Haley Griffith (adpce.ad)

From: Andrew Pruitt <apruitt@olsson.com>
Sent: Thursday, July 17, 2025 2:34 PM
To: EE GW Reports
Cc: Matthew Carey (adpce.ad); Billy J. Summerford; rhendrix@ccswda.com; Angela Sparks; Melissa Vaught; Paul Crawford
Subject: Technical memorandum for the plugging and abandonment of GP-7, MW-28, and MW-29 CCSWDA Legacy Class 1 Landfill , Permit No. 0254-S1-R4
Attachments: 25-07-17_ENV_CCLF Well and Gas Probe Abandonment Memo .pdf

Good afternoon,

Olsson has prepared the attached technical memorandum for the plugging and abandonment of GP-7, MW-28, and MW-29 at the CCSWDA Legacy Class 1 Landfill.

If you have any questions regarding this submittal, please let us know.

Thanks,
Andrew

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MEMO

To:	Arkansas Department of Energy and Environment, Department of Environmental Quality Attn: Billy Jack Summerford 5301 Northshore Drive North Little Rock, AR 72116
From:	Andrew Pruitt, PG
RE:	Gas Probe and Monitoring Well Abandonment, Craighead County Class 1 Landfill Permit No. 0254-S1-R4, AFIN: 16-00199
Date:	July 17, 2025
Project #:	025-02504

On behalf of the Craighead County Solid Waste Disposal Authority (CCSWDA), Olsson is providing this technical memorandum for the CCSWDA Legacy Landfill in Jonesboro, Arkansas. This memorandum presents a summary of field activities associated with the abandonment of one gas probe and two monitoring wells as required by Title 8 of the Code of Arkansas Rules Part 60 (8 CAR 60), §60-1103(f).

1. BACKGROUND

A work plan was submitted by Olsson to the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), on June 3, 2025, to abandon gas probe GP-7 and monitoring wells MW-28 and MW-29. DEQ approved the work plan in a letter dated June 25, 2025. Field activities associated with the abandonments are described in the following sections.

2. DRILLING METHOD

Drilling activities associated with the abandonments were conducted July 1 through July 3, 2025. Walker-Hill Environmental Inc., an Arkansas-licensed driller, provided the well abandonment services. An Olsson geologist experienced in the abandonment of gas probes and monitoring wells was onsite to document the work.

A BK-66 was used for overdrilling the abandonment gas probe GP-7 and wells MW-28 and MW-29. The abandonment was accomplished by overdrilling using 8.25-inch outer diameter hollow-stem augers fitted with a guide stem. Details describing the gas probe and well abandonment are provided in Section 3.0.

3. GAS PROBE AND WELL ABANDONMENT

The gas probe and well abandonment adhered to methods described in both the US Environmental Protection Agency's (EPA's) *Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells* (Aller et al. 1991) and the Arkansas Department of Pollution Control and Ecology (ADPCE) interim policy PRCR 96-4 and required by the Arkansas Water Well Construction Commission (AWWCC). The concrete pad, casing, and pipe bollards at GP-7, MW-28, and MW-29 were removed prior to abandonment activities. Monitoring wells MW-28 and MW-29 were overdrilled to the total depth of each well. The formation sands were allowed to collapse, and the remainder of each borehole was backfilled using 10- to 20-silica sand up to the base of the aquifer confining unit. A minimum of 3 ft of slow-release bentonite was placed at the base of the confining unit, followed by a well-mixed cement bentonite grout installed to the ground surface using a tremie pipe to ensure a proper seal. GP-7 was overdrilled to the total depth and was backfilled with a well-mixed cement bentonite grout installed to the ground surface using a tremie pipe.

Abandonment details for each well are provided in Table 1 below.

Table 1. Gas probe and monitoring well abandonment details.

Well ID	Total Depth (ft bgs[a])	Total Depth Overdrilled (ft bgs)	Aquifer Sand/Gravel (ft bgs)	10- to 20-Silica Sand (ft bgs)	Bentonite Pellets (ft bgs)	Bentonite/ Cement Grout (ft bgs)
GP-7	48	49	N/A	N/A	N/A	49.0 – 0
MW-28	105	109	109.0 – 56.0	56.0 – 22.0	22.0 – 18.0	18.0 – 0
MW-29	108	109	109.0 – 66.0	66.0 – 24.0	24.0 – 20.0	20.0 – 0

Notes:

a. ft bgs = feet below ground surface.

If you have questions or comments regarding this memorandum, please do not hesitate to contact Andrew Pruitt, PG at (501) 225-7779.

ADPCE. 1996. *Interim Policy PRCR 96-4 Monitoring Well Construction, Geotechnical Boreholes, And Plug & Abandonment Policy.*

Aller, L., T.W. Bennett, G. Hackett, R.J. Petty, J.H. Lehr, H. Sedoris, D.M. Nielsen, and J.E. Denne. 1991. *Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells* [EPA 160014-891034]. Las Vegas: US Environmental Protection Agency, Office of Research and Development, Environmental Monitoring Systems Laboratory.

AWWCC [Arkansas Water Well Construction Commission]. 2018. *Rules and Regulations*. Little Rock, AR: Arkansas Water Well Construction Commission.

PROFESSIONAL GEOLOGIST'S CERTIFICATION

With this certification, I certify that I am an Arkansas-registered professional geologist and a qualified groundwater scientist as defined in Arkansas Pollution Control and Ecology Commission Rule Title 8 of the Code of Arkansas Rules (CAR) Part 60 (8 CAR Part 60), §60.1201(f), that these abandonments described in this technical memorandum are accurate to the best of my knowledge.



Andrew J. Pruitt, Arkansas PG #3029

7/17/2025

Date

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