

## David Ferguson

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**From:** Quiroga, Cesar <C-Quiroga@tamu.edu>  
**Sent:** Sunday, January 19, 2014 2:57 PM  
**To:** David Ferguson  
**Subject:** RE: Chapter 18 - Stakeholder Meeting - Feb. 10, 2014

David – Unfortunately, I will be traveling and won't be able to attend the stakeholder meeting on 02/10/2014. However, I looked at the draft proposed rule amendments and have one comment. Section 18.11(e)(9) requires the submission of “***the GPS coordinates in decimal degrees NAD 83 format at the point of damage, if available***” . This requirement is too vague because it does not specify anything regarding the positional resolution or accuracy of the GPS reading. For example, all the following values are in decimal degrees:

- 30.1
- 30.12
- 30.123
- 30.1234
- 30.12345
- 30.123456

However, unless a positional accuracy requirement (e.g., 6-inches, 1-foot, sub-meter, etc.) is explicitly specified, there is no way of knowing if, for instance, 30.1 actually means  $30.1 \pm 0.05$  degrees,  $30.10 \pm 0.005$  degrees,  $30.100 \pm 0.0005$  degrees, etc. Likewise, it is not possible to know if, for instance, 30.123456 actually means  $30.123456 \pm 0.000005$  degrees or if anything beyond the first two decimals is truly significant or just “calculation noise.” Unless my numbers are wrong, around 30 degrees of latitude, an error of 0.0005 degrees (latitude) could translate to a positional error of about 200 ft, and an error of 0.0014 degrees (latitude) could translate to a positional error of about 500 ft. Conversely, an error of 0.000003 degrees (latitude) could translate to a positional error of about 1 ft. A surveyor could confirm or fine tune these numbers as needed.

Given the importance of the damage reporting process, my recommendation would be to specify tight positional accuracy requirements (e.g., 6-inches, 95% confidence level). I'm not a surveyor so my recommendation would be to ask a registered surveyor to provide a formal recommendation to include in the proposed rules. RRC might decide to use a less stringent standard, e.g., 2-feet. Whatever the decision, it will be critical to include an enforceable positional accuracy standard. Otherwise, the result will be damage location coordinates that don't mean anything because there is no certainty as to where the damage actually took place.

On a different (although related) note, I thought you might be interested in knowing that the American Society of Civil Engineers (ASCE) recently started a committee to develop guidelines and a standard for utility as-built. We've had a couple of meetings so far. The last one was actually two days ago at ASCE Headquarters in Reston, Virginia. At the meeting, we agreed that the committee needs more participation by regulators. I would be happy to provide additional information about the committee. Some basic information is available at <http://www.asce.org/ascenews/shorttakes.aspx?id=23622322056> .

Regards,

Cesar

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**Cesar Quiroga, Ph.D., P.E.**

Senior Research Engineer and Manager, San Antonio Office  
Texas A&M Transportation Institute

1100 NW Loop 410, Suite 400  
San Antonio, TX 78213  
Tel 210.979.9411 x 17203 | Fax 210.979.9694  
<http://tti.tamu.edu>

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**From:** David Ferguson [<mailto:David.Ferguson@rrc.state.tx.us>]  
**Sent:** Friday, January 17, 2014 9:26 AM  
**Subject:** Chapter 18 - Stakeholder Meeting - Feb. 10, 2014

All,

Please see attachments:

*Chapter 18 – Public Stakeholder Meeting Invitation*

*Chapter 18 – Draft Proposed Amendments to Rules in Chapter 18, Underground Pipeline Damage Prevention*

After review of comments and further consideration by staff, notable highlights of revisions from the informal proposed rules include:

- Removed incorporated by reference sections of Texas Utilities Code, Chapter 251; added similar language to appropriate areas of Chapter 18.
- Deleted exemptions in section 251.003
- Exempt the movement of earth by hand digging that does not exceed a depth of 12 inches.
- Retain 14 working days as the life of a line locate ticket
- Added requirements for pipeline operators to follow specified procedures.
- Excavation Tolerance Zone
- A locate ticket is limited to 2,640 continuous linear feet within a single county
- Pipeline Operator marking requirements for pipelines 12 inches or less in nominal diameter, or greater than 12 inches.
- Size of pipeline and pipe material included at every other mark.
- Pipeline data provided to one-call notification center within 10 calendar days before initiation of active service.

Best Regards,

**David Ferguson**

Railroad Commission of Texas  
Pipeline Safety Division  
Damage Prevention Section  
(512) 463-9119  
[david.ferguson@rrc.state.tx.us](mailto:david.ferguson@rrc.state.tx.us)