

CAFO Stakeholders Meeting  
Meeting Summary  
Austin, Texas  
March 5, 2009

Welcome and Introductions – James Moore, Water Quality Assessment Section Manager

History of Proposed Revisions to RG-408 – Linda Brookins, Office of Compliance & Enforcement

- Recognized 4 years ago that data for soil samples was inconsistent and unreliable
- Partnered with A & M AgriLife Extension service to do research to improve accuracy and precision of soil sample results
- Looked at process in labs
- Variation in the field as well as in the labs
- Variation in the depth of samples as well as the equipment used
- Research has been completed and a draft guidance written
- State-wide document with special provisions for the Bosque area
- Tried to get consistency on where samples are collected
- Revisions to RG-408 are based on research results

Proposed Changes for RG-408 – James Moore

- Clarified that the document applies to all soil sampling for concentrated animal feeding operations (CAFOs), not just NUPs
- Limited the scope to permitted LMUs only with the exception of Bosque third party fields
- Required Texas AgriLife Extension Service laboratory as source of soil test methodology
- Stated if 0-2 and 2-6 inch samples are required, a 0-6 inch sample should be collected and divided according to depth instead of 2 separate samples
- Stated that samples should be collected with clean sampling tools and containers for each LMU
- Required the use of a random number generator to select sampling sites for the grid sampling method.
- Provided instruction on where samples should be taken in the event that one of the subsample locations is an area where animals congregate (grid method)
- Stated that samples must be air dried not oven dried
- Required approximately one pint of soil per sample to be submitted to the lab
- Required GPS for each subsample location

- Added additional soil sampling method – GPS grid

The following proposed revisions are specific to CAFO operators in segments 1255 and 1226 (Bosque) that are required to have an individual permit:

- Collect soil samples using no larger than a 1-inch tube soil probe
- Send the entire amount of soil collected for the 0-6 inch sample to the lab to be dried and composited by the lab
- Third party fields used for waste application must be sampled per this guidance document
- This document was originally a companion document on how to develop NUP
- Retained Best Professional Judgment (BPJ) for statewide use, but excluded the Bosque area

#### Next Steps – James Moore

- There will be a two-week comment period on the document
- Send to James Moore by email or MC 150
- Staff will incorporate comments March 20-April 20
- The final document should appear on the website April 27
- TAMU will incorporate final document into their training

#### Questions and Comments:

Q: For the grid method, should a grid be developed for each soil type?

A: No. There should be one grid for each LMU because the field is managed based on LMU layout not soil types.

Q: Will GPS coordinates be required for each subsample?

A: Not all sample points call for that

Q: Will GPS coordinates need to be submitted to TCEQ?

A: Should have them available on site for inspectors

Comment: It's difficult to determine which location goes with each soil sample. LMU configurations change and it is difficult to determine historic samples with a specific field.

Q: What was the driving force behind the GPS location?

A: It is more for the operator to be able to reproduce sample locations each year.

Q: The rules require one sample per soil type within an LMU. Are you no longer requiring this? Is the guidance document in accordance with the rules?

A: Samples will be taken per LMU. In the application review process, we look at soil types within the LMU, management of the LMU, and what type of waste is applied to the LMU. Soil types are different than soil series. The guidance document has to comply with the rules.

Q: Once a grid is established for an LMU, are they required to stay with the same grid and sample location from year to year?

A: They are not required to keep the same grid, but we expect them to keep the same grid from year to year. If they need to change they can, such as if they think they do not have a representative sample or if there is a change to the LMU acreage or configuration.

Comment: If the LMU does not change, then the grid should not.

Comment from TCEQ staff: It's a regulatory paradigm – Don't want to destroy flexibility to change grids to get best locations. They could regenerate random samples by changing grid.

Q: If they push the probe into the ground the full 24 inches, but the core is 18 inches after removing the 0-6 inch sample, would this be considered a 6-24 inch sample or a 6-18 inch sample?

A: This occurs due to compaction. When this type of compaction is present two cores should be taken; one for the 0-6 inch sample and a separate one for the 6-24 inch sample. The second sample would be 6-24 inch, even if the core is only 18 inches in length.

Q: How do we submit the entire sample to the lab for the Bosque? In plastic bags or a bucket?

A: Limiting the probe to 1 inch diameter and requiring this only for the 0-6 inch sample will reduce the volume required to be submitted. The permittee should make arrangements with the lab for the container type.

Q: Why do they have to send in the entire 0-6 sample to the lab for the Bosque?

A: Subsamples from a LMU can be composited in the field, but requiring the lab to homogenize the soil prior to selecting the sample to analyze provides more accuracy and precision. They can do a better job with their equipment. Homogenizing in the field is the #1 reason why we don't get reliable data.

Q: The city of Waco has some prior agreement to take split samples. How do we split samples if the entire sample must be submitted to the lab?

A: The best way to take split samples is to allow the lab to composite and homogenize the sample, then collect the split samples from the homogenized mixture. You can then send them to two different labs.

Q: Why do they have to clean the sampling equipment between LMUs? It seems unrealistic.

A: We are trying to make sure that there is no cross-contamination between LMUs. This will improve the accuracy and precision and reduce variability. Cleaning can be as simple as wiping the equipment with a damp cloth or any other method to reduce carry-over of soil particles from one LMU to another. These methods have been tested and found that they give the most reliable data.

Q: Why 15 different subsamples?

A: Trying to have the best possible science by tightening down on variability. We tried to consider what was reasonable. Field research showed that collecting 15 subsamples improved accuracy and precision.

Q: What kind of equipment should be used to collect the 6-24 inch sample? Power probes can be very expensive.

A: It is up to the individual.

Comment: The cost is extremely prohibitive for a power probe.

Comment: Because equipment is so expensive, maybe soil sampling could be put up for bid and one person do it.

Q: Is an auger acceptable for the 6-24 inch sample?

A: Not in the Bosque because an auger mixes soil together and the Bosque requires a 1" push probe.

Q: Why are we concerned with anything greater than 12"?

A: The rule requires a 6-24 inch sample. The rule process would have to be reopened.

Comment: Maybe we should look at using 1" probe for 0-6 inch sample, then allowing the use of an auger for the 6-24 inch sample.

Q: Has AgriLife checked with commercial labs for appropriate testing methodology?

A from TAMU staff: AgriLife is working with the labs to identify causes of variability.

Q: What about the National Certification program?

A from TAMU staff: The program is voluntary, so not every lab participates in it. We picked 5 labs that do the majority of the samples to work with us to compare variability. Four out of five labs do the same methods as we do. Arkansas was doing something different, but has gone back to the original method.

Q: If this RG document is used to collect samples, will this eliminate the second guessing and lack of confidence from the regulatory agency?

A: We believe the revisions to this document improve accuracy and precision, which will improve confidence. We are trying to fix the variability we have seen from year to year on the same LMUs. Sound data needs to be used for regulatory action.

Comment: TCEQ needs to clarify air dry vs. oven dry.

Send comments to James Moore by March 19 by email or MC 150

## Upcoming meetings – Laurie Fleet

- March 17, 2009 – Stakeholder meeting on rulemaking from 10-12pm, Building B, Room 2010
- March 17, 2009 – Public meeting for CAFO General Permit 1-4pm, Building F, Room 2210

**CAFO Stakeholder Meeting**  
**March 5, 2009**  
**Austin, Texas**  
**Attendee List**

John Foster	TSSWCB
Bruce Wiland	WCI
Richard Eyster	TDA
Norman Mullin	Enviro Ag
James Grimm	Texas Poultry
Ned Meister	TFB
L'Oreal Stepney	TCEQ/WQD
Darrell Helm	Easterling
Sam Feagley	Texas AgriLife Extension Service
Charles Maguire	TCEQ
Lauren Kalisek	Lloyd Gosselink
Marvin Snow	ITS
John Ed Brothers	self
Laurie Fleet	TCEQ
James Moore	TCEQ
Lori Ziehr	NRCS
Linda Brookins	TCEQ
Eugene Lindeman	Easterling Consultants
Ben Weinheimer	TCFA
Jim Bradbury	Atty – TAD
Kim Wilson	TCEQ
Clyde Bohmfalk	TCEQ
Virgil Helm	Easterling Consultants