

Billings PCE NPL Site

December 5, 2022

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What Have We Done?

OU1 Indoor Air

Continued investigation of structures.

- ~50 Structure Indoor Air Samples
- ~140 Structure Sub-slab Samples
- ~115 Soil Gas Samples
- ~95 Utility Corridor Samples

OU2 Groundwater

Bi-annual monitoring of wells for plume delineation.

- 120 Wells Sampled for Each Event

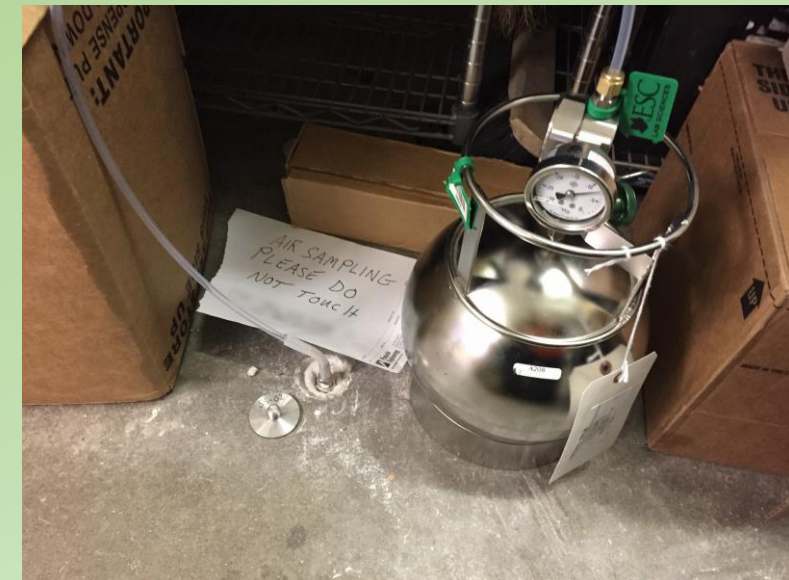


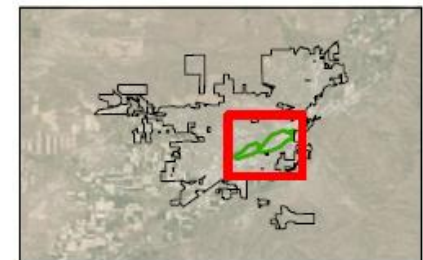
Figure 1-1
Winter 2022 Vapor Intrusion Investigation
Structures of Potential Concern

Legend

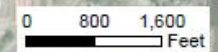
- Exceedance of Residential RML^a in Indoor Air
- Exceedance of Residential VISL^b in Indoor Air
- No Exceedance of Indoor Air VISL, but High Sub-Slab Vapor or Soil Gas Concentrations
- Residential with No Exceedances
- Commercial with No Exceedances
- ★ Suspected PCE Source
- 14.4 µg/L PCE in Groundwater (Residential TGC)
- 60.6 µg/L PCE in Groundwater (Commercial TGC)
- Preliminary BPCE VI Study Area
- City of Billings

Notes:

µg/m³ = micrograms per meter cubed
 µg/L = micrograms per liter
 BPCE = Billings Tetrachloroethene
 PCE = Tetrachloroethene
 RML = Regional Removal Management Level
 SG = Soil Gas
 SPS = Suspected PCE Source
 SSV = Sub-Slab Vapor
 TCE = Trichloroethene
 TGC = target groundwater concentration
 VI = Vapor Intrusion
 VISL = Vapor Intrusion Screening Level
 Dashed contours indicate estimated values



DATA SOURCES
 -Tritiyao, 2019. Remedial Investigation Report, Billings PCE Groundwater Facility, Billings, Montana, May 15.
 -Image: World Imagery, 2021
 -Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

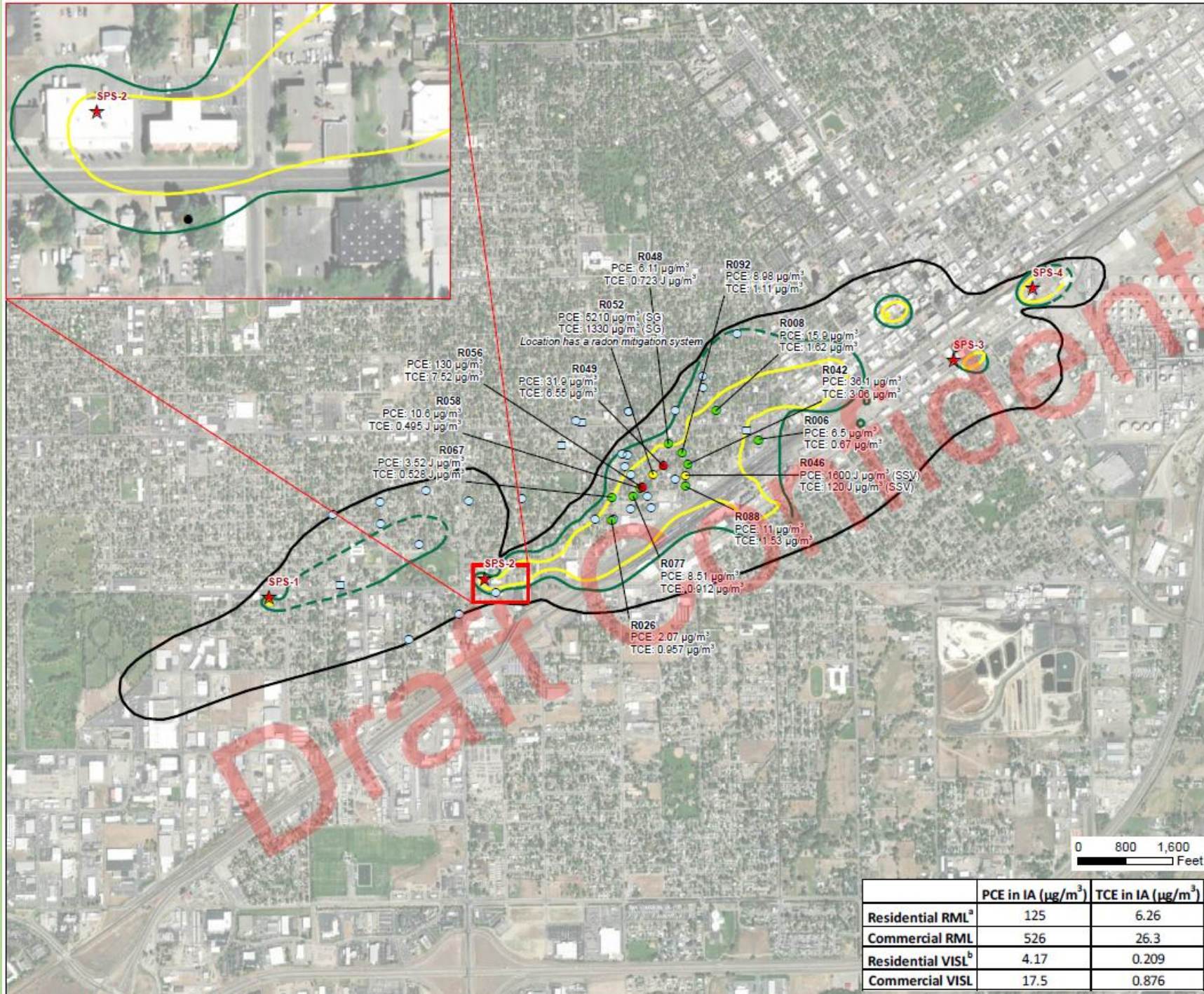


	PCE in IA (µg/m ³)	TCE in IA (µg/m ³)
Residential RML^a	125	6.26
Commercial RML	526	26.3
Residential VISL^b	4.17	0.209
Commercial VISL	17.5	0.876

GILBANE AECOM JV

BILLINGS PCE SITE
WINTER 2021/2022 VAPOR INTRUSION FIELD SAMPLING PLAN

DESIGNED BY: RL	Billings PCE Site Billings, MT	
DRAWN BY: CN		
CHECKED BY: RL	SCALE: 1:19,200	CONTRACT NUMBER: 68HE0318D0008
SUBMITTED BY: SK	DATE: 6/29/2022	DELIVERY ORDER: 68HE0621F0070
COORDINATE SYSTEM: NAD 1983 2011 StatePlane Montana FIPS 2600 F1 Inr		



Upcoming Work

OU1 Indoor Air

Continued investigation of structures.

- Installation of 9 Sub-slab Depressurization Systems
- ~200 Indoor Air Samples – Jan/Feb 2023

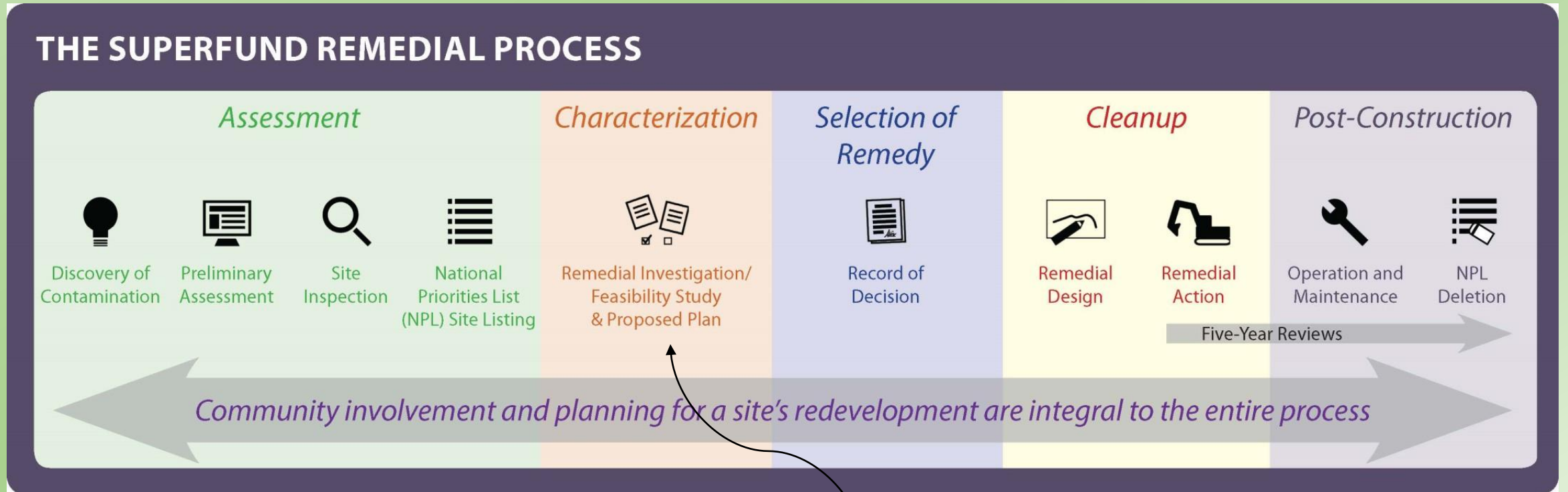
OU2 Groundwater

Bi-annual monitoring of wells for plume delineation.

- Sample 120 Wells –Spring 2023
- New Wells Installed # TBD – Spring/Summer 2023



Where Are We in the Process?



Billings PCE is Here

Questions?

