Subject:

RE: Eco-Vista Landfill - Piezometer Abandonments

From: Steve Jett [mailto:steve.jett@jettenviro.com]
Sent: Friday, February 24, 2023 8:52 AM
To: Bill Sadler (adpce.ad); Travis Atwood (adpce.ad)
Cc: Travis Doll; Conrad, David; Small, Blake; Michael Caldwell; Reynolds, Jodi
Subject: Eco-Vista Landfill - Piezometer Abandonments

Travis/Bill:

AFIN: 72-00144	
PMT#: 0290-S4-R1	
<b>Received</b> By Kacy Murillo at 3:45 pm, Mar 2, 2023	
DOC ID#: 83492	
TO: BS>FILE <km< td=""><td></td></km<>	

Attached for your review is a Work Plan for abandoning two piezometers related to the Eco-Vista, Class 4 Landfill (piezometers C4-PZ-1 and C4-PZ-2).

The piezometers were previously installed for water level measurements as part of a past hydrogeological investigation; however, are no longer utilized.

Though four additional piezometers were mentioned in my email yesterday, those were related to the Class 1 landfill; therefore, a separate work plan may be submitted in the future to address those items.

Please feel free to contact me if you have any questions.

Sincerely,

Steve Jett, P.G. Owner Jett Environmental Consulting 18 Lexington Oaks Court Foristell, MO 63348 314-496-4654 steve.jett@jettenviro.com www.jettenviro.com



February 24, 2023

Submitted via Electronic Mail

Mr. Travis Atwood, Geologist Arkansas Department of Energy and Environment Division of Environmental Quality 5301 Northshore Drive North Little Rock, AR 72118

## Re: Work Plan for Piezometer Abandonments Eco-Vista, LLC, Class 4 Landfill (Permit No. 0290-S4-R1) AFIN: 72-00144

Dear Mr. Atwood:

On behalf of Eco Vista, LLC, Jett Environmental Consulting is pleased to submit this Work Plan to the Arkansas Department of Energy and Environment, Division of Environmental Quality (ADEQ), for work to be conducted at the Eco-Vista Class 4 Landfill. The proposed work is for the abandonment of two existing piezometers, as described below.

The site intends to abandon two piezometers (C4-PZ-1 and C4-PZ-2) that are in the footprint of the future Class 4 Landfill expansion area (**see Figure 1**).

## ABANDONMENT ACTIVITES

The abandonment of the two piezometers will be performed by an Arkansas-licensed driller. The piezometers will be abandoned in general conformance with American Society for Testing and Materials (ASTM) D5299-99, US Environmental Protection Agency (EPA) (160014-891034), and Arkansas Water Well Construction Commission (AWWCC) guidance documents.

The equipment to be used for piezometer abandonment will be cleaned and decontaminated prior to the first piezometer and between decommissioning locations. The protective outer casing, pipe bollards, and concrete pad will be removed. An attempt will be made to remove the inner-casing. The associated annular materials and any remaining inner-casing will attempt to be removed by overdrilling. Each piezometer will be overdrilled to its total installed depth using sonic core barrels, air rotary, or hollow-stem augers fitted with a guide pipe. Once each piezometer has been overdrilled to its total depth, the borehole will be tremie grouted to the ground surface. The grout mixture will either be a neat cement grout, neat bentonite grout, or high solids bentonite grout. Construction logs for each monitoring point proposed for abandonment are included in **Attachment 1**.

## ABANDONMENT REPORT

Within 60 calendar days of completion of the proposed fieldwork, a report will be submitted documenting field activities. The report will be certified by the supervising professional per Regulation 22.1103(f) and will include the following:

- A site map that includes the locations of the abandoned piezometers,
- Completed Abandonment Forms for each piezometer, and
- Abandonment work quality and methods.

If you have any questions or comments, please contact me at steve.jett@jettenviro.com or 314-496-4654.

Sincerely,

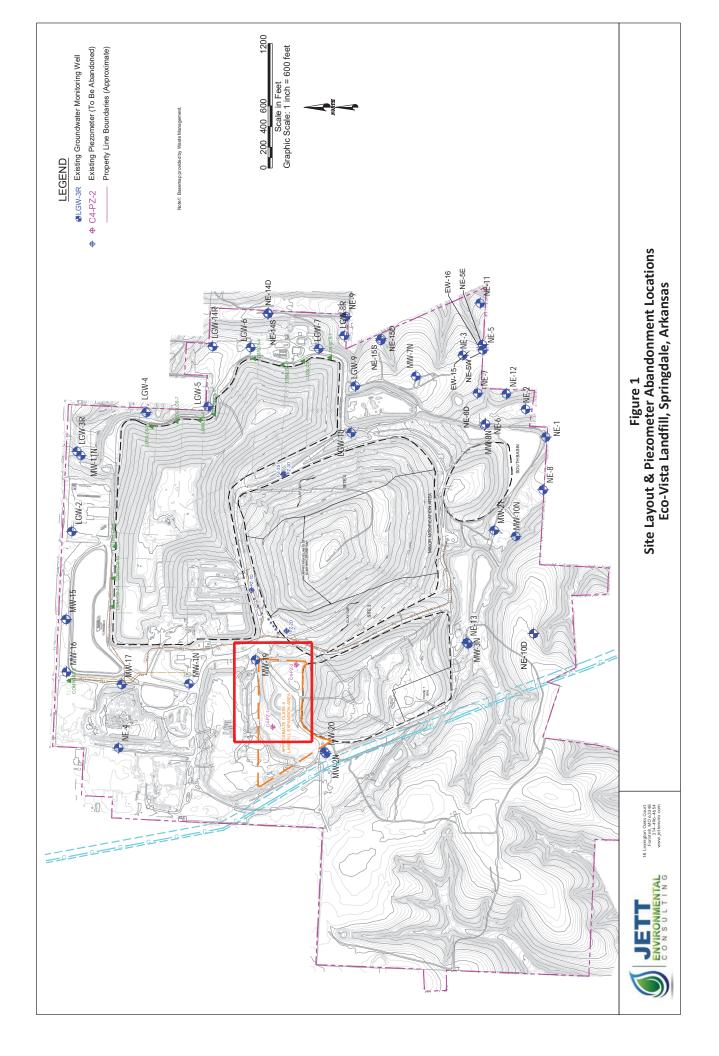


Steve Jett, P.G. No. 1826 Owner

 Attachments:
 Figure 1 – Site Layout & Piezometer Locations

 Attachment 1 – Boring Logs & As-Builts

cc: Jodi Reynolds – WM (PDF via Email) Dave Conrad – WM (PDF via Email) Michael Caldwell – WM (PDF via Email)



			Eco-Vista, LLC Class 4 Landfill GHI		BORING ID: <b>C4-PZ-1</b> NORTHING, FT SRC: <b>664704.9</b>			WELL ID: <b>C4-PZ-1</b> EASTING, FT SRC: <b>644512.2</b>			
_		]			LING CONTRACTOR:	GROUND S		FT SRE:	TOC MP, FT SRE:		
				Wal	ker-Hill Environmental, Inc.	1269.4			1272.68		
rater resou	Associates Ltd.		<u>es Ltd</u> .	DRILLING EQUIPMENT: Versa-Drill VersaSonic			TH, FT BEI	LOW MP:	INSTALLATION DATES: 2/23-27/2021		
	roiect #		nounanto		LING METHOD:						
	0-0100			Sonic with 4x6 in dia. core and case in soils and air rotary in bedrock							
oggi <b>AJP</b>	ED BY:			SAMPLING METHOD: Continuous with 10 ft, 4 in dia. core barrel in soil and 10 ft HQ core barrel in bedrock							
			c								
Depth (feet)	% REC	NSCS	Granhi	Log	Description		C	We Constr	uction		
- 0 — -	63	СН			GRAVELY FAT CLAY, reddish brown, with red staining along fractured chert gravel, soft, moist.			concrete locking of 52.1 ft of	ound completion including 3x3 ft pad, four pipe bollards, and uter aluminum casing 2 in dia., Sch. 40 PVC solid riser 3.3 ft of stickup		
- 0	-	CL GC	0/0		GRAVELY LEAN CLAY, reddish brown, increasing chert with depth, soft, moist. CLAYEY GRAVEL, reddish brown, dense, moist.			Comont/k	pentonite grout from 1.5 ft bgs to		
-	60		0/0		CHERT, white, 14-14.5 ft bgs.			21.0 ft bg			
-	-	GC GC CL			CLAYEY GRAVEL, reddish brown, dense, moist. CHERT, white, 16-16.5 ft bgs. CLAYEY GRAVEL, reddish brown, dense, moist. GRAVELY LEAN CLAY, reddish brown, soft, moist.						
— C -	65	CH			GRAVELY FAT CLAY, reddish brown, soft, moist.		×	Bentonite ft bgs	chip seal from 21.0 ft bgs to 38		
- - - (	. 80				WEATHERED CHERT/EPIKARST, chert is weathered into a silty gravel, white with black staining, moist.						
- - -	60				LIMESTONE AND CHERT, interbedded, competent, limestone is white to			Slow-rele	ase bentonite pellet seal from		
-	86			-0-0-0-0-	<ul> <li>gray, chert is white to bluish gray, stylolite's throughout.</li> <li>@ 40.5-47.5 ft bgs, RQD 70%, 2-42° off horizontal.</li> <li>@ 40.5-46 ft bgs no air loss.</li> <li>@ 46-47.5 ft bgs air loss and bit drop.</li> <li>@ 47.5 ft drill rig and air compressor were shut off and the boring was allowed to equilibrate for 15 minutes. Water level was measured at 42.8 ft bgs.</li> </ul>			38.0 ft bg	s to 44.9 ft bgs water: 43.7 ft bgs (3/15/2021)		

Associates Ltd, water resources / environmental consultants FTN Project # R06820-0100-016 LOGGED BY: AJP	PROJECT: Eco-Vista, LLC Class 4 Landfill GHI LOCATION: Eco-Vista, LLC Landfill, Tontitown, AR DRILLING CONTRACTOR: Walker-Hill Environmental, Inc. DRILLING EQUIPMENT: Versa-Drill VersaSonic DRILLING METHOD: Sonic with 4x6 in dia. core and case in soils SAMPLING METHOD: Continuous with 10 ft, 4 in dia. core barrel in Description		2/23-27/2021 in bedrock
	<ul> <li>(@ 47.5-53.5 ft bgs, RQD 5.6% and should be considered questionab due to poor recovery.</li> <li>(@ 47.5-53.5 ft bgs air loss and bit drop.)</li> <li>(@ 42-53.5 ft bgs air loss.</li> <li>(@ 53.5 ft due to very slow drilling, the drill rig and air comproverses to the other of the sample care was pulled. Reddish brow clay was found inside the sampler and is thought to have prevented retrieval of a sample. The boring was allowed to equilibrate for 15 minutes. Water level was measured at 44. 2 ft bgs.</li> <li>(@ 53.5-59 ft bgs, RQD 87%, fractures 2-43° off horizontal.</li> <li>(@ 53.5-59 ft bgs, air loss.</li> <li>(@ 53.5-59 f</li></ul>	ssor m 3 ft ting 10.0 ft of PVC scr 0.23 ft, 2	e 20/40 filter pack from 44.9 ft bgs bgs 2 in dia., 0.010 in slot, Sch. 40

Mailer tes Ltd. onsultants DRILL Sor SAME	LING CONTRACTOR: Iker-Hill Environmental, Inc. LING EQUIPMENT: 'sa-Drill VersaSonic LING METHOD: nic with 4x6 in dia. core and case PLING METHOD: ntinuous with 10 ft, 4 in dia. core barrel Description GRAVELY FAT CLAY, dark reddish brown, soft, moist. GRAVELY LEAN CLAY, tannish brown, gravel (<3" dia) soft, moist. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist. LEAN CLAY, tan, soft, moist. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist.	GROUND S 1263.6 WELL DEP' 51.4	C	-OW MP: We Constru Above gro concrete locking ou 41.2 ft of 1 including	
onsultants DRILL DRILL Sor SAMI Com United Bo D D D D D D D D D D D D D D D D D D	LING METHOD: nic with 4x6 in dia. core and case PLING METHOD: ntinuous with 10 ft, 4 in dia. core barrel Description GRAVELY FAT CLAY, dark reddish brown, soft, moist. GRAVELY LEAN CLAY, tannish brown, gravel (<3" dia) soft, moist. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist. LEAN CLAY, tan, soft, moist. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist.	51.4		Above gro concrete locking ou 41.2 ft of 3 including	ell Jound completion including 3x3 ft bad, four pipe bollards, and iter aluminum casing 2 in dia., Sch. 40 PVC solid riser, 3.2 ft of stickup
Con Caphic Con Con Con Con Con Con Con Con Con Con	PLING METHOD: httinuous with 10 ft, 4 in dia. core barrel Description GRAVELY FAT CLAY, dark reddish brown, soft, moist. GRAVELY LEAN CLAY, tannish brown, gravel (<3" dia) soft, moist. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist.			Above gro concrete locking ou 41.2 ft of 3 including	Durtion bund completion including 3x3 ft bad, four pipe bollards, and uter aluminum casing 2 in dia., Sch. 40 PVC solid riser, 3.2 ft of stickup
Con Graphic Log	Image: Construct of the second structure         Image: Constructure         Image: Constructure			Above gro concrete locking ou 41.2 ft of 3 including	Dund completion including 3x3 ft pad, four pipe bollards, and uter aluminum casing 2 in dia., Sch. 40 PVC solid riser, 3.2 ft of stickup
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	moist.@22.5-25 ft with lenses of red fat clay. SILTY GRAVEL, orange with lenses of white silt, gravel (<3" dia), loose, moist. CHERT, white with red staining along fractures. SILTY GRAVEL, orange with lenses of white silt, gravel				ase bentonite pellet seal from s to 31.5 ft bgs
	(<3" dia), loose, moist. CLAYEY GRAVEL, reddish brown, loose, moist. SILTY GRAVEL, tannish brown, gravel (<2" dia) loose, very moist.				
	CLAYEY GRAVEL, reddish brown, loose, very moist.				e 20/40 filter pack from 31.5 ft bg bgs
	SILT, reddish brown, loose, very moist. CLAYEY GRAVEL, reddish brown, loose, very moist. GRAVELY FAT CLAY, dark reddish brown, soft, very				water: 41.6 ft bgs (3/15/2021) 2 in dia., 0.010 in slot, Sch. 40
	moist.			PVC scre	en
<u> </u>	SILT, tannish brown, dense, moist to saturated. LIMESTONE, crystalline, gray.		141414141		in dia., Sch. 40 PVC end cap rminated at 49.0 ft bgs
	After bedrock was encountered, 20 ft of 2-inch diameter PVC solid riser and 30 ft of screen was placed in the borehole to ensure it would remain open after the 4-inch barrels were pulled. The borehole was allowed to equilibrate 14 hours (overnight). The following morning the water level measured at 38.7 ft bgs.				
2		SILTY GRAVEL, tannish brown, gravel (<2" dia) loose, very moist. CLAYEY GRAVEL, reddish brown, loose, very moist. GRAVELY FAT CLAY, dark reddish brown, soft, very moist. SILT, tannish brown, dense, moist to saturated. LIMESTONE, crystalline, gray. After bedrock was encountered, 20 ft of 2-inch diameter PVC solid riser and 30 ft of screen was placed in the borehole was allowed to equilibrate 14 hours (overnight). The following morning the water level measured at 38.7 ft bgs.	SILTY GRAVEL, tannish brown, gravel (<2" dia) loose, very moist.	SILTY GRAVEL, tannish brown, gravel (<2" dia) loose, very moist.	SILTY GRAVEL, tannish brown, gravel (<2" dia) loose, very moist.