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Mr. Bill Sadler, P.G.
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, AR 72118-5317
Submitted via Email: sadler@adeq.state.ar.us

Subject: NABORS Landfill
NABORS Landfill Borehole Plugging and Abandonment Report
Site AFIN: 03-00051; Site Permit No. 0249-S1-R2

Dear Mr. Sadler:

SCS Engineers (SCS) is pleased to present you with this Borehole Plugging and Abandonment Report for five (5) borings at the NABORS landfill (NABORS). Each boring was initially installed in 2022 to study hydrogeologic properties and to serve as a monitoring point for the Dye Test (DIN 83185). The Dye Test Report was submitted to DEQ on May 7, 2024 (DIN 85502). This report details the procedure followed to plug and abandon EB-1, EB-2, EB-4, EB-5, and IW-1.

APC&EC Regulation No.22.1103(f)), states *"Division Approval - No monitor well or piezometer shall be installed, decommissioned, replaced, repaired or otherwise altered without prior approval by the Solid Waste Management Division. Upon completion of a well installation, replacement, decommissioning, repair or alteration, a report shall be made to the Solid Waste Management Division and a copy placed in the facility operating record. The work quality and methods must be certified by the supervising professional."* SCS requested (DIN 8426) and was granted (DIN 84840) Division approval to abandon the five borings.

Abandonment of each boring was performed in accordance with the "EPA Handbook of Suggested Practices for Design and Installation of Groundwater Monitoring Wells." Anderson Engineering Consultants, Inc. (AECI), a licensed water well contractor in the state of Arkansas, performed the abandonment, while a qualified groundwater scientist from SCS oversaw and documented the procedure. Since each borehole was open below the casing placed from ground surface to the dolomite contact, a tremie pipe was placed at depth and used to backfill each boring to within four feet of ground surface. No casing was installed at EB-1, since dolomite was present at ground surface.

Borings EB-1, EB-2, EB-4, EB-5, and IW-1 were plugged and abandoned on February 20 and 21, 2024. SCS first removed dye test bailers and string from each borehole. At each boring, a tremie pipe was used to pump Portland cement into the borehole from the bottom upward to within four feet below land surface. After a rest period, each plugged borehole was checked and topped off with additional Portland cement if needed. The overburden casing and tremie pipe remnants were left in place. Photos of the plugging and abandonment process are attached.

If you have any questions or comments regarding this document, please do not hesitate to contact me at (501) 812-4551 or dmccullough@scsengineers.com.

Sincerely,

Anna Feldman
Associate Professional
SCS Engineers

Dan McCullough, P.G.
Senior Project Manager
SCS Engineers

AF/DM

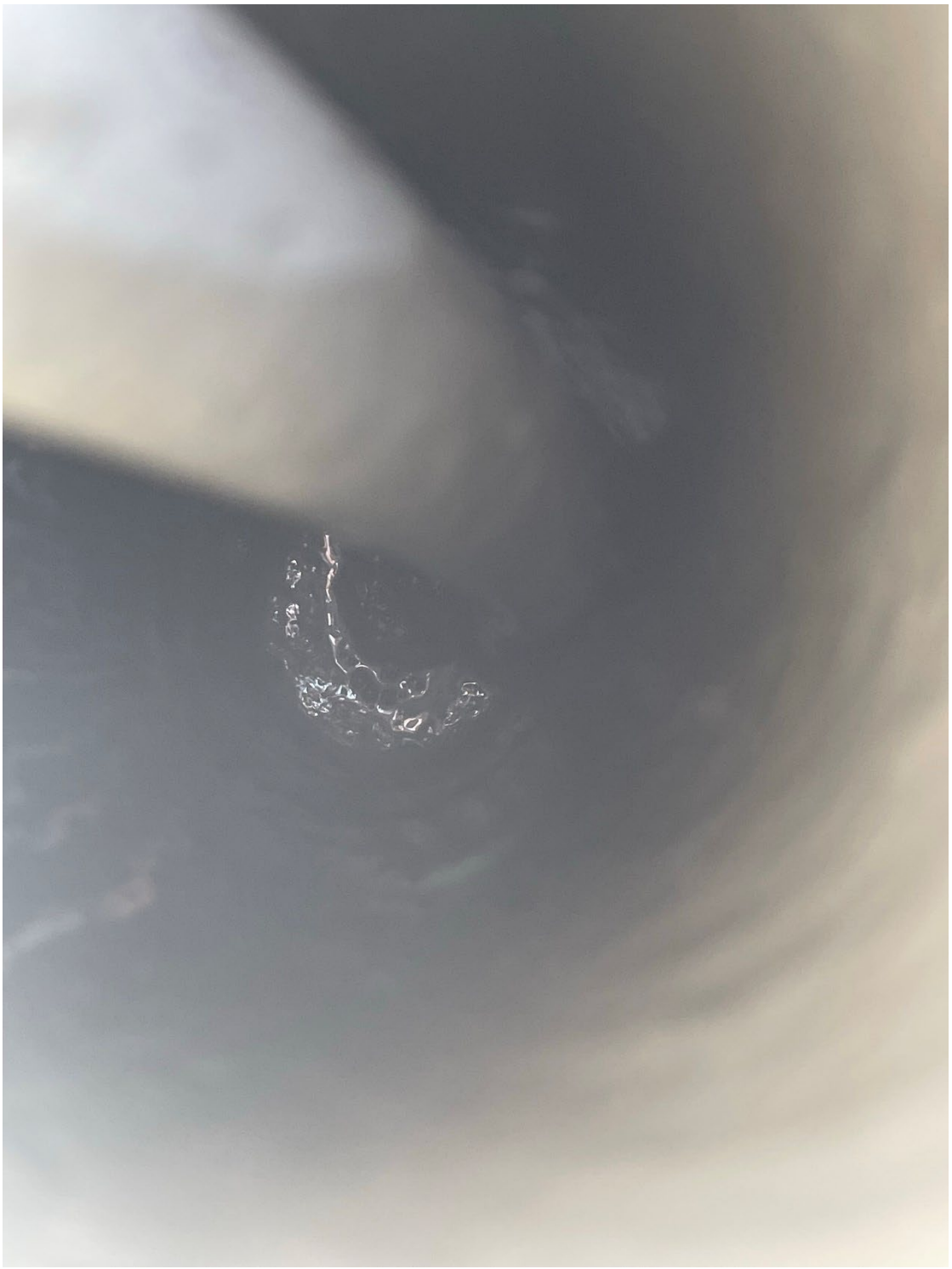
Photo Log

Vat of Portland cement to be used to grout boreholes through tremie pipe

IW-1 with tremie pipe prior to grouting

Backfilling IW-1; water rising to top of casing

Backfilling IW-1; visible dye (IW-1 was emplacement location for dye test)



IW-1 prior to topping off with cement

Placing cement to TOC in IW-1

EB-5 with tremie pipe prior to grouting

Backfilling EB-5; water rising to top of casing

EB-5, backfill complete

Placing cement to TOC in EB-5

EB-4 with tremie pipe prior to grouting

EB-4, backfill complete, prior to top off

EB-2 with tremie pipe, prior to grouting

Backfilling EB-2; water rising to top of casing

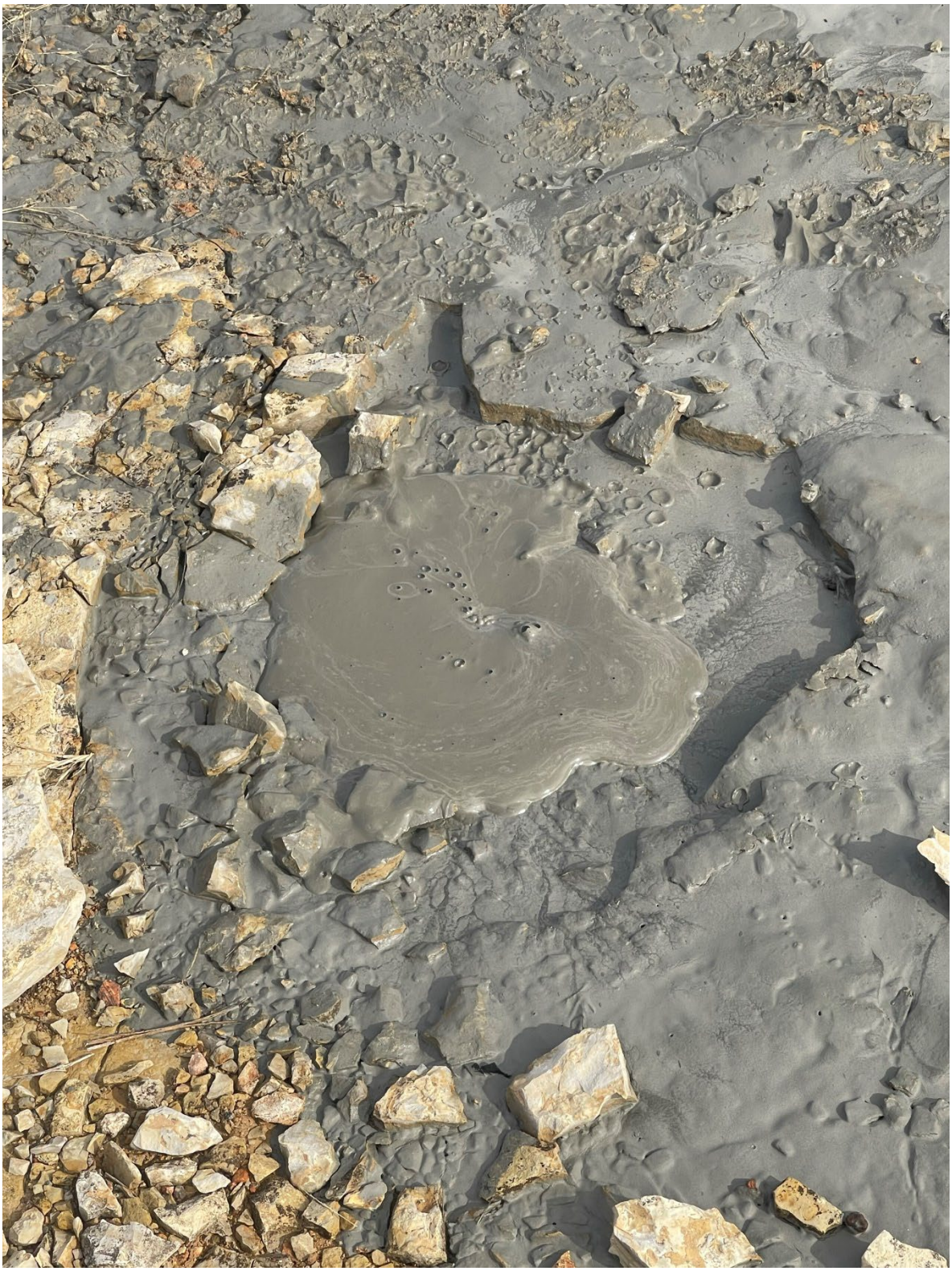
EB-2, backfill complete, prior to top off

Placing cement to TOC in EB-2

EB-1 with tremie pipe, prior to grouting

Backfilling EB-1; water rising to top of casing

Backfilling EB-1; water rising to top of casing



EB-1, backfill complete, prior to top off

Placing concrete to ground surface in EB-1