



**APPROVED**

*By Olivia Yu at 11:38 am, Mar 03, 2017*

PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

**February 27, 2017**

**Attn. Olivia Yu**

Environmental Specialists, District 1  
Oil Conservation Division, EMNRD  
1625 N. French Drive  
Hobbs, NM 88240

**RE: Path Forward  
Echo Production  
E. Livingston Ridge Delaware  
UL/K/M/N sec.31 T22S R32E  
Area 2  
1RP - 4250**

1RP-4250 Area 2 delineation workplan is approved with these conditions:

- 1) NMOCD approves the installation of conduits at Area 2- Floor 1, 3, and 4 for future vertical delineation at these sample locations.
- 2) NMOCD requests that future vertical delineation at Floor 1 and 4 also attempt to reach 23 ft. bgs as reached in Floor 3.
- 3) Please affirm that the entire Area 2 is excavated to 5 ft. and that floor samples were taken at greater depths using a soil borer.
- 4) Installation of a liner as demarcated in the document Proposed Liner is approved. Geotechnical details of the liner and photos of the setting are strongly encouraged.

Ms. Yu,

Echo Production Incorporated (Echo) has retained Basin Environmental Service Technologies (Basin) to address potential environmental concerns at the above-referenced site. Best estimates suggest that groundwater is more than four-hundred (400) feet below ground surface (bgs).

### **Background and Previous Work – Area 2**

Excavation is complete down to five (5) feet bgs. Wall samples with confirmatory laboratory results indicate that horizontal delineation has been completed. Vertical delineation was achieved for Floor 2, Floor 5, Floor 6, and Floor 7. Further vertical sampling is required for Floor 1, Floor 3, and Floor 4.

Basin is asking permission to install conduit for each of the three (3) floor sample areas that require further delineation. Once the conduit is installed, a six (6) inch padding of sand will be placed in the bottom of the excavation followed by a twenty (20) mil liner. Another 6 inches of sand will be placed on the liner to protect it from puncture during backfilling activities. The excavated area will be backfilled with clean, non-impacted soils.

At a later date, vertical delineation will be achieved by utilizing an environmental drilling rig. The soil bores will be installed through the conduit in order to preserve the integrity of the liner. Once vertical delineation has been achieved, the conduit will be removed at approximately two (2) feet bgs. The excavation will then be contoured to the surrounding area and seeded with the preferred land-owner approved seed mix at a time conducive for germination.

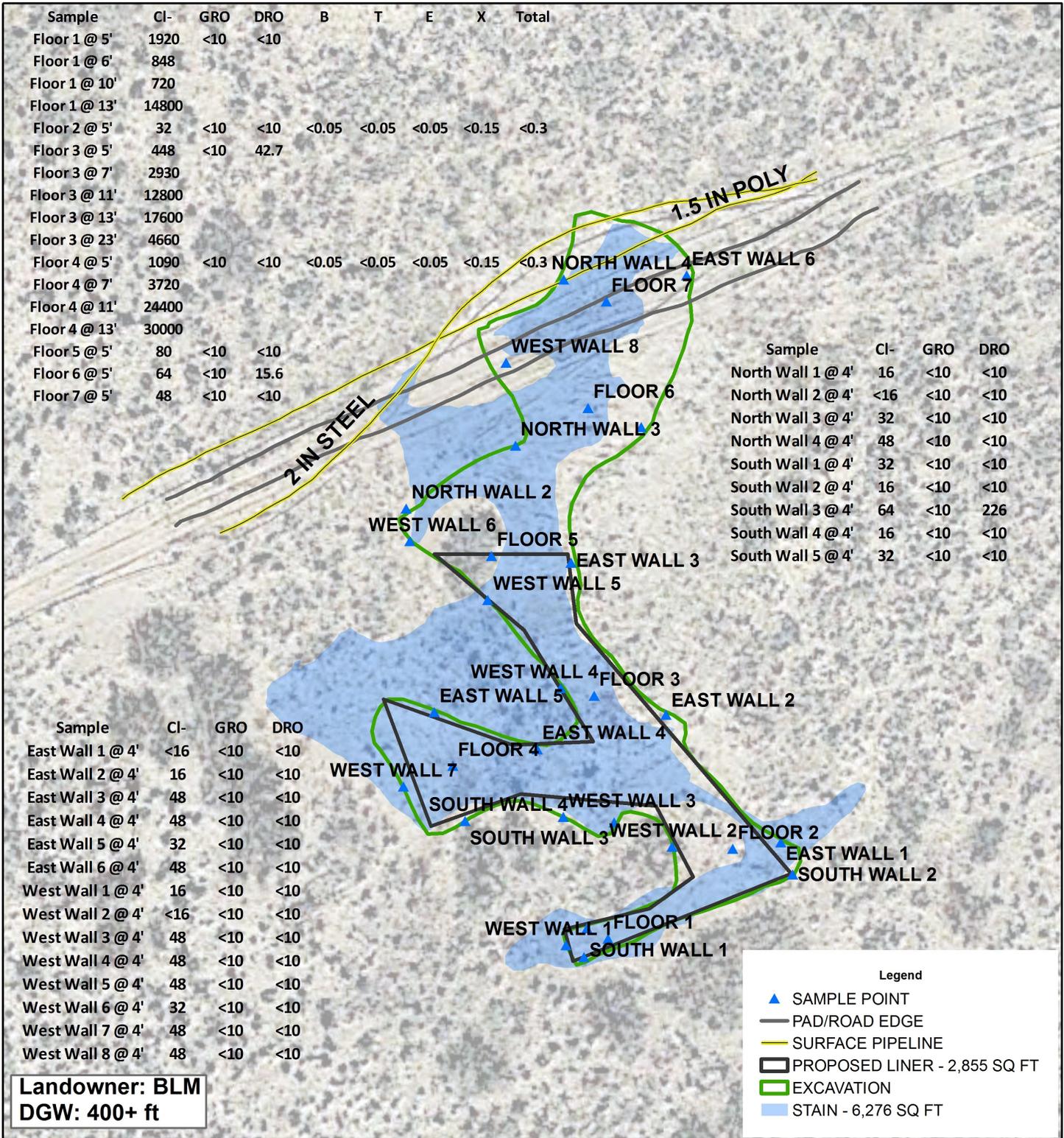


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Sincerely,

Robbie Runnels  
Project Manager  
Basin Environmental Service Technologies  
(575) 393-2967

# Proposed Liner



Sample	Cl-	GRO	DRO	B	T	E	X	Total
Floor 1 @ 5'	1920	<10	<10					
Floor 1 @ 6'	848							
Floor 1 @ 10'	720							
Floor 1 @ 13'	14800							
Floor 2 @ 5'	32	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Floor 3 @ 5'	448	<10	42.7					
Floor 3 @ 7'	2930							
Floor 3 @ 11'	12800							
Floor 3 @ 13'	17600							
Floor 3 @ 23'	4660							
Floor 4 @ 5'	1090	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Floor 4 @ 7'	3720							
Floor 4 @ 11'	24400							
Floor 4 @ 13'	30000							
Floor 5 @ 5'	80	<10	<10					
Floor 6 @ 5'	64	<10	15.6					
Floor 7 @ 5'	48	<10	<10					

Sample	Cl-	GRO	DRO
North Wall 1 @ 4'	16	<10	<10
North Wall 2 @ 4'	<16	<10	<10
North Wall 3 @ 4'	32	<10	<10
North Wall 4 @ 4'	48	<10	<10
South Wall 1 @ 4'	32	<10	<10
South Wall 2 @ 4'	16	<10	<10
South Wall 3 @ 4'	64	<10	226
South Wall 4 @ 4'	16	<10	<10
South Wall 5 @ 4'	32	<10	<10

Sample	Cl-	GRO	DRO
East Wall 1 @ 4'	<16	<10	<10
East Wall 2 @ 4'	16	<10	<10
East Wall 3 @ 4'	48	<10	<10
East Wall 4 @ 4'	48	<10	<10
East Wall 5 @ 4'	32	<10	<10
East Wall 6 @ 4'	48	<10	<10
West Wall 1 @ 4'	16	<10	<10
West Wall 2 @ 4'	<16	<10	<10
West Wall 3 @ 4'	48	<10	<10
West Wall 4 @ 4'	48	<10	<10
West Wall 5 @ 4'	48	<10	<10
West Wall 6 @ 4'	32	<10	<10
West Wall 7 @ 4'	48	<10	<10
West Wall 8 @ 4'	48	<10	<10

**ECHO PRODUCTION**  
**EAST LIVINGSTON RIDGE**  
**DELAWARE #1**  
**AREA 2**

UL N SECTION 31  
T-22-S R-32-E  
LEA COUNTY, NM

**Underground facilities are spatially projected and need to be field verified.**

GPS: 32.343859 -103.717914

0 25 50 Feet

GPS date: 3/28/16 TG, 1/31/17 MT  
Drawing date: 2/28/17  
Drafted by: T. Grieco

