From:	Baker, Larry
To:	Yu, Olivia, EMNRD; Van Curen, Jennifer; Henryetta Price; Tucker, Shelly (stucker@blm.gov)
Cc:	Billings, Bradford, EMNRD; Oberding, Tomas, EMNRD; Henkhaus, Mark; Carnes, Travis; Cox, Rodney
Subject:	RE: WBDU 52 1RP-4588-0
Date:	Tuesday, June 20, 2017 2:01:40 PM

Ms. Yu,

Thank you for your quick response in this matter.

Also we are in agreement that the estimated ground water depth is 60 feet below ground surface.

Apache has adequately delineated the release area in multiple areas to chloride levels of less than 250 mg/kg (Human health Standard in groundwater) and hydrocarbons less than the recommended action levels. Apache concludes that the corrective action plan submitted to NMOCD meets the protective levels required and will be protective of any impact to groundwater, being that groundwater is 60 feet below ground surface.

Apache Corporation once again respectively requests your approval of the corrective action plan. Please let me know if you have any questions or wish to discuss. Thanks and have a good day.

Bruce Baker
Apache Corporation
Environmental Technician
Northwest District
Email: larry.baker@apachecorp.com
Mobile: 432-631-6982

From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]
Sent: Wednesday, June 14, 2017 3:50 PM
To: Van Curen, Jennifer <Jennifer.VanCuren@arcadis.com>; Henryetta Price <hprice@blm.gov>; Tucker, Shelly (stucker@blm.gov) <stucker@blm.gov>
Cc: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Baker, Larry <Larry.Baker@apachecorp.com>; Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Subject: RE: WBDU 52 1RP-4588-0

Ms. Van Curen:

Thank you for the google image with the sample points. Individualizing distance and depth to water for each sample point is not necessary.

In addition to evaluation of depth to groundwater with USGS data and checking the Chevron water trend map, the process used to assess average depth to groundwater from the OSE database is based on the radius of approx. a section (2000.0 m) around the release's GPS coordinates provided on the initial C141 rather than the surrounding sections. However, if there are wells within the 1000 ft. radius, which would affect RRALs, the average depth to groundwater is adjusted to this value. In

this case, the average depth was assessed based on the 2000 m radius since there are no apparent OSE wells within 1000 ft. A copy of the search is attached.

Considering the age when these water wells were drilled and variable well construction specifications, can we agree to estimate the groundwater to be around 60 ft. bgs? If in agreement, NMOCD reassesses the vertical delineation requirement for permissible chloride levels to 600 mg/kg obtained and maintained for 5 ft. further in depth, which in this case is 7 ft. bgs. At any depth (between 2 and 7 ft. bgs) chloride levels exceed 600 mg/kg, the 5 ft. additional recommences. RRALs for Benzene, BTEX, and TPH remain the same as originally stated. Please confirm or inform if you have further questions.

Thanks,
Olivia

From: Van Curen, Jennifer [mailto:Jennifer.VanCuren@arcadis.com]
Sent: Wednesday, June 14, 2017 1:00 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Henryetta Price <hprice@blm.gov>; Tucker, Shelly (stucker@blm.gov) <stucker@blm.gov>
Cc: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>; Baker, Larry <Larry.Baker@apachecorp.com>; Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>
Subject: RE: WBDU 52 1RP-4588-0

Olivia,
The closest well to the release shows to be at 70 feet. What radius are you getting the 45' from? I also investigate water depths at the NMOSE site which is the same as the OCD data on the map. If I am looking at a radius around section 9 rather than the closest well, the average depth to water is 64'. This could become an issue if the closest well is shallow but all other wells are really deep. The average of a radius is not the best way to go in all cases. Attached is an enlarged map and NMOSE listed view. The map image in the plan shows where the well locations are clearly. Please let me know if you want all samples to have calculated average depth to water or the depth to water nearest to the release site.

Also, this site has had no other releases prior to this one. There is only slight erosion overtime from rain and cattle. Please see attached images. Apache requests a variance from the 10' request.

Thank you for clarification.

Jennifer Van Curen
T. 432.217.2699
C. 432.270.8753
ARCADIS, Imagine the result

From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]
Sent: Wednesday, June 14, 2017 1:07 PM
To: Van Curen, Jennifer <Jennifer.VanCuren@arcadis.com>; Henryetta Price <hprice@blm.gov>; Tucker, Shelly (stucker@blm.gov) <stucker@blm.gov>
Cc: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Subject: RE: WBDU 52 1RP-4588-0

Dear Ms. Van Curen:

As a reminder, for all corrective action plans (release characterization/delineation, remediation, abatement) submitted to NMOCD:

1. Laboratory analyses of TPH must be separated into GRO, DRO, MRO fractions.
2. Laboratory analyses of chlorides must utilize EPA Method 300.
3. Sample locations, demarcation of release area, point of release, and scale must be clearly visible on a digital map.

Please address these concerns regarding 1RP-4588:

1. NMOSE database for the radius of a section around the spill location indicates an average of 46 ft. Thus, the delineation and remediation RRALs are adjusted to 10 mg/kg Benzene, 50 mg/kg BTEX, and 100 mg/kg TPH. Permissible chloride levels are 250 mg/kg obtained and maintained for 10 ft. additional in depth.
2. Figure 1 does not show the sample locations clearly. Submit a larger image with visible sample locations.

Thanks,

Olivia Yu
Environmental Specialist
NMOCD, District I
Olivia.yu@state.nm.us
575-393-6161 x113

From: Van Curen, Jennifer [mailto:Jennifer.VanCuren@arcadis.com]
Sent: Thursday, May 18, 2017 8:32 AM

To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>; Henryetta Price <hprice@blm.gov>; Tucker, Shelly (stucker@blm.gov) <stucker@blm.gov>
Subject: WBDU 52 1RP-4588-0

Please find the attached plan for the WBDU 52 release for approval. We would like to start this as soon as possible. Thank you for you review time.

Jennifer

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From: Billings, Bradford, EMNRD
To: Yu, Olivia, EMNRD
Subject: RE: Question on streams
Date: Wednesday, June 14, 2017 8:22:38 AM

Hi,

So OSE has an average depth to water at about 45 feet. So being less than 50 feet they get the more stringent values anyway, especially on the Cl and then with age of release and possible downward movement. I do see the drainage for the site you talk about. Not sure this drainage runs all the time. May be better to make issue with them on REAL with depth to water. But Otherwise you draft indicating the levels to obtain and to find 250 Cl plus ten is fine.

Thanks Brad

From: Yu, Olivia, EMNRD
Sent: Tuesday, June 13, 2017 4:39 PM
To: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Subject: RE: Question on streams

Bradford:

Thanks for your prompt response. Actually, the release goes into the stream. You can see the vegetation outlining the wetter soil environment related to the stream on google earth. A draft of my response and pertinent documents are already in L drive in folder Urgent < 1RP4588.

Olivia

From: Billings, Bradford, EMNRD
Sent: Tuesday, June 13, 2017 4:20 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Subject: Question on streams

On the guidelines, if within 200 feet of surface waters then it would get a ranking of at least 20 which would put it in the most conservative values for remediation. Hope this helps.

Brad


Legend
Untitled Polygon
WBDU 52
WBDU 52
SP1
SP2
SP3
SP4
SP5
SP6
SP7
Google earth
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N
80 ft