

Friday, January 16, 2009

Special Edition

Members,

On December 18, 2008, EPA published a final rule that exempted animal waste from emissions reporting under the CERCLA regulations. In this same rule, EPA determined that EPCRA reporting is still required. The effective date for this rule is January 20, 2009. Many in the industry are viewing this January 20 deadline as the date for compliance with EPCRA reporting and not as just the effective date of the CERCLA exemption.

It is unclear at this time exactly how EPA intends to address the EPCRA reporting requirement. There have been threats of lawsuits from environmental groups and from industry that would postpone this rule. In addition, there is confusion within EPA as to whether it is necessary to initiate notification through phone calls on January 20 and what they will do with any information they receive.

Having said all of that, it seems prudent to have any producers who emit more than 100 pounds of ammonia or hydrogen sulfide per day to call their state emergency response committee (SERC) and local emergency planning committee (LEPC) to report continuous emissions.

The attached factsheet and emissions estimator should help producers determine if they need to report, who to call and what to say. The emissions estimator is for ammonia only. At this time, there is no good data on hydrogen sulfide emissions from dairy operations, but anecdotal reports are that if you have less than 20,000 dairy cows, then you probably don't emit more than 100 pounds of hydrogen sulfide per day.

Due to the uncertain nature of what may happen in the subsequent 30 days, we suggest that a phone call to regulators be made first and that any paperwork be held for now. We will provide guidance on sending in paperwork in the next few weeks as the situation becomes clearer.

Attached are two additional documents to assist you:

- (1) a two-page ammonia emissions estimator worksheet to determine if more than 100 pounds of ammonia per day are emitted
- (2) a three-page factsheet on the CERCLA-EPCRA final rule that includes links for state and local contact information, as well as a script for placing phone calls.

As an example, we went through the worksheet, and assumed 1,000 dairy cows, 10 percent ammonia loss from animal housing and 30 percent ammonia loss from manure storage. Those assumptions resulted in an ammonia loss in Step 2 of 37 percent. Then, when referencing Table 3 for dairy cows producing 88 pounds per day, a unit ammonia loss of 0.48 pounds/animal/day was recorded. In Step 4 of the worksheet, 1,000 cows multiplied by 0.48 pounds/animal/day equated to a dairy herd ammonia loss of 480 pounds.

If you have any questions, please contact David Darr at 816-801-6432 or Jackie Klippenstein at 816-801-6392.

(KEEP THIS WORKSHEET FOR RECORDS!)

Ammonia Emissions Estimator

Rick Koelsch and Rick Stowell, University of Nebraska

Caution: This worksheet provides an approximation of ammonia emission based upon currently available information. There is likely to be significant variations with region of the country, climate, and management of the production or storage system. These values are also likely to change with additional research on ammonia emissions.

Farm Name: _____

Table with 2 columns: Animal species and production stage, Average capacity (number of animals)

Step 1: Estimate % ammonia loss from:

Animal housing: _____% (Table 1) Describe housing: _____
Manure storage: _____% (Table 2) Describe storage: _____

Step 2. Estimate % ammonia loss from the animal housing and storage system

Ammonia Loss (%) = Housing % Loss + [(100 - Housing % Loss) X Storage % Loss / 100]
Ammonia Loss (%) = _____ + [(100 - _____) X _____ / 100]
Ammonia Loss (%) = _____%

Step 3. Identify the animal species row in Table 3 (along left side) that is most relevant to this estimation, and the ammonia loss (%) column (across the top) that best matches the estimated ammonia loss from Step 2. Find where this row (appropriate species) and this column (appropriate ammonia loss) intersect and record this value:

Unit ammonia loss = _____ lbs / animal / day.

Step 4. Estimate daily herd/flock ammonia loss

Daily herd ammonia loss = Average capacity X Unit ammonia loss (Step 3)
Daily herd ammonia loss = _____ animals X _____ lbs / animal / day
Daily herd ammonia loss = _____ lbs ammonia per day

Step 5. Estimate annual herd/flock ammonia loss

Annual herd ammonia loss = Daily herd ammonia loss X Days per year facility is occupied
Annual herd ammonia loss = _____ lbs/day X _____ days/year
Annual herd ammonia loss = _____ lbs ammonia per year

Table 1. Typical ammonia losses from animal housing facilities expressed as a percentage of excreted manure nitrogen.

Table with 6 columns: Facility Description, Applicable Species, % Loss, Facility Description, Applicable Species, % Loss

1 If more than one species, production stage, housing system or manure handling system is present on a given site, perform Steps 1-5 for each species, stage and/or system and sum resulting emissions.

2 If an ammonia loss range is given, you may want to estimate loss for low and high values.

3 Most estimates are from USDA NRCS Agricultural Waste Management Field Handbook and LPES Lesson 21: Manure Storage Structures.

Table 2. Typical ammonia losses from manure storage as a percentage of nitrogen entering facility.²

Facility Description	% Loss	Facility Description	% Loss
Temporary stacked manure (no turning)	10-20	Pit below slatted floor (included in Table 1 values)	0
Composted manure (no carbon amendment)	30 to 40	Earthen storage pit (minimal treatment)	20 – 35
Composted manure (significant carbon amendment)	5 to 10	Formed manure storage (bottom loaded)	10
Bedded Pack Manure (included in Table 1 values)	0	Formed manure storage (top loaded)	30
Runoff holding pond (precipitation runoff only) ³	2 - 3	Anaerobic Lagoon (significant treatment)*	65-75

* Much of the lagoon loss can be due to denitrification (N₂ and N₂O), so the ammonia loss may only be half of what is shown.

Table 3. Estimates of ammonia nitrogen losses. Excretion estimates based upon 2005 ASAE Standard (proposal) for typical animals.

Livestock and Poultry Species	Typical Nitrogen Excretion (lbs per animal per day)	Ammonia Loss (% of excreted nitrogen)								
		10%	20%	30%	40%	50%	60%	70%	80%	90%
Beef-Finishing Cattle	0.36	0.044	0.087	0.13	0.18	0.22	0.26	0.31	0.35	0.39
Beef – Cow (confinement)	0.42	0.051	0.10	0.15	0.20	0.26	0.31	0.367	0.41	0.46
Beef - Growing Calf (confinement)	0.29	0.035	0.070	0.11	0.14	0.18	0.21	0.25	0.28	0.32
Dairy – Lactating cow – 100 lbs milk/day	1.04	0.13	0.25	0.38	0.51	0.63	0.76	0.88	1.0	1.1
Dairy – Lactating cow – 88 lbs milk/day	0.99	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.1
Dairy – Lactating cow – 70 lbs milk/day	0.83	0.10	0.20	0.30	0.40	0.50	0.60	0.71	0.81	0.91
Dairy – Lactating cow – 50 lbs milk/day	0.66	0.080	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72
Dairy – Dry cow	0.5	0.061	0.12	0.18	0.24	0.30	0.36	0.43	0.49	0.55
Dairy – Milk fed calves	0.017	0.0021	0.0041	0.0062	0.0083	0.010	0.012	0.014	0.017	0.019
Dairy - Calf	0.14	0.017	0.034	0.051	0.068	0.085	0.10	0.12	0.14	0.15
Dairy – Heifer	0.26	0.032	0.063	0.095	0.13	0.16	0.19	0.22	0.25	0.28
Dairy - Veal	0.033	0.0040	0.0080	0.012	0.016	0.020	0.024	0.028	0.032	0.036
Horse - Sedentary	0.2	0.024	0.049	0.073	0.097	0.12	0.15	0.17	0.19	0.22
Horse – Intense exercise	0.34	0.041	0.083	0.12	0.17	0.21	0.25	0.29	0.33	0.37
Poultry-Broiler	0.0025	0.00031	0.00061	0.00092	0.0012	0.0015	0.0018	0.0021	0.0024	0.0027
Poultry-Turkey (male)	0.0090	0.0011	0.0022	0.0033	0.0044	0.0055	0.0066	0.0077	0.0088	0.0099
Poultry-Turkey (females)	0.0054	0.00066	0.0013	0.0020	0.0026	0.0033	0.0040	0.0046	0.0053	0.0059
Poultry-Duck	0.0036	0.00044	0.00087	0.0013	0.0017	0.0022	0.0026	0.0031	0.0035	0.0039
Poultry - Layer	0.0035	0.00043	0.00085	0.0013	0.0017	0.0021	0.0026	0.0030	0.0034	0.0038
Swine-Nursery Pig(27.5 lb)	0.025	0.0031	0.0061	0.0092	0.012	0.015	0.018	0.021	0.025	0.028
Swine-Grow-finish (154 lb)	0.083	0.010	0.020	0.030	0.040	0.051	0.061	0.071	0.081	0.091
Swine – Gestating sow	0.071	0.0086	0.017	0.026	0.034	0.043	0.052	0.060	0.069	0.078
Swine – Lactating sow	0.19	0.023	0.046	0.069	0.092	0.12	0.14	0.16	0.18	0.21
Swine – Boar	0.061	0.0074	0.015	0.022	0.030	0.037	0.044	0.052	0.059	0.067

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CERCLA-EPCRA Final Rule Fact Sheet
National Milk Producers Federation
January 15, 2009

SUMMARY OF RECOMMENDATION: NMPF believes that potential federal legal liabilities dictate that a dairy producer of the relevant size and with emissions possibly over the thresholds should seriously consider initiating on or before January 20th, 2009 an effort to comply with the EPCRA reporting requirement. A phone call to your state and local emergency response authorities is needed to initiate compliance. The fact that these authorities are giving conflicting and confusing responses when this effort is being made is discouraging to producers, but this should not stop any producer potentially covered by this regulation from trying to comply with the requirement. Below is information as to how you get the phone numbers for your state and local emergency response authorities, and also provided is a script that you can use when making these calls. Shortly after January 20th, 2009 NMPF will be in communication with you as to how you should proceed with the submission of a short, follow-up written report, if at all. We will work with US EPA and the other animal agriculture groups to clarify what must be done and get that information to you.

BACKGROUND: The EPA published a final rule in December, 2008 that exempted all large CAFOs from any federal reporting responsibility under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The same final rule continues, with a significant and helpful clarification, what EPA has always considered to be a previously existing reporting requirement under the Emergency Planning and Community Right-to-Know Act (EPCRA). Under this final rule all large CAFOs (including operations with 700 or more mature dairy cows) still must notify state and local emergency response officials about ammonia or hydrogen sulfide emissions from their operations if they emit 100 pounds or more of these substances during any 24 hour period. The EPCRA change under the final rule makes clear that the reporting CAFO should first notify the state and local authority with a phone call that they intend to submit a written report of their emissions, and then within the next 30 days submit a one-time written report that provides a “good faith estimate” of the lower and upper bounds of the range of emissions that could occur from their operation. No further report is needed unless a change in the operation would lead to a statistically significant change in these bounds, or if better data become available that indicate a different good faith estimate is more accurate.

While the new rule becomes effective January 20, 2009, there is disagreement in EPA and the agricultural legal community if the January 20th date is of any significance as far as a reporting deadline under EPCRA. Furthermore, several producers have already attempted to make the initial phone call to their state and local emergency response authorities and have been given confusing and conflicting responses, including being told that they:

- Should not be reporting to them;

- Do not need to report;
- Should be reporting this to another agency;
- Can report these emissions but nothing will be done with the information.

Calls to EPA headquarters and Regional offices by producers and producer groups has not yielded any clear assistance or guidance. To say the least, this is confusing and infuriating for those trying their best to comply with the law.

It is important to note that any dairy producer participating in the EPA Air Emissions Consent Agreement (ACA) need not report their current emissions under EPCRA until the NAEMS concludes on or about January 1, 2010. All ACA participants will be subject to the subsequent regulatory policies¹. Throughout this period EPA's enforcement authorities have made it fully clear to all of animal agriculture that any operation NOT participating in the ACA has had a legal responsibility to report ammonia or hydrogen sulfide emissions above the thresholds and that failure to do so could lead to enforcement action.

INITIATE COMPLIANCE WITH THE NEW RULE BY MAKING THE PRELIMINARY PHONE

CALL: Despite the fact that state and local emergency response authorities are giving such conflicting responses, NMPF believes that the potential legal liabilities here dictate that a dairy producer of the relevant size and with emissions possibly over the thresholds should seriously consider initiating compliance with the EPCRA requirement. To do so, the basic step of calling the state and local emergency response authority is required.

Make the telephone calls by January 20, 2009, to your state emergency response committee (SERC) and your local emergency planning committee (LEPC). You may find your state emergency response committee's phone number on the following EPA website:

http://www.epa.gov/oem/content/epcra/serc_contacts.htm

You may find your local emergency response committee's phone number by using the search tool on the following EPA website:

<http://yosemite.epa.gov/oswer/lepddb.nsf/SearchForm?OpenForm>

¹ NMPF has been an active participant with EPA on the ACA between the livestock sector and the U.S. government. Under the ACA, dairy and other livestock sectors are conducting a two-year National Air Emissions Monitoring Study (NAEMS) of the air emissions from livestock and poultry operations across the country. NMPF pursued the ACA and NAEMS after a 2002 report by the National Academy of Sciences found that scientifically credible methodologies for estimating emissions from animal feeding operations needed to be developed. NAEMS findings will allow EPA to set scientifically based emissions standards for farms.

SUBMITTING THE FOLLOW-UP REPORT: Normally under EPCRA, written notification is made within 30 days after the above telephone calls to the same state and local emergency planning officials as you called. Shortly after January 20th, 2009 NMPF will be in communication with you as to how you should proceed at this time, if at all, with the submission of your follow up written report. We will work with US EPA and the other animal agriculture groups to clarify what must be done and get that information to you.

The following script could be helpful to you in making this call (keep this sheet for your records):

Date: _____

Time: _____

SERC Contact Number: _____

LEPC Contact Number: _____

“Hello, this is [your name]. I am the person in charge of [name of dairy operation]. I am calling to make an initial continuous release notification report under Section 304 of the Emergency Planning and Community Right to Know Act for an animal feeding operation, pursuant to the EPA Final Rule effective January 20, 2009.

The name and location of this facility is [name and address]. Its corporate affiliation [if any] is [name] and address is [address]. The hazardous substance I am reporting is ammonia.

A written report will be submitted to you within 30 days from today.”

If you are not successful in contacting your SERC and LEPC by telephone, make a copy of this page and send by fax or certified mail to the SERC and LEPC.