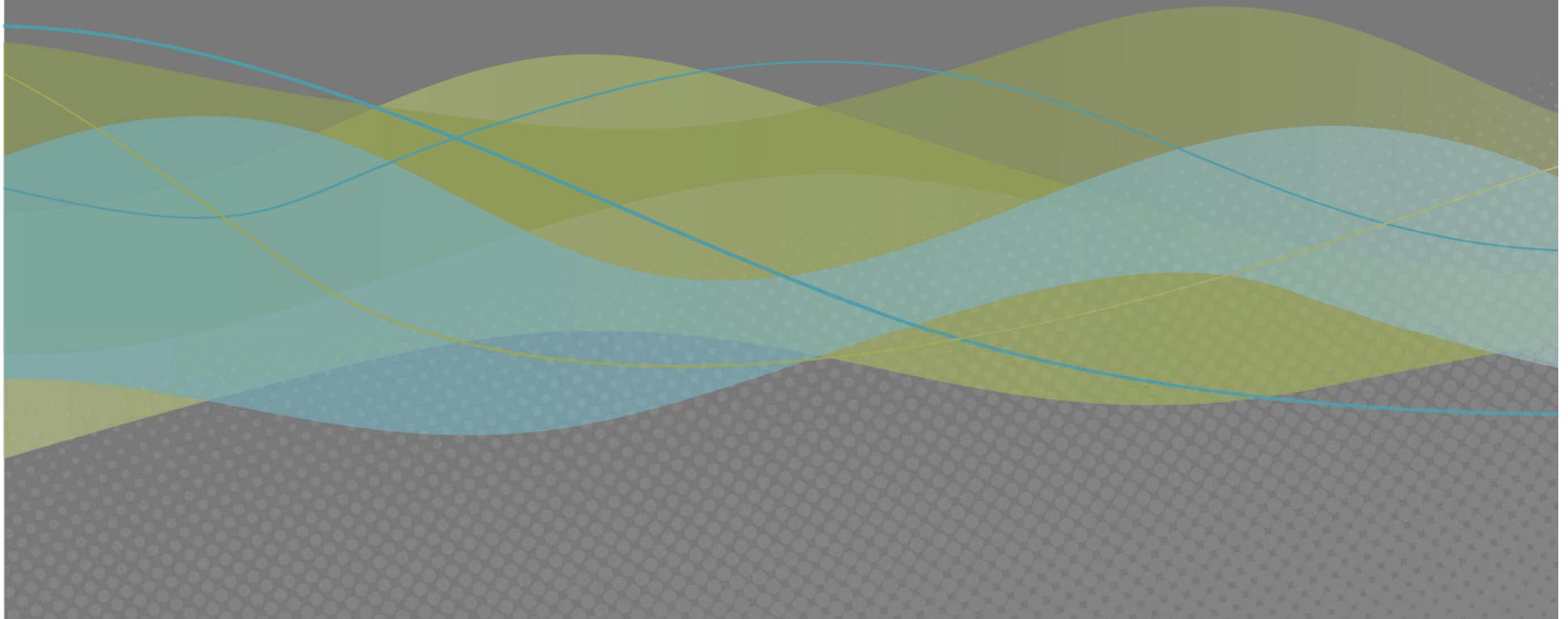




MAUL
FOSTER
ALONGI

NM-363 Tracer Study

Tom Mullen and Erik Naylor



Outline

- Introduction
- Background
 - Site description
 - Project objectives
 - Tracer Overview
- Tracer study design
 - Geology
 - Water chemistry
 - Injection locations
- Tracer study implementation
 - Definition of a tracer study - Erik
 - Laboratory preparation and tracer solutions
 - Monitoring
 - Injections
- Results
- Conclusions

Background

- Site description
- Project objectives
- Tracer Overview

Study Location and Setting

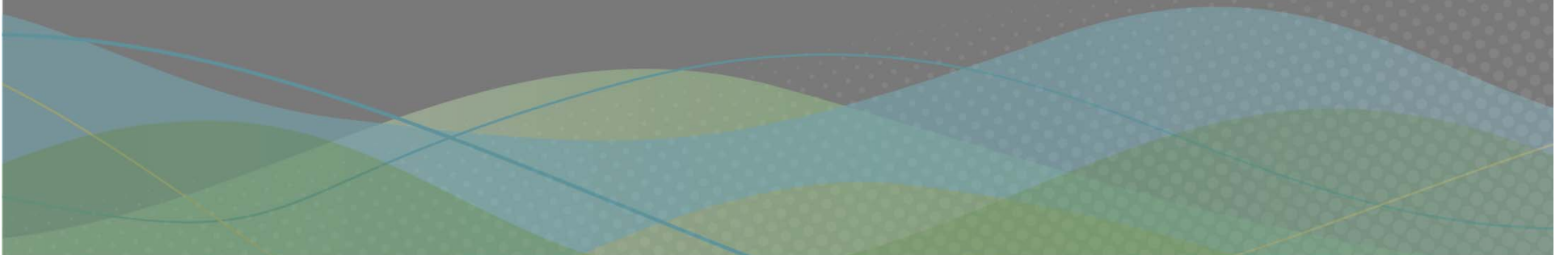


Why did we need one?

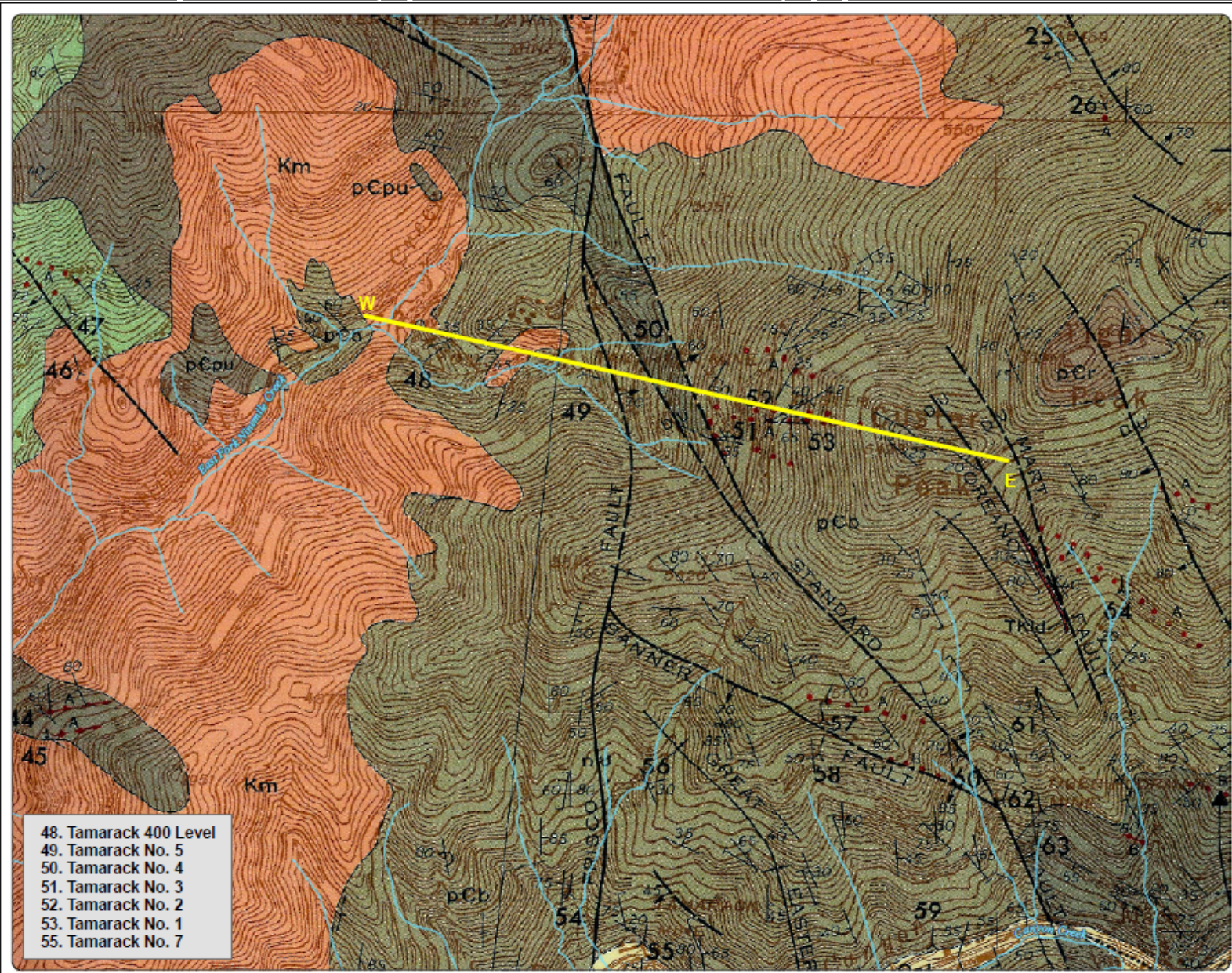


Tracer Study Design

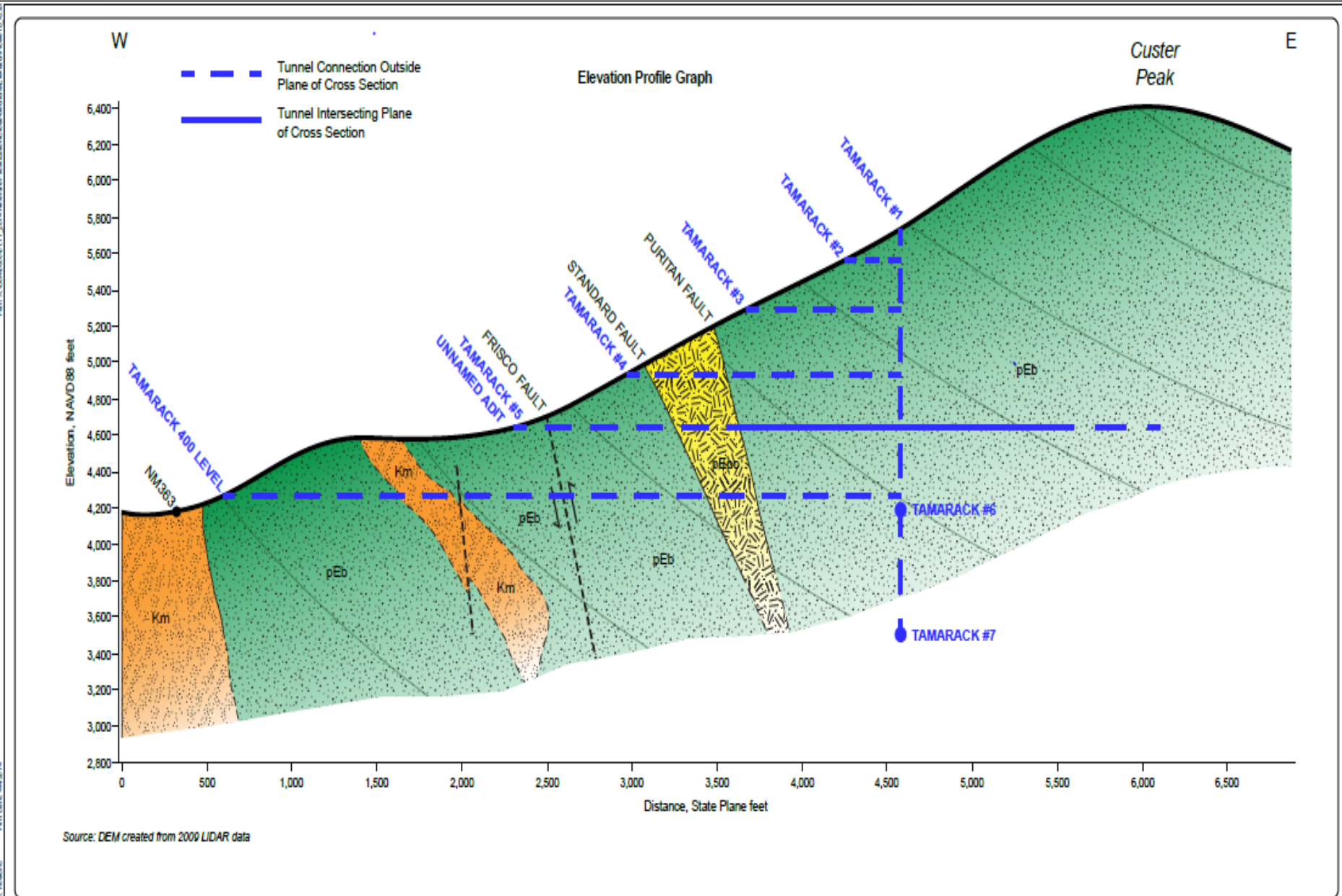
- Geology
- Water chemistry
- Injection locations



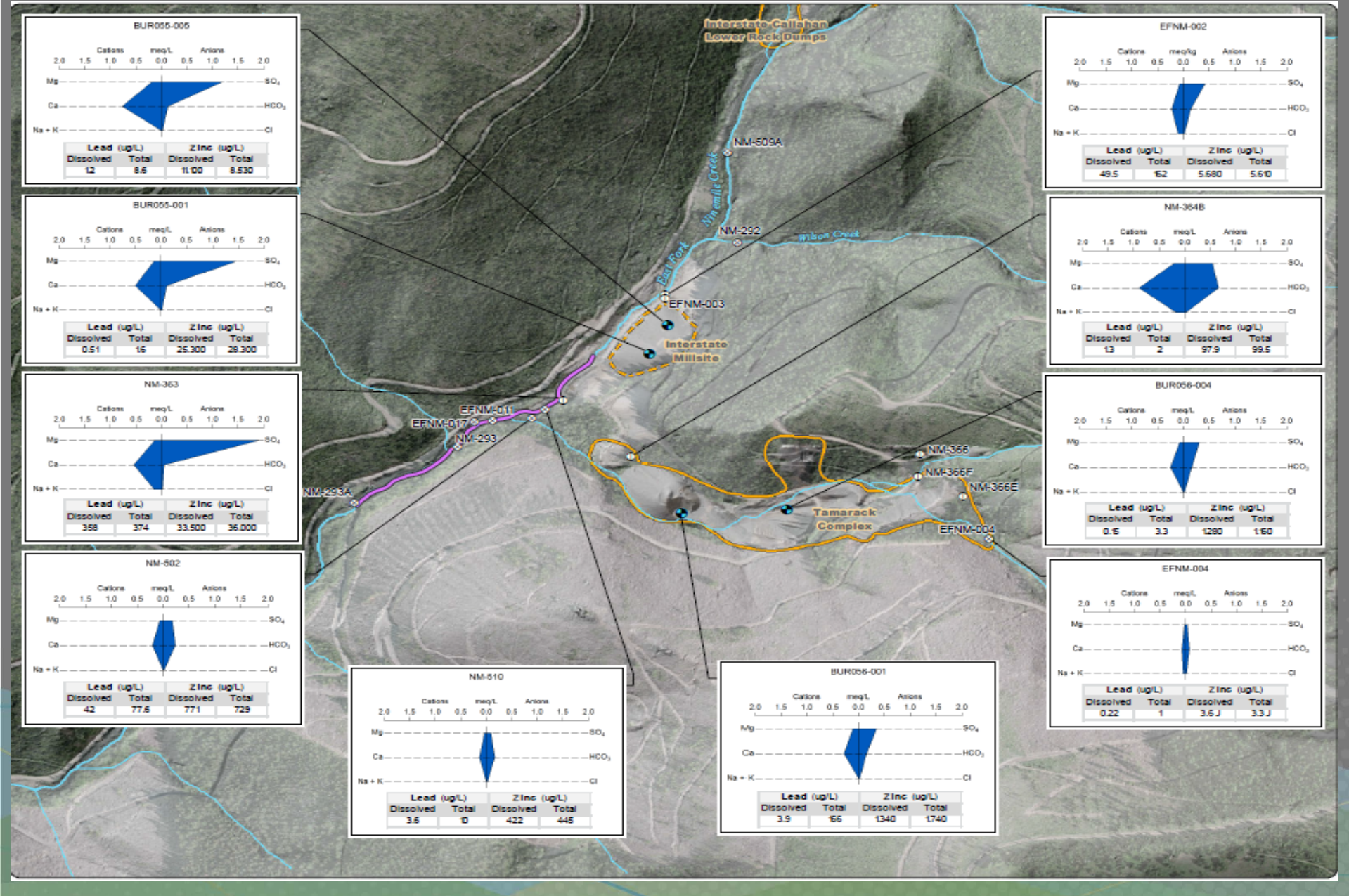
Study Design – Geology



Study Design – Geology



Study Design – Water Chemistry

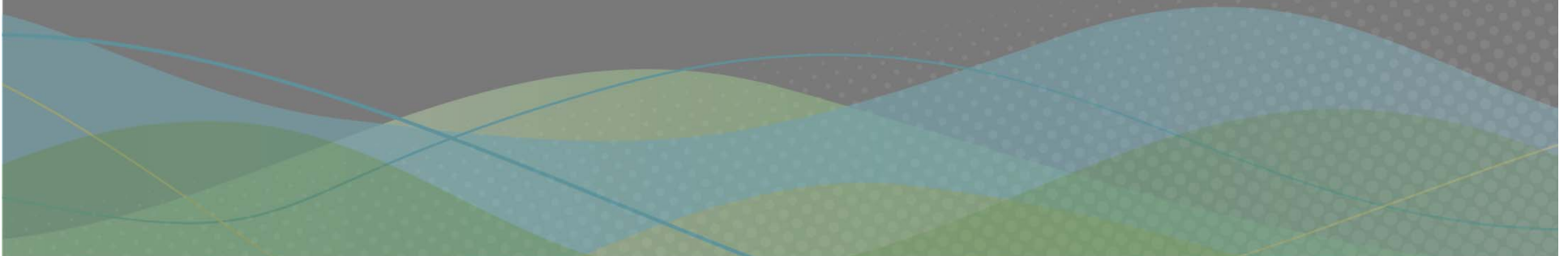


Study Design – Injection Locations



Tracer Study Implementation

- Definition of a tracer study and tracer
- Laboratory preparation and tracer solutions
- Monitoring
- Injections



What is a tracer study and a tracer?



Laboratory Preparation



Monitoring



BUR055-001 MW Injections



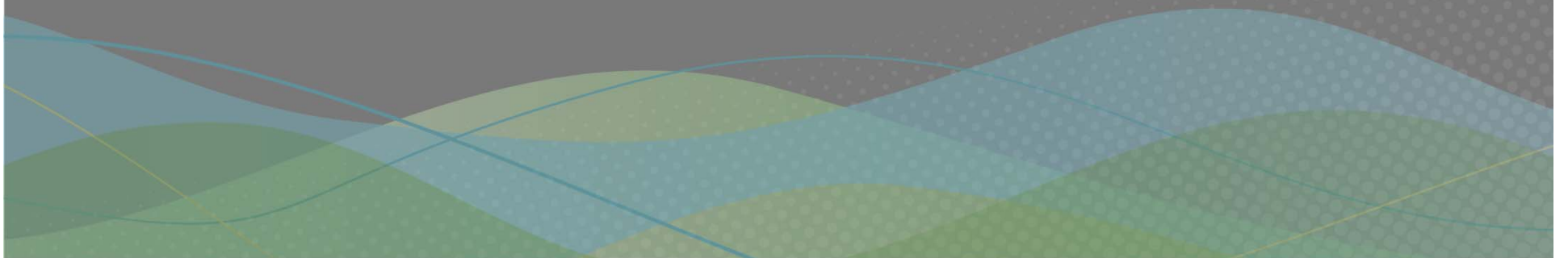
NM364B Seep/Adit Injections



Hooligan Protection

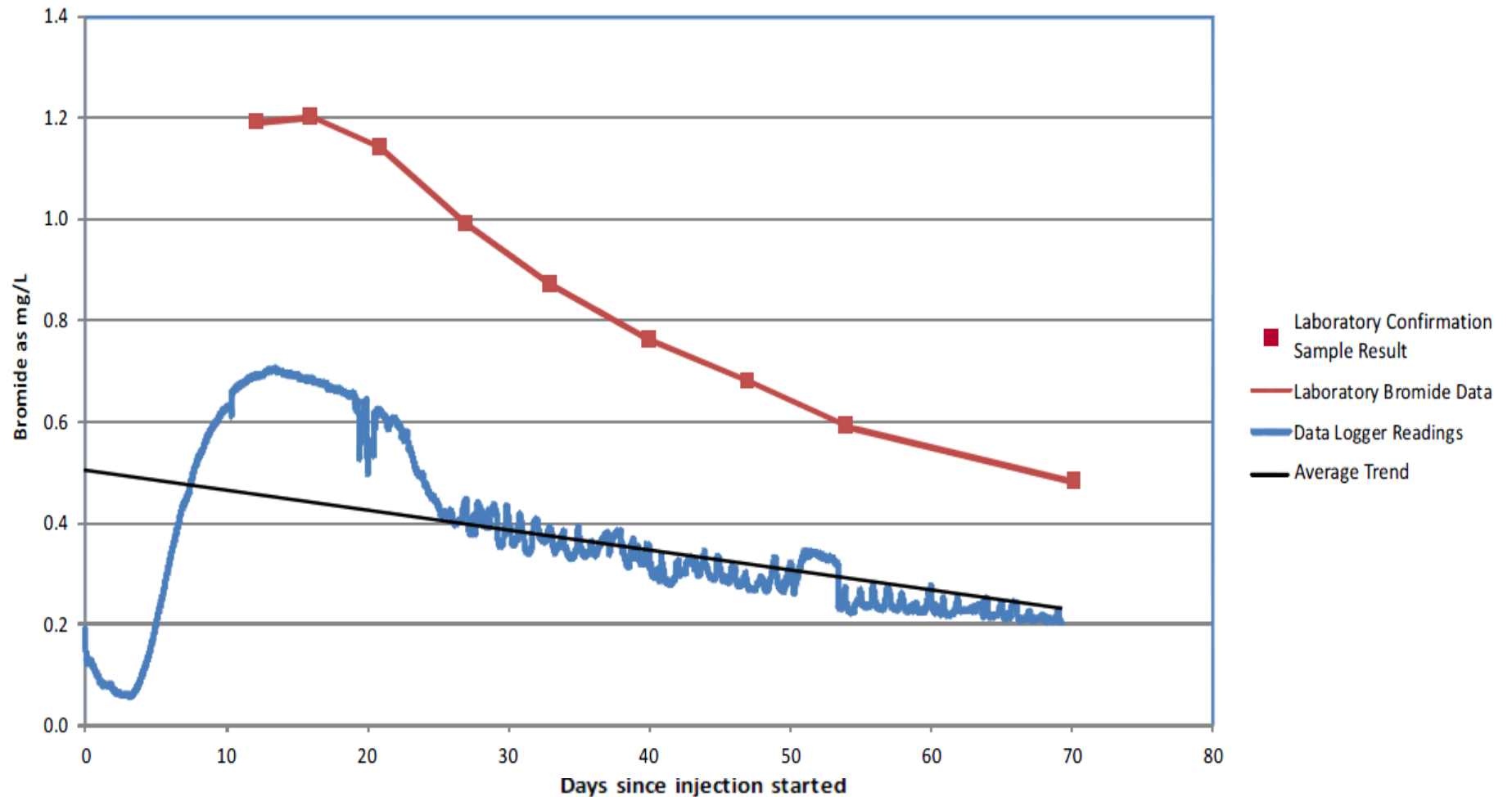


Results



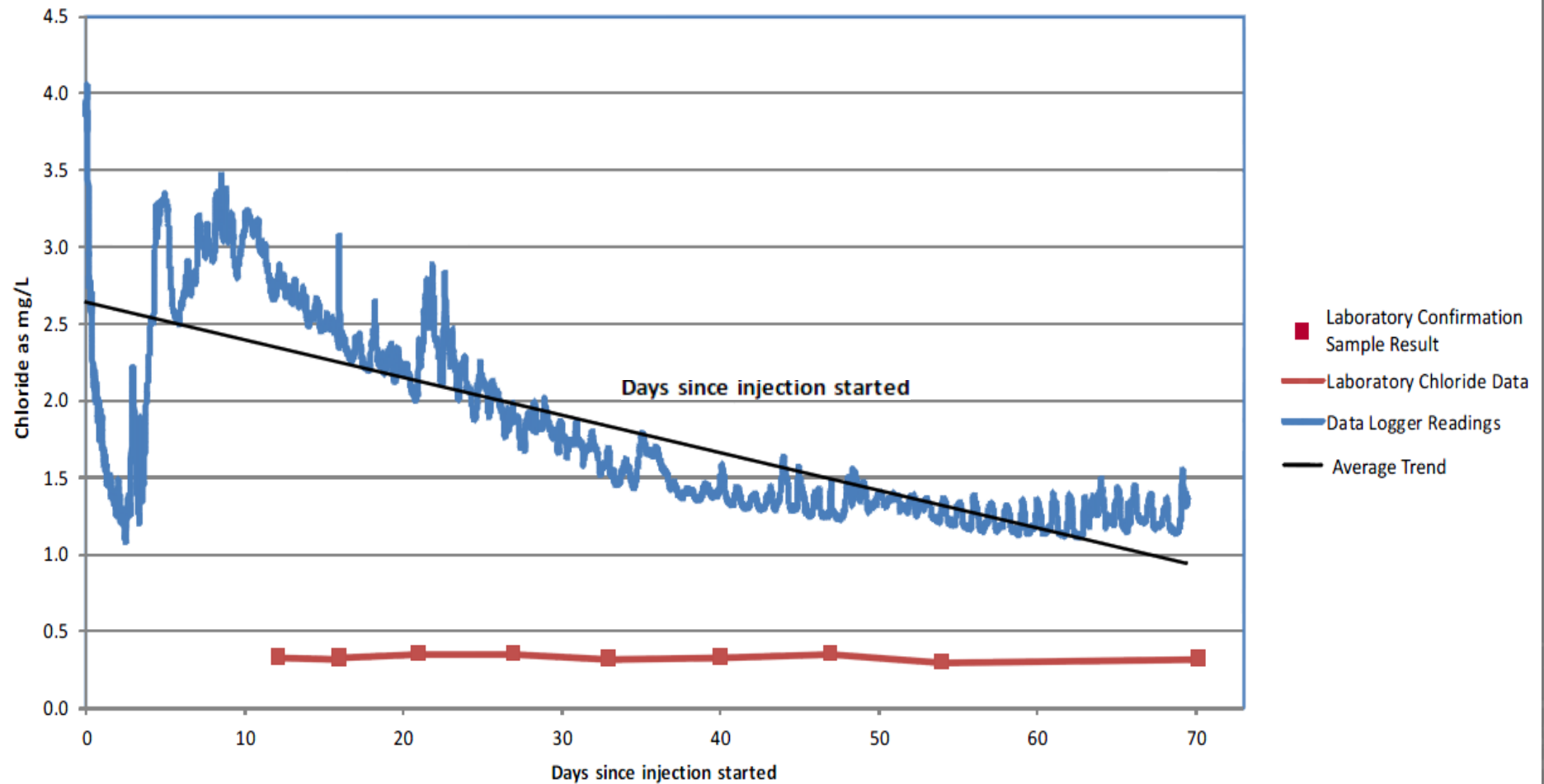
Br Breakthrough Curve – Test 1

Bromide Concentrations in NM-363 -Test 1 - BUR055-001 Injection



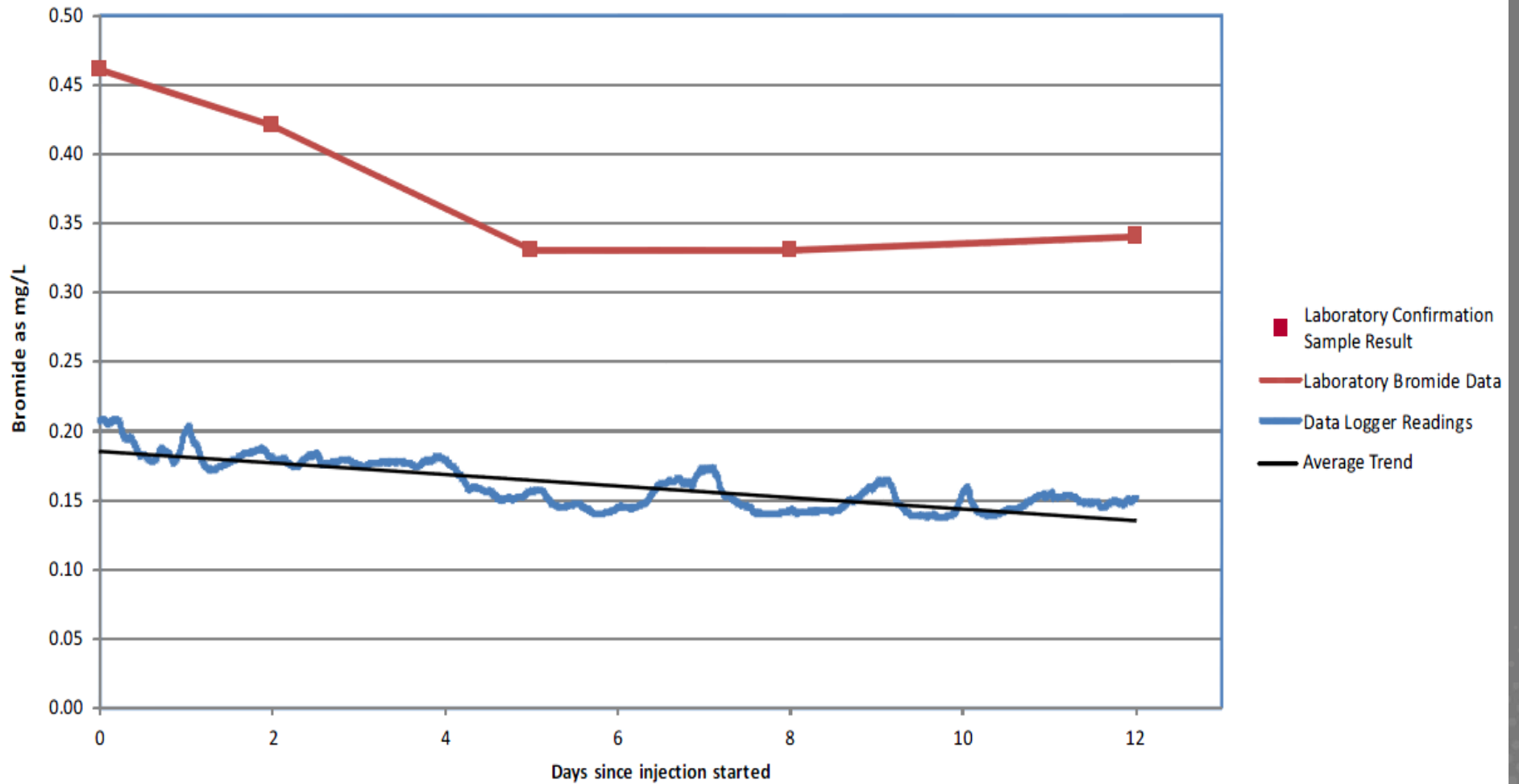
Cl Breakthrough Curve – Test 1

Chloride Concentrations in NM-363 - Test 1 - NM-346B Injection



Br Breakthrough Curve – Test 2

Bromide Concentrations in NM-363 - Test 2 - NM-364B Injection



Conclusions

