

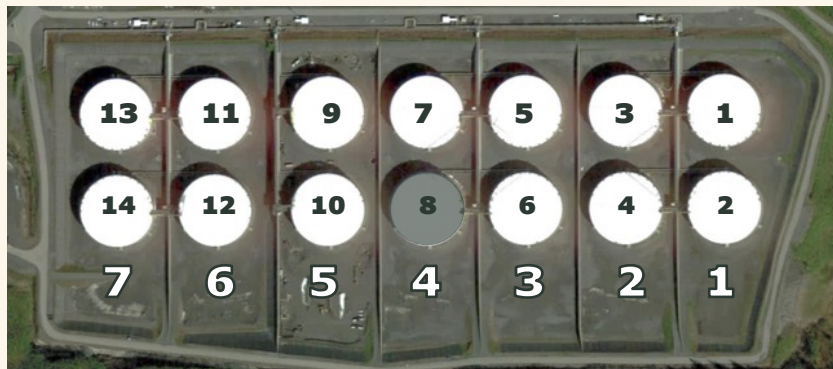
VMT East Tank Farm **Hydro-Test**

Robbin Capers
and
Olga Stewart, P.E. with Geosyntec Consultants



1

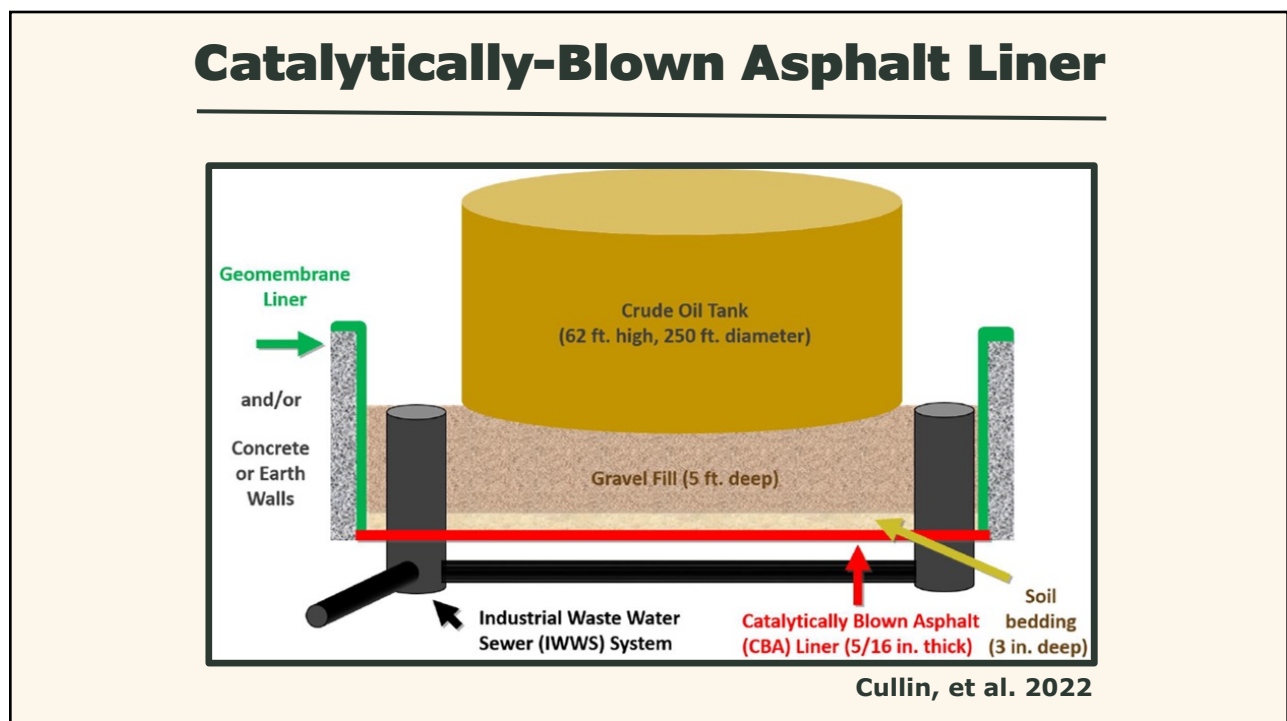
VMT East Tank Farm



2



3

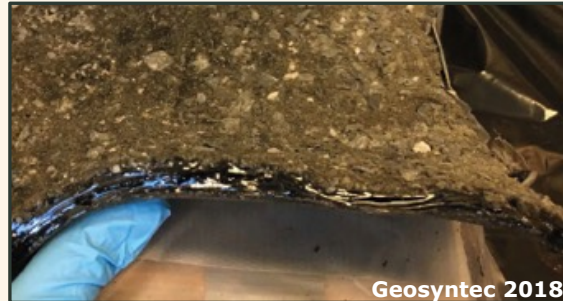


4

Catalytically-Blown Asphalt Liner



1976 Construction



Minimum 5/16" thick

5

VMT Oil Discharge Prevention and Contingency Plan (C-Plan)

November 2024

Alaska Department of Environmental Conservation (ADEC)
Division of Spill Prevention and Response (SPAR)

Condition of Approval 1

East Tank Farm Secondary Containment Area Required Evaluation

This condition is reasonable and necessary to ensure under AS 46.04.030(e)
that the plan holder meets secondary containment requirements of
18 AAC 75.075 and **18 AAC 75.990(124)**.

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Secondary containment requirements for aboveground oil storage tanks

18 AAC 75.075

Minimum secondary containment system requirements include:

- (1) berms, dikes, or retaining walls that are constructed to prevent the release of spilled oil from within the containment area; and
- (2) with the exception of the area under a tank, components constructed of, or lined with, materials that are:
 - (A) adequately resistant to damage by the products stored to maintain sufficient impermeability;
 - (B) resistant to damage from prevailing weather conditions;
 - (C) sufficiently impermeable; and
 - (D) resistant to operational damage.

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Sufficiently Impermeable

18 AAC 75.990 (124)

...impermeability necessary to
protect groundwater from contamination
 and to
contain a discharge or release
until it can be detected and cleaned up.

...for tanks constructed after May 1992...
 a maximum permeability...of 1×10^{-6} cm per second
 at a maximum anticipated hydrostatic pressure...

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C-Plan Condition of Approval 1

February 2025

Alyeska submitted **Electrical Leak Location** plan

June 2025

ADEC SPAR Division directs parties to confer
(Alyeska, PWSRCAC, and the City of Valdez)

August 2025

Alyeska submitted a new testing method: **Hydro-Test**

9

Since January 2026

February 2026

ADEC issues **conditional approval** for Hydro-Test plan

Reduce margin of error

Increase test duration

Increase # of measurement standpipes

March 2026

Alyeska submits **second revised testing plan**

VMT East Tank Farm Secondary Containment System

Rationale and Acceptance Criteria for Hydro-Test, Revision 2

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VMT East Tank Farm Secondary Containment System Rationale and Acceptance Criteria for Hydro-Test, Revision 2

**3 hr equilibration
+ 9 hr test period**

**Testing Season
July 1 - October 15**

Proposed Acceptance Criteria: 0.02 ft/hr
Measurement Resolution: 0.002 ft/hr

Water Depth 1.5-3.0 ft

12 Standpipes		
Depth	Instrument	No.
Deep	Piezometer	4
Shallow	Piezometer + HRWLS*	4
	HRWLS*	4

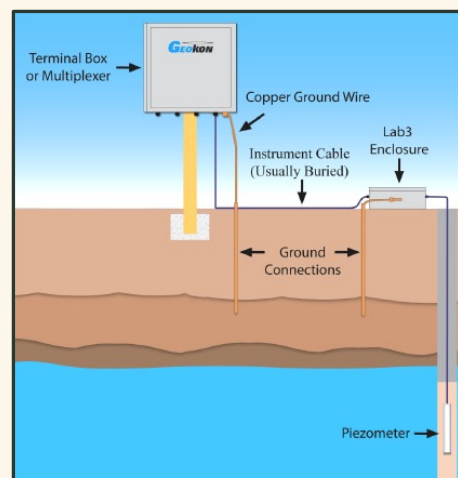
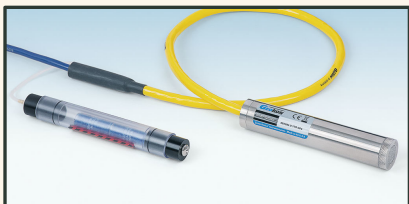
***High-Resolution Water Level Sensor**

11

Piezometer

**Geokon 4500ALV-35kPa
Vibrating wire piezometer**

**Low pressure ranges
Barometric pressure compensation
Resolution = 0.0029 ft**



Typical piezometer installation

12

High-Resolution Water Level Sensor HRWLS

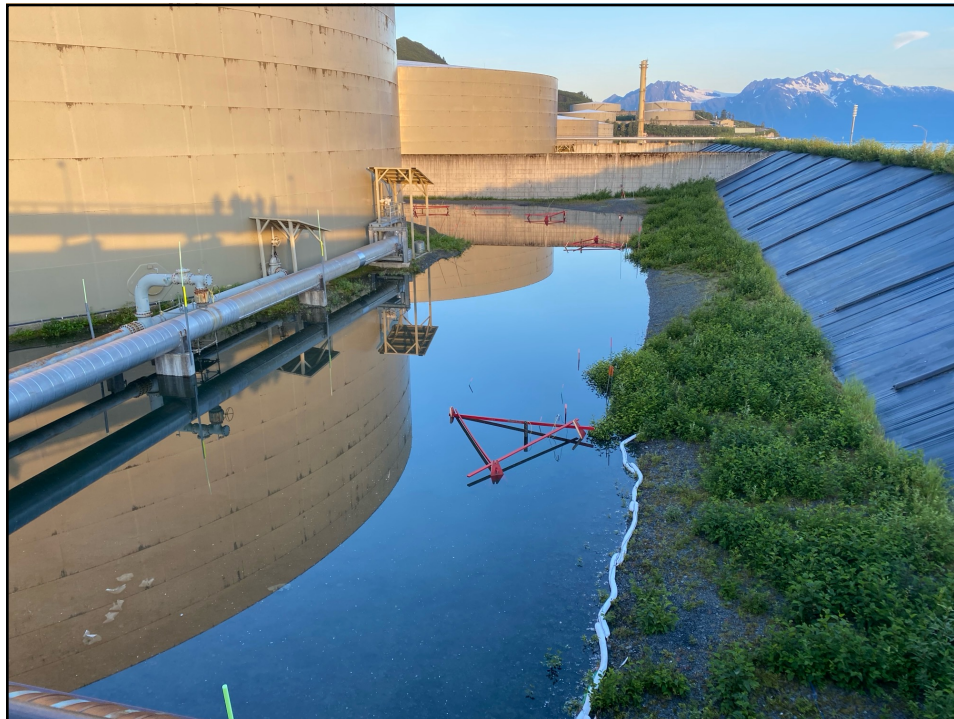


Standpipe with piezometer
and RBR Pressure Transducer

RBR Duet³ TD
Temperature and Depth
Resolution > 0.002 ft



13

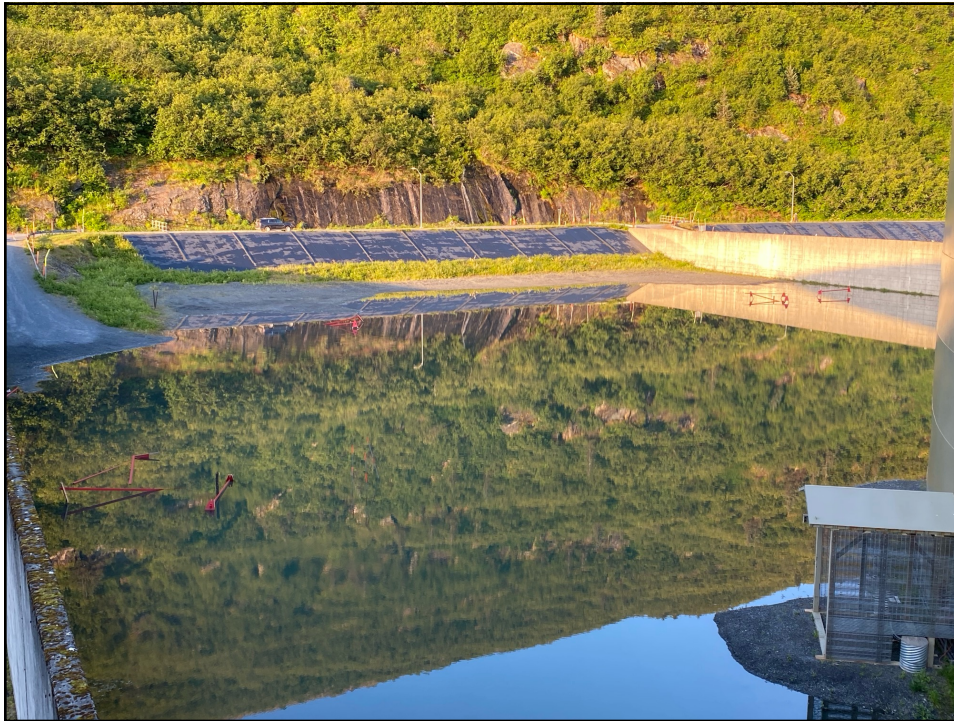


**August 1st
2026**

Dike Cell 4

Tanks 7 & 8

14



**August 1st
2026**

Dike Cell 4

Tanks 7 & 8

15

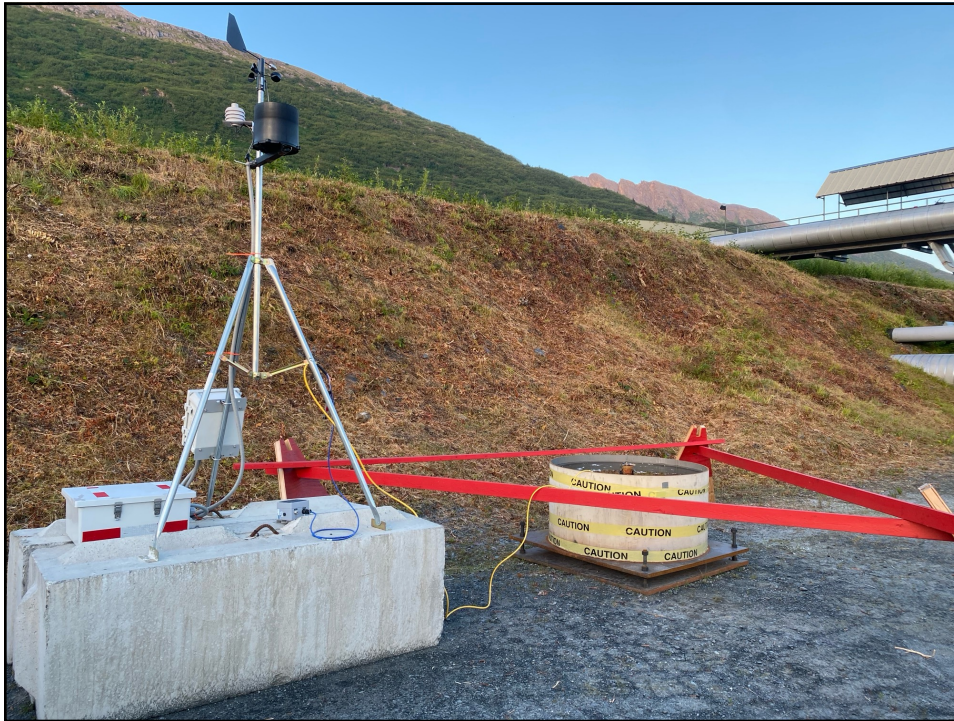


**August 1st
2026**

Dike Cell 4

Tanks 7 & 8

16



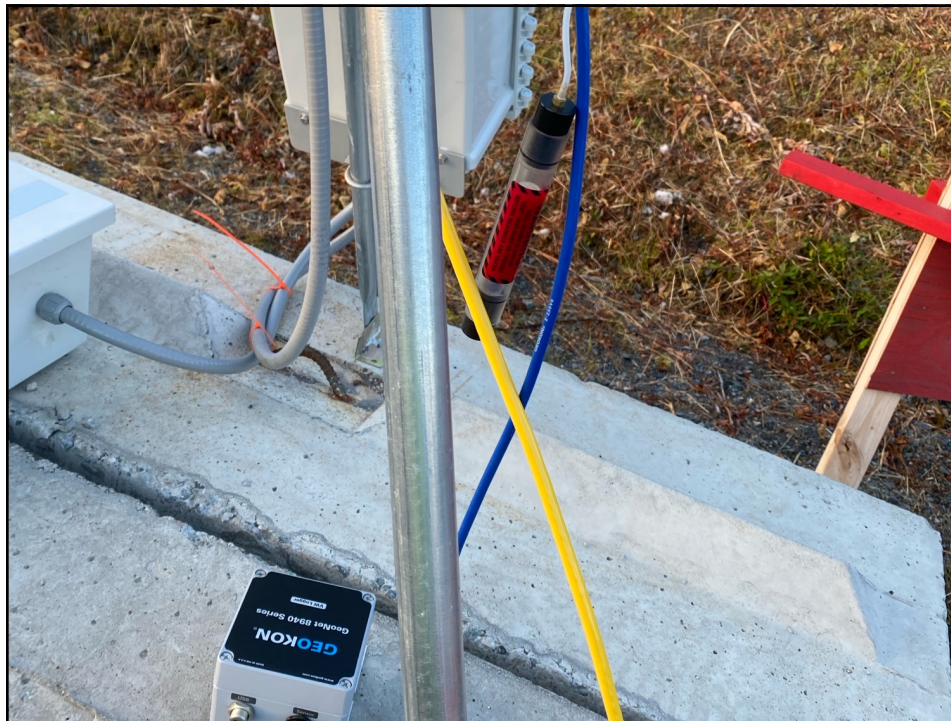
**Evaporation/
Precipitation
Basin**

17



**Evaporation/
Precipitation
Basin**

18



Evaporation/ Precipitation Basin

19

Results

Water Level Drop (evaporation corrected)

0.00082 ft/hr (0.249 mm/hr)

0.00984 ft/12hrs (3 mm/12 hrs)

"The [ADEC SPAR] Division reserves the determination on what is a passing criteria sufficient to meet regulatory standards until results are available and analyzed."

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**Thank
you**

Questions?