From: Yu, Olivia, EMNRD
To: "Katie Jones"
Subject: RE: EME E-21 AD (1RP-5127) Proposed Path Forward
Date: Tuesday, August 28, 2018 1:45:00 PM

Ms. Jones:

Thank you for these meeting minutes of our phone conversation this morning. As previously mentioned, NMOCD strongly recommends a soil bore to be located in the release area to complete vertical delineation of 1RP-5127, in case there is a water bearing zone within 100 ft. bgs.

Please be advised that the release will need to have Benzene, BTEX, and TPH extended characterized as well.

Thanks,
Olivia

From: Katie Jones <kjones@riceswd.com>
Sent: Tuesday, August 28, 2018 10:50 AM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Subject: EME E-21 AD (1RP-5127) Proposed Path Forward

Ms. Yu,

ROC proposes the following path forward for the EME E-21 AD (1RP-5127).

- Drill a background soil bore, which will be located approximately 100 ft southeast of the accidental discharge source. The bore will be drilled to a depth of 115 ft bgs, with soil samples collected at regular intervals to determine lithology only. The purpose of this bore is to determine that depth to groundwater is greater than 100 ft bgs. The bore will remain open for approximately 48 hours and gauged to check for moisture accumulation.
- If groundwater is determined to be greater than 100 ft bgs, ROC will submit a corrective action for the site which will likely include installing a 20-mil, reinforced liner over the accidental discharge area at a depth of 4-5 ft bgs. Then backfilling and contouring the site to the surrounding area, and seeding.
- If groundwater is found at a depth shallower than 100 ft bgs, ROC will delineate the site to the requirements listed in Table 1 listed in 19.15.29.12 NMAC. This will possibly require a second soil bore to be drilled closer to the accidental discharge source.

Thank you for your time and help on this site.

Thank you,

Katie Jones Davis
Environmental Manager
RICE Operating Company

From: Katie Jones
To: Yu, Olivia, EMNRD
Subject: RE: EME E-21 AD Initial C-141
Date: Monday, August 27, 2018 8:47:18 AM

Good Morning,

I've attached my depth to groundwater estimation for this site. We also didn't find any wells within the half mile radius on the USGS or OSE website. The closest well we have on our map is a WAIDs well with a depth to groundwater of 170 ft, which is why I estimated a depth to groundwater of 170 ft. The nearest soil bores I have are about 3 miles northwest of this leak site. One bore was drilled to depth of 120 ft and groundwater was not encountered. Depth to groundwater at that site was estimated to be 179 ft bgs. The nearest monitoring wells I had in the area were approximately 4.5 miles east-northeast, with a depth to groundwater of 101 ft bgs. Based on all this information we felt like 170 ft bgs would be a conservative estimation. What do you think?

Thank you,
Katie

From: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Sent: Monday, August 27, 2018 7:27 AM
To: Katie Jones <kjones@riceswd.com>
Subject: RE: EME E-21 AD Initial C-141

Good morning Ms. Jones:

Pardon for the delayed response to your email. Have you decided on a course of action regarding release characterization/delineation for 1RP-5127?

Thanks,
Olivia

From: Katie Jones <kjones@riceswd.com>
Sent: Thursday, August 23, 2018 10:48 AM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Subject: Re: EME E-21 AD Initial C-141

Thank you,

Would you happen to be available tomorrow to meet and discuss this site?

Sent from my iPhone

On Aug 23, 2018, at 10:25 AM, Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us> wrote:

> Good morning Ms. Jones:
>
> In order to apply Table 1 values, the guideline is to use a 0.5 mile radius to assess depth to groundwater, similar to the radius for wellhead protection and distance to nearest significant watercourse. For 1RP-5127, neither USGS nor NMOSE wells are within 0.5 mile radius. If another source(s) of data is used for determination, please provide according to 19.15.29.11A(2).
>
> Also, please keep in mind 19.15.29.13A. For releases impacting pasture, site and release characterization/delineation data must be sufficient to determine the vertical and horizontal extents, to which remediation will occur for subsequent successful restoration and revegetation.
>
> Thanks,
> Olivia
>
> ---
>
> **From:** Katie Jones <kjones@riceswd.com>
> **Sent:** Wednesday, August 22, 2018 1:14 PM
> **To:** Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
> **Subject:** RE: EME E-21 AD Initial C-141

Ms. Yu,

Before we drill this site next week, I was wondering if you could give some clarification on the delineation requirements for this accidental discharge. From my understanding of the new Part 29 rule, this site should be delineated to the limits listed in Table 1 for a site with depth to groundwater >100 ft bgs. The depth to groundwater is estimated to be 170 ft bgs. Are the following concentrations the concentrations I should delineate to?

Chloride	20,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
GRO+DRO	1,000 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

Thank you,

Katie Jones Davis
Environmental Manager
RICE Operating Company

From: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Sent: Friday, August 17, 2018 7:31 AM
To: Katie Jones <kjones@riceswd.com>
Cc: Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>
Subject: RE: EME E-21 AD Initial C-141

Good morning Ms. Jones:

The extension for 1RP-5127 is granted. New extension deadline is September 16, 2018.

Thanks,
Olivia

From: Katie Jones <kjones@riceswd.com>
Sent: Thursday, August 16, 2018 8:32 AM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Cc: Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>
Subject: RE: EME E-21 AD Initial C-141

Ms. Yu,

ROC is requesting an extension to submit the investigation results for this site. Initial sampling resulted in elevated concentrations to a depth of 12 ft bgs. ROC plans to include this site on the drilling cycle scheduled for the week of August 27, 2018. With your approval, ROC will submit the delineation results and remediation plan once the soil bore installation results are received. Please let me know if you have any questions or require any additional information.

Thank you,

Katie Jones Davis
Environmental Manager
RICE Operating Company

From: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Sent: Thursday, July 19, 2018 11:30 AM
To: Katie Jones <kjones@riceswd.com>
Cc: Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>
Subject: RE: EME E-21 AD Initial C-141

Dear Ms. Jones:

The 1RP for this incident is

					linked to 30-025-	22S-36E-	

5127	7/19/2018	A	Rice Operating	EME E-21 AD	12800	21E	7/3/2018

Please remember to include this 1RP identifier to all communications. Also, please be advised that a release characterization/delineation workplan as detailed in the attachment must be approved by NMOCD BEFORE any remediation work.

Thanks,

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

From: Katie Jones <kjones@riceswd.com>
Sent: Tuesday, July 17, 2018 10:59 AM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Subject: EME E-21 AD Initial C-141

Ms. Yu,

Attached is an Initial C-141, map, and photos of the EME E-21 AD. The leak occurred on July 3, 2018. Due to the small leak area, we initially believed the leak was less than 5 bbls and non-reportable. However, hand auger samples collected last week showed chloride concentrations to increase to a depth of 10.5 ft bgs. Hand auger samples couldn't be collected any deeper due to a hard caliche layer. We plan to collected additional samples next week with a backhoe. Please let me know if you have any questions or need any additional information.

Thank you,

Katie Jones Davis
Environmental Manager
RICE Operating Company

Initial Sampling

Vertical 1

Depth	Cl-	PID	GRO	DRO	EXT DRO	B	T	E	X	Total
3'	3077	886.7								
4'	3078	1543								
5'	3452	2359								
6'	3617	1439								
7'	4453	1511								
8'	4275	1641								
9'	6809	2660								
10'	6495	1530								
11'	4080	3853	173	356	<10	<0.5	1.75	3.35	30.9	36
11.5	4559	2145								
12'	5120	457	23.4	240	<10	<0.05	<0.05	0.088	1.16	1.25

Legend

- SOURCE
- ROC ACTIVE LINE
- CROSSING LINES
- ACTIVE CONCRETE JCT BOX
- EXCAVATION
- STAIN - 100 SQ FT

Landowner: Mark Gerard Cypert
DGW: 170 ft

Basin Environmental Service Technologies
Effective Solutions

EME
E-21 AD

UL E SECTION 21
T-22-S R-36-E
LEA COUNTY, NM

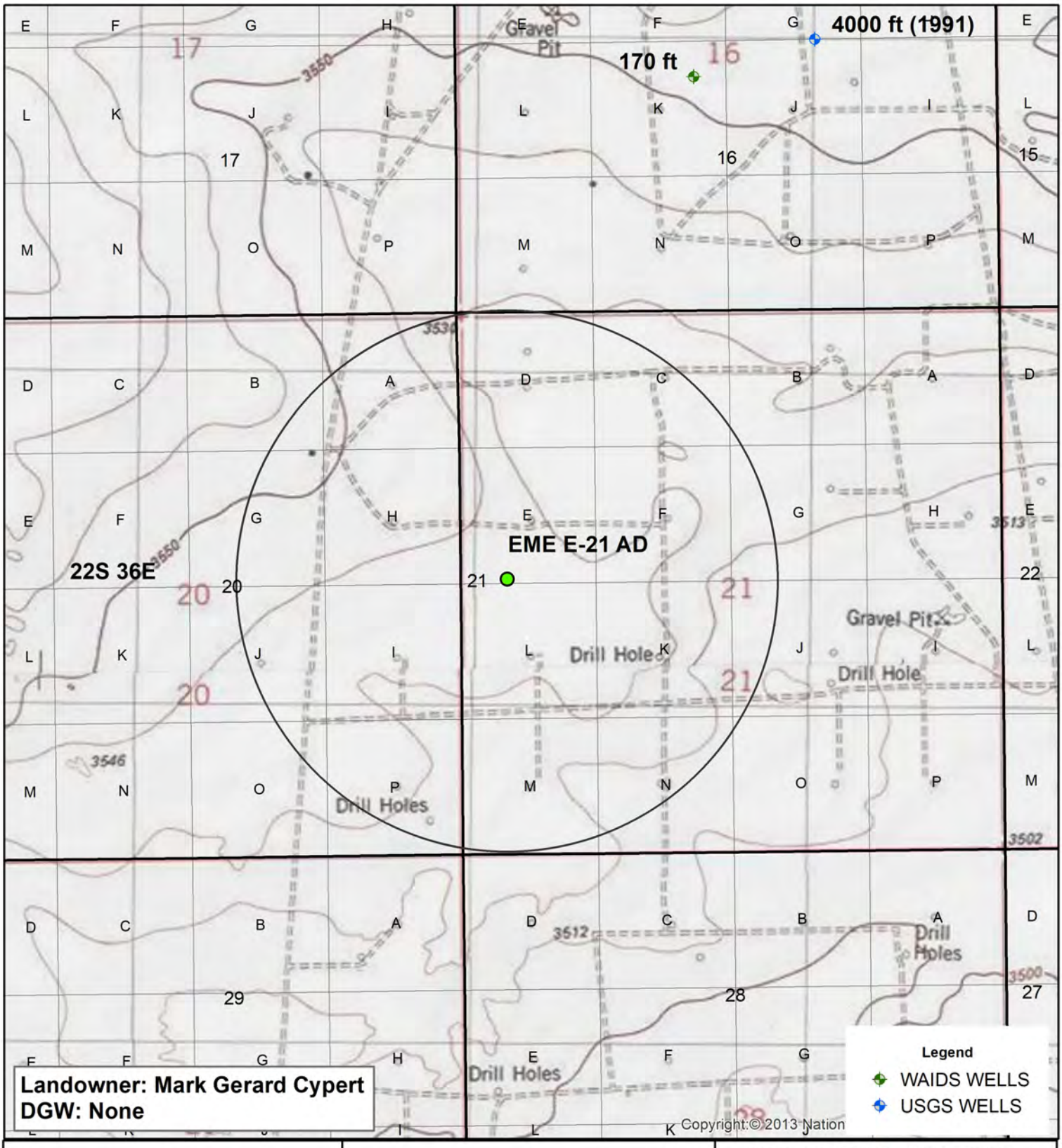
GPS: 32.377423 -103.277314

0 10 20 Feet

GPS date: 7/3/18TG
Drawing date: 8/15/18
Drafted by: T. Grieco

N W E S

Depth to Groundwater



Basin Environmental Service Technologies
Effective Solutions

EME E-21 AD

UL E SECTION 21
T-22-S R-36-E
LEA COUNTY, NM

GPS: 32.377423 -103.277314

0 1,000 2,000 Feet

N W E S

Drawing date: 8/16/18
Drafted by: T. Grieco