

## Venegas, Victoria, EMNRD

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**From:** Bratcher, Mike, EMNRD  
**Sent:** Tuesday, May 12, 2020 7:43 AM  
**To:** Bynum, Tom (Contract); Venegas, Victoria, EMNRD; Hamlet, Robert, EMNRD; Billings, Bradford, EMNRD; Griswold, Jim, EMNRD; Eads, Cristina, EMNRD; Marcus, Ramona, EMNRD  
**Cc:** Robison, Jason; Davis, Amanda; Mathews, Wesley; Carrasco, Lupe; DeHoyos, Kendra; Bob Allen; Kathy Purvis  
**Subject:** RE: [EXTERNAL] RE: Rejection for work plan on incidents NRM2003159278 & NAB1905153070  
**Attachments:** Procedures For Implementation of the Spill Rule.pdf

RE: Devon Thistle Unit 44H \* 30-025-41032 \* N-33-23s-33e  
Release 1 ID: nAB1905153070 \* DOR: 02/05/2019  
Release 2 ID: nRM2003159278\* DOR: 11/24/2019

Mr. Bynum,

I would like to preface this response by saying, one of the Division's goals is to bring some much needed consistency to the entire remedial process. The idea is to allow industry to know what is expected for remedial projects and provide a road map for regulatory reviewers to follow during the review process. A proposal submitted to the state and reviewed by any regulatory reviewer in the state, should yield the same response.

This project encompasses two releases at this well site. The incident numbers and dates of release have been listed above.

- **Please note both of these release incidents are currently in violation of 19.15.29.11 A.**

This portion of the spill rule requires site characterization and a remediation proposal be submitted to the Division within 90 days of the discovery of the release, or site characterization with a closure report be submitted to the Division within 90 days of discovery of the release. The first release is well over one year out of compliance, with the second release almost 90 days past compliance requirements. Provisions are available to request extensions to these time frames, for good cause, but Devon chose not to exercise this option with either release.

Aside from the compliance issues, it is important to note here that a site characterization is required for either option chosen (site characterization with remediation proposal, or site characterization with closure report).

Site characterization includes horizontal definition of the impacted soil. Devon has proposed using "visual identification" to determine the horizontal extent of impact. This is not a method that the Division will accept for making this determination. This method is especially not adequate in this instance since there are two releases being investigated and one of them is over a year old. There is no indication in the proposal as to whether both releases followed the same flow path or not. If both releases followed the same flow path, and this flow path is what has been outlined in yellow on the drone image of the well site, based on this image, the Division requests Devon investigate the area directly adjacent to the tank battery on the east side. The staining visible in this area looks much the same as the area that has been outlined in yellow, and identified as the area of concern. Devon has also proposed determining horizontal characterization by comparing sample data from outside the visually identified area of impact, to sample data from inside the visually identified area of impact. This method is also not acceptable for reasons including but not limited to, it's reliance on visual identification of the impact.

The acceptable method for determining horizontal extent is with data. Visual identification may be viable in estimating the release volume for initial reporting purposes, but for characterization, data will be required. To determine the horizontal extent, a “clean” sample is required. For the sake of consistency, the Division will consider a sample “clean” if it meets the more stringent requirements listed in Table 1. For chloride values, natural background levels will be considered. Also, for the initial horizontal characterization, these samples are typically obtained in upper portion of the soil profile. Side wall samples are utilized during the remediation phase of the project to insure adequate excavation has been performed, and, to insure horizontal definition has been defined at depth.

Mr. Allen has argued that delineation outside of the visually identified area of concern may lead to discovery of impacted materials not associated with the release being investigated. In the event this does occur, the responsible party is also responsible for remediation of these impacts. This is especially applicable here, since Devon has been the sole operator of this well site.

Depth to groundwater at this site has not been determined:

The remediation proposal contains one sentence in defining depth to groundwater. It states:

*“Based on the trend map and the USGS web interface, depth to groundwater in this area is over 100 feet.”*

The proposal contains a screen shot of the Chevron/Texaco Trend Map and a USGS data sheet on one water well that is approximately 2.5 miles from the release site, to the north east. The distance to this water well from the release site should have been clearly stated in the proposal. It was not. The trend map (Chevron/Texaco 2004) is not an acceptable means for determining depth to groundwater. It is a tool that may have some value as a quick reference guide, however, the Division does not consider it factual evidence of depth to ground water. The Division also notes that there exists USGS and OSE data on water wells approximately 1.5 miles from the release site to the south east. This data indicates groundwater may be encountered at less than 50’ from surface, with the potential to be less than 25’ from surface. Why was this data not considered or at least referenced, since it is closer to the release site?

19.15.29.11 NMAC is the portion of the spill rule that requires site assessment/characterization. In regard to depth to ground water, if the exact depth to ground water is unknown, the responsible party must provide a reasonable determination of probable depth to ground water. The rule lists several methods to be utilized in making this determination, but the method used must be as approved by the appropriate division district office. The rule also requires the responsible party to identify all known water sources within one half mile of the release.

The Division would prefer to have some standardization, again for the sake of consistency, as to what is expected when determining depth to ground water. Industry will know what is expected and reviewers will know what to look for. This eliminates leaving this type decision up to each reviewer. If a single water well is going to be used to make this determination, the Division will require that well be within one half mile of the release, otherwise, an alternative method will be required. The only way to make an exact determination in the event data is severely lacking, will be to advance an exploratory boring. The responsible party may choose to remediate to the more stringent levels listed in Table 1 in lieu of determining depth to groundwater.

This remediation proposal has been denied due to an incomplete characterization of impact, and an inadequate investigation into the potential depth to ground water at the release site.

This denial remains in effect. At this time, the Division requests that Devon resubmit a complete site characterization, along with either a remediation proposal, or a closure request, based on site characterization criteria, which includes a determination of the depth to ground water at this site. This submittal is due not later than thirty (30) days from the date of this correspondence.

Please review the applicable portions of 19.15.29 NMAC as well as OCD guidance document titled “Procedures for Implementation of the Spill Rule”. Both documents are available on the OCD web site. I have attached the guidance document for convenience. Please see paragraph IX of this document regarding determining depth to ground water.

Devon’s cooperation in this matter is greatly appreciated.

Best Regards,

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**From:** Bynum, Tom (Contract) <Tom.Bynum@dvn.com>

**Sent:** Friday, May 1, 2020 3:04 PM

**To:** Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Eads, Cristina, EMNRD <Cristina.Eads@state.nm.us>; Marcus, Ramona, EMNRD <Ramona.Marcus@state.nm.us>

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**Subject:** [EXT] Re: [EXTERNAL] RE: Rejection for work plan on incidents NRM2003159278 & NAB1905153070

Mr. Bratcher,

Thanks to you and your team for your time and consideration, we look forward to the Division's response and guidance.

Thank you,

Tom Bynum  
580-748-1613

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**From:** Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)>

**Sent:** Friday, May 1, 2020 2:58:28 PM

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**Subject:** [EXTERNAL] RE: Rejection for work plan on incidents NRM2003159278 & NAB1905153070

Mr. Bynum,

The Division will consider the issues Devon has presented and will be in touch once we have had time to evaluate the concerns Devon has expressed. I would not expect to have a determination until sometime next week at the earliest.

Devon's patience in this matter is greatly appreciated.

Best Regards,

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## AMERICA STRONG

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**From:** Bynum, Tom (Contract) <[Tom.Bynum@dvn.com](mailto:Tom.Bynum@dvn.com)>  
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**Subject:** [EXT] Rejection for work plan on incidents NRM2003159278 & NAB1905153070

Dear Victoria,

After much discussion within our team and with our consulting firm, we would like to express a couple more concerns regarding the rejection of the remediation plan for the incidents on the Thistle Unit 44H. Incident #s are NRM2003159278 and NAB1905153070.

### **In the matter of the “depth to ground water determination:”**

- [19.15.29.11](#) does not mention water wells no further than ½ mile from the site, and data no more than 25 years old, and providing well construction information. Devon strives to stay compliant with regulations, however, those are prescriptive protocols that are not listed in the regulation for the general public to follow. The consultant on this project used a reasonable determination based on published well data from the US Geological Service.

Copied from your response in the previous email:

- **Please, see [19.15.29.11](#) SITE ASSESSMENT/CHARACTERIZATION: Depth to ground water. The responsible party must determine the depth to ground water where the release occurred. If the exact depth to ground water is unknown, the responsible party must provide a reasonable determination of probable ground water depth using data generated by numeric models, cathodic well lithology, water well data, published information or other tools as approved by the appropriate division district office. If the responsible party uses water well data, the responsible party must provide all pertinent well information.**

***If the OCD still does not agree with our initial determination, then we would like to utilize a method of “triangulation” in order to determine our depth to ground water in this case. We would do this by combining water well data from wells that surround this incident’s location. This would provide more than a reasonable determination of the ground water depth in the area of these releases. Would the OCD agree with this method?***

### **In the matter of “horizontal delineation:”**

- We're confused in the ambiguity of the recommended remediation action level for horizontal delineation. Horizontal and vertical delineation are specifically addressed in [19.15.29.11](#) (A)(5)(b) "the responsible party must delineate the release horizontally and vertically using Table I of [19.15.29.12](#) NMAC constituents"... The remediation plan clearly shows vertical delineation on pad to less than 20,000 mg/kg however it does not indicate a clear sidewall sample. It is hard to make the argument for approval without a sidewall sample however based on the citation the sample should meet the constraints of Table 1.

Copied from your response in the previous email:

- **Samples can be collected during the remediation process. In respect to horizontal delineation, it has not been completed. While vertical definition of contamination that may be acceptable is almost exclusively driven by depth to water, as determined, and as driven by Table I in the spill rule, horizontal definition is different. The edges (horizontal definition) of a liquid release must be determined as well. The only value for determination of horizontal impact are derived by either "background" value as determined appropriate to Rule 29, or, for chloride, 600 mg/Kg in soils. Therefore, horizontal soils delineation for chloride should be 600 mg/kg (again, or background) for all liquid releases, either on or off production pad. It is conceivable that in determining the horizontal extent of chloride that the edge of the production pad may be encountered, if last sample taken on pad limit, samples(s) must be obtained off pad to determine extent of release. If horizontal delineation samples on pad eventually reach a mechanical barrier, (such as pipeline or battery) sample(s) should be obtained as near as possible on the linear opposite side of said barrier and as close as possible to the barrier.**

**It is conceivable that a liquid release may occur with, for example, a surface soil chloride of 19,000 mg/Kg, and if it is reliably determined that groundwater is over 101 feet below ground surface, then that value may stand as a vertical definition, but nonetheless, the horizontal value(s) for lateral extent of liquid release would still, of Rule 29 necessity, be 600 mg/Kg chloride or less. This would be inclusive of both "on-pad" of "off-pad" release area. The above is laboratory data driven, not just reported visual extent of a liquid release or calculated and reported release volumes. As indicated in the spill rule, a scaled map with horizontal and vertical definition of actual laboratory values is required. Generally, the top one foot sample suffices for immediate horizontal evaluation and deeper contamination would likely be identified during actual remediation.**

***We would have no problem at all giving you the full horizontal delineation of these releases if we could be granted approval to start on the remediation. This would allow us to gather sidewall samples during the excavation process that would be the most accurate in obtaining the true horizontal extent of these releases. We are currently working on gathering more samples here for the purpose of having full delineation, as well as gathering a background sample or two to help us be as accurate as possible to what our closure criteria will be.***

**Thank you.**

**TOM BYNUM  
EHS CONTRACTOR  
580-748-1613**

Devon - Internal

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