

From: [Billings, Bradford, EMNRD](#)
To: [Eads, Cristina, EMNRD](#)
Subject: FW: 1RP-5636 - EBDU #37 Addendum to Remediation Plan
Date: Thursday, January 9, 2020 10:37:38 AM

From: Billings, Bradford, EMNRD
Sent: Monday, December 23, 2019 2:24 PM
To: 'Mark Larson' <Mark@laenvironmental.com>
Cc: Baker, Larry <Larry.Baker@apachecorp.com>; Rachel Owen <rowen@laenvironmental.com>
Subject: RE: 1RP-5636 - EBDU #37 Addendum to Remediation Plan

12/23/2019

Apache Corp. – Larry Baker
Larson Environmental

RE: 1RP-5636/EBDU #37, the following:

The attached/stringed email as an addendum to offered Work Plan is approved, including the location of proposed monitor wells, as was discussed recently on the telephone.

Please keep a copy of this communication for your records, as NO paper copy will follow. It may take some days for this to be uploaded to The Oil Conservation Division (OCD) data base,

ODE appreciates your efforts.

Sincerely,

Bradford Billings
EMNRD/OCD
Santa Fe, NM

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations

From: Mark Larson <Mark@laenvironmental.com>
Sent: Monday, December 23, 2019 12:58 PM

To: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Cc: Baker, Larry <Larry.Baker@apachecorp.com>; Rachel Owen <rowen@laenvironmental.com>; Mark Larson <Mark@laenvironmental.com>
Subject: [EXT] Re: 1RP-5636 - EBDU #37 Addendum to Remediation Plan

Dear Bradford,

This email will confirm our phone conversation on December 20, 2019 for the EBDU #37 produced water release:

- Apache will install a boring in the bottom of the excavation to delineate the vertical extent of chloride in soil. Soil samples will be collected beginning at the bottom of the excavation and every five (5) feet thereafter until chloride decreases below 600 mg/Kg or groundwater is encountered;
- Apache will install two (2) additional monitoring wells at locations shown on the attached drawing. The monitoring wells will be constructed similar to monitoring well TMW-1 and TMW-2 with about 20 feet of screen placed above and below the groundwater level observed during drilling. Groundwater is expected to occur around 50 feet bgs therefore the borings will be advanced to around 70 feet bgs;
- Survey wells for top of elevation (top of casing and ground) for groundwater potentiometric surface elevation, flow direction and gradient;
- Apache will close the excavation at Area 1 according to the remediation plan dated October 29, 2019;
- Apache will close the excavation at Area 2, based on the laboratory results of samples from the boring to be placed in the bottom of the excavation, by filling the excavation to approximately 5 feet bgs with clean caliche, installing a 20 mill thickness polyethylene liner at approximately 5 feet bgs and backfilling to surface with clean topsoil;
- Seed Area 1 and Area 2 following remediation according to landowner requirements;
- Perform quarterly groundwater monitoring (5 wells) and reporting.

Your approval is this addendum remediation plan is requested. Please contact Bruce Baker with Apache or me if you have questions.

Mark J. Larson, P.G.
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