency and reduced paperwork. Moreover, EPA misstates the purpose behind the reporting notices required under CERCLA and EPCRA, see § III(A).

Thus, regardless of evidence that a federal, state, or local response is unlikely, if challenged, the court will likely find that EPA's basis for the Animal Waste ARE gives the agency too much discretion and thus renders the proposal arbitrary and capricious.

III. EPA'S DECISION TO EXEMPT AIR RELEASES OF HAZARDOUS SUBSTANCES FROM ANIMAL WASTE IS NOT ARBITRARY AND CAPRICIOUS IF IT CAN SHOW STATUTORY CONSISTENCY, REASONED FACT-BASED EVALUATION, AND CONSISTENT INTERNAL REASONING

Finally, this memo analyzes whether EPA's proposal to exempt air releases of hazardous substances, in particular, ammonia and hydrogen sulfide, from animal waste at farms, is arbitrary and capricious. To show that its decision is not arbitrary and capricious EPA must show that the decision is: (A) consistent with the mandates of both CERCLA and EPCRA; (B) founded on a reasoned evaluation of the relevant factors; and (C) not inconsistent with other applicable internal agency reasoning.

A. Agency Decisions must be Consistent with the Governing Statute

A reviewing court will likely hold that, on its face, EPA's Animal Waste ARE is not consistent with CERCLA and EPCRA.

Under the Administrative Procedure Act ("APA"), agency decisions may not be inconsistent with the governing statute. 5 U.S.C.A. § 706(2)(A). EPCRA was passed by Congress to protect local communities against releases of hazardous substances that posed a risk of injury to their persons and their property. A.L. Laboratories, Inc., 674 F.Supp. at 899. Moreover according to the United States District Court for the District of Columbia:

> Part of Congress' scheme for protecting local communities was to prevent the revision of the Right-to-Know list until the EPA had considered the short- and long-term effects of substances proposed for addition to or deletion from the list.

Id. at 899 -900 (citing 42 U.S.C.S. § 11002(a)(4)* (Law.Co-op.1987)). In A.L. Laboratories, Inc., the court held that EPA's refusal to remove certain substances that only appeared on the hazardous substance list due to a clerical error was "arbitrary, capricious, and contrary to the provisions of the Right-to-Know Act." The court opined that unless the agency had any evidence that the substances were in fact hazardous then its action could not be deemed "reasoned." Id. at 900.

Moreover, the purpose of the reporting requirements under CERCLA and EPCRA are to respectively provide EPA and the public with information from which they can properly "assess hazards and mitigate potential injury from releases." Tyson Foods, Inc., 299 F.Supp.2d at 705 (holding that citizens who used the environment affected by alleged ammonia releases from chicken farms sustained "injury" from potential exposure to releases and could seek enforcement of reporting requirements under CERCLA and EPCRA)). The court further stated that "without the required notices of alleged releases, regulatory agencies are without

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* Section 11002(a)(4) states: Revisions. The Administrator may revise the list and thresholds under [section 11002(a)(2) & (3)] from time to time. *Any revisions to the list shall take into account the toxicity,* reactivity, volatility, dispersability, combustability, or flammability of a substance.

knowledge of the releases; and are consequently impeded from adequately mitigating the releases," which is the intent of reporting requirements under both statutes. Id.

In its Animal Waste ARE proposal, EPA does not advance any scientific data regarding the level of risk posed by the hazardous substances it proposes to exempt other than the information that ammonia's mammalian toxicity level, based on inhalation data, was set by EPA at a RQ of 1000 pounds. 72 FR at 73702-03. However, EPA plainly asserts, without explanation, that "this administrative reporting exemption is protective of human health and the environment." Id. at 73700. Yet, the proposal does not provide any data that illustrates that these air releases do not pose risk to human health or the environment. In contrast, EPA states that the inhalation data shows that ammonia is toxic to humans when the RQ of 1000 pounds is met or exceeded. Id. at 73702.

Moreover, in 2005 EPA launched a monitoring study[†] of farms emitting hazardous substances from animal waste because at that time there was "no existing methodology to measure reliably a [farms] emissions." Association of Irritated Residents, 494 F.3d at 1029-30; see also 72 FR at 73703. The study commenced in the spring of 2007 on 21 farms in 10 states and the monitoring is slated for 2 years. 72 FR at 73703. EPA projects that it will have gathered all the necessary data by 2009, at which time it begin to develop emissions estimating methodologies. Id. Without a reliable methodology to capture the level of emissions from farms, EPA cannot proclaim that these releases are harmless.

Thus, it is most likely that a reviewing court will hold that EPA's decision to promulgate the Animal Waste ARE is in direct conflict with the general and specific notification goals of CERCLA and EPCRA.

[†] EMISSIONS FROM ANIMAL FEEDING OPERATIONS ET AL., NAT'L RESEARCH COUNCIL, AIR EMISSIONS FROM ANIMAL FEEDING OPERATIONS: CURRENT KNOWLEDGE, FUTURE NEEDS (2003), *available at* http: www. nap. edu/ catalog/ 10586. html; *Consent Agreement,* 70 Fed.Reg. at 4958.

B. Agency Decisions must be Founded on a Reasoned Evaluation of the Relevant Factors

EPA will have a hard time establishing that its decision to exempt air releases of hazardous substances from animal waste at farms is founded on a reasoned evaluation of the relevant factors.

Agency decisions must be founded on a reasoned evaluation of the relevant factors. Arizona Cattle Growers' Ass'n v. U.S. Fish and Wildlife, Bureau of Land Management, 273 F.3d 1229, 1236-37 (9th Cir. 2001) (citing Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 378 (1989)). In W.R. Grace & Co., the court held that EPA's order setting a cleanup standard of 1.2 milligrams per liter for ammonia in drinking water was "arbitrary and capricious and not supported by a rational basis" because "no technical study or explanation was offered for the standard." W.R. Grace & Co. v. U.S. E.P.A., 261 F.3d 330, 333 (3d Cir. 2001).

In 2005, EPA received a petition requesting an exemption from CERCLA and EPCRA's reporting requirements for ammonia from poultry operations from the National Chicken Council, National Turkey Federation, and the U.S. Poultry & Egg Association's. 72 FR at 73703. In response, EPA offered farms the option to sign up for an air monitoring study. Id. The study commenced in the spring of 2007 on 21 farms in 10 states and monitoring is slated for 2 years. Id. At the conclusion of the study, which is predicted for 2009, EPA plans to use the data that it gathers to develop emissions estimating methodologies. Id. Similar to W.R. Grace & Co., EPA has no technical study to offer as evidence that its decision to promulgate the Animal Waste ARE is supported by a rational basis.

Thus, it is most likely that a reviewing court will hold that EPA's Animal Waste ARE is premature, and thus arbitrary and capricious, because until the study results are available, a reasoned evaluation of the relevant factors cannot be made.

C. Agency Decisions must be Consistent with Other Applicable Internal Agency Reasoning

EPA will have a hard time establishing that its decision to exempt air releases of hazardous substances from animal waste at farms is consistent with its other decisions regarding such releases.

Generally: "internally contradictory agency reasoning renders resulting action arbitrary and capricious under the Administrative Procedure Act." Defenders of Wildlife v. U.S. Environmental Protection Agency, 420 F.3d 946, 959-60 (9th Cir. 2005); see also Gen. Chem. Corp. v. United States, 817 F.2d 844, 857 (D.C. Cir.1987) (holding that "internally inconsistent and inadequately explained" agency action "arbitrary and capricious"). In Defenders of Wildlife, the court held that EPA's approval of an application was arbitrary and capricious because the agency relied on "contradictory positions regarding its section 7 obligations" under the Endangered Species Act ("ESA") in administrative proceedings. Defenders of Wildlife, 420 F.3d at 959-60. EPA's reasoning was "internally inconsistent and inadequately explained" and thus could have no rational basis. Defenders of Wildlife, 420 F.3d at 959-60 (citing Gen. Chem. Corp., 817 F.2d at 857).

In 2005, EPA received a petition requesting an exemption from CERCLA and EPCRA's reporting requirements for ammonia from poultry operations from the National Chicken Council, National Turkey Federation, and the U.S. Poultry & Egg Association's. 72 FR at 73703. In response, EPA offered farms the option to sign up for an air monitoring study. Id. The study commenced in the spring of 2007 on 21 farms in 10 states and monitoring is slated for 2 years. Id. At the conclusion of the study, which is predicted for 2009, EPA plans to use the data that it gathers to develop emissions estimating methodologies. Id.

Similar to Defenders of Wildlife, EPA's proposed Animal Waste ARE is based on "contradictory positions," is "internally inconsistent," and is "inadequately explained." It is contradictory and internally inconsistent to continue a study aimed at developing emissions

estimating methodologies for emissions that you are simultaneously proposing to exempt from reporting requirements. In the Animal Waste ARE, EPA does *not* purport that it plans to abandon the study, but instead asserts that it will make the results of the study available to the public within 18 months of its completion. Id. Moreover, identical to W.R. Grace & Co., EPA has no technical study to offer as evidence that its decision to promulgate the Animal Waste ARE is supported by data that illustrates how this ARE is protective of human health and the environment. It is impossible for EPA to have data of this nature when it still is determining estimating methodologies for the emissions. Id.

Thus, it is almost certain that a reviewing court will hold that EPA's decision is arbitrary and capricious because EPA's proposal to exempt emissions from animal waste is in direct conflict with its decision to continue developing emissions estimating methodologies.

CONCLUSION

EPA cannot successfully defend against claims that the Animal Waste ARE exceeds its rulemaking authority and that it acted arbitrarily and capriciously in proposing such. Although EPA has broad rulemaking authority to regulate reporting requirements under CERCLA, and therefore EPCRA, the court has consistently held that EPA must act in accordance with the governing statute and put forth a reasoned evaluation for its proposals. First, CERCLA does not expressly give EPA the authority to grant reporting exemptions by any means other than by: (1) de-listing the substance as hazardous or (2) creating different RQ thresholds for different mediums. Next, a reviewing court will likely find that EPA's two-prong ARE test is a valid interpretation of its authority to regulate reporting requirements if it is deemed an *AND* test. As an *AND* test, it meets the purpose of the statute, to inform the government and local emergency responders of hazardous releases in order to protect human health and the environment. It does not meet this goal as an *OR* test, because a reviewing court is likely to find that the second-prong considerations relevant, but not dispositive on their own. Finally, due to the current state of the scientific data regarding the release of hazardous substances from animal

waste and the fact that EPA is simultaneously exempting and studying these releases, it is almost certain that a reviewing court would find this contradiction is in and of itself arbitrary and capricious.

Memorandum January 28, 2008

TO: House Energy and Commerce Committee
Attention: Richard Frandsen

FROM: Claudia Copeland
Specialist in Resource and Environmental Policy
Resources, Science, and Industry Division

SUBJECT: Emergency Planning Committee Comments on "Poultry Petition"

This memorandum responds to your inquiry concerning one aspect of a recent proposal by the Environmental Protection Agency (EPA) to exempt livestock operations from certain reporting requirements of federal law.

Both the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, or Superfund) and the Emergency Planning and Community Right-to-Know Act (EPCRA) have reporting requirements that are triggered when specified quantities (called reportable quantities) of hazardous substances are released to the environment. Owners and operators of farms, like all other businesses, are required to comply with these reporting requirements. The laws specify response actions that government agencies may take, upon receipt of release notification.

In 2005, the National Chicken Council, National Turkey Federation, and U.S. Poultry & Egg Association petitioned EPA ("poultry petition") to exempt ammonia emissions from poultry operations from the reporting requirements of CERCLA and EPCRA. The petition argued that application of emergency release reporting requirements to ammonia emissions from poultry operations is burdensome to poultry businesses and puts such businesses at risk of potential liability for improperly reporting ammonia releases, but does not improve public health or the environment. The petition also argued that these reporting requirements "will burden government emergency response agencies with the unnecessary duty of handling and processing a large volume of notifications which will undermine their ability to effectively address actual public health risks and release reporting that actually requires emergency response."[1]

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[1] National Chicken Council, U.S. Poultry & Egg Association, National Turkey Federation, "Petition for Exemption From EPCRA and CERCLA Reporting Requirements for Ammonia Emissions from Poultry Operations," August 5, 2005, p. 1.

On December 24, 2007, EPA responded to the poultry petition and proposed a rule that would permit an administrative reporting exemption for releases of hazardous substances to the air where animal waste at farms is the source of that release. EPA's rationale for the proposed exemption is that it is unlikely that EPA or any other government agency will take a response action under CERCLA or EPCRA as a result of a notification. According to EPA, ongoing releases of hazardous substances from animal waste at farms make an emergency response to such releases "unnecessary, impractical and unlikely."[2] In the Notice accompanying the proposed rule, EPA noted it had received comments on the poultry petition from state and local emergency response agencies supporting this view.

> EPA received 26 comment letters from state and/or local emergency response agencies in its request for public comments on the [poultry petition]. All of those commenters supported granting the poultry petition — that is, exempting from CERCLA and EPCRA reporting requirements for ammonia emissions from poultry operations. Generally, those agencies supported the petition because they are aware of the operations in their jurisdictions, were concerned about the resource implications of receiving the notifications (i.e., having to process the notifications), and would not conduct an emergency response as a result of the notifications. Thus, the comments received from state and/or local emergency response agencies is consistent [sic] with EPA's views.[3]

You requested that CRS review the public comments from state and/or local emergency response agencies in the EPA docket for the 2005 poultry petition.[4] The 26 comments referenced in the December *Federal Register* Notice were submitted by five state emergency response commissions or agencies (SERCs) and 21 local emergency planning commissions or committees (LEPCs). The 26 represent only a small fraction of the 4,491 LEPCs and SERCs that are included in EPA's database.[5]

The majority of the 26 comments (from 17 LEPCs and 1 SERC) are essentially identical letters that include the following text (with slight variation in a few of the letters):

> Our committee is well aware that routine agricultural operations, such as livestock production, litter application and application of commercial fertilizers, release ammonia at generally low concentrations on an ongoing basis, and the inherent difficulty in estimating such emissions.
>
> Given these circumstances, our committee does not believe such notifications would be of value in performing our mission, and in fact may prove to be a hindrance. We would not anticipate undertaking any response to such notifications since the releases are routine: (and lack of prior complaints alleging any health impact) and are not amenable to any immediate corrective or mitigative measures. (Moreover, given the difficulty in estimating of this type of release, these notifications would not contain quantitative information concerning releases, and therefore would be of little value to responders or the general public.) Finally, given the substantial number of poultry and other livestock production operations in our area, a significant number of notifications would strain our

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[2] U.S. Environmental Protection Agency, "CERCLA/EPCRA Administrative Reporting Exemption for air Releases of Hazardous Substances From Animal Waste, Proposed Rule," *Federal Register*, Vol. 72, No. 248, December 28, 2007, p. 73704.

[3] Ibid.

[4] Docket No. EPA-HQ-SFUND-2005-0013.

[5] See: http://http://yosemite.epa.gov/oswer/LEPCDb.nsf/HomePage?openform.

resources and unnecessarily divert our attention from potentially serious emergencies to which we must be prepared to respond.[6]

The majority of the other eight comments supported the poultry petition.

- Five letters supported the petition, saying that response and recordkeeping would be burdensome, but the text of these letters differed from the above quoted material (letters from Hardy County (WV) LEPC, Union City (TN) Fire Department, Obion County (TN) LEPC, Arkansas SERC, and Indiana SERC).

- Two letters provided general information about responses to release notifications from poultry operations, but they did not specifically take a position on the poultry petition (Virginia SERC, and Kershaw County (SC) LEPC).

- One letter asked for more information in order to provide comments on the petition (Grant County (WV) LEPC).

Copies of all 26 of the public comment letters are attached. If I can assist you further, please call me at 7-7227.

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[6] Letter from Mitchell G. Byrd, Director, Bladen County (NC) Office of Emergency Services, Re: Docket ID No. EPA-HQ-SFUND-2005, 0013, March 27, 2006. Similar comments were submitted by the Sampson County (NC) LEPC, Perks County (PA) LEPC, South Fulton (TN) Fire Department, Kandiyohi County (MN) LEPC, Hall County (GA) Fire Services, Washington County (AR) LEPC, Grundy County (TN) LEPC, Shenandoah County (VA) LEPC, City of Suffolk (VA) LEPC, Sussex County (DE) LEPC, Franklin County LEPC, Page County (VA) LEPC, Johnston County (NC) LEPC, Kent County (DE) LEPC, Barry Lawrence County (MO) LEPC, Gilmer County (GA) LEPC, and Office of the Governor, State of Texas.

Government Accountability Office's Responses to U.S. Department of Agriculture's Comments

The United States Department of Agriculture (USDA) appreciates the chance to comment on this GAO report on CAFOs. GAO's report suffers from many infirmities, including repetition, erroneous assumptions, inaccurate information and uncited references. Moreover, we believe that GAO missed an important opportunity to correctly present CAFO producers as environmentally responsible citizens – a fact demonstrated by up-to-date evidence. We believe that there should have been more time dedicated to the report, as well as consistent input from experts at USDA and EPA and better use of the wide variety of written materials currently available. The comments that follow sequentially track the various sections of this report.

GAO Response: *No change.*

Comments on the Summary Page – "What GAO Found"

GAO states "Because no federal agency collects consistent, reliable data on CAFOs, we could not determine the trends in these operations over the past 30 years." This is incorrect. USDA's National Agriculture Statistics Service (NASS) does a Census of Agriculture every 5 years that is available for use by the Environmental Protection Agency (EPA). Additionally, USDA's Natural Resources Conservation Service (NRCS) supplements this Census by calculating manure production. The next Census of Agriculture is due for release in early 2009. We believe this Census and supplement is sufficient for EPA's program management needs.

GAO Response: *No change. According to USDA officials, its Census does not ask respondents whether they raise animals in confined situations nor are USDA Census size categories consistent with EPA's CAFOs size thresholds—a fact that USDA confirms later in these comments. However, USDA officials repeatedly told us that the farms in the Census' largest size categories are most likely CAFOs. As a result, we used USDA Census Data for 2002, the most current available at the time of our review, as a proxy for CAFOs when estimating trends.*

GAO repeatedly insists that EPA needs, but cannot obtain the information it needs to make a health and environmental impact analyses from CAFO discharge. However, USDA cannot share farm specific information with anyone without the permission of the producer. These statutory protections

are found in the Farm Security and Rural Investment Act of 2002, Title II, Subtitle A, Section 2004(a); and the Freedom of Information Act, 5 U.S.C. 552 (b), as amended by Public Law No. 104-231, 110 Stat. 3048.

GAO Response: *No change. We recognize that USDA is generally prohibited from sharing farm specific information and our report does not suggest or recommend that USDA do otherwise.*

To say that GAO could not determine CAFO trends is erroneous. GAO used the 2002 census to estimate trends, the result of which (increase in CAFOs of 230 percent) was well known to those in the agricultural industry. The trend in livestock production is toward larger operations because advanced technology has allowed the industry to become highly efficient through economies of scale.

GAO Response: *No change. USDA is correct that we used 2002 Census data to estimate trends. As we state in our report, we used USDA data on large farms with animals as a proxy for CAFOs because no federal agency collects consistent, reliable data on the number of CAFOs nationwide. In addition, our report recognizes the changes in the livestock industry and notes that these changes are due to a variety of factors, including domestic and market forces, technological changes, and industry adaptations. Our report also points out that according to agricultural experts and USDA officials, the overall decrease in the number of farms and increase in the average number of animals raised on a farm may have occurred because these operations wanted to achieve economies of scale.*

GAO's comparison of CAFO manure to municipal waste is misleading since animal waste is useful and in demand nationwide for agricultural operations. Please refer to University of Missouri Extension Publication EQ 349, *Hog Manure and Domestic Wastewater Management Objectives by Lory, Zulovich and Fulhage.*

GAO Response: *Our report does not compare CAFO manure to municipal waste, because such a comparison would be inappropriate. Instead, to provide a perspective of the amount of wastes generated by large farms that raise animals, we compared them with the amount of human sanitary waste generated by various cities. Human sanitary waste includes feces and urine but does not include wastes such as water from showers, washing dishes and clothes, and flushing toilets. Appendix I of our report describes the*

methodology that we used to develop annual estimates of the sanitary wastes generated by various cities and the amount of manure that would be produced by three different sizes of farms. In addition, we inserted the term "sanitary" before "waste" throughout the report when referring to the human sanitary wastes to clarify the type of human waste used in our report for comparison purposes.

GAO fails to support the statement that the NAEMS study will not provide the "scientific and statistically valid data it was intended to provide and EPA needs to develop the air emissions protocols". Approximately fifty scientists, academics and industry experts using a consensus approach developed the NAEMS test protocol. NAEMS is a state of the art study using techniques to measure non-point sources. This study was viewed as a first step to develop better emission estimation protocols than currently available to EPA. NAEMS was never intended to fill all the data gaps or result in the development of the "process based models" suggested in the NAS study. GAO is confusing the "emission protocols" with the NAS recommended "process based models."

GAO Response: *No change. Our report discusses and describes the Air Compliance Agreement, including EPA's rationale for offering animal feeding operations an opportunity to sign a voluntary consent agreement and participate in the National Air Emissions Monitoring Study in some detail and clearly recognizes the study is a first step in a multi-year effort. However, as we point out in our report, the study, as currently structured, may not provide EPA with the data that it needs to develop the planned protocols for three reasons: the study (1) may not be representative of the vast majority of animal feeding operations, (2) does not include a sufficient number of monitoring sites to establish a statistically valid sample, and (3) does not include other sources that can contribute significantly In addition, our report clearly distinguishes between the emissions protocols that EPA plans to develop following the completion of the monitoring study and a more sophisticated process-based model recommended by the National Academy of Sciences. Because the emissions protocols that EPA plans to develop are a "first step," we recommended that EPA establish a strategy and timetable for developing a process-based model. EPA concurred with our recommendation and told us that it has begun to evaluate what is needed to develop such a model.*

USDA disagrees with GAO's conclusion that EPA does not have sufficient information to effectively monitor and regulate CAFOs. The inventory that GAO recommends is not necessary, and absent a "Duty to Apply" requirement, would be costly, difficult to maintain, and likely be an unacceptable intrusion on privacy. GAO does not identify the root cause of EPA's struggles with this rule, which is EPA's use of permits as enforcement tools. Permits are not enforcement tools. A permit insures the application of appropriate technology and protects the producer from fines in the event of a discharge for causes outside the producer's control. GAO should recommend that EPA stop using permits for unintended purposes and further recommend that the Congress provide sufficient funds to properly enforce the Clean Water Act (CWA).

GAO Response: *Our report points out that since 2003, EPA has compiled quarterly estimates from its regional offices on the number of permits that have been issued, but that this data, developed by the regional offices or originating with the state permitting authority, are not consistent or accurate. As a result, EPA does not have the information that it needs to effectively regulate permitted CAFOs. In its comments on our draft report, EPA stated that the agency is currently working with its regional offices and the states to develop and implement a new national NPDES permit data base that will collect and record facility-specific information on permitted CAFOs. In addition, we revised our report to make clear that we were discussing EPA's efforts to collect and maintain data on "permitted" CAFOs. Furthermore, although we did discuss the impact of the Waterkeeper decision on EPA's and the states' abilities to regulate CAFOs for water pollutants, a review of EPA's enforcement efforts was outside the scope of this review.*

GAO's reference to the 68 studies is far short of the quantity of research that has actually been done. Fifteen studies suggesting a linkage between CAFO discharges and health concerns means that 53 studies failed to establish such a link. The linkage is inconclusive at best. It is unclear why GAO failed to include the large number of studies touching on this subject published by USDA and professional associations.

GAO Response: *As clearly described in our methodology, we only included those studies that had been completed since 2002 and were (1) peer-reviewed or produced by a federal agency, (2) were new and original research, (3) had a clearly defined methodology, and (4) identified*

pollutants in animal waste and/or their impacts. Through our library, online journal, and Internet searches; consultations with EPA, USDA, state agencies, industry groups, environmental groups, and academia; and other efforts, we identified over 200 studies but only 68 studies met our criteria. We are aware of the large number of studies that USDA refers to in its comments, but as USDA points out later in its comments, these studies are ongoing and therefore do not meet our criteria of completed studies. We revised our report to indicate that the studies included in our review were "completed."

In addition, our report clearly points out that 15 of the 68 studies that we reviewed directly link CAFOs with human health or environmental impacts. In addition, our report notes that academic experts, industry and EPA officials told us that few studies directly link CAFOs with health or environmental impacts because the same pollutants that CAFOs discharge also often come from other sources, including smaller livestock operations, row crops using commercial fertilizers, and wastes from humans, municipalities, or wildlife.

Finally, GAO does not explain why EPA's air emissions study may not provide the information that it needs. USDA is supportive of EPA's approach in this study and thinks it will allow EPA to address the air issue with CAFOs in a reasonable fashion.

GAO Response: *No change. Our report discusses and describes the Air Compliance Agreement, including EPA's rationale for offering animal feeding operations an opportunity to sign a voluntary consent agreement and participate in the National Air Emissions Monitoring Study in some detail and clearly recognizes the study as the first step in a multi-year effort. However, as we point out in our report, the study, as currently structured, may not provide EPA with the data that it needs to develop the planned protocols for three reasons: the study (1) may not be representative of the vast majority of animal feeding operations, (2) does not include a sufficient number of monitoring sites to establish a statistically valid sample, and (3) does not include other sources that can contribute significantly.*

Introductory Section of the Report Narrative

Page 1 – GAO indicates "industrialized livestock and poultry operations are generally referred to as animal feeding operations". These terms are not interchangeable in their common use. Not all animal feeding operations are "industrialized". Furthermore, the term "industrialized" is not defined, and carries with it a negative connotation.

GAO Response: *We have revised our report and changed "larger, more industrialized farms" to "fewer, much larger farms" or "large-scale livestock and poultry operations."*

Page 2, paragraph 1 – GAO states that properly managed manure can benefit crop production and that improperly managed manure can "degrade air and water quality, thereby potentially impairing human health and damaging the environment." We agree with the use of the word "potentially" because a clear linkage between CAFOs and health risks has not been established. In the subsequent sentence GAO writes that these operations can "degrade air quality because large amounts of manure can emit unsafe quantities of ammonia, hydrogen, sulfide and dust, and they can degrade water quality..." Given the limited information that exists on emissions from CAFOs, this statement is premature and is why EPA is conducting the two-year study referenced above. '

GAO Response: *We revised our report to clarify that CAFOs can "potentially" degrade air and water quality.*

Page 2, paragraph 1, last sentence and continued on page 3 – With regard to air emissions, CAFOs have not been shown to be large emitters of "dust". CAFOs can emit ammonia that could contribute to the generation of PM fine. However, there are other pollutants (which are generated by other sources) that must be present and react with ammonia in the presence of heat and sunlight in order to form PM fine. GAO's discussion shifts between water and air issues and between the Clean Water Act (CAA) and CERCLA/EPCRA in a highly confusing manner making it difficult to determine whether or not GAO is correct.

GAO Response: *We revised our report, and changed "dust" to "particulate matter" and defined the term in a footnote. In addition, because our Results in Brief discuss both EPA's efforts to develop air emissions protocols for animal feeding operations and its NPDES permitting program, we briefly discussed EPA's statutory authorities.*

Page 3, paragraph 1 – GAO states, "In light of growing concerns…" but fails to indicate whose growing concerns is GAO referring to? GAO also points out pointed out that Congress commissioned it to assess trends over the past 30 years. However, GAO fails to accomplish this. Instead, claiming lack of data, GAO was estimates trends only over the last 20 years. It is important to note that some of the most significant advances in nutrient management technology have come about during the last 10 years. GAO did not assess or mention these advances anywhere in its report.

GAO Response: *No change. Our report recognizes that we were asked to determine the trends over the past 30 years and clearly explains that we could not determine the trends prior to 1982 because we could not determine from USDA data for 1974 through 1982 which farms would meet EPA's minimum size thresholds for CAFOs. In addition, our report does state that USDA officials believe that the use of nutrient management plans will likely reduce the amount of pollutants entering ground and surface water; and that some new technologies may help these operations more effectively use the manure being generated.*

Page 3, paragraph 2 continued page 4 – No where in this report does GAO detail information about its interviews with officials and experts, as exemplified on this page. In order to determine the credibility and expertise of these individuals, GAO should have provided complete background information.

GAO Response: *No change. As required by government auditing standards, we identify the organizations and geographic locations included in our review. Information on those that we met with during the course of our review can be found in Appendix I of our report (Objectives, Scope, and Methodology). As we note in Appendix I, we met with officials from EPA, USDA, the National Pork Council, the National Port Board, the National Cattlemen's Beef Association, the Environmental Integrity Project, the Sierra Club, California Association of Irritated Residents, Waterkeeper Alliance, Iowa Citizens for Community Improvement, Environmental Defense, National Association of Clean Air Agencies, Association of State and Interstate Water Pollution Control Administrators, and state officials from Arkansas, California, Iowa, Maryland, Minnesota, North Carolina and Texas." In addition, we spoke with members of Academia in Iowa and North Carolina.*

Results in Brief

USDA does not agree with the first sentence in this section of the report and subsequent justification on **page 5** that "no federal agency collects accurate and consistent data on the number, size, and location of CAFOs". Every five years USDA, through NASS publishes a Census of Agriculture that is adequate for EPA's needs, pertaining to management of the CAFO program. From this Census you can determine the number various livestock operations by size. NRCS also calculates manure production. The Census is not an inventory because it does not provide the location and ownership of each and every CAFO, which is what GAO incorrectly indicates is needed by EPA. We neither agree that EPA needs such an inventory nor do we believe that it is feasible to assemble or maintain this inventory without intruding on the privacy of producers. Producers are not required to interact with EPA or its partner state regulatory agency if they do not discharge.

GAO Response: *No change. USDA is correct that we used 2002 Census data to estimate trends. As we state in our report, we used USDA data on large farms with animals as a proxy for CAFOs because no federal agency collects consistent, reliable data on the number of CAFOs nationwide. In addition, our report recognizes the changes in the livestock industry and notes that these changes are due to a variety of factors, including domestic and market forces, technological changes, and industry adaptations. Our report also points out that according to agricultural experts and USDA officials, the overall decrease in the number of farms and increase in the average number of animals raised on a farm may have occurred because these operations wanted to achieve economies of scale. Furthermore, as we state in our report, although EPA has compiled data from its regional offices on permitted CAFOs, those data are inconsistent and inaccurate. In its comments on our draft report, EPA stated that the agency is currently working with its regional offices and the states to develop and implement a new national NPDES permit data base that will collect and record facility-specific information on permitted CAFOs. In addition, we revised our report to make clear that we were discussing EPA's efforts to collect and maintain data on "permitted" CAFOs.*

Since the CAFO rule has been in existence, EPA and its partner state regulatory agencies have made attempts to access USDA farm specific information for CWA enforcement purposes. USDA has consistently refused to allow them to access this information. For this, and other well

known privacy concerns, Congress instituted the privacy protections referenced on page one of these comments.

GAO Response: *No change. We recognize that USDA is generally prohibited from sharing farm specific information and our report does not suggest or recommend that USDA do otherwise.*

USDA disagrees with the last sentence on **page 5** which reads: "Without a systematic and coordinated process for collecting and maintaining accurate and complete information on the number, size, and location of CAFOs nationwide, EPA does not have the information it needs to effectively monitor and regulate these operations." The CWA does not intend that EPA be in the farm management business by micro-managing farms through permits and inventories. EPA should encourage producers to seek protections offered by the NPDES permit. More importantly, EPA should enforce the law with inspections, appropriate penalties and fines when there is an unlawful discharge.

GAO Response: *We revised our report to clarify that we are recommending that EPA collect and maintain data on permitted CAFOs. Furthermore, although we did discuss the impact of the Waterkeeper decision on EPA's and the states' abilities to regulate CAFOs for water pollutants, our report did not focus on EPA's enforcement efforts.*

There are a number of problems with the report on **page 6.** First, GAO again attempts to compare animal waste with municipal waste to portray the magnitude of manure production on a large CAFO. We ask GAO to consult Lory, Zulovich, and Fulhage, referenced earlier, who state "direct comparisons of human wastewater and animal manure production is misleading and typically unproductive."

GAO Response: *We agree that CAFO manure is not comparable to municipal waste. That is why to provide a perspective of the amount of wastes generated by large farms with animals, we compared CAFO manure amounts with the amount of human sanitary waste generated in various cities. Human sanitary waste includes feces and urine but does not include wastes such as water from showers, washing dishes and clothes, and flushing toilets. Appendix I of our report describes the methodology that we used to develop annual estimates of the sanitary wastes generated by various cities and the amounts of manure that would be produced by three different*

sizes of farms. In addition, we inserted the term "sanitary" before "waste" throughout the report when referring to the human sanitary wastes to clarify the type of human waste used in our report for comparison purposes.

The example of the quantity of manure produced on a CAFO with 800,000 hogs is an extreme exception to the rule. There are only two hog farms of that size that we are aware of. Additionally, the use of the 800,000 hog example is inconsistent with the data presented in Table 4 which shows the number of animals raised on large farms in the 75th percentile to be 7,700. Similarly, the example of a beef cattle farm with 140,000 head of cattle is inconsistent with the data in Table 4 that shows the number of animals raised on large farms in the 75th percentile to be 10,000. Manure produced by a representative CAFO is far less than what the report attempts to portray.

GAO Response: *No change. Our report states that the amount of manure a large farm that raises animals can generate depends on the types and number of animals raised on that farm. To show the range of manure that might be produced on large farms that raise animals, we provide estimates of the manure produced by three different sizes of farms—large farms that meet EPA's minimum size thresholds, large farms that raise the median number of animals according to our analysis of USDA farm Census data, and large farms that fell into the 75th percentile based on our analysis. In addition, our report provides information on the amount of manure that could be produced by individual large farms.*

As GAO will see later in this commentary USDA demonstrates that the figure used showing a hog population in North Carolina of 9 million hogs is overstated and that the manure production estimate that GAO shows is in error by as much as 30-40 %.

GAO Response: *To ensure that we were not overstating the hog population of these counties, we adjusted our estimates by 25 percent (based on 1997 USDA data) to account for percentage of hogs in these counties that were nursery pigs and revised our report to reflect the adjusted estimates of both the number of swine in the 5 counties and the amount of manure hog operations could have produced in 2002.*

On **page 6** there GAO again attempts to support its methods and conclusions by referencing unnamed "agricultural experts" and "government officials". Since these references are uncited, we cannot determine who they are, what

department, agency or university they come from, what positions they hold and what the level of expertise they have. Additionally, GAO fails to cite specific studies to support their conclusions such that a reviewer can check for accuracy. A study of this magnitude should have had an extensive independent review. However, there was no independent review of this report outside of USDA and EPA.

GAO Response: *No change. As required by government auditing standards, we identify the organizations and geographic locations included in our review. Information on those that we met with during the course of our review can be found in Appendix I of our report (Objectives, Scope, and Methodology).*

In the final paragraph of **page 6** GAO references "at least 68 government-sponsored or peer-reviewed studies that have been completed on air and water quality issues associated with animal waste since 2002, and 15 of these studies have directly linked pollutants from animal waste to specific health or environmental impacts." First, only 15 of 68 studies establishing a link, with seven studies indicating no direct or indirect link, making the issue inconclusive at best. Second, USDA knows that GAO's literature search was far less than complete as there are over 400 active projects in the USDA Cooperative State Research Education and Extension Service's Research Information System data base that touch on some aspect of livestock and poultry manure management. We also suggest that GAO consult http://www.asabe.org/meetings/airwaste2007/index.htm. GAO's research is therefore inadequate.

GAO Response: *We only included studies that had been completed since 2002 and were (1) peer-reviewed or produced by a federal agency, (2) were new and original research, (3) had a clearly defined methodology, and (4) identified pollutants in animal waste and/or their impacts. Through our library, online journal, and Internet searches; consultations with EPA, USDA, state agencies, industry groups, environmental groups, and academia; and other efforts, we identified over 200 studies but only 68 studies met our criteria. We are aware of the large number of studies that USDA refers to in its comments, but as USDA points out these studies are ongoing and therefore do not meet our criteria for completed studies. We also revised our report to clarify that the studies included in our review were "completed."*

On **page 7** there are more uncited references, but this time they are "EPA officials." We have insufficient information to assess whether or not their interpretation is correct. What are the effects and the magnitude of those effects? What are the number of individuals impacted and the degree of impact? What air quality and agricultural experience do the authors have? USDA notes that there is extensive discussion given to the studies that established a linkage to human health and very little discussion of studies that failed to establish a linkage. GAO says "Most of the water studies found that nutrients or hormones released from animal feeding operations were causing environmental harm, such as reproductive disorders in fish and degraded water quality." Just this week, USDA became aware of a U.S. Geological Survey (USGS) news release which reports that non-agricultural sources are a major problem regarding the presence of hormones in surface and ground water.

GAO Response: *We only included studies that had been completed since 2002 and were (1) peer-reviewed or produced by a federal agency, (2) were new and original research, (3) had a clearly defined methodology, and (4) identified pollutants in animal waste and/or their impacts. Appendix IV of our report provides additional information on the studies we included in our report.*

In the second paragraph on **page 7**, what is the basis of GAO's statement that the NAEMS study won't provide the 'scientifically and statistically valid data it was intended to provide and EPA needs to develop the air emissions protocols?" The NAEMS test protocol was developed over a six-month period by nearly fifty scientists, academics and industry experts using a consensus basis approach. It is a state of the art study using techniques to measure non-point sources. This study was viewed as a first step to develop better emission estimation protocols than currently available to EPA. It was never intended to fill all the data gaps or result in the development of the "process based models" suggested in the NAS study. GAO is confusing the "emission protocols" with the NAS recommended "process based models."

GAO Response: *Our report discusses and describes the Air Compliance Agreement, including EPA's rationale for offering animal feeding operations an opportunity to sign a voluntary consent agreement and participate in the National Air Emissions Monitoring Study in some detail and clearly recognizes the study as the first step in a multi-year effort.*

However, as we point out in our report, the study, as currently structured, may not provide EPA with the data that it needs to develop the planned protocols for three reasons: the study (1) may not be representative of the vast majority of animal feeding operations, (2) does not include a sufficient number of monitoring sites to establish a statistically valid sample, and (3) does not include other sources that can contribute significantly. In addition, our report discusses that EPA plans to develop a process-based model after 2011, but that the agency has not yet established a timetable for developing this model. As a result, we recommended that EPA establish a strategy and a timetable for developing a process-based model.

Page 8, paragraph 1 – GAO faults EPA for not deciding whether or not they will aggregate emissions on CAFOs. Regarding air emissions, CAFOs are non-point/area sources. Many of the air emissions from CAFOs would normally be considered "fugitive." This determination may be different than the treatment of CAFOs under the CWA. However, under the CAA, it is not unusual for emissions that can't pass through a stack to be treated as fugitive regardless of the source of the emissions. It is also not unusual for EPA, when beginning rulemaking for sources under the CAA, to withhold decisions about aggregation (and other issues) until they have sufficient information to make informed decisions. Therefore, CAFOs are not being treated differently than other sources that EPA has evaluated for regulation under the CAA. GAO's presumption that this behavior indicates that EPA has no intention to regulate CAFOs is erroneous.

GAO Response: *No change. Our report discusses recent actions taken by EPA that call into question how the agency plans to regulate air emissions from animal feeding operations. For example, EPA has indicated that it does not intend to issue guidance defining the scope of the term "source" as it related to animal agriculture and farm activities until after 2011 when the monitoring study in completed. Depending on the approach that EPA takes, how emissions are calculated could differ significantly.*

Page 10, paragraph 2, last sentence – GAO states that the "...increases in size and the large amounts of manure" have generated concerns. What are these concerns and who raised these concerns? In the past many complaints related to air emissions have come from citizens about the odor from the facilities. EPA has no authority to regulate odor. Are these concerns about odor? If so, this should be stated in the report.

GAO Response: *No change. The concerns expressed in our report were identified by a variety of sources including USDA publications, state officials, academia, and community and environmental groups. In addition, we recognize that odor is not covered by federal statutes and are therefore not covered in our report.*

Background

We again note our objection to the use of the term "industrialized" because it is negative and does not include all animal-feeding operations.

GAO Response: *We revised our report and changed "larger, more industrialized farms" to "fewer, much larger farms" or "large-scale livestock and poultry operations."*

Page 11, paragraph 1 first sentence – GAO states that discharging CAFOs are "point sources" under CWA. GAO should have also stated that CAFOs are "non-point sources" with fugitive emissions under EPA's typical approach to air emissions under the CAA.

GAO Response: *No change. The paragraph referred to is describing EPA's regulatory authorities and responsibilities under the Clean Water Act.*

On **page 14** we would add that neither the 2003 CAFO rule nor the *Waterkeeper* decision have affected the commonly accepted design standards for waste storage or nutrient management planning. EPA has accepted and supported USDA standards during this entire period. The statement in the report referencing "more stringent design and operational requirements" is erroneous. The principal effect of the 2003 rule was to incorrectly compel all CAFOs to seek NPDES permit coverage.

GAO Response: *No change. Our report describes the key provisions included in the 2003 CAFO Rule, including a new no-discharge standard for new facilities that could be met if they were designed, constructed, and operated to contain the runoff from a 100-year, 24-hour storm event.*

Page 15, paragraph 2, sentence 2 – This statement is incorrect. The Agricultural Air Quality Task Force (AAQTF) is a Federal Advisory

Committee (not an "agency") that makes recommendations to the Secretary of Agriculture. The AAQTF cannot enter into any MOU with EPA.

GAO Response: *We have revised the report accordingly.*

On **page 15**, we again point to the inaccurate statement in the last sentence that indicates that no agency in the federal government collects accurate data on CAFOs. GAO used USDA data to establish an increase in the number of CAFOs.

GAO Response: *No change. According to USDA officials, its Census does not ask respondents whether they raise animals in confined situations nor are size categories used in USDA's Census consistent with EPA's CAFOs size thresholds—a fact that USDA confirms in these comments. However, USDA officials repeatedly told us that the largest farms in the Census are likely CAFOs. As a result, we used USDA Census Data for 2002, the most current available at the time of our review, as a proxy for CAFOs when estimating trends.*

On **page 16** of the report, we reviewed the data that GAO produced and found errors in methodology. GAO unsuccessfully attempted to correct these errors in the draft report.

GAO Response: *Page 16 presents the trends in the number of large farms raising animals which USDA has already indicated are well known to those in the agricultural industry. However, USDA did not provide any specific comments about the errors in our methodology. We have reviewed our methodology and data, and believe it is correct.*

On **page 18**, GAO discusses the increase in livestock numbers since 1982, but fails to mention the increase in the U.S. population and domestic demand for livestock products over that period of time or the increased opportunities for livestock producers to export their products overseas.

GAO Response: *Examining U.S. populations and demand for farm products were outside the scope of our engagement.*

While it is true that more livestock is being raised, it is also true that producers have had to adopt more efficient systems. One of these is feed

conversion. Today's animals produce more meat, milk and eggs per unit of feed than they did thirty years ago. More of the feed goes into production and less is wasted as manure.

GAO Response: *Our report recognizes that various factors may affect manure production, including feeding programs, feed used, climatic conditions, production techniques, and animal genetics.*

On **page 19** we dispute GAO's contention that USDA does not have the data that EPA needs to gain a sufficiently clear picture on the number and location of CAFOs nationwide. While it is true that the USDA Census data does not coincide directly with the definition of CAFO, it correlates sufficiently to be adequate for the purpose of program management. For example, the number that EPA has used since the 2003 CAFO rule for the number of CAFOs nationwide is 18,500. The number of CAFOs that USDA estimated from the 1997 Agricultural Census and the supplement produced by USDA (Kellogg et al) was 19,000. EPA regularly used this data in its management of the CAFO program. As USDA has stated in our previous commentary EPA does not have the authority, in light of *Waterkeeper* to produce the kind of inventory that GAO states is necessary, including "farm location, owners, size of farms, and the number of animals raised."

GAO Response: *As USDA notes, its Census data is not consistent with EPA's CAFOs size thresholds. In addition, we revised our report to clarify that we are recommending that EPA develop an inventory of permitted CAFOs. Moreover, EPA acknowledges in its comments that information on permitted CAFOs is not readily compiled in a national database and has undertaken an effort to develop and implement a new national data system to collect and record operation-specific information. According to EPA, this system will allow EPA to have an updated national inventory of permitted CAFOs, including number, location, size, and permitted discharges. Furthermore, we recognize that the numbers of large farms with animals presented in our report may be conservative, but our estimates are based solely on the number of large farms that meet EPA's minimum "large CAFO" size threshold. Because EPA uses additional criteria in addition to size to determine if medium or small CAFOs need to apply for a NPDES permit, we were not able to determine from USDA's data the number of medium or small farms with animals that may be CAFOs.*

Page 22, Table 4 – we did a quick check of some of the calculations presented in this table, specifically regarding the (Column 3) manure production numbers and found errors. These errors are as follows:

Animal	USDA Data	GAO Data
Beef	11500	11700
Dairy	19500	17800
Hogs	3700	5100
Layers	3200	2800
Broilers	5230	4130
Turkeys	6370	3630

Since GAO cites the American Society of Agricultural and Biological Engineers (ASABE) as their source – as do we – we would expect the values in Column 3 to agree with our values. The USDA data above contains annual manure in pounds calculated for the number of animal units determined from unit weights from ASABE and the number of animals necessary for a CAFO. The animal units were then multiplied by the annual manure per animal unit derived from the ASABE standard. The GAO data contains the annual manure value in points for their CAFO sized operation, also derived from ASABE. We have consistently used a 360 day year that could account for small differences. However, since both USDA and GAO use the ASABE standard they should have arrived at the same results.

GAO Response: *No change. Appendix I (Objectives, Scope, and Methodology) of our report clearly describes the methodology that we used to estimate the amount of manure produced by three different sizes of farms. In addition, as the numbers above reflect, we generally took a conservative approach and our estimates are less than USDA's except for beef cattle and hogs. However, our estimates and USDA's estimates for beef cattle were very close and could be explained by our use of 365 days and their use of 360 days. Our estimates of hog manure are higher than USDA's. This is because we used a higher finishing weight than that used in the ASABE standards. The ASABE manure standards for this type of operation use 154 pounds as the finish weight. However, USDA reports that typical hog finish (slaughter) weights at the time of the 2002 Census were about 260 pounds. For hogs only, we adjusted the ASABE manure estimates by 1.7 to account for the larger finish weights reported by USDA.*

Pages 23 and 24 – This narrative misrepresents the findings reported in Kellogg et al. The Kellogg report never discussed increased soil nitrogen and phosphorous resulting from excess manure. The phrase "that had higher levels of nitrogen in the soil…" should read "that generated more manure than could be land applied at a nitrogen standard rate on cropland present within the county…" A similar correction for the phosphorous statement is also needed. Kellogg surmised – did not observe or have supporting data – that some of this excess county-level manure may have been land applied but at rates greater than a nitrogen standard rate and if so this applications would have constituted an increased risk of water contamination. This is a very weak reference to use to establish a link between manure application in areas with concentrated livestock and degraded water quality. GAO should use one of the studies they report that actually found a link between concentrated livestock operations and degraded water quality to make this point. Kellogg does not present any findings that establishes a link between manure production and water quality problems. The Kellogg reference is more useful to establish that the number of counties facing challenges for using manure by land application increased between 1982 and 1997 because of the changes in geographic concentration of livestock production.

GAO Response: *We revised our report to ensure that we accurately represented the findings reported by USDA in its 2000 report. In the USDA report, Dr. Kellogg states that the potential for water quality problems (such as runoff and leaching) stemming from problems associated with livestock waste utilization and disposal is high.*

Pages 24 and 25 – One example used in the report, is a five-county area in North Carolina where there are concentrations of swine production facilities. Such concentrations are referred to in the report as "regional clusters." Other examples of regional clusters in the report include the border area between Arkansas and Oklahoma, the Central Valley of California and in the state of Iowa.

GAO Response: *No change. Regional clustering is the term that we use to describe regional concentration of animal feeding operations.*

On **page 25**, the report contains a paragraph that is misleading and unsubstantiated. "According to North Carolina agricultural experts, excessive manure production has contributed to the contamination of the surface and well water in these counties (five county area referenced above)

and the surrounding areas. According to these officials, this contamination may have occurred because the hog farms are attempting to dispose of excess manure but have little available cropland that can effectively use it. According to state officials, partly out of concern for the potential contamination of waterways and surface water from manure, in 1997 North Carolina placed a moratorium, still in effect on new or expanding hog animal feeding operations."

GAO does not cite these "experts" or "government officials," making it impossible to ascertain their credibility. GAO offers no data, whatsoever, to substantiate these assertions. Significantly, the statement that North Carolina has a moratorium on new hog operations or expansions or existing operations is incorrect. North Carolina has a moratorium on new open manure storage lagoons, not on new or expanded hog operations. Most improtantly, the Black and South river systems in this area of North Carolina are classified by the North Carolina environmental agencies as "Outstanding Resource Waters."

GAO Response: *USDA is correct is stating that the moratorium only applies to the lagoon and sprayfield system. According to North Carolina state officials, partly out of concern for the potential contamination of waterways and surface water from manure, in 1997 North Carolina placed a moratorium, which was subsequently continued through 2007. These officials told us that the design standards are so stringent that the regulation effectively prevents the construction of new swine operations. We revised our report to more accurately reflect the design standards.*

On **page 24**, GAO states that on any one day the hog population of the five North Carolina counties referenced above is over 9 million hogs producing almost 19 million tons of manure per year. This is a factual error. The reason for this error is that the report falsely assumes that every single pig in the five count area is a "feeder to finish" phase pig. In fact, only around 55% of the pigs in these counties are feeder to finish phase that would produce that amount of waste estimated by the report. At least 2.5 million pigs in the five counties are "wean to feeder," or nursery pigs. Nursery pigs produce only about 20% of the total manure on an annual basis that feeder to finish pigs do. Thus, because of the inaccurate estimate of swine populations, the 19 million ton figure for yearly manure production is off by as much as 30 to 40 percent. According to the North Carolina Division of Water Quality regulatory database, and using conversion factors to add

piglets for sow operations, there are approximately 6.9 million confined pigs in the five counties.

North Carolina has one of the most aggressive state-enabled regulatory programs for CAFOs in the United States and is not impacted by *Waterkeeper*. There is a "duty to apply" in this state program which means that all of the hog operations in this "regional cluster" (as well as all others in state) must have a general or individual permit, have a nutrient management plan and be inspected at least one time every year. This assures that manure is applied to land at agronomic rates and assures the structural integrity of the manure storage lagoons. GAO can refer to http://ww.ncga.state.nc.us/EnactedLegislation/Statutes/PDF/BySection/Chapter143/GS143/GS 143-215.10C.pdf.
The "experts" referred to in the report indicate that "the contamination may have occurred because the hog farms are attempting to dispose of excess manure but have little available cropland that can effectively use it." In fact, every single permitted swine operation in North Carolina has a Certified Animal Waste Management Plan (CAWMP) and waste treatment structure that has been certified by technical specialists (designated by the State of North Carolina) as sufficient to treat the total volume of manure produced as well as account, by land application on growing crops, for all plant available nitrogen produced by the operation. All CAFOs in the state have also evaluated the potential for phosphorous loss from each land application field through the use of the North Carolina-developed science-based Phosphorous Loss assessment tool (PLAT). Each operation must have land available to apply nitrogen on an agronomic basis based on realistic yield, soil type and nitrogen use factor, as a condition of compliance with its state or NPDES permit.

The report intimates through comments from "North Carolina Ag experts" that North Carolina does not have sufficient land available for nutrient uptake of generated wastes from swine operations for the five counties. Utilizing North Carolina Division of Water Quality swine population data (6.9 million) and North Carolina State University data on nutrients produced by each swine production phase, it is estimated that 13 million pounds of plant available nitrogen are generated by confined swine in the profiled counties. North Carolina Department of Agriculture 2008 estimates of available hayed and grazed land in the five counties show the following: 74,800 acres of harvested and hayed land and 53,000 acres of cattle grazed land. Using conservative figures for nitrogen growth need and uptake in

Bermuda grass, the predominate hay and pasture grass in southeastern North Carolina, the potential for total plant available nitrogen uptake in the five counties is almost 17 million pounds for hayed land (@225 pounds PAN/acre) and nearly 8 million pounds for grazed land (@150 pounds PAN/acre). Thus, the total potential for nitrogen uptake on grassland in the five counties-an estimated 25 million pounds, far exceeds the approximately 13 million pounds produced by swine operations. In addition, there are many thousands of acres of cropland utilizing crops such as corn and small grains, which have significant nitrogen growth needs and uptake rates used for land application of waste materials produced by swine operations.

The assertion of the GAO report that insufficient land exists in the five county area to utilize the nutrients from the manure produced by the swine industry which is leading to water quality degradation is incorrent, as is the assertion that over-over application of nutrients is leading to water quality degradation. The Cape Fear River system in North Carolina drains three of the largest swine producing counties in the United States that constitute over 70% of the swine production in North Carolina. The Black and South rivers are classified by the North Carolina environmental agencies as "Outstanding Resource Waters", a rating that signifies excellent water quality as defined by the North Carolina Division of Water Quality. See http://h2oenr.state.nc.us/nps/uwalong.pdf.

Given the time we had to analyze and comment on the draft report, we are unfortunately unable to assess GAO's factual statements about other referenced "regional clusters." However, the significant inaccuracies regarding North Carolina raise questions about these other regional clusters

GAO Response: *To ensure that we were not overstating the hog population of these counties, we adjusted our estimates by 25 percent (based on 1997 USDA data) to account for percentage of hogs in these counties that were nursery pigs and revised our report to reflect the adjusted estimates of both the number of swine in the 5 counties and the amount of manure hog operations could have produced in 2002.*

USDA is correct that the Black River is rated "Outstanding." However, the Cape Fear River Basin has impaired watersheds in Samson and Duplin Counties—the two counties included in the geographic area discussed in our report. USDA is also correct that North Carolina does have a "duty to apply" and requires all hog operations to obtain a permit, have a nutrient

management plan and be inspected once a year. To ensure that the information that we presented in our report about North Carolina was correct, we asked North Carolina officials to review this segment of the report. These officials confirmed the requirements highlighted by USDA in their comments; but noted that even with these requirements, some surface and well waters in these counties and surrounding areas had been contaminated. We revised our report to reflect these statements. We followed the same procedure to ensure the accuracy of the other examples of regional clustering included in our report.

On **page 27** GAO again references the 68 government and peer reviewed studies, which is an incomplete review and listing of the research available.

GAO Response: *We only included studies that had been completed since 2002 and were (1) peer-reviewed or produced by a federal agency, (2) were new and original research, (3) had a clearly defined methodology, and (4) identified pollutants in animal waste and/or their impacts. Through our library, online journal, and Internet searches; consultations with EPA, USDA, state agencies, industry groups, environmental groups, and academia; and other efforts, we identified over 200 studies of which 68 met our criteria. We are aware of the large number of studies that USDA refers to in its comments, but as USDA points out these studies are ongoing and therefore do not meet our criteria of completed studies. We also revised our report to clarify that the studies included in our review were "completed."*

On **page 30** the narrative summary of the research that would support a direct link between CAFO operations and health risks is repeated with a very limited summary of the research that fails to establish a linkage. Also, what does "Exposure to Diluted Air Sampled from a Swine Confinement Atmosphere" mean?

GAO Response: *Appendix IV of our report provides additional information on the studies we included in our report.*

Page 33, table 8, row 5 – Since the prevalence of asthma does not change in urban and rural children, there does not appear to be a correlation between CAFO air emissions and health effects. Did GAO check to see if there could be another cause for asthma in rural children? Could it be that confounding factors actually account for effects noted in the other studies?

GAO Response: *No change. Our report classified studies as indirectly linking pollutants from animal feeding operations to human health or environmental impacts if they found that animal feeding operations were the likely cause of these impacts occurring in areas near the operations, but could not conclusively link waste from these operations to the impacts.*

Page 37, paragraph 1 – Actually the NAS stated that EPA should develop a process-based model to accurately determine the environmental impacts of CAFOs. A process-based model is far more complex and requires more information than that indicated by GAO.

GAO Response: *No change. An evaluation of what information EPA would need to develop a process-based model was outside the scope of our review. However, our report does note that the NAS recommended that EPA develop a process-based model that would capture emission factors from all sources and use these data to assess the interaction of all sources and the impact that different manure management techniques have on air emissions for the entire operations. However, because EPA had not developed of timetable for developing such a model, we recommended that EPA establish a strategy and timetable for developing a process-based model that will provide more sophisticated air emissions methodologies for animal feeding operations. In its comments on our draft report, EPA indicated that it has begun to evaluate what is needed to develop such a model.*

Page 37, paragraph 2 – The study discussed by GAO was an assessment of potential risk and has little value, if any, to determine the actual risk from any CAFO much less all CAFOs.

GAO Response: *No change. In addition to identifying the findings of recent key academic, industry, and government research on the impact of CAFOs on human health and the environment, we were asked to determine the extent to which EPA has assessed the nature and severity of such impacts. Our report discussed one assessment that EPA identified the agency had completed on the impacts of air emissions from animal feeding operations.*

Page 38, last paragraph – The authors state the NAEMS "...study may not provide the quantity and quality of date needed for developing appropriate methods for estimating emissions." Given that this study is but the first step to develop the process-based model and the anticipated outcome is an initial

emission estimation protocol, the information gathered from the study should be sufficient to achieve the initial goal. The protocol was developed using a consensus process with national experts. It was reviewed and approved by EPA and EPA has audited its implementation to make sure the approved protocol is followed.

GAO Response: *No change. Our report discusses the National Air Emissions Monitoring Study in some detail and clearly recognizes the study as a first step in a multi-year effort. However, as we point out in our report, the study, as currently structured, may not provide EPA with the data that it needs to develop the planned protocols for three reasons: the study (1) may not be representative of the vast majority of animal feeding operations, (2) does not include a sufficient number of monitoring sites to establish a statistically valid sample, and (3) does not include other sources that can contribute significantly.*

Page 43, paragraph 1 sentence 1 – GAO states that the AAQTF questions the quantity and quality of NAEMS study data provided by EPA. GAO is incorrect about the source of the data. The data viewed by the AAQTF was part of a 45-minute presentation by Dr. Al Heber of Purdue University, not a presentation of data by EPA as GAO reports. Dr. Heber's presentation showed a few slides of data that had not been QA/QC'd by EPA as required by the study prior to release. Therefore, GAO's mentioning the presentation in this report is premature. Finally, GAO inaccurately states that the AAQTF is concerned that the data being collected "may not be extrapolated to all types of CAFOs". EPA does intend to extrapolate the data to all CAFO operations and AAQTF is aware of that fact.

GAO Response: *Our report reflects concerns expressed by the AAQTF about the data collected during the early phases of they study. According to USDA officials that we spoke with the Task Force raised concerns about extrapolation of the data across the variety of CAFO operating configurations. Given the importance of the study results and their ultimate use as part of an emission estimating method, the AAQTF recommended that the Secretary of Agriculture request that the Administrator of EPA conduct an independent review of the study; and the Secretary of Agriculture coordinate with EPA's Administrator to establish a Joint Emission Factors Working Group with the sole purpose of incorporating new data into EPA's AP-42 Emission Factors document. It is our understanding that the*

Secretary of Agriculture has taken these recommendations under advisement. We revised our report to clarify the Task Force's concerns.

Page 43, paragraph 2 – The discussion again confuses the emission estimation protocols anticipated from the NAEMS study with the NAS recommended process-based model.

GAO Response: *Our report discusses and describes the Air Compliance Agreement, including EPA's rationale for offering animal feeding operations an opportunity to sign a voluntary consent agreement and participate in a National Air Emissions Monitoring Study in some detail and clearly recognizes the study as a first step in a multi-year effort. However, as we point out in our report, the study, as currently structured, may not provide EPA with the data that it needs to develop the planned protocols for three reasons: the study (1) may not be representative of the vast majority of animal feeding operations, (2) does not include a sufficient number of monitoring sites to establish a statistically valid sample, and (3) does not include other sources that can contribute significantly. In addition, our report discusses that EPA plans to develop a process-based model after 2011, but that the agency has not yet established a timetable for developing this model. As a result, we recommended that EPA establish a strategy and a timetable for developing a process-based model.*

United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

US GAO
2008 AUG 26 AM 11:23

Ms. Anu Mittal
Director
Natural Resources and Environment
General Accounting Office
441 "G" Street, NW
Washington, DC 20250

Dear Ms. Mittal,

Thank you for your electronic memorandum of August 7, 2008, to Secretary of Agriculture Ed Schafer requesting comments on the draft GAO report on Concentrated Animal Feeding Operations (CAFO). Secretary Schafer has asked me to reply on his behalf. The following is USDA's analysis of this report.

Sincerely,

MARK REY
Under Secretary
Natural Resources and Environment

The United States Department of Agriculture (USDA) appreciates the chance to comment on this GAO report on CAFOs. GAO's report suffers from many infirmities, including repetition, erroneous assumptions, inaccurate information and uncited references. Moreover, we believe that GAO missed an important opportunity to correctly present CAFO producers as environmentally responsible citizens – a fact demonstrated by up-to-date evidence. We believe that there should have been more time dedicated to the report, as well as consistent input from experts at USDA and EPA and better use of the wide variety of written materials currently available. The comments that follow sequentially track the various sections of this report.

Comments on the Summary Page – "What GAO Found"

GAO states "Because no federal agency collects consistent, reliable data on CAFOs, we could not determine the trends in these operations over the past 30 years." This is incorrect. USDA's National Agriculture Statistics Service (NASS) does a Census of Agriculture every 5 years that is available for use by the Environmental Protection Agency (EPA). Additionally, USDA's Natural Resources Conservation Service (NRCS) supplements this Census by calculating manure production. The next Census of Agriculture is due for release in early 2009. We believe this Census and supplement is sufficient for EPA's program management needs.

GAO repeatedly insists that EPA needs, but cannot obtain the information it needs to make a health and environmental impact analyses from CAFO discharge. However, USDA cannot share farm specific information with anyone without the permission of the producer. These statutory protections are found in the Farm Security and Rural Investment Act of 2002, Title II, Subtitle A, Section 2004(a); and the Freedom of Information Act, 5 U.S.C. 552 (b), as amended by Public Law No. 104-231, 110 Stat. 3048.

To say that GAO could not determine CAFO trends is erroneous. GAO used the 2002 census to estimate trends, the result of which (increase in CAFOs of 230 percent) was well known to those in the agricultural industry. The trend in livestock production is toward larger operations because advanced technology has allowed the industry to become highly efficient through economies of scale.

GAO's comparison of CAFO manure to municipal waste is misleading since animal waste is useful and in demand nationwide for agricultural operations.

Please refer to University of Missouri Extension Publication EQ 349, *Hog Manure and Domestic Wastewater Management Objectives by Lory, Zulovich and Fulhage.*

GAO fails to support the statement that the NAEMS study will not provide the "scientific and statistically valid data it was intended to provide and EPA needs to develop the air emissions protocols". Approximately fifty scientists, academics and industry experts using a consensus approach developed the NAEMS test protocol. NAEMS is a state of the art study using techniques to measure non-point sources. This study was viewed as a first step to develop better emission estimation protocols than currently available to EPA. NAEMS was never intended to fill all the data gaps or result in the development of the "process based models" suggested in the NAS study. GAO is confusing the "emission protocols" with the NAS recommended "process based models."

USDA disagrees with GAO's conclusion that EPA does not have sufficient information to effectively monitor and regulate CAFOs. The inventory that GAO recommends is not necessary, and absent a "Duty to Apply" requirement, would be costly, difficult to maintain, and likely be an unacceptable intrusion on privacy. GAO does not identify the root cause of EPA's struggles with this rule, which is EPA's use of permits as enforcement tools. Permits are not enforcement tools. A permit insures the application of appropriate technology and protects the producer from fines in the event of a discharge for causes outside the producer's control. GAO should recommend that EPA stop using permits for unintended purposes and further recommend that the Congress provide sufficient funds to properly enforce the Clean Water Act (CWA).

GAO's reference to the 68 studies is far short of the quantity of research that has actually been done. Fifteen studies suggesting a linkage between CAFO discharges and health concerns means that 53 studies failed to establish such a link. The linkage is inconclusive at best. It is unclear why GAO failed to include the large number of studies touching on this subject published by USDA and professional associations.

Finally, GAO does not explain why EPA's air emissions study may not provide the information that it needs. USDA is supportive of EPA's approach in this study and thinks it will allow EPA to address the air issue with CAFOs in a reasonable fashion.

Introductory Section of the Report Narrative

Page 1 – GAO indicates "industrialized livestock and poultry operations are generally referred to as animal feeding operations". These terms are not interchangeable in their common use. Not all animal feeding operations are "industrialized". Furthermore, the term "industrialized" is not defined, and carries with it a negative connotation.

Page 2, paragraph 1 – GAO states that properly managed manure can benefit crop production and that improperly managed manure can "degrade air and water quality, thereby potentially impairing human health and damaging the environment." We agree with the use of the word "potentially" because a clear linkage between CAFOs and health risks has not been established. In the subsequent sentence GAO writes that these operations can "degrade air quality because large amounts of manure can emit unsafe quantities of ammonia, hydrogen, sulfide and dust, and they can degrade water quality…" Given the limited information that exists on emissions from CAFOs, this statement is premature and is why EPA is conducting the two-year study referenced above.

Page 2, paragraph 1, last sentence and continued on page 3 – With regard to air emissions, CAFOs have not been shown to be large emitters of "dust". CAFOs can emit ammonia that could contribute to the generation of PM fine. However, there are other pollutants (which are generated by other sources) that must be present and react with ammonia in the presence of heat and sunlight in order to form PM fine. GAO's discussion shifts between water and air issues and between the Clean Water Act (CAA) and CERCLA/EPCRA in a highly confusing manner making it difficult to determine whether or not GAO is correct.

Page 3, paragraph 1 – GAO states, "In light of growing concerns…" but fails to indicate whose growing concerns is GAO referring to? GAO also points out pointed out that Congress commissioned it to assess trends over the past 30 years. However, GAO fails to accomplish this. Instead, claiming lack of data, GAO was estimates trends only over the last 20 years. It is important to note that some of the most significant advances in nutrient management technology have come about during the last 10 years. GAO did not assess or mention these advances anywhere in its report.

Page 3, paragraph 2 continued page 4 – No where in this report does GAO detail information about its interviews with officials and experts, as exemplified on this page. In order to determine the credibility and expertise of these individuals, GAO should have provided complete background information.

Results in Brief

USDA does not agree with the first sentence in this section of the report and subsequent justification on **page 5** that "no federal agency collects accurate and consistent data on the number, size, and location of CAFOs". Every five years USDA, through NASS publishes a Census of Agriculture that is adequate for EPA's needs, pertaining to management of the CAFO program. From this Census you can determine the number various livestock operations by size. NRCS also calculates manure production. The Census is not an inventory because it does not provide the location and ownership of each and every CAFO, which is what GAO incorrectly indicates is needed by EPA. We neither agree that EPA needs such an inventory nor do we believe that it is feasible to assemble or maintain this inventory without intruding on the privacy of producers. Producers are not required to interact with EPA or its partner state regulatory agency if they do not discharge.

Since the CAFO rule has been in existence, EPA and its partner state regulatory agencies have made attempts to access USDA farm specific information for CWA enforcement purposes. USDA has consistently refused to allow them to access this information. For this, and other well known privacy concerns, Congress instituted the privacy protections referenced on page one of these comments.

USDA disagrees with the last sentence on **page 5** which reads: "Without a systematic and coordinated process for collecting and maintaining accurate and complete information on the number, size, and location of CAFOs nationwide, EPA does not have the information it needs to effectively monitor and regulate these operations." The CWA does not intend that EPA be in the farm management business by micro-managing farms through permits and inventories. EPA should encourage producers to seek protections offered by the NPDES permit. More importantly, EPA should enforce the law with inspections, appropriate penalties and fines when there is an unlawful discharge.

There are a number of problems with the report on **page 6.** First, GAO again attempts to compare animal waste with municipal waste to portray the magnitude of manure production on a large CAFO. We ask GAO to consult Lory, Zulovich, and Fulhage, referenced earlier, who state "direct comparisons of human wastewater and animal manure production is misleading and typically unproductive."

The example of the quantity of manure produced on a CAFO with 800,000 hogs is an extreme exception to the rule. There are only two hog farms of that size that we are aware of. Additionally, the use of the 800,000 hog example is inconsistent with the data presented in Table 4 which shows the number of animals raised on large farms in the 75th percentile to be 7,700. Similarly, the example of a beef cattle farm with 140,000 head of cattle is inconsistent with the data in Table 4 that shows the number of animals raised on large farms in the 75th percentile to be 10,000. Manure produced by a representative CAFO is far less than what the report attempts to portray.

As GAO will see later in this commentary USDA demonstrates that the figure used showing a hog population in North Carolina of 9 million hogs is overstated and that the manure production estimate that GAO shows is in error by as much as 30-40 %.

On **page 6** there GAO again attempts to support its methods and conclusions by referencing unnamed "agricultural experts" and "government officials". Since these references are uncited, we cannot determine who they are, what department, agency or university they come from, what positions they hold and what the level of expertise they have. Additionally, GAO fails to cite specific studies to support their conclusions such that a reviewer can check for accuracy. A study of this magnitude should have had an extensive independent review. However, there was no independent review of this report outside of USDA and EPA.

In the final paragraph of **page 6** GAO references "at least 68 government-sponsored or peer-reviewed studies that have been completed on air and water quality issues associated with animal waste since 2002, and 15 of these studies have directly linked pollutants from animal waste to specific health or environmental impacts." First, only 15 of 68 studies establishing a link, with seven studies indicating no direct or indirect link, making the issue inconclusive at best. Second, USDA knows that GAO's literature search was far less than complete as there are over 400 active projects in the USDA

Cooperative State Research Education and Extension Service's Research Information System data base that touch on some aspect of livestock and poultry manure management. We also suggest that GAO consult http://www.asabe.org/meetings/airwaste2007/index.htm. GAO's research is therefore inadequate.

On **page 7** there are more uncited references, but this time they are "EPA officials." We have insufficient information to assess whether or not their interpretation is correct. What are the effects and the magnitude of those effects? What are the number of individuals impacted and the degree of impact? What air quality and agricultural experience do the authors have? USDA notes that there is extensive discussion given to the studies that established a linkage to human health and very little discussion of studies that failed to establish a linkage. GAO says "Most of the water studies found that nutrients or hormones released from animal feeding operations were causing environmental harm, such as reproductive disorders in fish and degraded water quality." Just this week, USDA became aware of a U.S. Geological Survey (USGS) news release which reports that non-agricultural sources are a major problem regarding the presence of hormones in surface and ground water.

In the second paragraph on **page 7**, what is the basis of GAO's statement that the NAEMS study won't provide the 'scientifically and statistically valid data it was intended to provide and EPA needs to develop the air emissions protocols?" The NAEMS test protocol was developed over a six-month period by nearly fifty scientists, academics and industry experts using a consensus basis approach. It is a state of the art study using techniques to measure non-point sources. This study was viewed as a first step to develop better emission estimation protocols than currently available to EPA. It was never intended to fill all the data gaps or result in the development of the "process based models" suggested in the NAS study. GAO is confusing the "emission protocols" with the NAS recommended "process based models."

Page 8, paragraph 1 – GAO faults EPA for not deciding whether or not they will aggregate emissions on CAFOs. Regarding air emissions, CAFOs are non-point/area sources. Many of the air emissions from CAFOs would normally be considered "fugitive." This determination may be different than the treatment of CAFOs under the CWA. However, under the CAA, it is not unusual for emissions that can't pass through a stack to be treated as fugitive regardless of the source of the emissions. It is also not unusual for EPA,

when beginning rulemaking for sources under the CAA, to withhold decisions about aggregation (and other issues) until they have sufficient information to make informed decisions. Therefore, CAFOs are not being treated differently than other sources that EPA has evaluated for regulation under the CAA. GAO's presumption that this behavior indicates that EPA has no intention to regulate CAFOs is erroneous.

GAO's recommendation on **page 9,** that the EPA Administrator develop a comprehensive inventory of CAFOs nationwide would be costly to assemble and maintain. Moreover, in light of *Waterkeeper,* were the Second Circuit vacated the "duty to apply" for a permit, the Administrator does not have the authority to compel producers to submit the information to make such an inventory complete and accurate. Additionally, this inventory would be highly objectionable to the farm community. The real problem lies with EPA's use of the permit as an enforcement tool, which was never intended under the CWA. EPA has the authority that it needs to inspect a farm and compel a producer to submit farm-specific information in cases of a suspected discharge under section 308 of the CWA. It also has the authority to level fines of up to $32,000 per day when an unlawful discharge has occurred. EPA needs to appropriately use its authority.

Page 10, paragraph 2, last sentence – GAO states that the "...increases in size and the large amounts of manure" have generated concerns. What are these concerns and who raised these concerns? In the past many complaints related to air emissions have come from citizens about the odor from the facilities. EPA has no authority to regulate odor. Are these concerns about odor? If so, this should be stated in the report.

Background

We again note our objection to the use of the term "industrialized" because it is negative and does not include all animal-feeding operations.

Page 11, paragraph 1 first sentence – GAO states that discharging CAFOs are "point sources" under CWA. GAO should have also stated that CAFOs are "non-point sources" with fugitive emissions under EPA's typical approach to air emissions under the CAA.

On **page 14** we would add that neither the 2003 CAFO rule nor the *Waterkeeper* decision have affected the commonly accepted design

standards for waste storage or nutrient management planning. EPA has accepted and supported USDA standards during this entire period. The statement in the report referencing "more stringent design and operational requirements" is erroneous. The principal effect of the 2003 rule was to incorrectly compel all CAFOs to seek NPDES permit coverage.

Page 15, paragraph 2, sentence 2 – This statement is incorrect. The Agricultural Air Quality Task Force (AAQTF) is a Federal Advisory Committee (not an "agency") that makes recommendations to the Secretary of Agriculture. The AAQTF cannot enter into any MOU with EPA.

On **page 15**, we again point to the inaccurate statement in the last sentence that indicates that no agency in the federal government collects accurate data on CAFOs. GAO used USDA data to establish an increase in the number of CAFOs.

On **page 16** of the report, we reviewed the data that GAO produced and found errors in methodology. GAO unsuccessfully attempted to correct these errors in the draft report.

On **page 18**, GAO discusses the increase in livestock numbers since 1982, but fails to mention the increase in the U.S. population and domestic demand for livestock products over that period of time or the increased opportunities for livestock producers to export their products overseas. While it is true that more livestock is being raised, it is also true that producers have had to adopt more efficient systems. One of these is feed conversion. Today's animals produce more meat, milk and eggs per unit of feed than they did thirty years ago. More of the feed goes into production and less is wasted as manure.

On **page 19** we dispute GAO's contention that USDA does not have the data that EPA needs to gain a sufficiently clear picture on the number and location of CAFOs nationwide. While it is true that the USDA Census data does not coincide directly with the definition of CAFO, it correlates sufficiently to be adequate for the purpose of program management. For example, the number that EPA has used since the 2003 CAFO rule for the number of CAFOs nationwide is 18,500. The number of CAFOs that USDA estimated from the 1997 Agricultural Census and the supplement produced by USDA (Kellogg et al) was 19,000. EPA regularly used this data in its management of the CAFO program. As USDA has stated in our previous

commentary EPA does not have the authority, in light of *Waterkeeper* to produce the kind of inventory that GAO states is necessary, including "farm location, owners, size of farms, and the number of animals raised."

Page 22, Table 4 – we did a quick check of some of the calculations presented in this table, specifically regarding the (Column 3) manure production numbers and found errors. These errors are as follows:

Animal	USDA Data	GAO Data
Beef	11500	11700
Dairy	19500	17800
Hogs	3700	5100
Layers	3200	2800
Broilers	5230	4130
Turkeys	6370	3630

Since GAO cites the American Society of Agricultural and Biological Engineers (ASABE) as their source – as do we – we would expect the values in Column 3 to agree with our values. The USDA data above contains annual manure in pounds calculated for the number of animal units determined from unit weights from ASABE and the number of animals necessary for a CAFO. The animal units were then multiplied by the annual manure per animal unit derived from the ASABE standard. The GAO data contains the annual manure value in points for their CAFO sized operation, also derived from ASABE. We have consistently used a 360 day year that could account for small differences. However, since both USDA and GAO use the ASABE standard they should have arrived at the same results.

Pages 23 and 24 – This narrative misrepresents the findings reported in Kellogg et al. The Kellogg report never discussed increased soil nitrogen and phosphorous resulting from excess manure. The phrase "that had higher levels of nitrogen in the soil…" should read "that generated more manure than could be land applied at a nitrogen standard rate on cropland present within the county…" A similar correction for the phosphorous statement is also needed. Kellogg surmised – did not observe or have supporting data – that some of this excess county-level manure may have been land applied but at rates greater than a nitrogen standard rate and if so this applications would have constituted an increased risk of water contamination. This is a very weak reference to use to establish a link between manure application in areas with concentrated livestock and degraded water quality. GAO should

use one of the studies they report that actually found a link between concentrated livestock operations and degraded water quality to make this point. Kellogg does not present any findings that establishes a link between manure production and water quality problems. The Kellogg reference is more useful to establish that the number of counties facing challenges for using manure by land application increased between 1982 and 1997 because of the changes in geographic concentration of livestock production.

Pages 24 and 25 – One example used in the report, is a five-county area in North Carolina where there are concentrations of swine production facilities. Such concentrations are referred to in the report as "regional clusters." Other examples of regional clusters in the report include the border area between Arkansas and Oklahoma, the Central Valley of California and in the state of Iowa.

On **page 25**, the report contains a paragraph that is misleading and unsubstantiated. "According to North Carolina agricultural experts, excessive manure production has contributed to the contamination of the surface and well water in these counties (five county area referenced above) and the surrounding areas. According to these officials, this contamination may have occurred because the hog farms are attempting to dispose of excess manure but have little available cropland that can effectively use it. According to state officials, partly out of concern for the potential contamination of waterways and surface water from manure, in 1997 North Carolina placed a moratorium, still in effect on new or expanding hog animal feeding operations."

GAO does not cite these "experts" or "government officials," making it impossible to ascertain their credibility. GAO offers no data, whatsoever, to substantiate these assertions. Significantly, the statement that North Carolina has a moratorium on new hog operations or expansions or existing operations is incorrect. North Carolina has a moratorium on new open manure storage lagoons, not on new or expanded hog operations. Most improtantly, the Black and South river systems in this area of North Carolina are classified by the North Carolina environmental agencies as "Outstanding Resource Waters."

On **page 24**, GAO states that on any one day the hog population of the five North Carolina counties referenced above is over 9 million hogs producing almost 19 million tons of manure per year. This is a factual error. The

reason for this error is that the report falsely assumes that every single pig in the five count area is a "feeder to finish" phase pig. In fact, only around 55% of the pigs in these counties are feeder to finish phase that would produce that amount of waste estimated by the report. At least 2.5 million pigs in the five counties are "wean to feeder," or nursery pigs. Nursery pigs produce only about 20% of the total manure on an annual basis that feeder to finish pigs do. Thus, because of the inaccurate estimate of swine populations, the 19 million ton figure for yearly manure production is off by as much as 30 to 40 percent. According to the North Carolina Division of Water Quality regulatory database, and using conversion factors to add piglets for sow operations, there are approximately 6.9 million confined pigs in the five counties.

North Carolina has one of the most aggressive state-enabled regulatory programs for CAFOs in the United States and is not impacted by *Waterkeeper*. There is a "duty to apply" in this state program which means that all of the hog operations in this "regional cluster" (as well as all others in state) must have a general or individual permit, have a nutrient management plan and be inspected at least one time every year. This assures that manure is applied to land at agronomic rates and assures the structural integrity of the manure storage lagoons. GAO can refer to http://ww.ncga.state.nc.us/EnactedLegislation/Statutes/PDF/BySection/Chapter143/GS143/GS_143-215.10C.pdf.

The "experts" referred to in the report indicate that "the contamination may have occurred because the hog farms are attempting to dispose of excess manure but have little available cropland that can effectively use it." In fact, every single permitted swine operation in North Carolina has a Certified Animal Waste Management Plan (CAWMP) and waste treatment structure that has been certified by technical specialists (designated by the State of North Carolina) as sufficient to treat the total volume of manure produced as well as account, by land application on growing crops, for all plant available nitrogen produced by the operation. All CAFOs in the state have also evaluated the potential for phosphorous loss from each land application field through the use of the North Carolina-developed science-based Phosphorous Loss assessment tool (PLAT). Each operation must have land available to apply nitrogen on an agronomic basis based on realistic yield, soil type and nitrogen use factor, as a condition of compliance with its state or NPDES permit.

The report intimates through comments from "North Carolina Ag experts" that North Carolina does not have sufficient land available for nutrient uptake of generated wastes from swine operations for the five counties. Utilizing North Carolina Division of Water Quality swine population data (6.9 million) and North Carolina State University data on nutrients produced by each swine production phase, it is estimated that 13 million pounds of plant available nitrogen are generated by confined swine in the profiled counties. North Carolina Department of Agriculture 2008 estimates of available hayed and grazed land in the five counties show the following: 74,800 acres of harvested and hayed land and 53,000 acres of cattle grazed land. Using conservative figures for nitrogen growth need and uptake in Bermuda grass, the predominate hay and pasture grass in southeastern North Carolina, the potential for total plant available nitrogen uptake in the five counties is almost 17 million pounds for hayed land (@225 pounds PAN/acre) and nearly 8 million pounds for grazed land (@150 pounds PAN/acre). Thus, the total potential for nitrogen uptake on grassland in the five counties-an estimated 25 million pounds, far exceeds the approximately 13 million pounds produced by swine operations. In addition, there are many thousands of acres of cropland utilizing crops such as corn and small grains, which have significant nitrogen growth needs and uptake rates used for land application of waste materials produced by swine operations.

The assertion of the GAO report that insufficient land exists in the five county area to utilize the nutrients from the manure produced by the swine industry which is leading to water quality degradation is incorrent, as is the assertion that over-over application of nutrients is leading to water quality degradation. The Cape Fear River system in North Carolina drains three of the largest swine producing counties in the United States that constitute over 70% of the swine production in North Carolina. The Black and South rivers are classified by the North Carolina environmental agencies as "Outstanding Resource Waters", a rating that signifies excellent water quality as defined by the North Carolina Division of Water Quality. See http://h2oenr.state.nc.us/nps/uwalong.pdf.

Given the time we had to analyze and comment on the draft report, we are unfortunately unable to assess GAO's factual statements about other referenced "regional clusters." However, the significant inaccuracies regarding North Carolina raise questions about these other regional clusters.

On **page 27** GAO again references the 68 government and peer reviewed studies, which is an incomplete review and listing of the research available.

On **page 30** the narrative summary of the research that would support a direct link between CAFO operations and health risks is repeated with a very limited summary of the research that fails to establish a linkage. Also, what does "Exposure to Diluted Air Sampled from a Swine Confinement Atmosphere" mean?

Page 33, table 8, row 5 – Since the prevalence of asthma does not change in urban and rural children, there does not appear to be a correlation between CAFO air emissions and health effects. Did GAO check to see if there could be another cause for asthma in rural children? Could it be that confounding factors actually account for effects noted in the other studies?

Page 37, paragraph 1 – Actually the NAS stated that EPA should develop a process-based model to accurately determine the environmental impacts of CAFOs. A process-based model is far more complex and requires more information than that indicated by GAO.

Page 37, paragraph 2 – The study discussed by GAO was an assessment of potential risk and has little value, if any, to determine the actual risk from any CAFO much less all CAFOs.

Page 38, last paragraph – The authors state the NAEMS "...study may not provide the quantity and quality of date needed for developing appropriate methods for estimating emissions." Given that this study is but the first step to develop the process-based model and the anticipated outcome is an initial emission estimation protocol, the information gathered from the study should be sufficient to achieve the initial goal. The protocol was developed using a consensus process with national experts. It was reviewed and approved by EPA and EPA has audited its implementation to make sure the approved protocol is followed.

Page 43, paragraph 1 sentence 1 – GAO states that the AAQTF questions the quantity and quality of NAEMS study data provided by EPA. GAO is incorrect about the source of the data. The data viewed by the AAQTF was part of a 45-minute presentation by Dr. Al Heber of Purdue University, not a presentation of data by EPA as GAO reports. Dr. Heber's presentation showed a few slides of data that had not been QA/QC'd by EPA as required

by the study prior to release. Therefore, GAO's mentioning the presentation in this report is premature. Finally, GAO inaccurately states that the AAQTF is concerned that the data being collected "may not be extrapolated to all types of CAFOs". EPA does intend to extrapolate the data to all CAFO operations and AAQTF is aware of that fact.

Page 43, paragraph 2 – The discussion again confuses the emission estimation protocols anticipated from the NAEMS study with the NAS recommended process-based model.

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MIKE FERGUSON, NEW JERSEY
MIKE ROGERS, MICHIGAN
SUE WILKINS MYRICK, NORTH CAROLINA
JOHN SULLIVAN, OKLAHOMA
TIM MURPHY, PENNSYLVANIA
MICHAEL C. BURGESS, TEXAS
MARSHA BLACKBURN, TENNESSEE

December 4, 2008

Ms. Susan P. Bodine
Assistant Administrator
Office of Solid Waste and Emergency Response
Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Ms. Bodine:

Thank you for appearing before the Subcommittee on Environment and Hazardous Materials at the September 24, 2008, hearing entitled, "Hazardous Substance Releases and Reporting under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)". We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions from subcommittee Members for inclusion in the record. In preparing your answers to these questions, please include the text of the questions along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received by no later than the close of business on **Thursday, December 18, 2008**. Your written responses should be delivered to 2322-B Rayburn House Office Building to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at **rachel.bleshman@mail.house.gov**. Please send your response in a single Word formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman with the Committee staff at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Gene Green, Chairman
Subcommittee on Environment and Hazardous Materials

The Honorable John Shadegg, Ranking Member
Subcommittee on Environment and Hazardous Materials

The Honorable Bart Stupak, Member
Subcommittee on Environment and Hazardous Materials

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 1 8 2008

REPLY TO THE ATTENTION OF:
(AE-17J)

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Richard Millner
The Dairy Dozen – Thief River Falls, LLP
d/b/a Excel Dairy
22615 120th Avenue NE
Thief River Falls, Minnesota 56701-8685

Re: Notice of Violation
The Dairy Dozen – Thief River Falls, LLP d/b/a Excel Dairy

Dear Mr. Millner:

U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation (NOV) to The Dairy Dozen – Thief River Falls, LLP d/b/a Excel Dairy (you) under Section 113(a)(1) of the Clean Air Act, 42 U.S.C. § 7413(a)(1). We find that you are violating the Minnesota State Implementation Plan at your Thief River Falls, Minnesota facility. We are concerned that in the month of June, the emissions from your facility resulted in nearby residents being advised to evacuate their homes.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV. We have made arrangements to meet with you and your representatives at the United States Attorney's Office at the United States courthouse located at 300 South Fourth Street in Minneapolis, Minnesota on August 4 or August 5, 2008. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply, and the steps you will take to prevent future violations.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

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EPA contact in this matter is Kevin Vuilleumier. You may contact Mr. Vuilleumier at (312) 886-6188 to confirm the conference. You should contact him within three calendar days following receipt of this letter.

Sincerely yours,

FOR

Cheryl L. Newton
Acting Director
Air and Radiation Division

Enclosures: NOV and SBREFA fact sheet

cc: Jeff T. Connell, MPCA

Richard Millner
Excel Dairy

Jack Perry, Esquire, via facsimile
Briggs & Morgan

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
The Dairy Dozen – Thief River Falls LLP	)	**NOTICE OF VIOLATION**
d/b/a Excel Dairy	)	
Thief River Falls, Minnesota	)	**EPA-5-08-MN-23**
	)	
Proceedings Pursuant to	)	
Section 113(a)(1) of the	)	
Clean Air Act, 42 U.S.C.	)	
§ 7413(a)(1)	)	

NOTICE OF VIOLATION

The U.S. Environmental Protection Agency is issuing this Notice of Violation under Section 113(a)(1) of the Clean Air Act, 42 U.S.C. § 7413(a)(1). EPA finds that The Dairy Dozen – Thief River Falls, LLP d/b/a Excel Dairy (Excel Dairy) is violating the Minnesota State Implementation Plan (SIP), as follows:

Statutory and Regulatory Background

1. On May 24, 1995, EPA approved Rule 7009.0080 as part of the federally enforceable SIP for Minnesota. 60 Fed. Reg. 27411.

2. Minnesota SIP Rule 7009.0080 states that hydrogen sulfide emissions may not exceed 0.05 ppm by volume (70.0 micrograms per cubic meter) for a half hour not to be exceeded over 2 times per year. It also states hydrogen sulfide emissions may not exceed 0.03 ppm by volume (42.0 micrograms per cubic meter) for a half hour average not to be exceeded over 2 times in any 5 consecutive days.

Excel Dairy's Facility

3. Excel Dairy owns and/or operates a dairy feedlot near Thief River Falls, Minnesota.

4. Emissions from Excel Dairy's feedlot are subject to the hydrogen sulfide emissions requirements in Rule 7009.0080 in the Minnesota SIP.

Violations

5. Emissions readings taken on numerous days in May, June and July, 2008 demonstrate that Excel Dairy exceeded the hydrogen sulfide emission limit of 0.05 ppm by volume for a half hour over 2 times per year.

6. Emission readings taken on numerous days in May, June and July, 2008 demonstrate Excel Dairy exceeded the hydrogen sulfide emission limit of 0.03 ppm by volume for a half hour over 2 times during a consecutive 5 day period.

Environmental Impacts

7. Hydrogen sulfide is a colorless, water soluble, highly flammable and poisonous gas at ambient temperatures. Exposure can occur through skin contact, eye contact and inhalation. Symptoms of exposure may include irritation to skin and mucous membranes, burning eyes, headache and diarrhea. Hydrogen sulfide can cause respiratory irritation, and at higher concentrations respiratory paralysis where breathing stops. Hydrogen sulfide can rapidly fatigue the sense of smell so smell cannot be depended on as a warning of exposure.

8. The Agency for Toxic Substances and Disease Registry (ATSDR) has established an acute inhalation minimal risk level (MRL) at 70 ppb and an intermediate inhalation MRL at 20 ppb for hydrogen sulfide.

7/18/08
Date

FOR
Cheryl L. Newton, Acting Director
Air and Radiation Division

Protecting the environment is everyone's responsibility. Help EPA fight pollution by reporting possible harmful environmental activity.
To do so, visit EPA's website at http://www.epa.gov/compliance/complaints/index.html

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 1 1 2008

REPLY TO THE ATTENTION OF:

SC-6J

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Richard Millner
Prairie Ridge Management Company, LLC
503 East Wold Avenue
Veblen, South Dakota 57270-2120

Re: Request for Information Pursuant to Section 104(e) of CERCLA for Prairie Ridge Management Company, LLC

Dear Mr. Millner:

The United States Environmental Protection Agency (Agency) is currently investigating the source, extent, and nature of releases of hazardous substances, pollutants, or contaminants pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, including but not limited to the releases of hydrogen sulfide from The Dairy Dozen – Thief River Falls, LLP d/b/a Excel Dairy (Excel Dairy) between May of 2008 to June 8, 2008, which caused a public evacuation on or about June 8, 2008.

Pursuant to the authority of Section 104(e) of the CERCLA, 42 U.S.C. § 9604(e), you are hereby requested to respond to the Information Request enclosed. Compliance with the enclosed Information Request is mandatory. Failure to respond fully and truthfully to each and every request within **thirty (30)** days of receipt of this letter, or to adequately justify such failure to respond, can result in enforcement action by the Agency and the imposition of penalties of up to $32,500[1] for each day of noncompliance. Noncompliance is considered by the Agency to be not only failure to respond to the Information Request but also failure to respond completely and truthfully to each request. Please be further advised that provision of false, fictitious, or fraudulent statements or representations may subject you to criminal fines or up to five years of imprisonment or both under 18 U.S.C. § 1001.

[1] While the provisions of Section 104(e)(5) of CERCLA provide for a penalty per violation of up to $25,000 per day, the Civil Monetary Penalty Adjustment Rule, published at 40 C.F.R. Part 19, increased the maximum penalty for each violation occurring on or after January 31, 1997, to $27,500 per day and to $32,500 for each violation occurring after March 15, 2004.

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The Agency has the authority to use the information requested herein in an administrative, civil, or criminal action. This Information Request is not subject to the approval requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. §§ 3501 et seq.

Your response to this Information Request should be mailed to:

Ruth McNamara
Chemical Emergency Preparedness
and Prevention Section (SC-6J)
United States Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604

The Agency strongly encourages you to give this matter your immediate attention and to respond to his Information Request within the time specified above.

Please direct any questions you may have regarding this Information Request to Ruth McNamara at (312) 353-3193.

Thank you for your cooperation in this matter.

Sincerely yours,

Mark J. Horwitz, Chief
Chemical Emergency Preparedness
and Prevention Section

Enclosures (3) Information Request Definitions
Information Request Instructions
Information Request

cc: Richard Millner
Excel Dairy
44480 State Hwy 25
Veblen, South Dakota 57270

Jack Perry, Esquire
Briggs & Morgan
2200 IDS Center
80 South Eighth Street
Minneapolis, Minnesota 55402

DEFINITIONS

For the purpose of the Instructions and the Information Request set forth herein, the following definitions shall apply:

1. The term "you" or "Respondent" shall mean the addressee of the Information Request, the addressee's officer, managers, employees, contractors, trustees, and agents.

2. The term "person" as used herein, in the plural as well as the singular, shall mean any natural person, firm, contractor, corporation, partnership, trust or governmental entity, unless the context indicates otherwise.

3. The term "hazardous substance" shall have the same definition as that contained in Section 101(14) of CERCLA, including mixtures of hazardous substances including petroleum products.

4. The term "furnish," "describe," or "indicate" shall mean turning over to the Agency either original or duplicate copies of the requested information in the possession, custody, or control of the Respondent. Where specific information has not been memorialized in any document but is nonetheless responsive to a request, you must respond to the request with a written response. If such requested information is not in your possession, custody, or control, then indicate where such information or documents may be obtained.

5. "Release" means any spilling, leaking, pumping, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of any hazardous substance.

6. "And" as well as "or" shall be construed either conjunctively or disjunctively as necessary to bring within the scope of this Information Request any information which might otherwise be construed to be outside its scope.

7. The terms "transport" or "transportation" mean the movement of a hazardous substance by any mode, including pipeline, and in the case of a hazardous substance which has been accepted for transportation by a common or contract carrier, the terms "transport" or "transportation" shall include any stoppage in transit which is temporary, incidental to the transportation movement, and at the ordinary operating convenience of a common or contract carrier, and any such stoppage shall be considered as a continuity of movement and not as the storage of a hazardous substance.

8. The term "pollutant" or "contaminant" shall have the same definition as that contained in Section 101(33) of CERCLA, and includes any mixtures of such pollutants and contaminants with any other substances.

9. The term "Facility" means (1) 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 (2) any site or area where a hazardous substance has been disposed of, or

placed, or otherwise come to be located; but does not include any consumer products in consumer use or vessel.

10. All terms not defined herein shall have their ordinary meaning, unless such terms are defined in CERCLA, the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 et seq., as amended, 40 C.F.R. Part 300 or 40 C.F.R. Parts 260-280, in which case the statutory or regulatory definitions shall apply.

INSTRUCTIONS

1. A separate response must be made to each of the questions set forth in this Information Request.

2. Precede each answer with the number in the Information Request to which it corresponds.

3. In answering each request, identify all contributing sources of information.

4. If information not known or not available to the Respondent as of the date of submission of its response should later become known or available, Respondent must supplement its response to the Agency. Moreover, should the Respondent find, at any time after the submission of its response that any portion of the submitted information is false or misrepresents the truth, Respondent must notify the Agency as soon as possible.

5. Your response must be accompanied by a notarized affidavit from a responsible company official or representative stating that the information provided in this response is true and accurate to the best of the Facility's knowledge. To the extend that any information you provided relating to these requests is based on your personal knowledge, or personal knowledge of your employees, agents, or their representatives, this information shall be in the form of a notarized affidavit.

6. The information requested herein must be provided notwithstanding its possible characterization as confidential information or trade secrets. You may, if you desire, assert a business confidentiality claim covering part or all of the information requested, in the manner described by 40 C.F.R. § 2.203(b). Information covered by such a claim will be disclosed by the Agency only to the extent, and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. [See 41 Federal Register 36902 et seq. (September 1, 1976); 43 Federal Register 4000 et seq. (December 18, 1985)]. If no such claim accompanies the information when it is received by the Agency, it may be made available to the public by the Agency without further notice to you. You should read carefully the above-cited regulations, together with the standards set forth in Section 104(e)(7) of CERCLA, before asserting a business confidentiality claim, since certain categories of information are not properly the subject of such a claim, as stated in Section 104(e)(7)(F) of CERCLA.

INFORMATION REQUEST

1. Identify all persons consulted in the preparation of the answers to this request.

2. Identify all documentation consulted, examined, or referred to in the preparation of the answers to this request and provide copies of all such documents.

3. What is Respondent's Standard Industrial Classification Code?

4. What is Respondent's Dun & Bradstreet number?

5. What are Respondent's annual sales for the most recently completed fiscal year?

6. How many employees are employed at Respondent corporate wide?

7. Provide a copy of your emergency plan which outlines the procedures for notification of accidental releases at your facility.

8. Provide documentation regarding the training of your employees on the procedures for notification of accidental releases at your facility.

9. Provide the name and current address of all of the owner(s) of the property located at 22615 120th Ave NE, Minneapolis, Minnesota, during the time period of May 1, 2008 to the present.

10. Provide the name and current address of all of the operator(s) of the facility located at 22615 120th Ave NE, Minneapolis, Minnesota, during the time period of May 1, 2008 to the present.

11. Are there any other types of animals other than dairy cows and calves living at this facility? If so, describe the other animals, quantity of each, and where they are kept?

12. Provide a description of the animals and quantity of each living at the facility (i.e. mature dairy cows, calves, gestating cows, etc.)

13. What is the average weight of a mature dairy cow, a calf, a gestating cow?

14. How many total animal units does Respondent have per type of animal?

15. Provide the dimensions of each barn or housing facility for the livestock.

16. For each structure provided in number 15 above describe the flooring, such as flat, slatted, free stall, straw bedding, free stall with straw.

17. For each structure provided in number 15 above, describe the method of ventilation and if known the ventilation rate of each.

18. What methods do you use to collect the manure?

19. Is the urine and feces combined for storage?

20. Are the feces and/or manure treated before storage? If so, describe in detail.

21. Provide a diagram of the facility identifying all buildings, barns, pits, lagoons, storage piles, etc.

22. Describe the methods of manure storage at the facility (i.e. lagoons, pits, basins, storage piles, etc.)

23. For each storage area identified in number 22 above provide the dimensions of the structure, and the total surface area exposed to the air.

24. What is the pH of each of the storage areas identified in 22 above?

25. Identify the feed fed to the livestock. Provide the % composition of ingredients in the each of the feed.

26. Do you have a manure management plan? If so, provide a copy of the plan.

27. Do you use land application of manure? If so, provide, provide the dimensions of the area used for land application.

28. When did Respondent become aware of an increase in emissions from the facility?

29. How did Respondent become aware of an increase in emissions from the facility?

30. Describe any unusual circumstances that may have contributed in an increase in emissions between May 1, 2008 and the present.

31. Identify each hazardous substance released and its Chemical Abstract Service (CAS) number.

32. How much hydrogen sulfide and how much ammonia was released for each 24 hour period from May 1, 2008 to the present? Describe your method or source of information in calculating the quantity released and provide the calculations.

33. How much hydrogen sulfide was released for each 24 hour period from May 1, 2008 to the present? Describe your method or source of information in calculating the quantity released and provide the calculations.

34. How much ammonia was released for each 24 hour period from May 1, 2008 to the present? Describe your method or source of information in calculating the quantity released and provide the calculations.

35. Describe your method or source of information in calculating the quantity of hydrogen sulfide and ammonia which volatilized and provide the volatilization calculations.

36. Provide the results of any and all analyses, including but not limited to results of any sampling conducted regarding these releases between May 1, 2008 and the present.

37. Describe in detail the actions taken by your employees and/or anyone else regarding the response to each release. What actions did you take and when did you take them to mitigate these emissions?

38. Provide copies of any permits that cover each release, and provide an explanation of why you believe this release is covered by this permit.

39. Provide a diagram of your facility in relation to each of the facility's boundaries, north, east, south, west, and identify the distance between each point of emissions to each facility boundary. You can provide separate diagrams for each if it is easier.

40. Provide a description of the area surrounding the facility within a 1 ½ mile radius, including residential, commercial, and industrial nature, including the approximate distance of your closest neighbor in each direction. If commercial or industrial please specify the type.

41. Provide the daily weather conditions for each 24 hour period between May 1, 2008 and June 8, 2008, including the temperature, humidity, wind speed and direction, precipitation, sunny/cloudy, and barometric conditions.

42. Were there any evacuations, persons medically treated, hospitalizations, and/or deaths associated with these emissions? If so, describe in detail.

43. Was there any known environmental damage, dead animals or vegetation damage? If so, describe in detail.

44. Provide both the date and time when you had knowledge that a reportable quantity (RQ) of hydrogen sulfide and/or ammonia was released from the facility on or about June 8, 2008.

45. If the time of knowledge of the release and time of knowledge of an RQ released is not the same, explain what actions your employees took in determining that an RQ was released.

46. Did Respondent notify the National Response Center regarding the releases which occurred between May 1, 2008 and July 1, 2008? If so, provide the name of the individual that provided the notification, the agency notified, and the date and time of each call.

47. Did Respondent notify the Minnesota State Emergency Response Commission regarding the releases which occurred between May 1, 2008 and July 1, 2008? If so, provide the name of the individual that provided the notification, the agency notified, and the date and time of each call.

48. Did Respondent provide a written follow-up emergency notice to the Minnesota State Emergency Response Commission, as required by the Emergency Planning and Community Right-to-Know Act (EPCRA) Section 304(c)? If so, provide documentation to support your claim.

HENRY A. WAXMAN, CALIFORNIA
EDWARD J. MARKEY, MASSACHUSETTS
RICK BOUCHER, VIRGINIA
EDOLPHUS TOWNS, NEW YORK
FRANK PALLONE, JR., NEW JERSEY
BART GORDON, TENNESSEE
BOBBY L. RUSH, ILLINOIS
ANNA G. ESHOO, CALIFORNIA
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JAY INSLEE, WASHINGTON
TAMMY BALDWIN, WISCONSIN
MIKE ROSS, ARKANSAS
DARLENE HOOLEY, OREGON
ANTHONY D. WEINER, NEW YORK
JIM MATHESON, UTAH
G.K. BUTTERFIELD, NORTH CAROLINA
CHARLIE MELANCON, LOUISIANA
JOHN BARROW, GEORGIA
BARON P. HILL, INDIANA
DORIS O. MATSUI, CALIFORNIA

DENNIS B. FITZGIBBONS, CHIEF OF STAFF
GREGG A. ROTHSCHILD, DEPUTY CHIEF OF STAFF
AND CHIEF COUNSEL

ONE HUNDRED TENTH CONGRESS

U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

JOHN D. DINGELL, MICHIGAN
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JOHN SULLIVAN, OKLAHOMA
TIM MURPHY, PENNSYLVANIA
MICHAEL C. BURGESS, TEXAS
MARSHA BLACKBURN, TENNESSEE

December 4, 2008

Mark Johnson, PhD, DABT
Senior Environmental Health Scientist
ATSDR-Region 5
77 West Jackson Blvd.
Chicago, IL 60604

Dear Dr. Johnson:

Thank you for appearing before the Subcommittee on Environment and Hazardous Materials at the September 24, 2008, hearing entitled, "Hazardous Substance Releases and Reporting under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)". We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions from subcommittee Members for inclusion in the record. In preparing your answers to these questions, please include the text of the questions along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received by no later than the close of business on **Thursday, December 18, 2008**. Your written responses should be delivered to 2322-B Rayburn House Office Building to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at **rachel.bleshman@mail.house.gov**. Please send your response in a single Word formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman with the Committee staff at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Gene Green, Chairman
Subcommittee on Environment and Hazardous Materials

The Honorable John Shadegg, Ranking Member
Subcommittee on Environment and Hazardous Materials

The Honorable Bart Stupak, Member
Subcommittee on Environment and Hazardous Materials

ATSDR's Responses to Supplemental Questions

The Honorable John D. Dingell

1. The Minnesota Department of Health (MDH) and the Minnesota Pollution Control Agency (MPCA) received complaints from citizens about odors and health effects believed to be related to hydrogen sulfide emission originating at the Excel Dairy, Thief River Falls, Minnesota. Self-reported health complaints include upper respiratory effects (such as nasal congestion and sore throats), itchy eyes, trouble breathing, nausea, and headaches.

   Are these health complaints consistent with Agency for Toxic Substances and Disease Registry's findings for health effects of hydrogen sulfide in its Toxicological Profile for Hydrogen Sulfide and its Public Health Statement for Hydrogen Sulfide?

   ATSDR response: While these symptoms are not exclusive to hydrogen sulfide, these types of symptoms (i.e., irritation of mucous membranes, upper airway irritation) are characteristic of the effects of exposure to an irritant gas, such as hydrogen sulfide as addressed in ATSDR's Toxicological Profile for Hydrogen Sulfide. ATSDR uses a weight of evidence approach in our health consultation that includes a review of the environmental sampling data and the reported health impacts to draw conclusions about health hazards.

The Honorable Joe Barton and John B. Shadegg

1. In ATSDR's September 19, 2008 letter to U.S. EPA and the Minnesota Pollution Control Agency, which you and one other person signed, three recommendations were made. First, Excel must engage in emissions control measures. Second, Minnesota and Excel should coordinate on an air monitoring program – as part of Minnesota's state air implementation plan – to assure emissions control. Third, Execl should restrict access to lagoons trespassers and children living on-site of the dairy. No where, was there a comment that Excel needed to file EPCRA and CERCLA reporting with the National Response Center, or state and local emergency response planners? Why?

   ATSDR response: Since ATSDR and the Minnesota Department of Health are not regulatory agencies, we are not involved in evaluating the need to meet the legal requirements under EPCRA and CERCLA. Our health evaluation is independent of whether the emissions from Excel may have been determined to have triggered reporting requirements under those regulations.

2. You testify that multiple pathways for release of contaminants from CAFOs, may expose people to these chemicals through inhalation of air or dust, direct contact with soil, ingestion of drinking water, or dermal contact with surface water. EPA is being accused of somehow trying to let polluters of the hook. However, EPA is testifying today that it is not proposing to diminish its ability to respond to these very threats. In light of the fact that Excel Dairy first came to Minnesota's attention as a state and federal Clean Air Act law violator, rather than a CERCLA or EPCRA violator, is the Federal government loosing its ability to respond to these kinds of issues by removing a paperwork requirement?

   ATSDR response: It is ATSDR's understanding that the reporting requirements under CERCLA and EPCRA are not based on predictions of human exposure levels or potential health impacts. While disclosure of CERCLA or EPCRA violations may be a factor to trigger further health evaluations, ATSDR does not use this regulatory criteria as the basis for determining whether there is or is not a public health hazard.

3. Your testimony admits that ATSDR only performed an exposure investigation instead of monitoring people in the community. In addition, your testimony admits that you did not conduct a formal health study of persons living on or near the dairy. Simply put, you base your assertions about the impacts of Excel's emissions on the description of symptoms your testimony calls "not inconsistent" with known acute health affects as well as other assumptions that may or may not be relevant – like cloud cover and temperature impacts on air deposits. In a court of law, this kind of testimony would be inadmissible as hearsay. Why shouldn't we assume that you made a leap from one cause to the other effect based solely on air level data rather than on hard evidence that ATSDR itself collected?

   ATSDR response: The ATSDR Exposure Investigation based its conclusion that a public health hazard existed on our air sampling results. These results showed that potential hydrogen sulfide exposures to people living close to the Excel Dairy exceeded our acute screening value (70 ppb) and were in the range of concentrations that have been associated with health impacts reported in the scientific literature. These findings justified our conclusions and recommendations. We did include in the report the fact that community members self-reported symptoms that are consistent with hydrogen sulfide exposure. However, our report was not based on a scientific evaluation of health effects due to exposures from the dairy. Self-reported health complaints, while relevant to the overall situation, were not used as the basis of our conclusions.

4. According to Minnesota Public Radio, one explanation for the high levels of hydrogen sulfide readings from based on a dispute between Excel Dairy and the Minnesota Pollution Control Agency in which the dairy claims the state is forcing repair work on one of its manure basins but won't inspect it form compliance. In you opinion, is this a plausible explanation as to why the levels are as high? Doesn't it seem logical that having properly managed manure system operating is the surest way to drive down emissions levels?

   ATSDR response: ATSDR does not have the information necessary to respond to these questions. While we understand that there is a disagreement between Excel and MPCA about what triggered the releases, we would agree that the solution is to use best management practices to control the emissions from the manure treatment system.

5. Five studies -- (1) 2008 Texas A&M study of hydrogen sulfide emissions on 2,000 head open-lot dairy operation, (2) 2008 Texas A&M study of hydrogen sulfide emissions from a 18,000 head beef cattle lot, (3) 2002 Iowa Department of Natural Resources assessment of hydrogen sulfide at the state's largest swine feeding operations, (4) 2004 Iowa State University study of downwind hydrogen sulfide emissions at six (6) swine finishing sites, and (5) 2004 American Society of Agricultural and Biology Engineers hydrogen sulfide study of a 50,000 beef feedlot – each showed that large livestock operations were not producing amounts of hydrogen sulfide in excess of state or Federal law or of regulatory concern. When you consider the range and the statistically higher amount of animals involved in the operations sampled for the five (5) studies cited, is it possible that Excel is an outlier or an example of poor practices in handling hydrogen sulfide rather than the norm?

   ATSDR response: We approached this assessment the same way we would for any other chemical emissions from an industrial source. As stated in our testimony, ATSDR has limited experience in the assessment of CAFOs. Therefore, we would not be able to draw conclusions as to how operations at the Excel Dairy compare to other CAFOs.

6. You mention "restricting access" to Excel's manure lagoons to prevent on-site children from getting close to them. Yet, this will not stop air emissions from reaching them. If you were to dispatch an emergency responder to Excel Dairy to address high levels of hydrogen sulfide on site, what specific thing should that responder do to eliminate the harmful impacts of elevated hydrogen sulfide levels for that child?

   ATSDR response: Our recommendation was for Excel to take action that would prevent children from accessing areas near the source of the emissions. If a hazardous condition were identified by an emergency responder, we would expect that the most appropriate action would be to relocate the child, or any other exposed individual, to an unimpacted area until the hazard was mitigated.

7. ATSDR has been involved with assessments at four (4) other CAFOs and only a few of those had EPCRA implications. How much hard data does ATSDR have to make unequivocally statements about CAFOs and EPCRA?

   ATSDR response: ATSDR has not made any statements regarding CAFOs and EPCRA. Our health assessments have evaluated available environmental data to determine whether a health hazard is present.

8. To what extent do local common law nuisance actions resolve much of this or if we've gone totally Federal in this area?

   ATSDR response: This question requests information that is outside the scope of ATSDR's investigation.

9. Do you have any information you can share with our subcommittee regarding the relative volumes of manure livestock produce when compared to the volume of sewage that is produced in our cities wastewater treatment facilities?

   ATSDR response: ATSDR does not collect or possess information regarding the volumes of livestock manure and human sewage produced in the United States.

The Honorable Bart Stupak

1. In your testimony it was stated that hydrogen sulfide concentration in outdoor air reached 480 parts per billion (ppb). At what level does the agency believe exposure poses a risk to human health?

   ATSDR docs not have a bright line that defines a health hazard. We evaluate the data on a site-specific basis and apply a weight-of-evidence approach in drawing conclusions about the presence of a health hazard. This approach is intended to characterize actual exposures, which includes the consideration of factors such as the profile of chemical concentrations, the frequency and duration of exposure, and the presence of individuals who may be sensitive to the effects of that exposure. Our initial screening evaluation is a comparison to the ATSDR Minimal Risk Levels (MRLs). The acute MRL for short-term exposure (up to 14 days) is **70 ppb**. The intermediate MRL for durations greater than 14 days is **20 ppb**. The acute effects of exposure to hydrogen sulfide (i.e., irritation of upper respiratory system and mucous membranes) can be triggered within a few minutes of exposure. Our conclusion of a public health hazard was based on the

magnitude and frequency of the exceedance of our health-based criteria, in comparison to health impact data in the scientific literature.

2. **Has the ATSDR issued sample data on what the hydrogen sulfide concentration level was measured at for its indoor monitors?**

   ATSDR and the Minnesota Department of Health are preparing a Health Consultation report that will summarize all of the data that ATSDR collected during the exposure investigation, including the indoor sampling results, as well as other environmental sampling data collected by the Minnesota Pollution Control Agency (MPCA). ATSDR will provide the Committee with a copy of that document.

3. **Does ATSDR have any ideas on what the sources of hydrogen sulfide were in regards to Excel Dairy?**

   ATSDR did not have access to the Excel Dairy property to perform an independent evaluation of the specific areas of hydrogen sulfide emissions. However, we know that hydrogen sulfide gas is generated under anaerobic conditions. It was reported to us by MPCA that one of the lagoons was highly anaerobic and did not have an adequate "crust" to prevent air releases. Therefore, this lagoon was likely to be a significant source of emissions.

4. **What actions need to be taken by EPA and Excel Dairy to reduce the exposure of Hydrogen Sulfide?**

   ATSDR is a public health agency that advises EPA, other regulatory agencies, and facility owners about health concerns associated with exposure to environmental contaminants. Our recommendation was to take actions that would result in a reduction in community exposures to emissions from Excel Dairy. We would rely on EPA, MPCA, and Excel Dairy to utilize their technical expertise and authorities to develop and implement a strategy that would define the specific actions needed to achieve that goal.

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U.S. House of Representatives
Committee on Energy and Commerce
Washington, DC 20515–6115

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December 4, 2008

Mr. Mark E. Rey
Under Secretary for Natural Resources
and Environment
Jamie L. Whitten Federal Building
12th and Jefferson Drive, SW, Room 217-E
U.S. Department of Agriculture
Washington, D.C. 20250

Dear Mr. Rey:

Thank you for appearing before the Subcommittee on Environment and Hazardous Materials at the September 24, 2008, hearing entitled, "Hazardous Substance Releases and Reporting under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)". We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions from subcommittee Members for inclusion in the record. In preparing your answers to these questions, please include the text of the questions along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received by no later than the close of business on **Thursday, December 18, 2008**. Your written responses should be delivered to 2322-B Rayburn House Office Building to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at **rachel.bleshman@mail.house.gov**. Please send your response in a single Word formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman with the Committee staff at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Gene Green, Chairman
Subcommittee on Environment and Hazardous Materials

The Honorable John Shadegg, Ranking Member
Subcommittee on Environment and Hazardous Materials

Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us

October 13, 2008 OCT 2 7 2008

The Honorable Gene Green, Chairman
Subcommittee on the Environment and Hazardous Materials
Committee on Energy and Commerce
United States House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Green and Members of the Subcommittee on Environment and Hazardous Materials:

I write in regard to testimony given before the Subcommittee on Environment and Hazardous Materials on Sept 24, 2008. The testimony was provided during a hearing on Hazardous Substance Releases and Reporting under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA).

During the hearing, U.S. Department of Agriculture Under Secretary Mark Rey testified about ongoing air quality problems at Excel Dairy facility near Thief River Falls, Minnesota. As you have heard, there have been significant issues with the dairy regarding hydrogen sulfide emissions for quite some time. The Minnesota Pollution Control Agency (MPCA) has worked diligently to get the facility back into compliance. Due to the number of measured exceedances of Minnesota's hydrogen sulfide standard, the Minnesota Attorney General's office and the Minnesota Pollution Control Agency (MPCA) has sued the dairy. Citizens and the county where the facility is located have also filed suit.

Unfortunately, Mr. Rey's testimony did not accurately reflect the facts of this case, so I respectfully request that this response be inserted in the record. First, Mr. Rey testified that air quality violations at the dairy occurred because the current owners inherited a basin that had years worth of accumulated manure in it, and that the MPCA did not require the previous owner to clean out the manure basin before the current owner began operations.

According to our records and affidavits filed in the lawsuit, MPCA staff inspected the feedlot site in May of 2004, after the previous owner had ceased operations and before the current owner purchased the facility. At that time, 2-3 feet of rainwater, sludge and straw was in the 16-foot deep manure basin; not ten years worth of accumulated manure. Leaving that amount of residue at the bottom of a basin is considered minimal and beneficial to protecting the integrity of an earthen liner while not in use. The material in the bottom of the basin would not be enough to cause or contribute significantly to the excessive emissions as Mr. Rey suggested.

The current owners took possession of Excel Dairy on April 29, 2005. MPCA inspected the facility again on September 22, 2005 and on November 20, 2005. There were no cattle on the site and there was no indication that any manure had been added to the basin since the inspection in May 2004.

Mr. Rey also stated that Excel Dairy has been allowed to expand beyond its designed capacity. However, Excel Dairy's current permit allows it to house the same number of animal units as permitted for the previous owner of the facility. Excel Dairy has applied for permission to expand, but the MPCA has not, and will not, consider expansion until the facility is in compliance with its current permit.

Additionally, I take exception to Mr. Rey's suggestion that if the permit process would have worked properly there would not have been a spike in hydrogen sulfide emissions. In fact, the permit process was administered properly and the spikes in emissions are the result of how operations are managed at the dairy.

As you know, it is necessary to have accurate information to make a decision so I felt it imperative to provide you with the agency's factual perspective in this matter. If you would like further information, please feel free to contact me at (651) 296-7301 or MPCA Regional Division Director Gaylen Reetz, who is responsible for MPCA's feedlot permitting, at (651) 296-8856.

Sincerely,

Brad Moore
Commissioner

cc: John Shadegg, Ranking Member
Collin Peterson, United States Representative
Amy Klobuchar, United States Senator
Norm Coleman, United States Senator
Gene Hugoson, Commissioner, MN Department of Agriculture
Josh Gackle, Office of Governor Tim Pawlenty
Jason Rohloff, Office of Governor Tim Pawlenty
Edward T. Schafer, Secretary of Agriculture
Mark Rey, Under Secretary

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December 4, 2008

Ms. Anu Mittal
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Room 2075
Washington, DC 20548

Dear Ms. Mittal:

Thank you for appearing before the Subcommittee on Environment and Hazardous Materials at the September 24, 2008, hearing entitled, "Hazardous Substance Releases and Reporting under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)". We appreciate the time and effort you gave as a witness before the subcommittee.

Under the Rules of the Committee on Energy and Commerce, the hearing record remains open to permit Members to submit additional questions to the witnesses. Attached are questions from subcommittee Members for inclusion in the record. In preparing your answers to these questions, please include the text of the questions along with your response.

To facilitate the printing of the hearing record, your responses to these questions should be received by no later than the close of business on **Thursday, December 18, 2008**. Your written responses should be delivered to 2322-B Rayburn House Office Building to the attention of Rachel Bleshman. An electronic version of your response should also be sent by e-mail to Ms. Bleshman at **rachel.bleshman@mail.house.gov**. Please send your response in a single Word formatted document.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Rachel Bleshman with the Committee staff at (202) 225-2927.

Sincerely,

JOHN D. DINGELL
CHAIRMAN

Attachment

cc: The Honorable Joe Barton, Ranking Member
Committee on Energy and Commerce

The Honorable Gene Green, Chairman
Subcommittee on Environment and Hazardous Materials

The Honorable John Shadegg, Ranking Member
Subcommittee on Environment and Hazardous Materials

United States Government Accountability Office
Washington, DC 20548

December 18, 2008

The Honorable John D. Dingell
Chairman
Committee on Energy and Commerce
House of Representatives

Attention: Rachel Bleshman

Dear Mr. Chairman:

Enclosed is our response to the questions submitted for the record by you and Members of the Subcommittee on Environment and Hazardous Materials regarding our September 24, 2008 testimony on concentrated animal feeding operations. If you should have any questions, please contact me on 202-512-3841 or my Assistant Director, Sherry McDonald, on 202-512-8302.

Sincerely yours,

Anu K. Mittal
Director, Natural Resources
and Environment

Enclosures – 2

Responses to Questions for the Record Submitted to Anu K. Mittal, Director, Natural Resources and Environment, GAO, from The Honorable John D. Dingell

1. Do you believe that the Environmental Protection Agency (EPA) should first obtain the key data about the amount of pollutants that Concentrated Animal Feeding Operations (CAFOs) are discharging and assess the extent to which air emissions from CAFOs may be impairing human health before the EPA eliminates long-standing reporting requirements for ammonia and hydrogen sulfide releases? Please explain the reasons for your answer.

   GAO Response: We are concerned that EPA's decision to eliminate farms from CERCLA and EPCRA reporting requirements may be premature because the agency does not yet have complete, reliable information on the amount of air pollutants emitted from animal feeding operations. According to EPA, its decision is based on its determination that the source and nature of the releases make emergency responses unnecessary, impractical, and unlikely for these operations, and thus make the notification unnecessary. However, it is unclear to us how EPA made this determination when the National Air Emissions Monitoring Study—a 2-year effort to collect data on air emissions from animal feeding operation started in 2007—is not yet complete. Moreover, EPA's decision seems to be a departure from the agency's past regulatory enforcement actions that have included charges of failing to comply with the release reporting requirements when bringing claims against producers for violating several environmental laws.

2. Please respond to Mr. Rey's testimony that the Government Accountability Office (GAO) analysis was "one, conducted over too short a time period, two, appears to be a relatively superficial investigation and analysis, three, did not adequately involve agriculture and air quality experts both within USDA and outside the government, and four, fails to allow for the inclusion of USDA comments that would have corrected some of the inaccuracies in the report."

   GAO Response: We disagree with Mr. Rey's characterization of our report. Our review was conducted over a 13-month period between July 2007 and August 2008 in accordance with generally accepted government auditing standards. These standards require that we obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions. In conducting our work, we reviewed laws and regulations and federal and state agencies' documents and met with officials from EPA, USDA, and a wide range of organizations and associations representing state administrators, industry, citizen and environment groups, and academia. In addition, we interviewed officials responsible for the ongoing National Air Emissions Monitoring Study and visited several sites in North Carolina. We also spoke with state officials and visited CAFOs in eight states—Arkansas, California, Colorado, Iowa, Maryland, Minnesota, North Carolina, and Texas. We chose these states because they were geographically dispersed and contained numerous CAFOs representing various animal types. In addition, we contacted officials in all 50 states to (1) obtain information on the number of CAFOs permitted in their states and (2) determine which states had

developed air emission regulations applicable to CAFOs, and how recent court decisions had affected their state CAFO programs. Only 3 states did not respond to our request for information on their programs.

Moreover, in accordance with GAO's policies, we obtained and incorporated comments from both EPA and USDA in the final report. Because the comments provided by USDA were considered technical comments, according to our agency protocols, we did not reproduce them in the final report. We believe that our practice of reproducing an agency's official comments in the final report, but not technical comments, helps crystallize the issues and reduces voluminous comments. Although we did not reproduce USDA's technical comments in the final report, before the final report was issued, we considered each of the comments provided by USDA and identified and made changes where appropriate. For example, USDA expressed its concern that our estimate of the hog population of 5 contiguous North Carolina counties in 2002 included nursery pigs and could be overstating the counties' hog population. In response, we reviewed our estimates and adjusted them downward (based on 1997 USDA data) to account for the percentage of hogs in these counties that were nursery pigs. We also revised our report to reflect the adjusted estimates of both the number of swine in the five counties as well as the amount of manure hog operations in these counties could have produced in 2002. Our disposition of USDA's comments is clearly stated in our final report.

Responses to Questions for the Record Submitted to
Anu K. Mittal, Director, Natural Resources and Environment, GAO,
from The Honorable Joe Barton and John B. Shadegg

1. In addition to U.S. EPA and USDA, did you go into any of the state regulatory agency offices and examine publicly available information about livestock operations?

   GAO Response: In conducting our work, we met with officials from EPA, the U.S. Department of Agriculture (USDA), the National Pork Producers Council, the National Pork Board, the National Cattleman's Beef Association and several citizen and environmental group. We also spoke with state officials and visited CAFOs in eight states—Arkansas, California, Colorado, Iowa, Maryland, Minnesota, North Carolina, and Texas. We chose these states because they were geographically dispersed and contained numerous CAFOs representing various animal types. In addition, we contacted officials in all 50 states to (1) obtain information on the number of CAFOs permitted in their states and (2) determine which states had developed air emission regulations applicable to CAFOs, and how recent court decisions had affected their state CAFO programs. Officials from 47 states responded.

2. You recommend that EPA has to track all of these operations regardless of whether they have releases. As I understand it, though, CERLA and EPCRA, are primarily concerned with understanding and responding to releases. Why should EPA keep this kind of data on non-discharging operations, especially in light of the *Waterkeeper Alliance* decision which prohibits EPA from forcing permits on non-discharging CAFOs? Since you do not recommend a statutory change to address this recommendation, are you suggesting that EPA should ignore the decision of the Second Circuit Court of Appeals?

   GAO Response: To ensure that EPA can more effectively monitor and regulate permitted CAFOs, we recommended that EPA complete its effort to develop and maintain a new national NPDES permit data base that will collect and record facility-specific data on these CAFOs and incorporate appropriate internal controls to ensure the quality of the data. Because EPA actions and our recommendation focus on "permitted" CAFOs, we do not believe that our recommendation is suggesting that the agency take actions rejected by the Waterkeeper decision. Although EPA has regulated CAFOs under the Clean Water Act for more than 30 years the agency still lacks comprehensive, reliable data on the number, location, and size of operations that have been issued permits and the amounts of discharges that they release. As a result, EPA has neither the information that it needs to assess the extent to which CAFOs may be contributing to water pollution nor the information that it needs to effectively regulate permitted CAFOs.

3. Your testimony mentions the 2003 NAS study on scientific information on air emissions from animal feeding operations. This report and your testimony leave open the notion that the Clean Air Act will be enough to handle these emissions.

Will excusing operations from reporting continual manure emissions to the air prevent application of the Clean Air Act to these facilities or enforcement actions against violators?

GAO Response: As we describe in our report and testimony, three laws provide EPA with certain authorities related to air emissions from animal feeding operations. First, under the Clean Air Act, any animal feeding operation that exceeds established air emissions thresholds for certain pollutants can be regulated. For example, pollutants such as particulate matter that are emitted by animal feeding operations are regulated under the Clean Air Act and other pollutants such as hydrogen sulfide or ammonia may be regulated under the act in certain circumstances. Second, CERCLA and EPCRA reporting requirements together require owners and operators to report to federal or state and local authorities the release of hazardous substances that meet or exceed their reportable quantities. Among the reportable substances that could be released by livestock facilities are hydrogen sulfide and ammonia. However, recent decisions made by EPA indicate that the agency has not yet determined how it intends to regulate air emissions from animal feeding operations. EPA's decision to postpone making key decisions on how federal air regulations apply to animal feeding operations until after 2011, when the National Air Emissions Monitoring Study is completed, could significantly affect how emissions are calculated and how many operations might be subject to CERCLA and EPCRA reporting requirements. Moreover, EPA's decision to exempt releases to the air of hazardous substances from manure at farms that meet or exceed the reportable quantities from both CERCLA and EPCRA notification requirements seems to be a departure from EPA's past enforcement actions that have included filing charges of failing to comply with release reporting requirements when bringing claims against producers for violating environmental laws. The exemption also seems contrary to one of the stated goals of the Air Compliance Agreement—ensuring compliance with applicable Clean Air Act, CERCLA and EPCRA provisions.

4. Your testimony implies that EPA is somewhat flawed with regulating air emissions from CAFO because the statutes that could cover this do not explicitly use the word CAFO in them. Yet, in the very next line of your testimony, you state that the Clean Air Act regulates "any animal feeding operation, regardless of size, that exceeds established air emission thresholds for certain pollutants". Doesn't it make more sense to have the Clean Air Act governing unsafe air emissions from manure than an arbitrarily-set CAFO size limit in statute?

   GAO Response: Our summary of the applicable statutes was simply describing the four principal laws that provide EPA with authorities related to water and air pollutants from animal feeding operations. This descriptive material criticizes neither the statutes nor EPA's implementation of them.

5. Your testimony states that CERCLA and EPCRA reporting requirements provide government authorities, emergency management agencies, and citizens the ability to know about the source and magnitude of hazardous releases. How detailed are these filings? Do these reports provide anything more than a name, address,

admittance of an emittance above the reportable quantity (though this information does not contain a specific quantity)? Based on the this information, what specific response should EPA, the Coast Guard, or emergency planning officials take to abate these acknowledged levels that are likely above the RQ?

GAO Response: According to instructions published by the EPA on how to report a release, reporting a release of a hazardous substance release or oil spill should only take a few minutes and should include the following information, if possible:

- *Name, location, organization, and telephone number of person reporting the incident*
- *Name and address of the party responsible for the incident*
- *Date and time of the incident*
- *Location of the incident*
- *Source and cause of the release or spill*
- *Types of material(s) released or spilled*
- *Quantity of materials released or spilled*
- *Medium (e.g. land, water) affected by release or spill*
- *Danger or threat posed by the release or spill*
- *Number and types of injuries or fatalities (if any)*
- *Weather conditions at the incident location*
- *Name of the carrier or vessel, the railcar/truck number, or other indentifying information*
- *Whether an evacuation has occurred*
- *Other agencies notified or about to be notified*
- *Any other information that may help emergency personnel respond to the incident*

In addition, the decision on whether to use CERCLA's emergency response authority is made on a case-by-case basis. Once a report of a hazardous substance release or oil spill is made to the National Response Center, the federal On-Scene Coordinator evaluates the situation and, if the coordinator decides that a federal emergency response action is necessary, the National Response System will be activated. Otherwise, the coordinator will monitor the cleanup activities of the responsible party and the local and state governments, and will assist in the cleanup as warranted.

6. You mention a study that shows a direct link between manure on CAFOs and e.coli. Is this contamination caused by air deposition? If not, how is it relevant since no one is seeks to amend any federal authorities that would implicate it?

GAO Response: The study, "Characterization of Waterborne Outbreak—Associated Campylobacter jejuni, Walkerton Canada" was conducted by Health Canada. The study was undertaken to better understand how the water supply of Walkerton, Ontario became contaminated with bacteria in 2000. These bacteria, which included Campylobacter and E. Coli, caused gastrointestinal illnesses in more than 2,300 Walkerton residents and 7 deaths. The study found that cattle manure from nearby farms contained the bacteria. The manure entered the

groundwater system after heavy rains and contaminated a well serving the town. The study did not look at contamination caused by air deposition.

7. If I were to assume that everything in your testimony and report is true about the significant amount of manure, potential emissions, and size of these animal operations then I would also have to assume that the majority of these farms would need to be reporting daily under CERCLA and EPCRA to the National Response Center (NRC) as well as their state and local emergency response officials. Does the NRC have the capability to handle this massive influx of reports on top of the nearly 34,000 calls it already gets and ferret out which ones need immediate attention and which are less threatening?

   GAO Response: At the present time EPA does not have complete information on the air pollutants being emitted by animal feeding operations. Moreover, EPA has indicated that it will not make several key regulatory decisions, such as defining the term "source" as it relates to animal feeding operations, until after 2011, when the National Air Emissions Monitoring Study is completed. Specifically, EPA has not yet decided if it will aggregate the emissions occurring on an animal feeding operation as one source or if the emissions from the barns, lagoons, feed storage, and fields will be considered as a separate source when determining if an operation has exceeded "reportable quantities." Depending on the approach that EPA takes, how emissions are calculated could differ significantly. Until EPA has complete, reliable data on the actual emissions coming from animal feeding operations, it will not be known how many operations are meeting or exceeding the reportable quantity limits of CERLA and EPCRA and therefore would have to file reports. In addition, animal feeding operations with emissions that meet or exceed reportable quantities might meet EPA criteria for continuous release reporting. Continuous release reporting, established by 103(f)(2) of CERCLA, generally requires an initial notification of releases that meet or exceed the reportable quantity with a follow-up report anually.

8. You cite critical comments made by the National Association of SARA Title III Program Officials about EPA's proposal to exempt CERLA and EPCRA administrative reporting requirements relating to air emissions from manure on farms. Did you interview anyone else on this matter, including the National Emergency Management Association -- which represents the State emergency management directors – or the International Association of Emergency Management, which represents local, city, and county emergency managers?

   GAO Response: The information contained in our report and testimony on the position of SARA and the 26 state and local response agencies that submitted comment letters on the proposed exemption was obtained from reviewing the public docket that contained the comments received by EPA on the proposed exemption and documents provided by EPA. Our review of these two sources did not identify any comments from either the State Emergency Management Association or the International Association of Emergency Management on the proposed exemption. We did not interview officials from the National Association of SARA Title III program officials about their position on EPA's proposed exemption.

9. To what extent do local common law nuisance actions resolve much of this or if we've gone totally Federal in this area?

GAO Response: Our review focused on federal authorities and regulatory responsibilities and specifically on the progress that EPA has made in developing air emission protocols for animal feeding operations and the effect that recent court decisions have had on EPA's regulation of CAFO water pollutants. Although we are aware of state and local responsibilities related to nuisance complaints, such as odor, the number of the complaints received by state and local agencies and the actions taken in response were outside the scope of our review.

MARK JOHNSON, ANSWERS TO SUBMITTED QUESTIONS

QUESTION SUBMITTED BY HON. JOHN D. DINGELL

1. The Minnesota Department of Health (MDH) and the Minnesota Pollution Control Agency (MPCA) received complaints from citizens about odors and health effects believed to be related to hydrogen sulfide emission originating at the Excel Dairy, Thief River Falls, Minnesota. Self-reported health complaints include upper respiratory effects (such as nasal congestion and sore throats), itchy eyes, trouble breathing, nausea, and headaches.

Are these health complaints consistent with Agency for Toxic Substances and Disease Registry's findings for health effects of hydrogen sulfide in its Toxicological Profile for Hydrogen Sulfide and its Public Health Statement for Hydrogen Sulfide?

ATSDR response: While these symptoms are not exclusive to hydrogen sulfide, these types of symptoms (i.e., irritation of mucous membranes, upper airway irritation) are characteristic of the effects of exposure to an irritant gas, such as hydrogen sulfide as addressed in ATSDR's Toxicological Profile for Hydrogen Sulfide. ATSDR uses a weight of evidence approach in our health consultation that includes a review of the environmental sampling data and the reported health impacts to draw conclusions about health hazards.

QUESTIONS SUBMITTED BY HON. JOE BARTON AND JOHN B. SHADEGG

1. In ATSDR's September 19, 2008 letter to U.S. EPA and the Minnesota Pollution Control Agency, which you and one other person signed, three recommendations were made. First, Excel must engage in emissions control measures. Second, Minnesota and Excelshould coordinate on an air monitoring program - as part of Minnesota's state airimplementation plan - to assure emissions control. Third, Execl should restrict access to lagoons trespassers and children living on-site of the dairy. No where, was there a comment that Excel needed to file EPCRA and CERCLA reporting with the National Response Center, or state and local emergency response planners? Why?

ATSDR response: Since ATSDR and the Minnesota Department of Health are not regulatory agencies, we are not involved in evaluating the need to meet the legal requirements under EPCRA and CERCLA. Our health evaluation is independent of whether the emissions from Excel may have been determined to have triggered reporting requirements under those regulations.

2. You testify that mUltiple pathways for release of contaminants from CAPOs, may expose people to these chemicals through inhalation of air or dust, direct contact with soil, ingestion of drinking water, or dermal contact with surface water. EPA is being accused of somehow trying to let polluters of the hook. However, EPA is testifying today that it is not proposing to diminish its ability to respond to these very threats. In light of the fact that Excel Dairy first came to Minnesota's attention as a state and federal Clean Air Act law violator, rather than a CERCLA or EPCRA violator, is the Federal government loosing its ability to respond to these kinds of issues by removing a paperwork requirement?

ATSDR response: It is ATSDR's understanding that the reporting requirements under CERCLA and EPCRA are not based on predictions of human exposure levels or potential health impacts. While disclosure of CERCLA or EPCRA violations may be a factor to trigger further health evaluations, ATSDR does not use this regulatory criteria as the basis for determining whether there is or is not a public health hazard.

3. Your testimony admits that ATSDR only performed an exposure investigation instead of monitoring people in the community. In addition, your testimony admits that you did not conduct a formal health study of persons living on or near the dairy. Simply'put, you base your assertions about the impacts of Excel's emissions on the description of symptoms your testimony calls ″not inconsistent″ with known acute health affects as well as other assumptions that mayor may not be relevant - like cloud cover and temperature impacts on air deposits. In a court oflaw, this kind oftestimony would be inadmissible as hearsay. Why shouldn't we assume that you made a leap from one cause to the other effect based solely on air level data rather than on hard evidence that ATSDR itself collected?

ATSDR response: The ATSDR Exposure Investigation based its conclusion that a public health hazard existed on our air sampling results. These results showed that potential hydrogen sulfide exposures to people living close to the Excel Dairy exceeded our acute screening value (70 ppb) and were in the range of concentrations that have been associated with health impacts reported in the scientific literature. These findings justified our conclusions and recommendations. We did include in the report the fact that community members self-reported symptoms that are consistent with hydrogen sulfide exposure. However, our report was not based on a scientific evaluation of health effects due to exposures from the dairy. Self-reported health complaints, while relevant to the overall situation, were not used as the basis of our conclusions.

4. According to Minnesota Public Radio, one explanation for the high levels of hydrogen sulfide readings from based on a dispute between Excel Dairy and the Minnesota Pollution Control Agency in which the dairy claims the state is forcing repair work on one of its manure basins but won't inspect it form compliance. In you opinion, is this a plausible explanation as to why the levels are as high? Doesn't it seem logical that having properly managed manure system operating is the surest way to drive down emissions levels?

ATSDR response: ATSDR does not have the information necessary to respond to these questions. While we understand that there is a disagreement between Excel and MPCA about what triggered the releases, we would agree that the solution is to use best management practices to control the emissions from the manure treatment system.

5. Five studies -- (1) 2008 Texas A&M study of hydrogen sulfide emissions on 2,000 head open-lot dairy operation, (2) 2008 Texas A&M study of hydrogen sulfide emissions from a 18,000 head beef cattle lot, (3) 2002 Iowa Department of Natural Resources assessment of hydrogen sulfide at the state's largest swine feeding operations, (4) 2004 Iowa State University study of downwind hydrogen sulfide emissions at six (6) swine finishing sites, and (5) 2004 American Society of Agricultural and Biology Engineers hydrogen sulfide study of a 50,000 beef feedlot - each showed that large livestock operations were not producing amounts of hydrogen sulfide in excess of state or Federal law or of regulatory The Honorable Joe Barton and John B. Shadegg (continued) concern. When you consider the range and the statistically higher amount of animals involved in the operations sampled for the five (5) studies cited, is it possible that Excel is an outlier or an example of poor practices in handling hydrogen sulfide rather than the norm?

ATSDR response: We approached this assessment the same way we would for any other chemical emissions from an industrial source. As stated in our testimony, ATSDR has limited experience in the assessment of CAFOs. Therefore, we would not be able to draw conclusions as to how operations at the Excel Dairy compare to other CAFOs.

6. You mention ″restricting access″ to Excel's manure lagoons to prevent on-site children from getting close to them. Yet, this will not stop air emissions from reaching them. If you were to dispatch an emergency responder to Excel Dairy to address high levels of hydrogen sulfide on site, what specific thing should that responder do to eliminate the harmful impacts of elevated hydrogen sulfide levels for that child?

ATSDR response: Our recommendation was for Excel to take action that would prevent children from accessing areas near the source of the emissions. If a hazardous condition were identified by an emergency responder, we would expect that the most appropriate action would be to relocate the child, or any other exposed individual, to an unimpacted area until the hazard was mitigated.

7. ATSDR has been involved with assessments at four (4) other CAFOs and only a few of those had EPCRA implications. How much hard data does ATSDR have to makeunequivocally statements about CAFOs and EPCRA?

ATSDR response: ATSDR has not made any statements regarding CAFOs and EPCRA. Our health assessments have evaluated available environmental data to determine whether a health hazard is present.

8. To what extent do local common law nuisance actions resolve much of this or if we've gone totally Federal in this area?

ATSDR response: This question requests information that is outside the scope of ATSDR's investigation.

9. Do you have any information you can share with our subcommittee regarding the relative volumes of manure livestock produce when compared

to the volume of sewage that is produced in our cities wastewater treatment facilities?

ATSDR response: ATSDR does not collect or possess information regarding the volumes of livestock manure and human sewage produced in the United States.

QUESTIONS SUBMITTED BY HON. BART STUPAK

1. In your testimony it was stated that hydrogen sulfide concentration in outdoor air reached 480 parts per billion (Ppb). At what level does the agency believe exposure poses a risk to human health?

ATSDR does not have a bright line that defines a health hazard. We evaluate the data on a site-specific basis and apply a weight-of-evidence approach in drawing conclusions about the presence of a health hazard. This approach is intended to characterize actual exposures, which includes the consideration of factors such as the profile of chemical concentrations, the frequency and duration of exposure, and the presence of individuals who may be sensitive to the effects of that exposure. Our initial screening evaluation is a comparison to the ATSDR Minimal Risk Levels (MRLs). The acute MRL for short-term exposure (up to 14 days) is 70 ppb. The intermediate MRL for durations greater than 14 days is 20 ppb. The acute effects of exposure to hydrogen sulfide (i.e., irritation of upper respiratory system and mucous membranes) can be triggered within a few minutes of exposure. Our conclusion of a public health hazard was based on the magnitude and frequency of the exceedance of our health-based criteria, in comparison to health impact data in the scientific literature.

2. Has the ATSDR issued sample data on what the hydrogen sulfide concentration level was measured at for its indoor monitors?

ATSDR and the Minnesota Department of Health are preparing a Health Consultation report that will summarize all of the data that ATSDR collected during the exposure investigation, including the indoor sampling results, as well as other environmental sampling data collected by the Minnesota Pollution Control Agency (MPCA). ATSDR will provide the Committee with a copy of that document.

3. Does ATSDR have any ideas on what the sources of hydrogen sulfide were in regards to Excel Dairy?

ATSDR did not have access to the Excel Dairy property to perform an independent evaluation of the specific areas of hydrogen sulfide emissions. However, we know that hydrogen sulfide gas is generated under anaerobic conditions. It was reported to us by MPCA that one of the lagoons was highly anaerobic and did not have an adequate ″crust″ to prevent air releases. Therefore, this lagoon was likely to be a significant source of emissions.

4. What actions need to be taken by EPA and Excel Dairy to reduce the exposure of Hydrogen Sulfide?

ATSDR is a public health agency that advises EPA, other regulatory agencies, and facility owners about health concerns associated with exposure to environmental contaminants. Our recommendation was to take actions that would result in a reduction in community exposures to emissions from Excel Dairy. We would rely on EPA, MPCA, and Excel Dairy to utilize their technical expertise and authorities to develop and implement a strategy that would define the specific actions needed to achieve that goal.

STATEMENT OF HON. JOHN D. DINGELL

Mr. Chairman, I commend you and thank you for holding this hearing. On March 18, I wrote the Environmental Protection Agency (EPA) about the proposed reporting exemption for air releases from farms that, among other things, would deprive local emergency responders and communities of knowledge of significant releases of ammonia and hydrogen sulfide from large industrialized animal feeding operations. At that time, I indicated that the proposed exemption appeared to be ill-considered and contrary to the public interest. Today, after reviewing the Government Accountability Office's (GAO) report and the comments EPA received from the national association representing Local Emergency Planning Committees and State Emergency Response Commissions, I can say with certainty that the Bush Administration's plan to exempt industrial-sized animal feeding operations from air emissions reporting requirements is nothing more than a favor to Big Agribusiness at the expense of the public health and communities living near these facilities.

One question I asked EPA concerned why it didn't consider limiting the exemption to so-called family farms rather than providing an exemption for large cor-

porate concentrated animal feeding operations. The answer from EPA was that ″the Agency's basis or rationale for proposing the exemption is not dependent on the size of the farm.″ EPA also informed me that it was not aware of any small farm operations that have triggered the reporting requirements for ammonia and hydrogen sulfide.

Clearly, EPA is not concerned about small farms that most likely would not have releases of ammonia or hydrogen sulfide above the reportable quantity limit anyway. This exemption from long-standing regulations is clearly designed for big industrialized animal feeding operations such as the ones identified by GAO that produce more manure annually than the sanitary waste produced by cities like Philadelphia and Houston.

EPA, in its own risk assessment for CAFO's in March 2004, stated that ″a dairy CAFO with 1,000 animal units is equivalent to a city of 164,500 people.″ We should keep in mind that human waste is treated before discharge into the environment, but animal waste is either not treated at all or minimally treated by virtue of the storage methods used before disposal.

As its rationale for the exemption, EPA has taken the position that it could not foresee any response action being taken as a result of a notification of a release of ammonia or hydrogen sulfide above 100 lbs/day and that requiring monitoring or recommendations to local officials regarding evacuations and shelter-in-place would not be a necessary or an appropriate response to the release of hazardous substances to the air from animal waste at farms.

The public evacuation of residents living near Excel Dairy in Minnesota this summer due to hydrogen sulfide releases entirely undermines EPA's rationale for the exemption. Further, the national association representing State Emergency Response Commissions and the Local Emergency Planning Committees told EPA in March that the proposed exemption ″endangers responders and the public by denying them information they would use to protect themselves from hazardous chemical releases.″

We should let the first responders on the ground make the judgment whether a response is necessary after a notification is filed -- not political officials sitting in Washington who want to do favors for Big-Agribusiness.

I look forward to the testimony of our witnesses.

STATEMENT OF HON. JOE BARTON

Mr. Chairman, thank you for recognizing me for the purposes of an opening statement and let me congratulate you for an exceptionally informative and educational hearing on carbon capture and sequestration. I hope this hearing will be equally enlightening.

As I listen to the testimony and analyze the issue before us today, the most important thing to me is not whether we have multiple laws and regulations covering a specific area, but that the law we have works and helps protect people. We need to ensure that the target audience that the law is addressing is not confused or unnecessarily burdened with activities that sideline their efforts, especially when certain requirements make busy work for bureaucrats and do not enhance the ability to respond to or contain these releases.

I think we all agree that the intention of EPCRA is to have communities ready to respond and abate environmental releases of hazardous substances. However, it's equally important that we understand who the primary audience is that these laws speak to and that is the state and local emergency planning commissions. We must make sure these folks have practical information to know what is on site so they have a plan to handle an unplanned, finite release of a hazardous substance.

I applaud EPA for taking the very narrow and targeted steps that it has in its rulemaking to lift a CERCLA and EPCRA administrative reporting requirement from livestock farms whose source of hazardous air emissions - as defined in law - is solely from animal waste at that farm. This proposal does not alter, affect or diminish U.S. EPA's authorities to respond to hazardous substances, cleanup or compel cleanup of hazardous waste sites, relieve anyone of liability for environmental damage caused by these releases, or change any other provisions of the CERCLA or EPCRA.

I understand that GAO is going to argue that well-managed manure on a farm is not a threat to the environment or public health and poorly managed manure is a problem EPA's proposed rule allows it to combat. In fact, I am not aware of a single CERCLA or EPCRA enforcement case against a farm where some other environmental violation was not implicated - whether the Solid Waste Disposal Act, the Clean Water Act, or the Clean Air Act. This includes Excel Dairy, for which EPA

filed a Notice of Violation under the Clean Air Act long before EPCRA and CERCLA reporting issues were raised.

I know some of my colleagues think that we should not be absolving farms of a paperwork requirement whose burden, in this circumstance, does nothing to clean the environment or improve public health. I only ask them to consider to what end this report is necessary?

First, the National Response Center, who is charged with taking these phone calls, already fields more than 33,000 calls per year for releases in which there is a defined way to abate the threat - or more than 92 calls per day. If you add large livestock operations on the assumption that they have lots of manure and flatulence - this call center would be getting more than 8,000 calls per day. Second, once it gets these calls -- or the local or State emergency planning official receives the repeated filings, they have to consider how to respond. I am an engineer, but short of outsourcing our milk and meat to others, I have no idea what the proper remedy is for removing the smell of livestock flatulence from the open atmosphere. As I said at our November 2005 hearing on this subject, folks don't need to phone call or a stack of forms to know that livestock eat and create wastes, all they need is their nose.

I want rural America to be more than just a good place to live. I want it to be a good place to make a living. I understand that there are serious health issues involved when bad actors are allowed to free-lance. I want to hear from our witnesses what gaps in public health protection exist if the EPA proposal is adopted. We must make sure that our environment is safe and clean and that our businesses are good neighbors to each other. But, as we heard in our first subcommittee hearing this Congress, we should also use common sense with our programs and make decisions that achieve results, not just squander public resources in the name-only of the public's good.

I want to thank the witnesses for coming to testify today and yield back my time.

STATEMENT OF HON. BART STUPAK

Thank you, Chairman Green, for holding this hearing on the Environmental Protection Agency's (EPA) proposed reporting exemption for air releases of hazardous substances, including ammonia and hydrogen sulfide, from animal waste.

This proposed rule has raised a number of concerns in regards to whether the proposed exemption would significantly weaken the EPA's capability to enforce effective air quality standards for Concentrated Animal Feeding Operations (CAFO).

In addition, the Government Accountability Office report issued to the Committee for this hearing, states ″no federal agency collects consistent, reliable data on CAFOs.″

Before the EPA moves forward on a proposed exemption for reporting, it is important that this issue of consistent reliable data gathering is resolved first.

The regulatory authorities must work with accurate and up to date information. That way, should we consider exemptions to reduce the burdens of compliance, we know exactly what the implications can be.

In addition, consistent and reliable data made available to the public will provide them the tools they need to stay informed about potential public health safety risks.

I look forward to learning how the EPA arrived at its 2007 proposed rulemaking on exemptions for air releases of hazardous substances from animal waste under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Emergency Planning and Community Right-to-Know Act (EPCRA).

I understand the need to ensure regulations are flexible for small businesses. Often regulations enacted here in DC need to be modified after implementation to address the unique needs of rural communities like those in Northern Michigan.

However, the proposed rule making is much broader in its scope. It appears that the EPA is seeking to exempt the industry from compliance before it actually has to comply.

What methodology did the agency use when crafting this rulemaking? What thresholds were met for the agency to consider exemptions?

Exempting any industry from reporting the release of any hazardous substance that is a human toxin sets a precedent. While this hearing is focused on reporting requirements for air quality, I am personally concerned on what the future may hold for reporting requirements with water quality.

Strict water quality regulations and reporting requirements are essential to maintaining the health of the Great Lakes.

I am also concerned with the timing of finalizing this proposed rulemaking being as how we are nearing the end of this Administration's term.

Chairman Green, thank you again for holding today's hearing. I look forward to learning more about the EPA's proposal.