

Bratcher, Mike, EMNRD

From: tgregsto@blm.gov

Sent: Tuesday, May 17, 2011 1:43 PM
To: Vernon Black; jamos@blm.gov

Cc: 'Allan Rambur'; 'Daniel Frick'; dpotter@linnenergy.com; Bratcher, Mike, EMNRD;

Terry_gregston@nm.blm.gov Re: FW: TURNER B #118

Subject: Re: FW: TURNER B #118
Attachments: Turner B 118-sample plat-051611.jpg

Categories: Yellow Category

Gentlemen,

I deal with so many spills and so many sampling events (and I am at an 'age'!), where it is difficult to keep them all sorted out. A sample plat, even if it is hand drawn, is often necessary to make sense of soil sampling results and to formulate a sound approach plan. The sample plat is normally provided by the contractor/operator, but I have drawn the attached sample plat from the GPS of the original spill and my "best recall" of the various sample points in question. Mr. Black, can you confirm that sample point #3 was at the pooling area of the north fork of the spill? If so, then the sample plat is fairly accurate in the depiction of the location of various chloride levels and may be an aid to the folks who were not present at the site to see where the samples were taken from.

Chlorides are funny things. Sometimes they can clean up very rapidly, sometimes they don't. As far as the proposal to take out 2' lifts and then sample, I think it would be prudent to take out 1' foot lifts and sample. This requires more sampling to confirm that further cleanup is needed, however it also prevents removal of soils that are at or below closure. The BLM prefers to be as surgical as possible in removals so that any soils that are at or below closure don't end up being hauled off.

As far as the pit is concerned, any time you have a spill across an old pit, it becomes extremely difficult to determine where the contamination from the spill ends and the contamination from the pit begins. This is an old pit. It does have some vegetation here and there, but lack of vegetation in areas outside of the covered up spill areas was noted during my first inspection of the site. Regardless of whether that lack of vegetation is created by an old pit or an old spill or a new spill, the surface restoration of areas that are impacted by drilling and production activities must be addressed and revegetation of impacted areas achieved. In my conversations with Mr. Black out in the field, I pointed out the fact that a portion of the pit must be disturbed to address the spill cleanup. Addressing this portion of the pit in the spill cleanup and bringing in clean soils to backfill it wouldn't make much sense if the pit remained contaminated/unvegetated on either side of the spill path. The operator would still have to address the unvegetated pit areas and re-establish vegetation. The most economical thing to do is to go ahead and address the pit issues along with the spill cleanup and to achieve revegetation of both the spill impacted and reserve pit issue area. That way, the operator doesn't have to come back in a second time and address the remaining pit issues at a future date.

Typically in old pit reclamations, the goal is to stabilize the pit contents so that they do not leach salts back up to the surface and to provide enough of a soil cap to provide a four foot root zone for the establishment of vegetation. Unless there are groundwater issues or cave/karst issues or some other critical resource concern, typically reserve pit issues do not require digging out and hauling off the entire pit. In the past, the OCD has been amenable to partial cleanup of grandfathered reserve pits, but I will let Mr. Bratcher throw in his own two cents on this one as he sees fit to do so. Like approval of both agencies is, as always, required.

Sample plats imposed upon aerial images can be great aids to understanding what is taking place at a given site. It was not until I imposed the original spill map and "roughly remembered" sample points upon the aerial that I realized that the soil sample taken at the midpoint of the road may be showing up as a hot anomaly from an old reserve pit for an abandoned well. This second reserve pit/well is on state land and the impacts from the reserve pit in question are under state jurisdiction; whereas the reserve pit on the Turner B 188 is a result of actions to obtain federal minerals and is under federal jurisdiction, if that makes sense. My authority only extends to cleanup of spill events and impacts that result from federal mineral activities. In that regard, the BLM tends to be "color blind" and treats the cleanup of spills and other impacts from federal mineral actions the same on federal, state, and private lands. So while I have authority over the 118 well/reserve pit issues, it will be entirely the state's call as to how they wish to handle the spill/reserve pit interface issue

on the abandoned Fren well. My authority on that segment of the spill extends only to the cleanup of spill impacts.

My suggestion is to pull a couple of samples in the spill path further upslope from the Fren pit (inbetween the sample that we pulled in the middle of the road and the #2 sample point which showed 64ppm chlorides). If a road sample between those two points shows a lack of chloride content consistent with the terminus (32ppm) sample point, then I'd say that the higher readings at the mid point of the road are most likely due to the old Fren pit, which appears to be under the road at that point.

Anyway, hope that gives everyone concerned a better idea of the issues on this site and what needs to be achieved both in this spill cleanup and in the revegetation of the site in question. In many ways, this is a very complex site and spill cleanup.

If anyone has any questions in that regard, feel free to give me a call. My cell phone number is best. If folks want to meet for an onsite, let's set a mutually agreeable time and date. Let me know.

Again, many thanks for everyone's help on this,

Terry Gregston
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"Vernon Black" <vernon@hungry-horse.com>

05/17/2011 09:54 AM

To "'Allan Rambur'" <ARambur@linnenergy.com>, <dpotter@linnenergy.com>, "'Daniel Frick" <DFrick@linnenergy.com>, <mike.bratcher@state.nm.us>, <Terry_gregston@nm.blm.gov>

CC

Subject FW: TURNER B #118

Good Morning,

Please see the attached lab results from the confirmation sampling at the Turner B #118. Lab results indicate that the TPH and BTEX contaminants have been eliminated and/or reduced to closure levels. However, chloride levels are still above closure levels at SP1, SP3, West Road, SE and NM Corners of Pit Area.

At SP1, SP3, and the West Road, I recommend removing 2' more of the contaminated soil and

conduct chloride field test. Should the field test indicate levels at or below closure levels, confirmation sampling will occur. Should the levels exceed closure levels, I recommend continuing the excavation in 2' lifts along with field testing for chlorides until we reach the point that chloride levels are at or below closure levels. At this point confirmation sampling will occur.

As for the chloride levels in the "old pit area" (SE/NW Corners) where the release ran across the pit. I'm very cautious about excavating in and/or around any antiquated pit area without very clear communication between all parties involved. During the initial remediation we did "scrape/remove" approximately 1' of soil from this area. Prior to removing this 1' of material, we exposed various parts of the pit area by hand in order to determine the nature of the exposed plastic. If this plastic was some type of cover and/or barrier, it was very evident that it's integrity was compromised prior to any remediation work conducted by Hungry Horse. As it stands, we have no way of knowing if the chlorides are a result of the release or the contents of the pit area. Having said this, we need to approach this area with caution and a clear plan. I recommend a representative from all three parties meet on site and let's come a clear decision as to the most effective and most efficient course of action for this sensitive area.

Boone Arch will be contacted to provided an Arch Monitor when work resumes.

Thanks, Vernon K. Black H.S.E. Hungry Horse, LLC Hobbs, NM 575 393 3386 office 575 631 2253 cell

From: Celey Keene [mailto:celey.keene@cardinallabsnm.com]

Sent: Monday, May 16, 2011 11:03 AM

To: 'Vernon Black'

Subject: TURNER B #118

THANK YOU,

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[attachment "H100970 HHE.pdf" deleted by Terry G Gregston/CFO/NM/BLM/DOI]