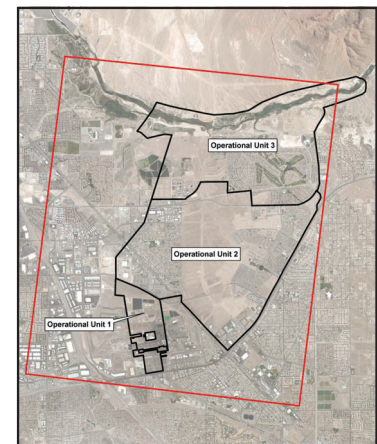


(NOT TO SCALE)

LEGEND:

	Alluvium		BMI Complex		Extraction Wells		Runoff and Recharge
	Muddy Creek Formation		Business / Industrial		Source Zone Infiltration		Surface Runoff
	Bedrock		Wetlands Park (Recreational)		Potential Vapor Intrusion		Groundwater Flow Direction
	Mixed Land Use (Residential and Commercial)		Undeveloped Land		Master-Planned Community		

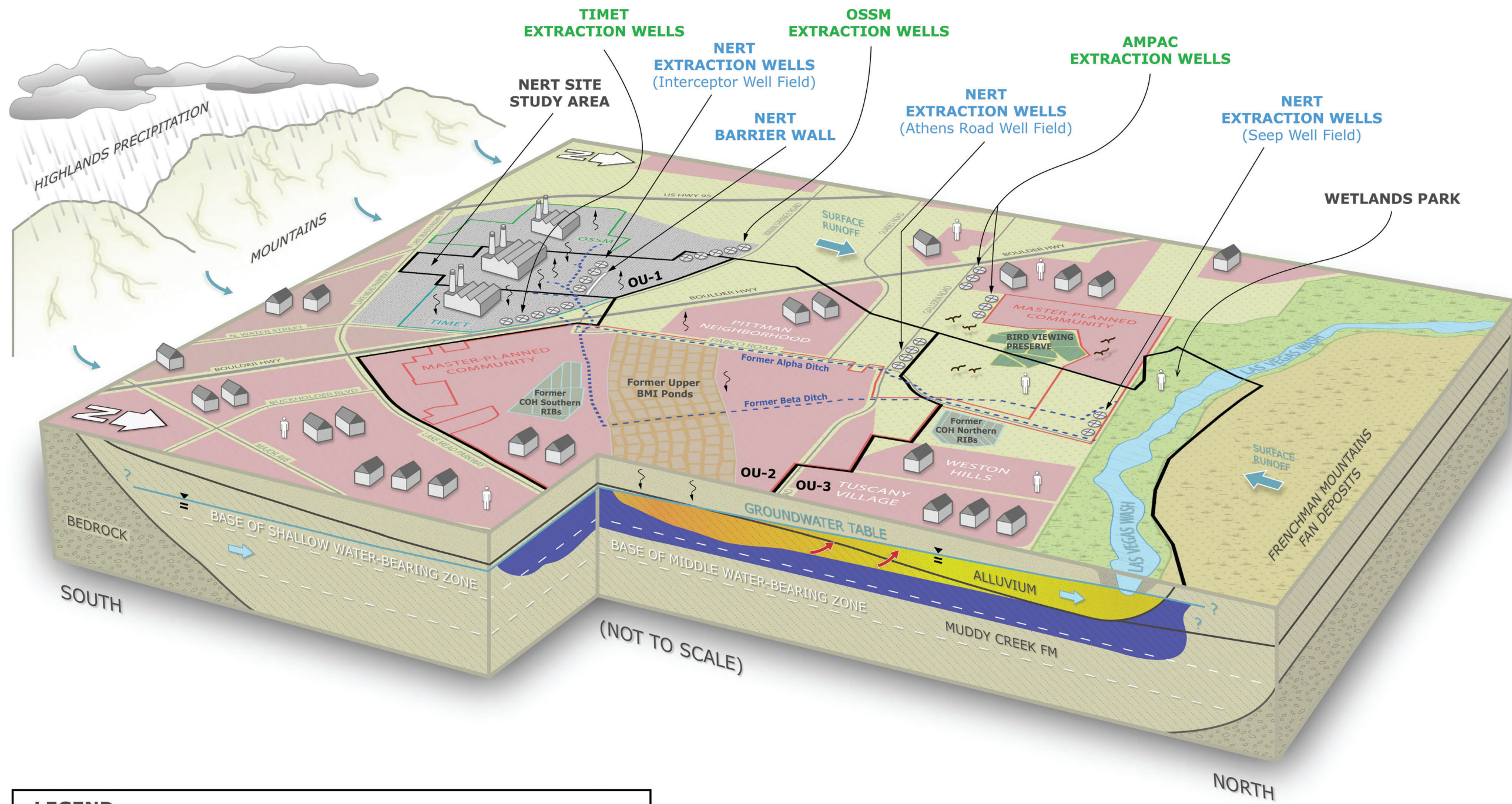


Conceptual Site Model: NERT RI Study Area
 Nevada Environmental Response Trust Site
 Henderson, Nevada

Figure
9-1

C:\DRAWINGS\1690\020169\CSM_7-6-21.CDR



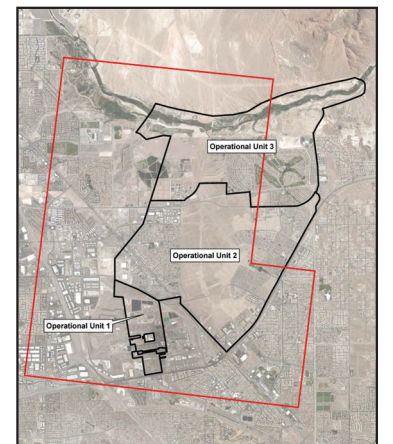


LEGEND:

	Alluvium		BMI Complex		Extraction Wells		Runoff and Recharge
	Muddy Creek Formation		Business / Industrial		Source Zone Infiltration		Surface Runoff
	Bedrock		Wetlands Park (Recreational)		Potential Vapor Intrusion		Groundwater Flow Direction
	Mixed Land Use (Residential and Commercial)		Undeveloped Land		Master-Planned Community		Upward Contaminant Migration

EXPLANATION:

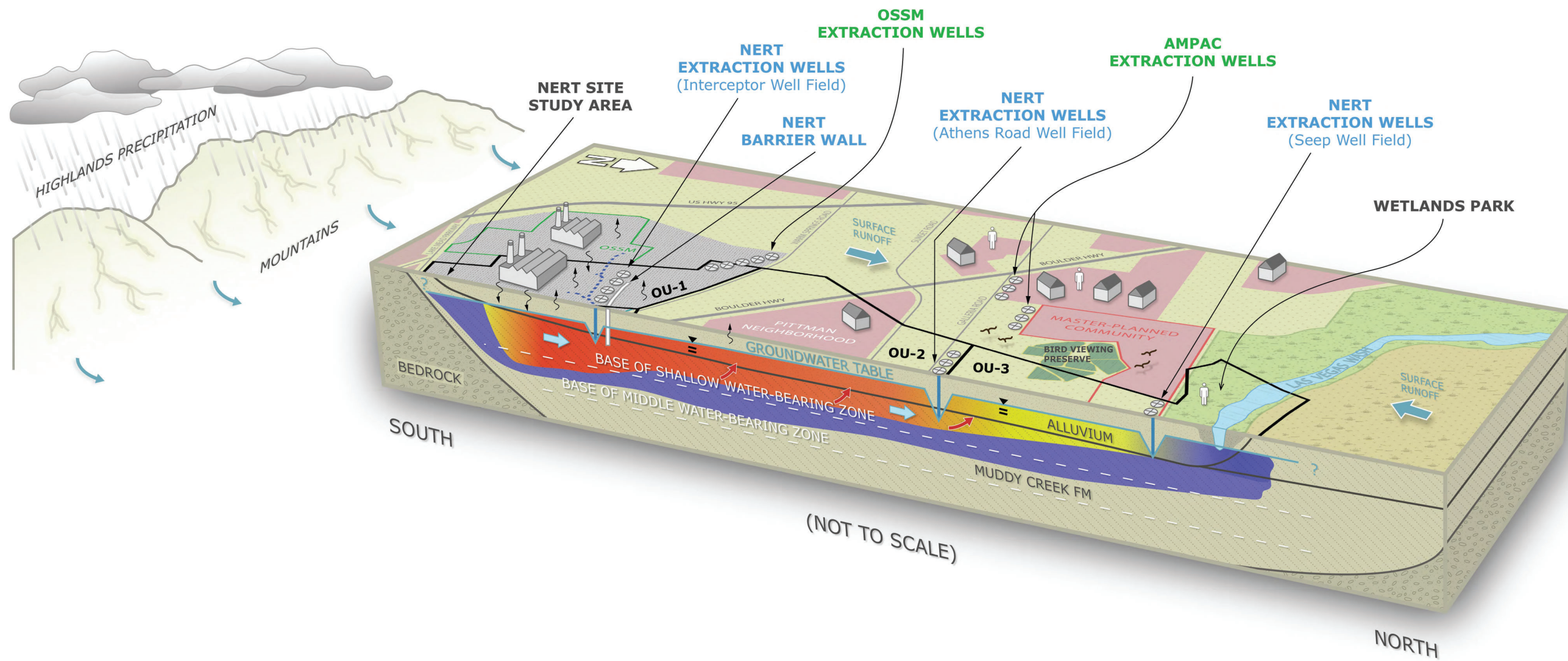
Relative Groundwater Concentrations



Conceptual Site Model: Eastside Study Area
 Nevada Environmental Response Trust Site
 Henderson, Nevada

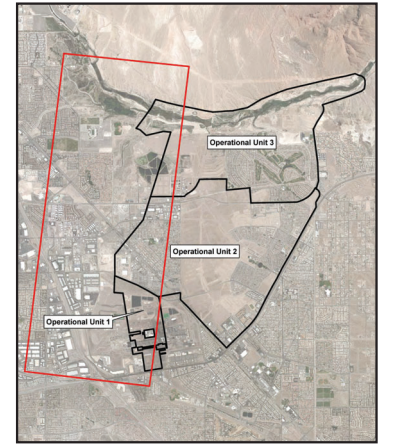
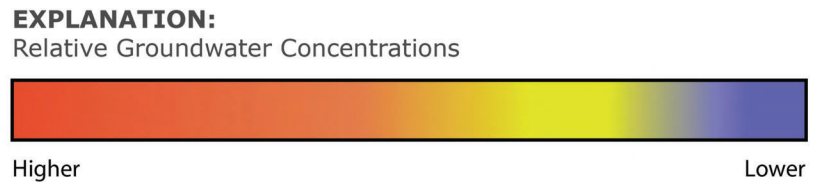
Figure
9-2a





(NOT TO SCALE)

LEGEND:			
	Alluvium		BMI Complex
	Muddy Creek Formation		Extraction Wells
	Bedrock		Runoff and Recharge
	Mixed Land Use (Residential and Commercial)		Surface Runoff
	Business / Industrial		Groundwater Flow Direction
	Wetlands Park (Recreational)		Upward Contaminant Migration
	Undeveloped Land		Source Zone Infiltration
			Potential Vapor Intrusion
			Master-Planned Community

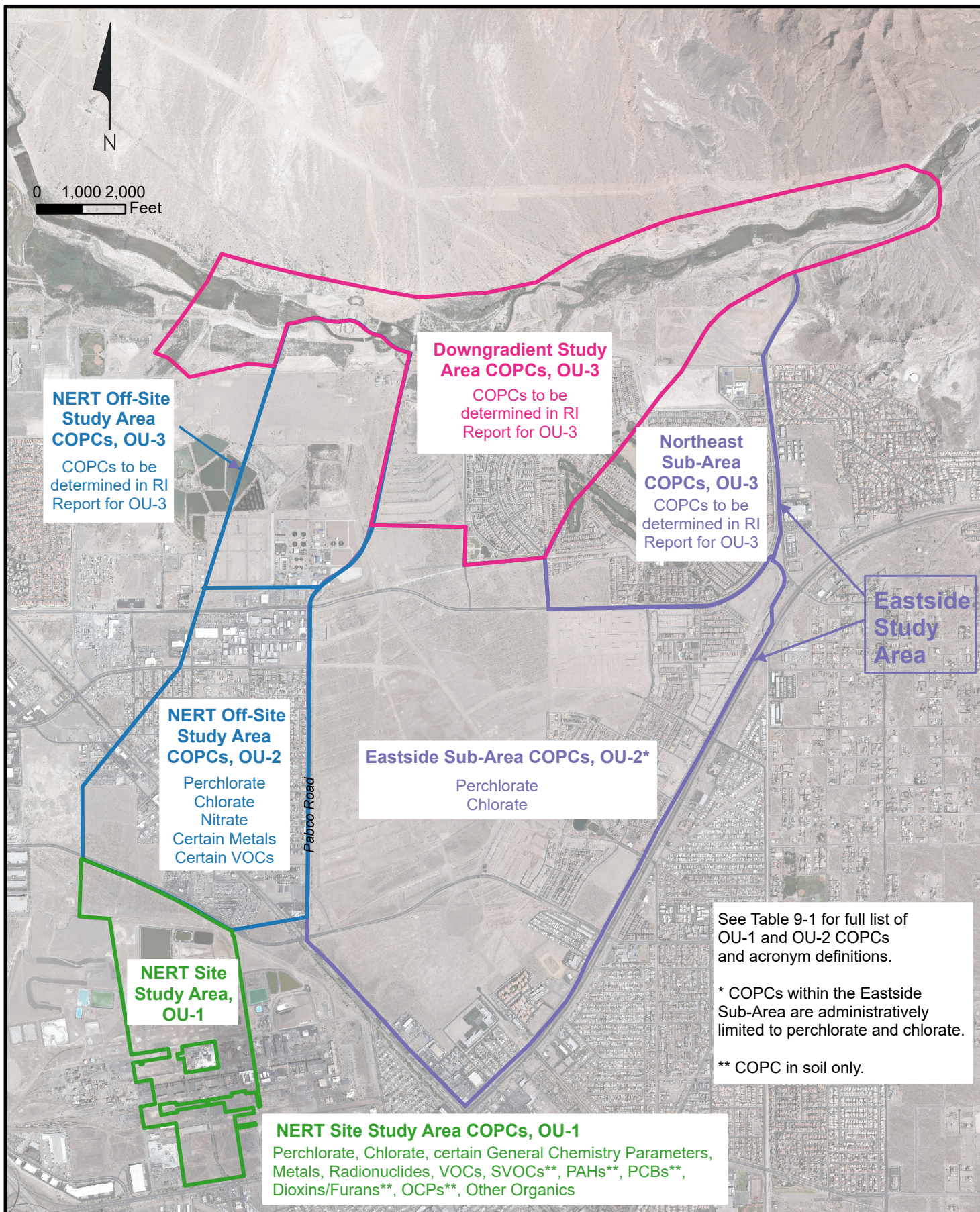


Conceptual Site Model: NERT Site Study Area to Las Vegas Wash
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
9-2b



C:\DRAWINGS\1690\020169\CSM_7-6-21.CDR

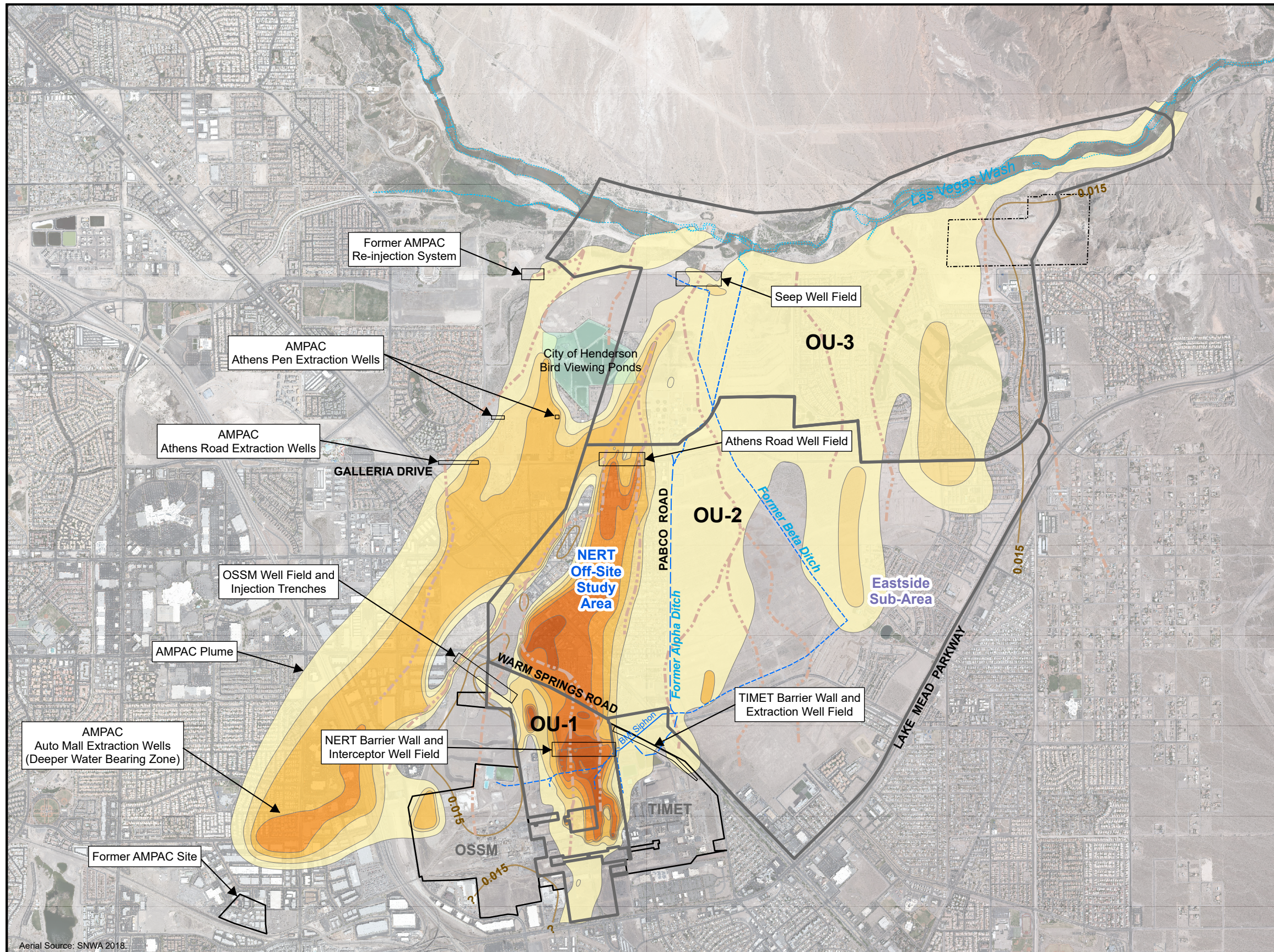


Path: H:\LePetomane\NERT\RI\OU-1_OU-2\RI Report\GIS\revision1\revision1.aprx\Fig 9-4 Chemicals of Potential Concern



Chemicals of Potential Concern (COPCs), NERT RI Study Area
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
9-4



LEGEND:

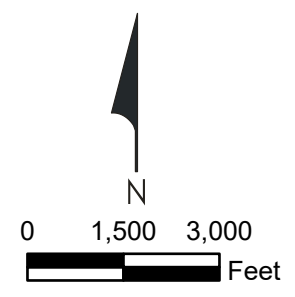
- Former Ditches
- Paleochannel

Perchlorate (mg/L)

	<1 mg/L
	1-10
	10-25
	25-100
	100-250
	250-500
	500-1,000
	>1,000 mg/L

--- Perchlorate GWSL (0.015 mg/L)

Note:
The NERT RI Study Area includes Operable Units OU-1, OU-2, and OU-3.



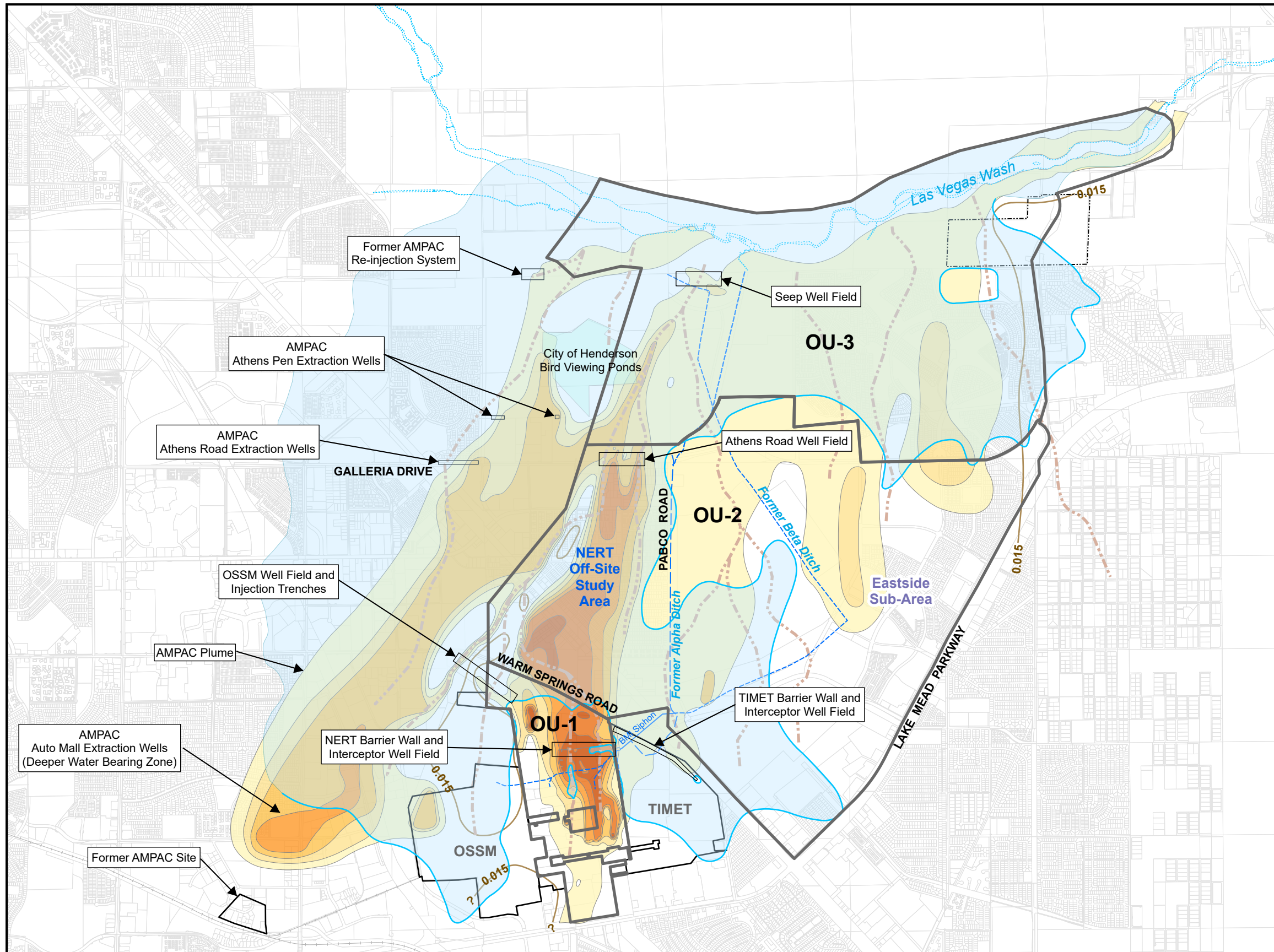
Aerial Source: SNWA 2018



Perchlorate in Groundwater in the Shallow WBZ (0-55 ft bgs)
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
9-5a

Path: H:\LePetomane\NERT\RI\OU-1_OU-2 RI Report\GIS\revision1\revision1.aprx\Fig 9-5a_Perchlorate in OU-1-OU2 in gw-2018



LEGEND:

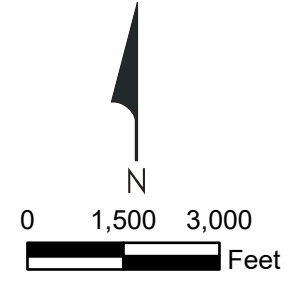
- Saturated Alluvium
- - - Former Ditches
- - - Paleochannel

Perchlorate (mg/L)

- <math><1\text{ mg/L}</math>
- 1-10
- 10-25
- 25-100
- 100-250
- 250-500
- 500-1,000
- >1,000 mg/L

- - - Perchlorate GWSL (0.015 mg/L)

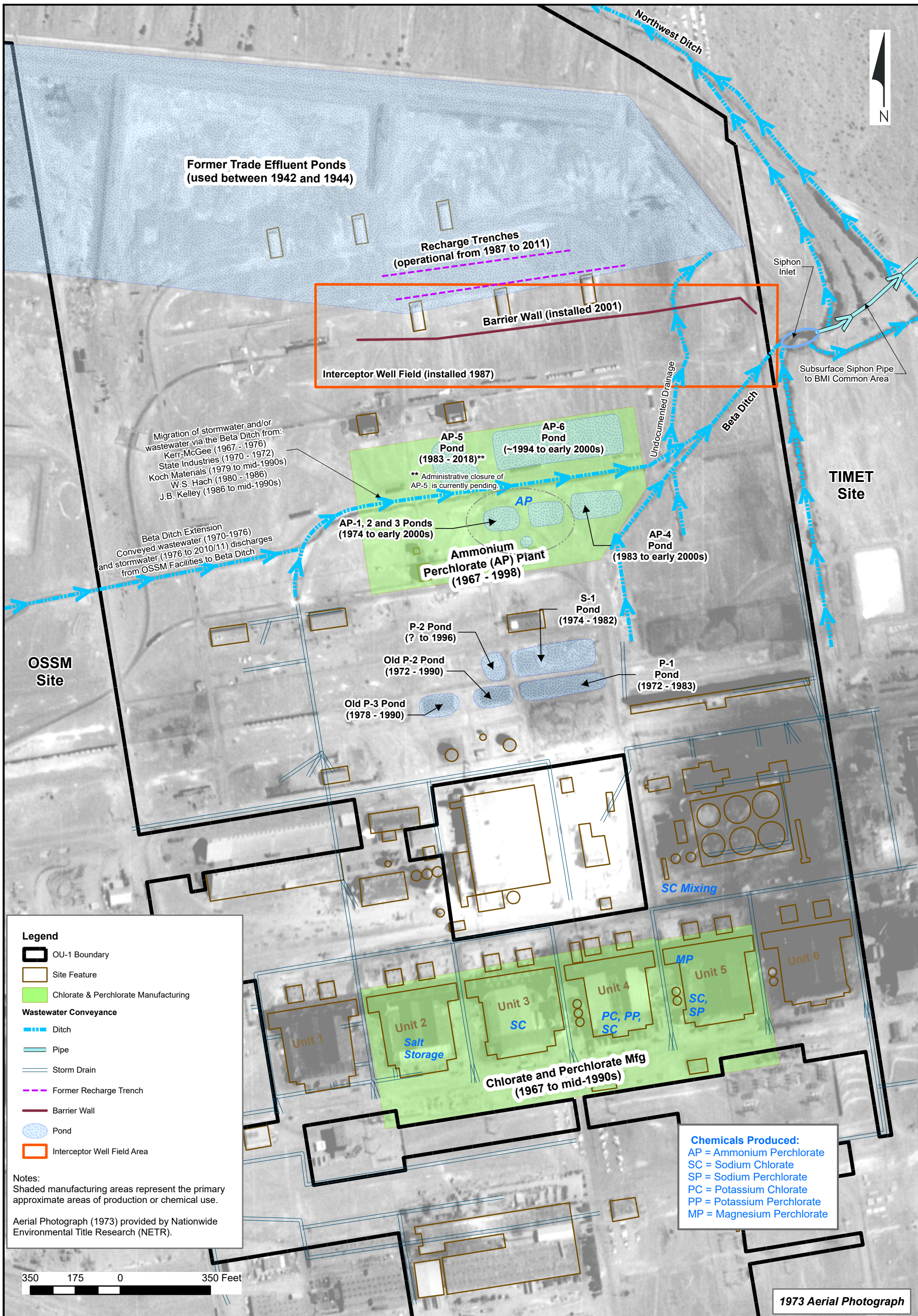
Note:
The NERT RI Study Area includes Operable Units OU-1, OU-2, and OU-3.



Perchlorate in Groundwater in the Shallow WBZ (0-55 ft bgs) Showing the Extent of Saturated Alluvium
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
9-5b

Path: H:\LePetomane\NERT\OU-1_OU-2 RI Report\GIS\revision1\revision1.aprx\Fig 9-5b_Perchlorate in OU-1-OU2 in gw-2018



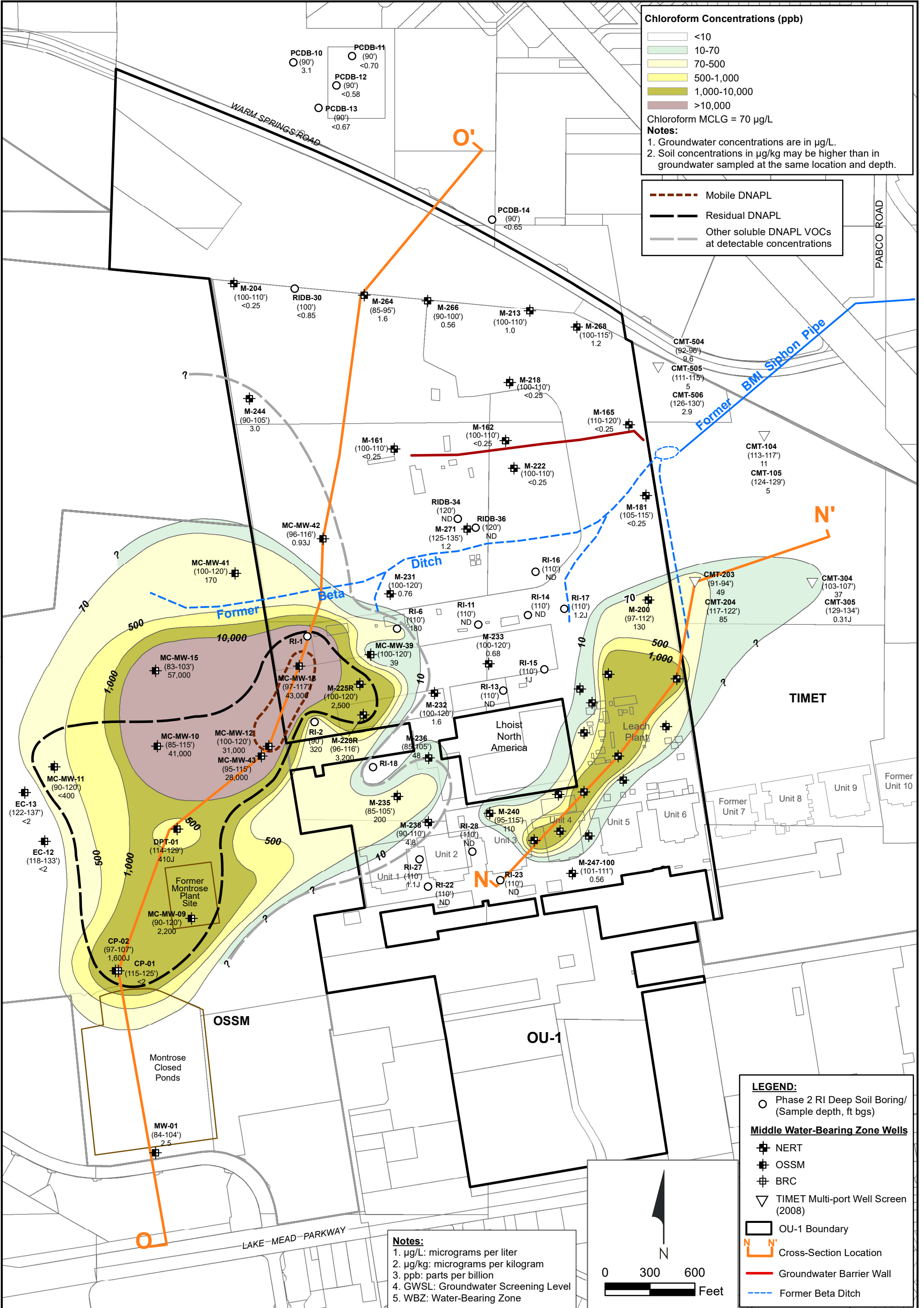
Path: H:\LePetomane\NETR\OU-1_OU-2_RI_Report\GIS\revision1.aprx\Fig 9-6 Major Historical Sources of Contamination



Historical Sources of Contamination in OU-1
Nevada Environmental Response Trust Site
Henderson, Nevada

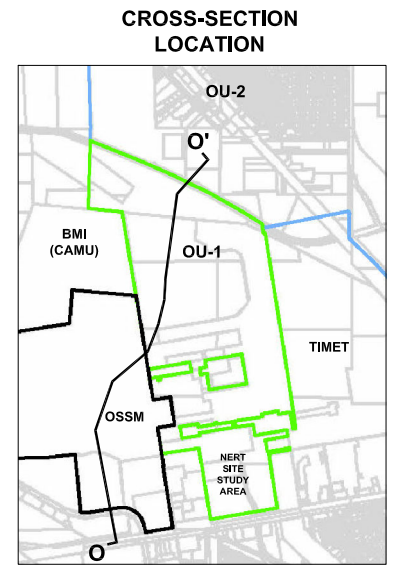
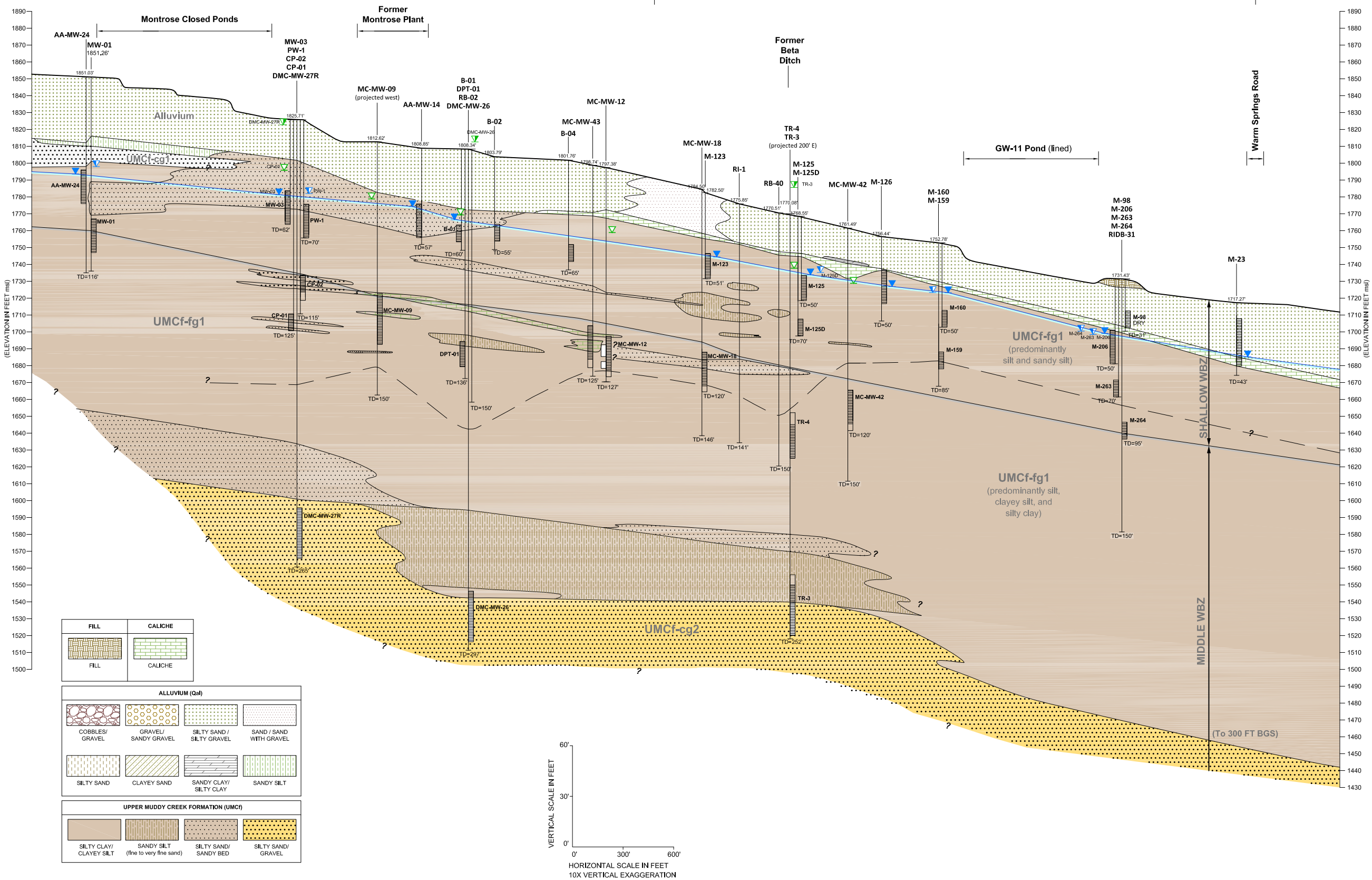
Figure
9-6

Path: H:\LePalomane\NERT\RI_Evaluation\GIS\Chemical Maps\Fig 9-7_Chloroform_Xsec_Location_Map.mxd



Subsurface Cross-Section Location Map
Nevada Environmental Response Trust Site; Henderson, Nevada

Figure
9-7

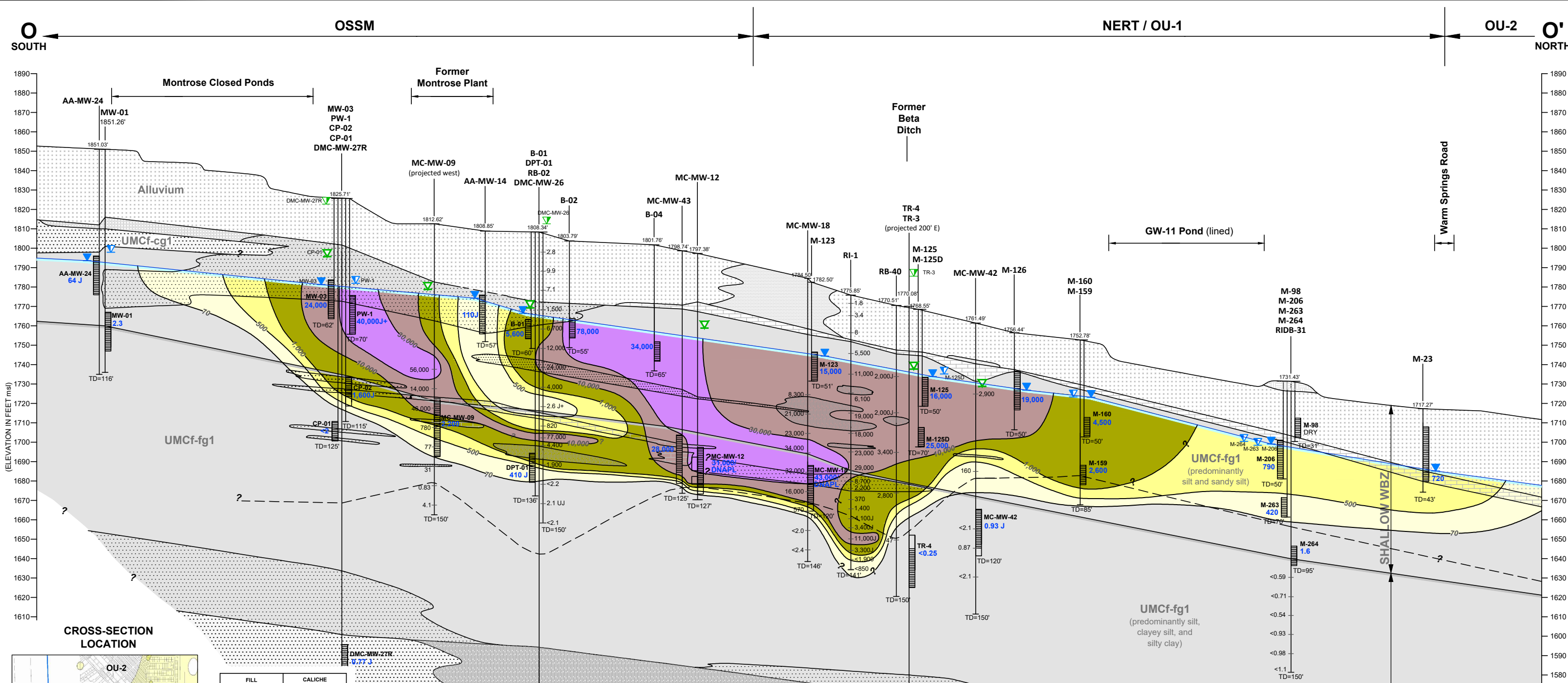


Subsurface Cross-Section O-O'

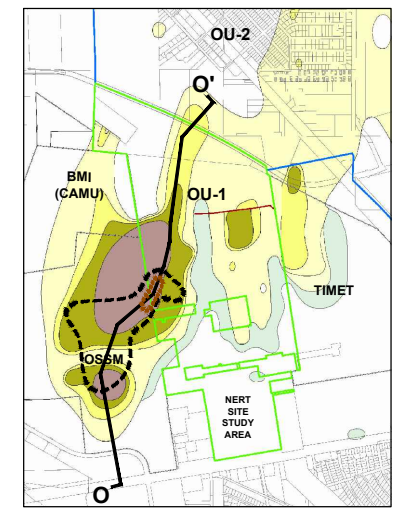
Nevada Environmental Response Trust Site
Henderson, Nevada



C:\Users\imso\OneDrive - Ramboll\Desktop\drawing\11690025040-017--Cross_Section O-O.DWG Layout: 11x17 User: RMSO Feb 02, 2023 - 3:26pm



CROSS-SECTION LOCATION



FILL	CALICHE

ALLUVIUM (Gal)			
COBBLES/ GRAVEL	GRAVEL/ SANDY GRAVEL	SILTY SAND/ SILTY GRAVEL	SAND / SAND WITH GRAVEL
SILTY SAND	CLAYEY SAND	SANDY CLAY/ SILTY CLAY	SANDY SILT
UPPER MUDDY CREEK FORMATION (UMC)			
SILTY CLAY/ CLAYEY SILT	SANDY SILT (fine to very fine sand)	SILTY SAND/ SANDY BED	SILTY SAND/ GRAVEL

CHLOROFORM CONCENTRATIONS

	<70 µg/L/ppb		1,000 - 10,000
	70 - 500		10,000 - 30,000
	500 - 1,000		> 30,000

CHLOROFORM GWSL = 70 µg/L

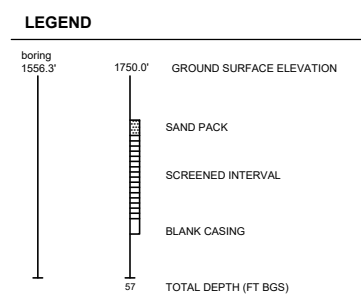
GROUNDWATER CONCENTRATIONS (2015-2018)

80 CHLOROFORM (µg/L)

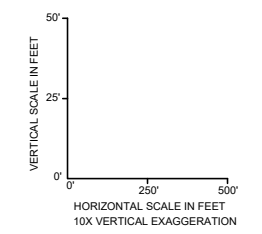
SOIL SAMPLE CONCENTRATIONS

Boring
Depth | 1.2 Chloroform (µg/kg)

- NOTES:**
1. DNAPL = Dense Non-Aqueous Phase Liquid.
 2. Chloroform is one component of the DNAPL found at the OSSM Site.
 3. Chloroform groundwater data are from 2015-2018, or most recent available data.
 4. Data for 9 of the 18 OSSM wells are from 2012-2013.
 5. Data for OSSM well B-02 is from April 1998; data from OSSM well B-04 is from November 2008.
 6. Groundwater elevations measured October 2017 - May 2018, or most recent available data.
 7. See Figure 9-8a for lithology.



- GROUNDWATER ELEVATIONS (feet, mean sea level datum)**
- Shallow Water-Bearing Zone (0-90 ft)**
- Water Table Zone Well
 - Deeper Shallow WBZ Well
- Middle Water-Bearing Zone (90-300 ft)**
- Upper Muddy Creek Formation, First Fine-Grained Unit (UMCf-fg1)
 - Upper Muddy Creek Formation, Second Coarse-Grained Unit (UMCf-cg2)



Schematic Subsurface Cross-Section O-O' with Chloroform Concentrations

Nevada Environmental Response Trust Site
Henderson, Nevada



Drafter: RS

Date: 1/26/23

Contract Number: 169002 9369

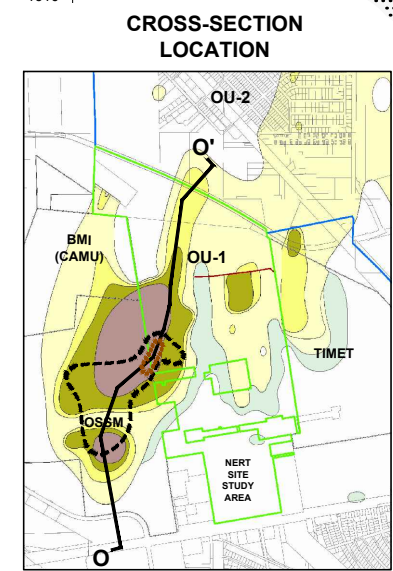
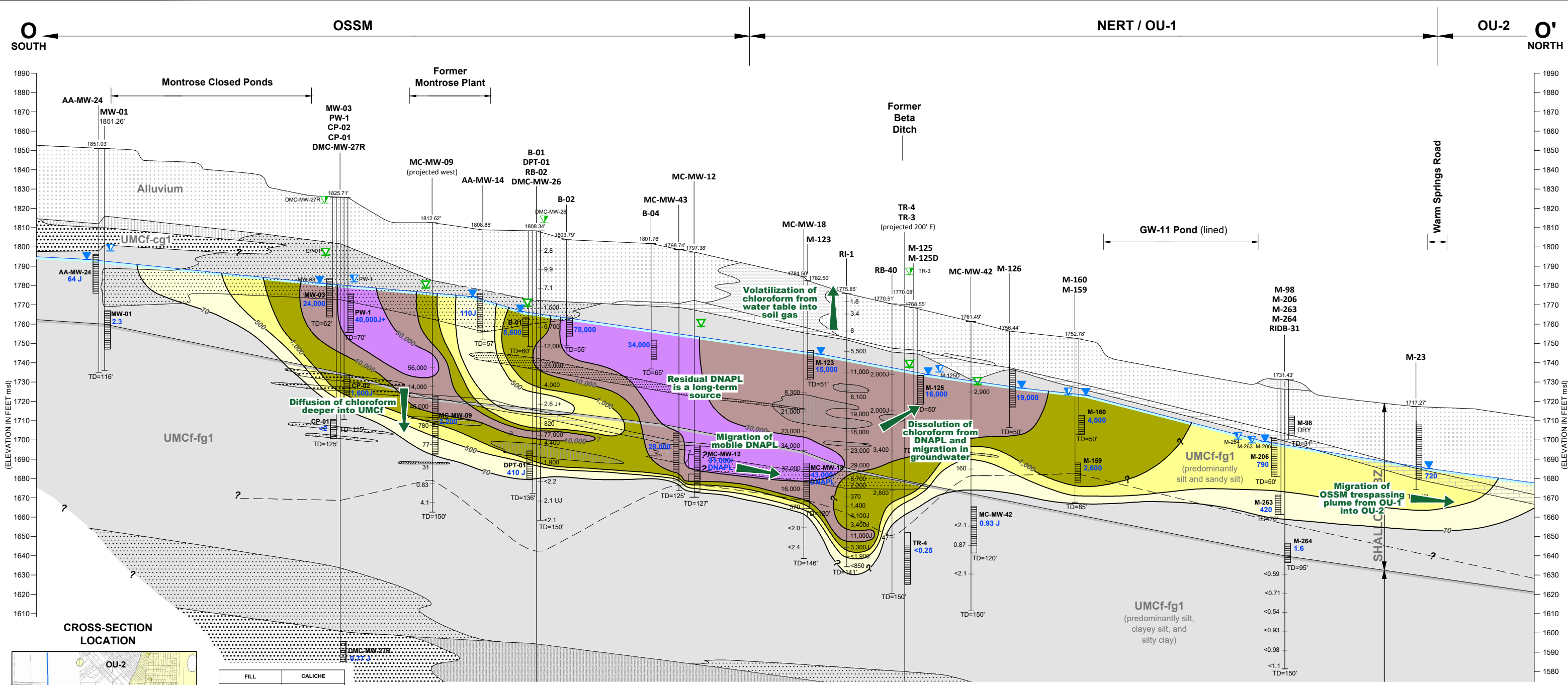
Approved by:

Revised:

Figure
9-8b

RMSO 2/3/23 C:\USERS\RMSO\ONEDRIVE - RAMBOLL\DESKTOP\DRAWING\1690006943 < 1690029369-CROSS_SECTION O-O-CHLOROFORM >

RMSO 6/6/23 C:\USERS\RMSO\ONEDRIVE - RAMBOLL\DESKTOP\DRAWING\1690006943 < 1690029369-FIG 9-8C_CROSS_SECTION O-O-CHLOROFORM >



FILL	CALICHE		
ALLUVIUM (Gal)			
COBBLES/ GRAVEL	GRAVEL/ SANDY GRAVEL	SILTY SAND/ SILTY GRAVEL	SAND / SAND WITH GRAVEL
SILTY SAND	CLAYEY SAND	SANDY CLAY/ SILTY CLAY	SANDY SILT
UPPER MUDDY CREEK FORMATION (UMCf)			
SILTY CLAY/ CLAYEY SILT	SANDY SILT (fine to very fine sand)	SILTY SAND/ SANDY BED	SILTY SAND/ GRAVEL

CHLOROFORM CONCENTRATIONS

	<70 µg/L/ppb		1,000 - 10,000
	70 - 500		10,000 - 30,000
	500 - 1,000		> 30,000

CHLOROFORM GWSL = 70 µg/L

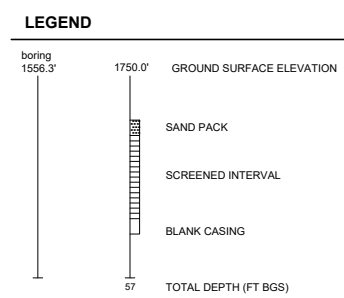
GROUNDWATER CONCENTRATIONS (2015-2018)

80 CHLOROFORM (µg/L)

SOIL SAMPLE CONCENTRATIONS

Boring
Depth
1.2 Chloroform (µg/kg)

- NOTES:**
1. DNAPL = Dense Non-Aqueous Phase Liquid.
 2. Chloroform is one component of the DNAPL found at the OSSM Site.
 3. Chloroform groundwater data are from 2015-2018, or most recent available data.
 4. Data for 9 of the 18 OSSM wells are from 2012-2013.
 5. Data for OSSM well B-02 is from April 1998; data from OSSM well B-04 is from November 2008.
 6. Groundwater elevations measured October 2017 - May 2018, or most recent available data.
 7. See Figure 9-8a for lithology.



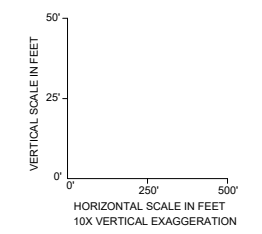
GROUNDWATER ELEVATIONS (feet, mean sea level datum)

Shallow Water-Bearing Zone (0-90 ft)

- Water Table Zone Well
- Deeper Shallow WBZ Well

Middle Water-Bearing Zone (90-300 ft)

- Upper Muddy Creek Formation, First Fine-Grained Unit (UMCf-fg1)
- Upper Muddy Creek Formation, Second Coarse-Grained Unit (UMCf-cg2)



Conceptual Migration Pathways from the OSSM Trespassing Plume

Nevada Environmental Response Trust Site
Henderson, Nevada

Drafter: RS

Date: 1/26/23

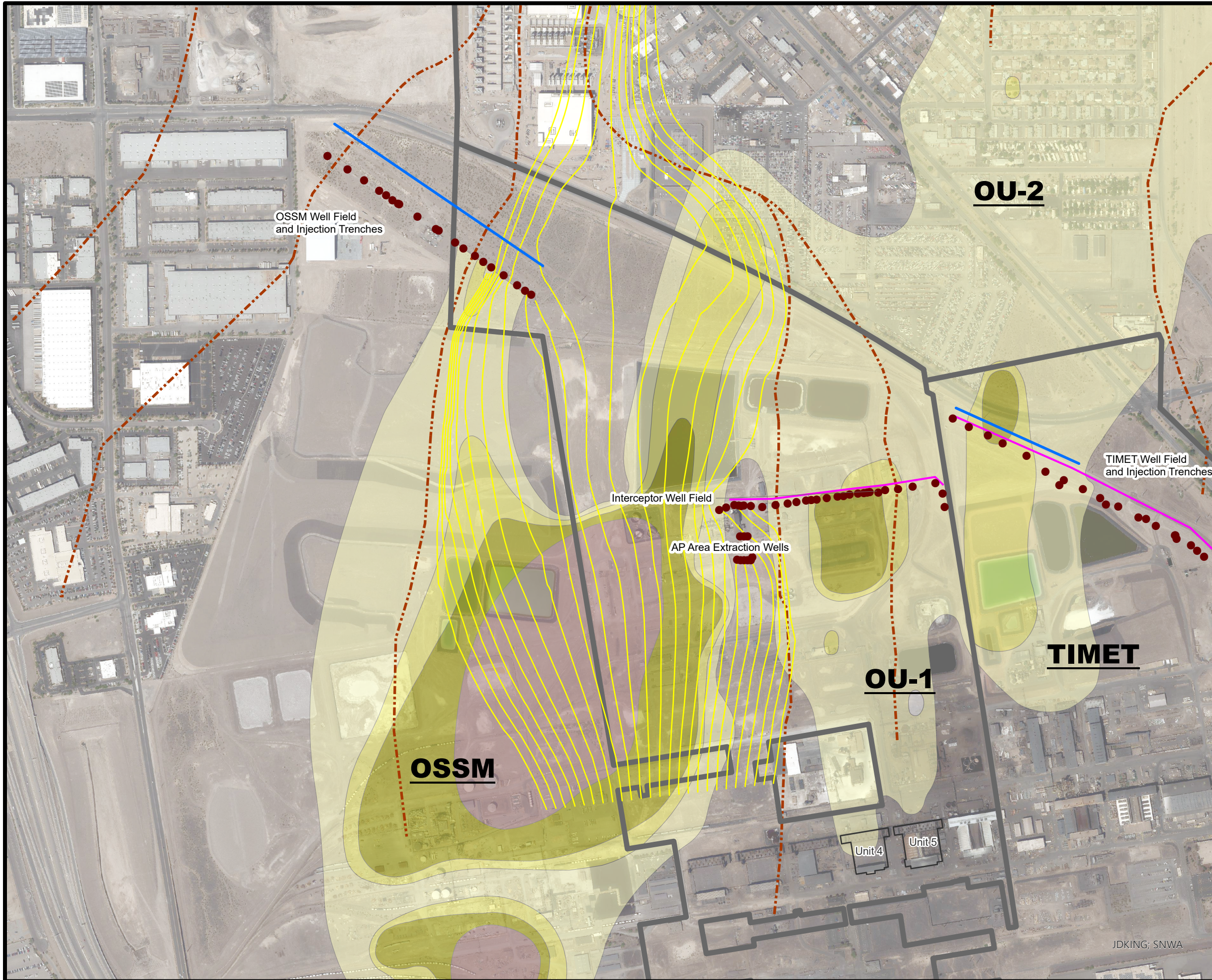
Contract Number: 169002 9369

Approved by:

Revised:

Figure
9-8c

Path: H:\LePetomane\NERTRI\OU-1_OU-2_RI_Report\GIS\revision1\revision1.aprx

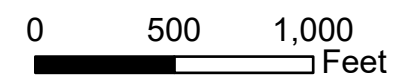
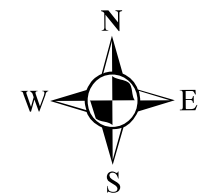


Legend

- Extraction Well
- Particle Tracks (Shallow UMcF)
- Barrier Wall
- Injection Trench
- Paleochannel
- Operable Unit Boundaries

Chloroform Concentration (µg/L)

- <70
- 70-500
- 500-1,000
- 1,000-10,000
- >10,000

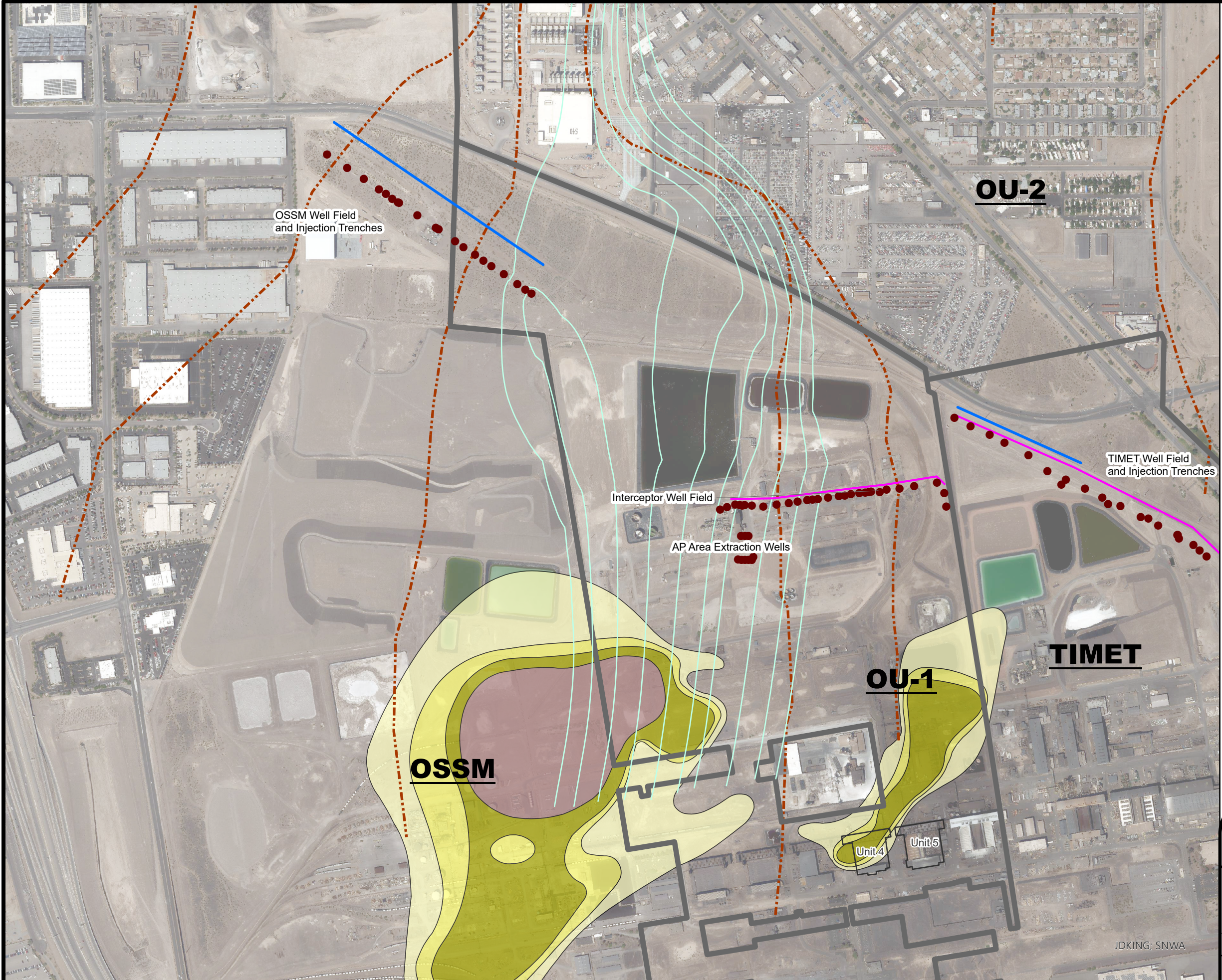


**Tracking of Particles Released at
the Base of the Alluvium in Western OU-1**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-06-15	Contract Number: 169002 9369	Figure
Drafter: AS	Approved:	Revised:

9-9a

Path: H:\LePetomane\NERTRI\OU-1_0U-2_RI\Report\GIS\revision1\revision1.aprx

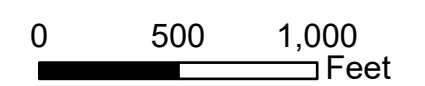
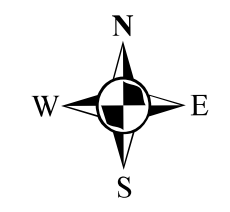


Legend

- Extraction Well
- Particle Tracks from Middle WBZ (90-130 ft bgs)
- Barrier Wall
- Injection Trench
- - - Paleochannel
- ▭ Operable Unit Boundaries

Chloroform Concentration (µg/L)

- <70
- 70-500
- 500-1,000
- 1,000-10,000
- >10,000

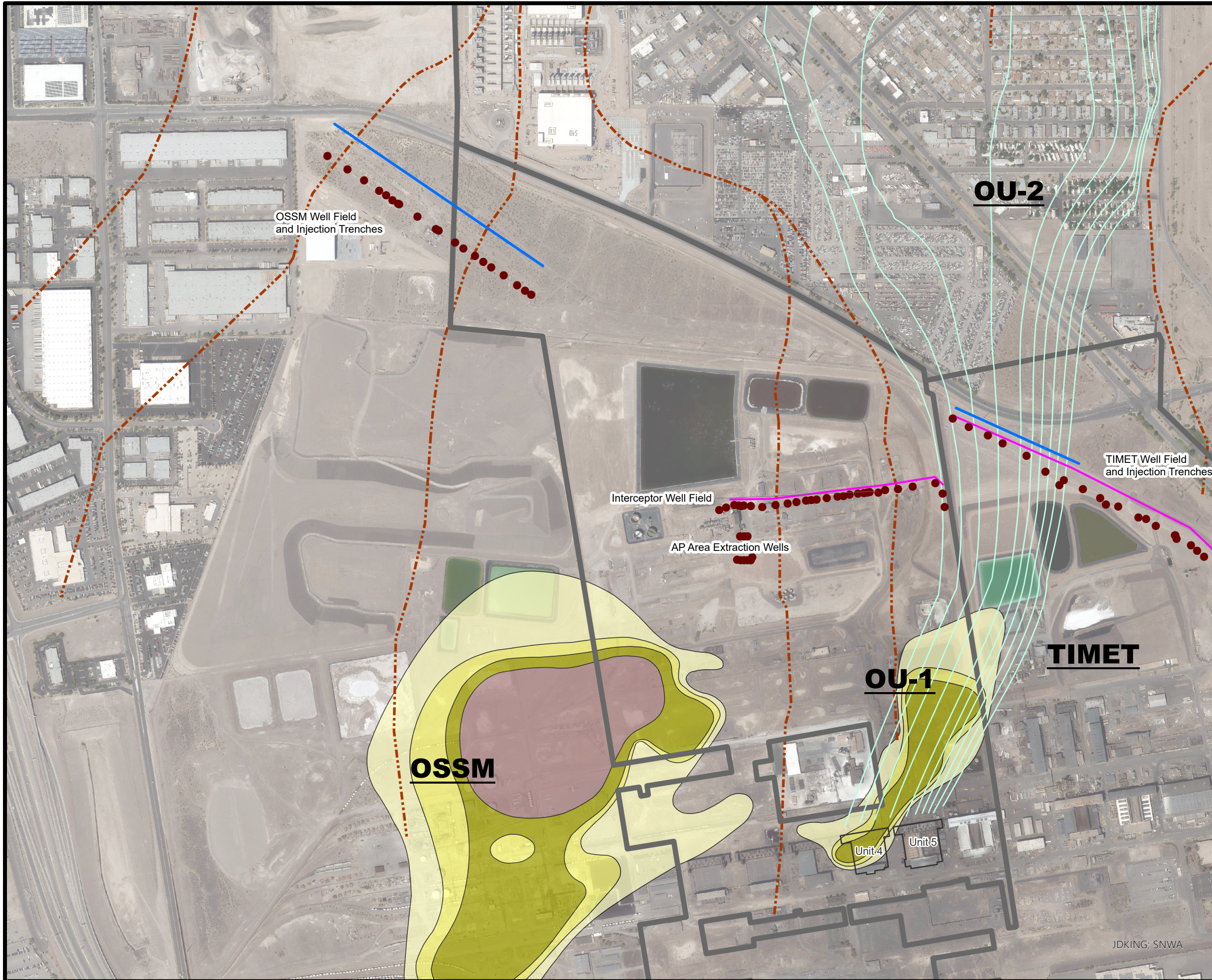


Tracking of Particles Released from the Middle WBZ (90-130 ft bgs) in Western OU-1
 Nevada Environmental Response Trust Site
 Henderson, Nevada

Date: 2023-06-15	Contract Number: 169002 9369	Figure
Drafter: AS/JC	Approved:	Revised:
		9-9b

JDKING; SNWA

Path: H:\LePetomane\NERTRI\OU-1_OU-2_RI\Report\GIS\revision1\revision1.aprx

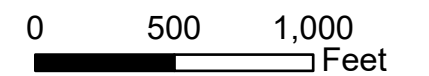


Legend

- Extraction Well
- Particle Tracks from Middle WBZ (90-130 ft bgs)
- Barrier Wall
- Injection Trench
- Paleochannel
- Operable Unit Boundaries

Chloroform Concentration (µg/L)

- <70
- 70-500
- 500-1,000
- 1,000-10,000
- >10,000



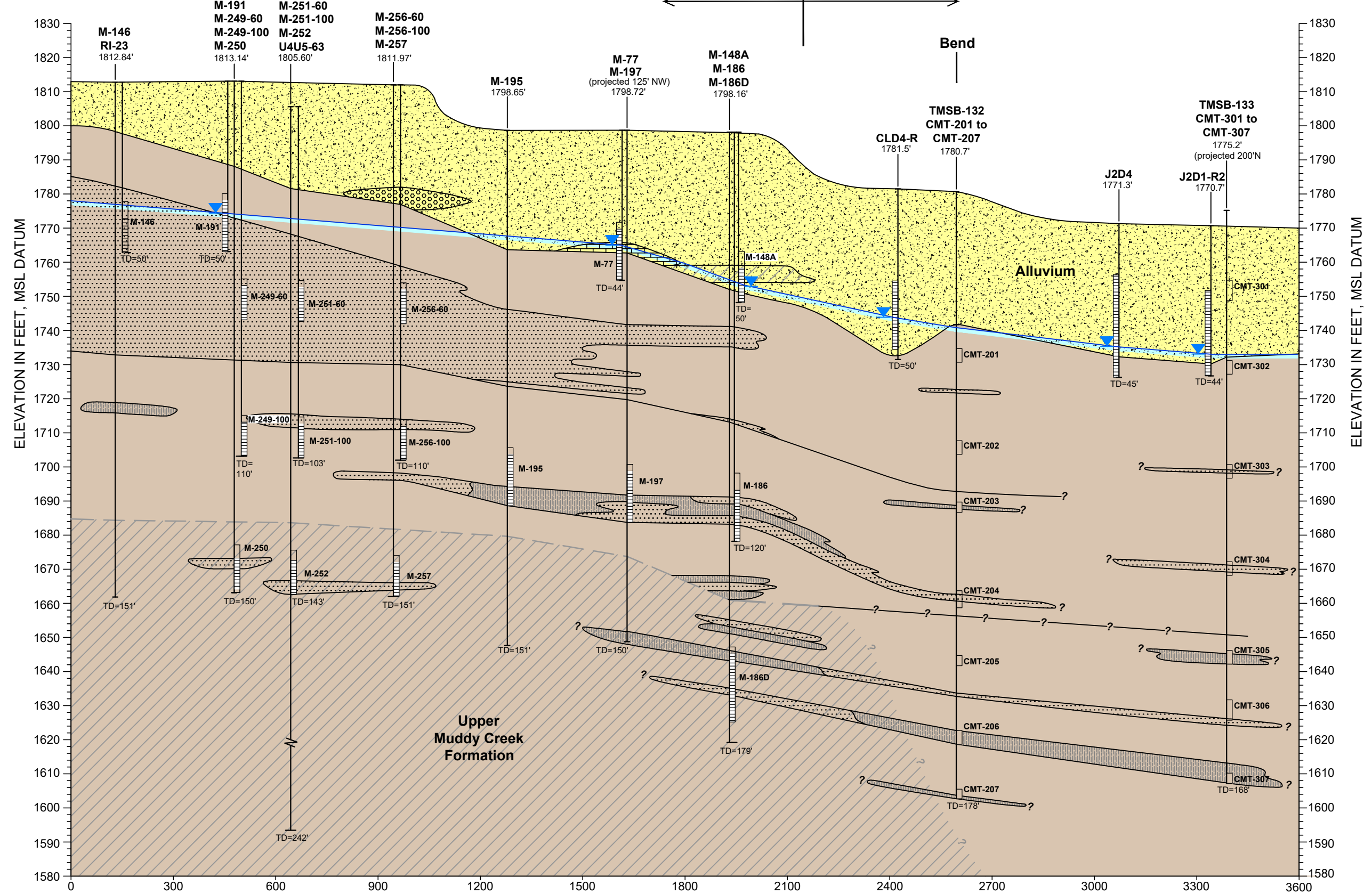
Tracking of Particles Released from the Middle WBZ (90-130 ft bgs) in Eastern OU-1
 Nevada Environmental Response Trust Site
 Henderson, Nevada

Date: 2023-06-15	Contract Number: 169002 9369	Figure
Drafter: AS/JC	Approved:	Revised:
		9-9c

JDKING; SNWA

N
SOUTHWEST

N'
NORTHEAST



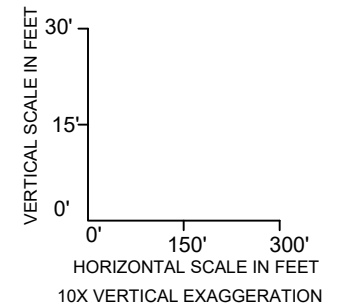
LEGEND:

- M-186** Well name
- Groundwater Elevation Measured in Shallow Monitoring Wells (2017/2018)

Notes:

1. TD = total depth.
2. MSL Datum = Mean Sea Level Datum.
3. Subsurface interpretation is based on available boring logs. Actual conditions may vary.
4. See Figure 9-7 for cross-section location.

ALLUVIUM (Qal)	
	GRAVEL/ SANDY GRAVEL
	SAND, SILTY AND GRAVELLY
	CALICHE
	SANDY CLAY/ CLAYEY SAND
UPPER MUDDY CREEK FORMATION (UMCF)	
	SILT/SILT WITH SAND
	SANDY SILT (fine to very fine sand)
	SILTY SAND/ SANDY BED
	SILTY SAND/ GRAVEL
	CLAYEY SILT/ SILTY CLAY



Schematic Subsurface Cross-Section N-N'

Nevada Environmental Response Trust Site
Henderson, Nevada

Drafter: RS

Date: 9/21/2021

Contract Number: 169002 9369

Approved by:

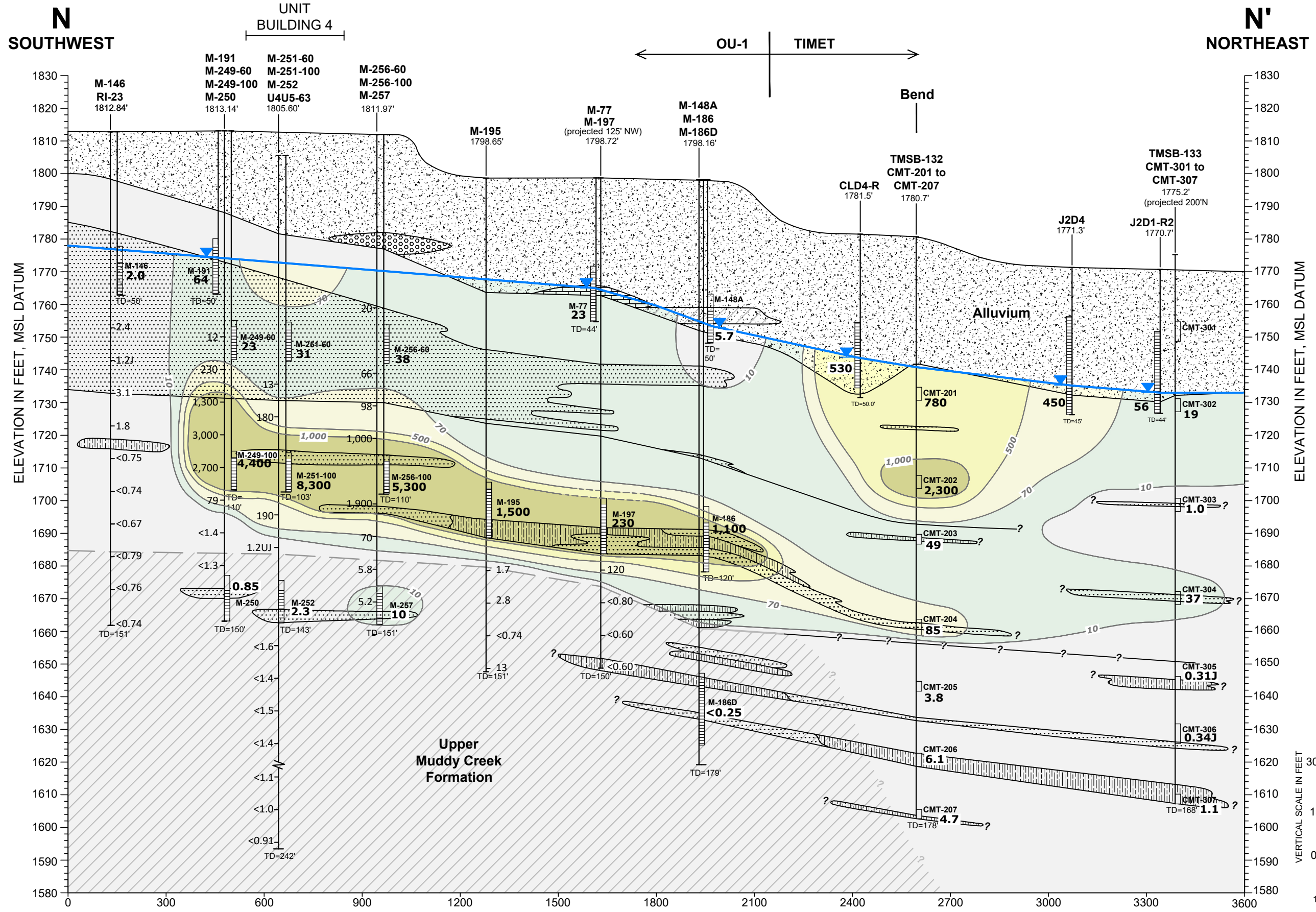
Revised:

Figure

9-10a

RMSO 6/9/23 C:\USERS\RMSO\ONEDRIVE - RAMBOLL\DESKTOP\DRAWING\1690006943 < 1690029369-019.FIG C-3A_SUBSURFACE XSECT N-N >





LEGEND:

M-186 Well name

98 Chloroform (Soil), ppb

38 Chloroform (Groundwater), µg/L

Groundwater Elevation Measured in Shallow Monitoring Wells (2017/2018)

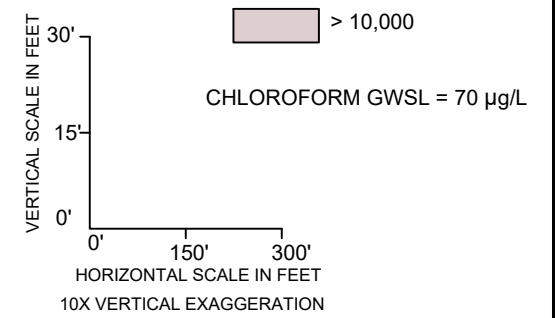
Notes:

1. TD = total depth.
2. MSL Datum = Mean Sea Level Datum.
3. Subsurface interpretation is based on available boring logs. Actual conditions may vary.
4. See Figure 9-7 for cross-section location.

ALLUVIUM (Qal)	
GRAVEL/ SANDY GRAVEL	SAND, SILTY AND GRAVELLY
CALICHE	
CALICHE	SANDY CLAY/ CLAYEY SAND
UPPER MUDDY CREEK FORMATION (UMCf)	
SILT/SILT WITH SAND	SILTY SILT (fine to very fine sand)
SILTY SAND/ SANDY BED	SILTY SAND/ GRAVEL
CLAYEY SILT/ SILTY CLAY	

CHLOROFORM CONCENTRATIONS

	<10 µg/L/ppb
	10 - 70
	70 - 500
	500 - 1,000
	1,000 - 10,000
	> 10,000



Schematic Subsurface Cross-Section N-N' with Chloroform Concentrations

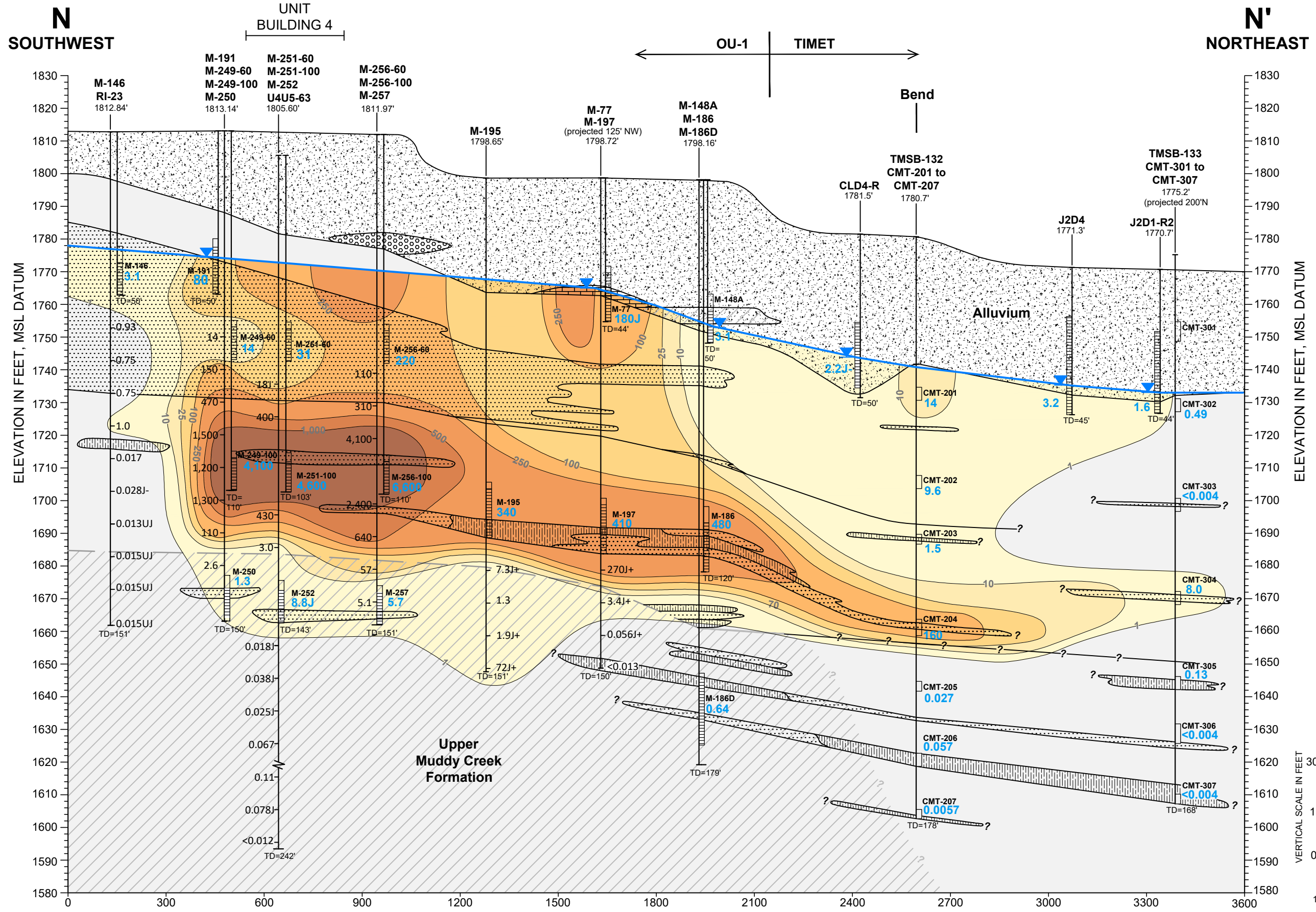
Nevada Environmental Response Trust Site
Henderson, Nevada

Drafter: RS Date: 10/29/2021 Contract Number: 169002 9369 Approved by: Revised:



Figure
9-10b

RMSO 6/9/23 C:\USERS\RMSO\ONEDRIVE - RAMBOLL\DESKTOP\DRAWING\1690006943 < 1690029369-019_FIG C-3C_SUBSURFACE XSECT N-N_CHLOROFORM >



LEGEND:

M-186 Well name

- 98 Perchlorate (Soil), ppm
- 38 Perchlorate (Groundwater), mg/L

Groundwater Elevation Measured in Shallow Monitoring Wells (2017/2018)

Notes:

1. TD = total depth.
2. MSL Datum = Mean Sea Level Datum.
3. Subsurface interpretation is based on available boring logs. Actual conditions may vary.
4. See Figure 9-7 for cross-section location.

ALLUVIUM (Qal)	
GRAVEL/ SANDY GRAVEL	SAND, SILTY AND GRAVELLY
CALICHE	
CALICHE	SANDY CLAY/ CLAYEY SAND
UPPER MUDDY CREEK FORMATION (UMcf)	
SILT/SILT WITH SAND	SANDY SILT (fine to very fine sand)
SILTY SAND/ SANDY BED	SILTY SAND/ GRAVEL
CLAYEY SILT/ SILTY CLAY	

PERCHLORATE CONCENTRATIONS

	<math>< 1</math> ppm
	1-10
	10-25
	25-100
	100-250
	250-500
	500-1,000
	>1,000

PERCHLORATE GWSL = 0.015 mg/L

VERTICAL SCALE IN FEET: 0', 15', 30'

HORIZONTAL SCALE IN FEET: 0', 150', 300'

10X VERTICAL EXAGGERATION

Schematic Subsurface Cross-Section N-N' with Perchlorate Concentrations

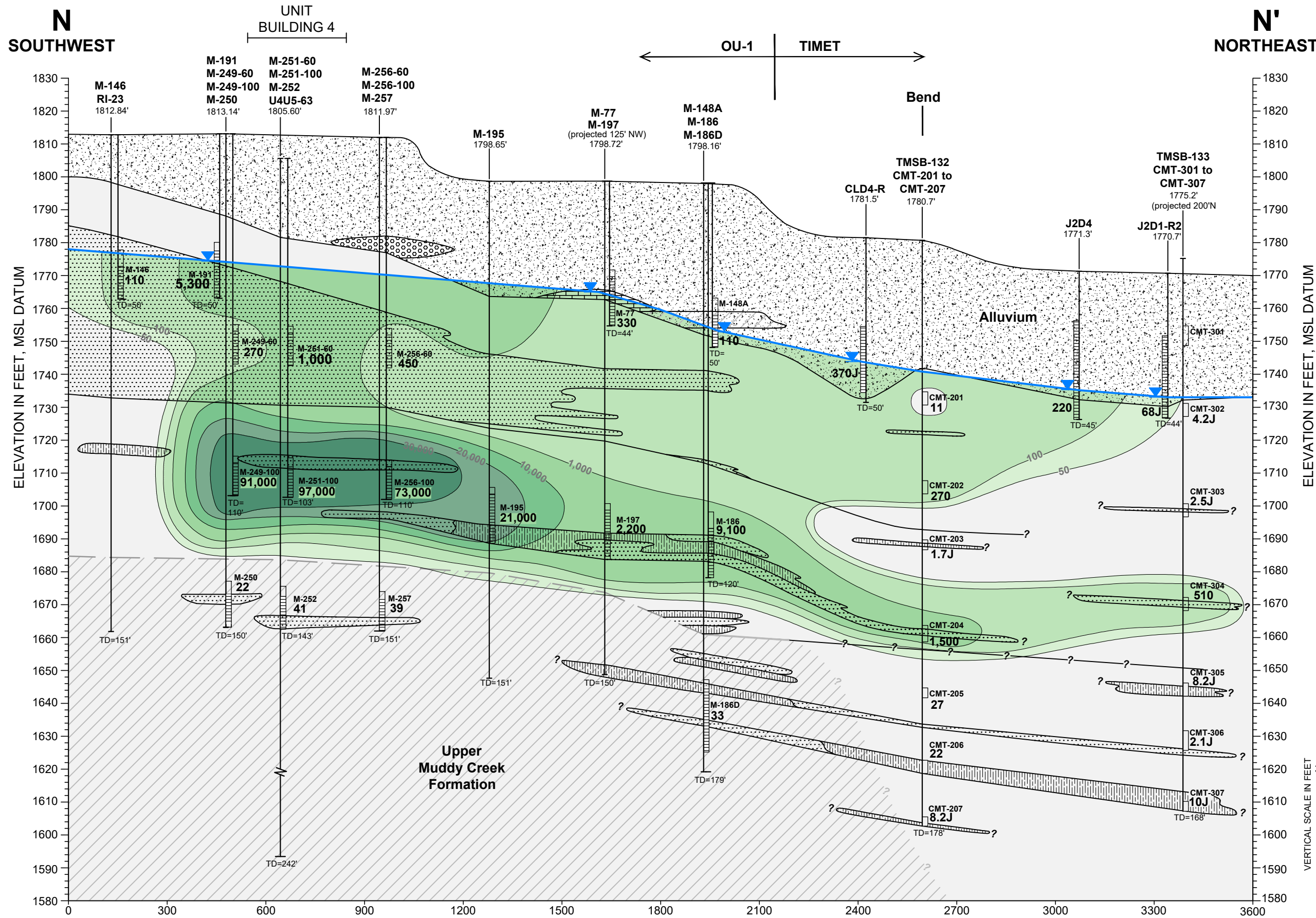
Nevada Environmental Response Trust Site
Henderson, Nevada



Figure
9-10c

RM50 6/9/23 C:\USERS\RM50\ONEDRIVE - RAMBOLL\DESKTOP\DRAWING\169002\9369-019_FIG C-3B_SUBSURFACE XSECT N-N'_PERCHLORATE 2021 >

RMSO 6/9/23 C:\USERS\RMSO\ONEDRIVE - RAMBOLL\DESKTOP\DRAWING\1690006943 < 1690029369-019_FIG C-3D_SUBSURFACE XSECT N-N_CHROMIUM ISOCON2021 >



LEGEND:

M-186 Well name

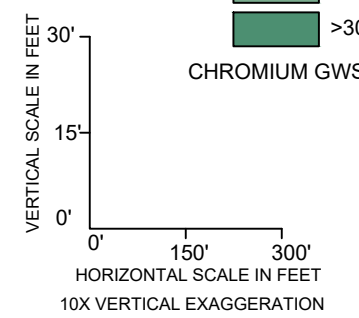
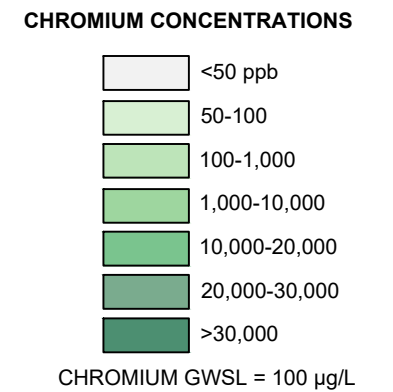
38 Chromium (Groundwater), µg/L

▼ Groundwater Elevation Measured in Shallow Monitoring Wells (2017/2018)

Notes:

1. TD = total depth.
2. MSL Datum = Mean Sea Level Datum.
3. Subsurface interpretation is based on available boring logs. Actual conditions may vary.
4. See Figure 9-7 for cross-section location.

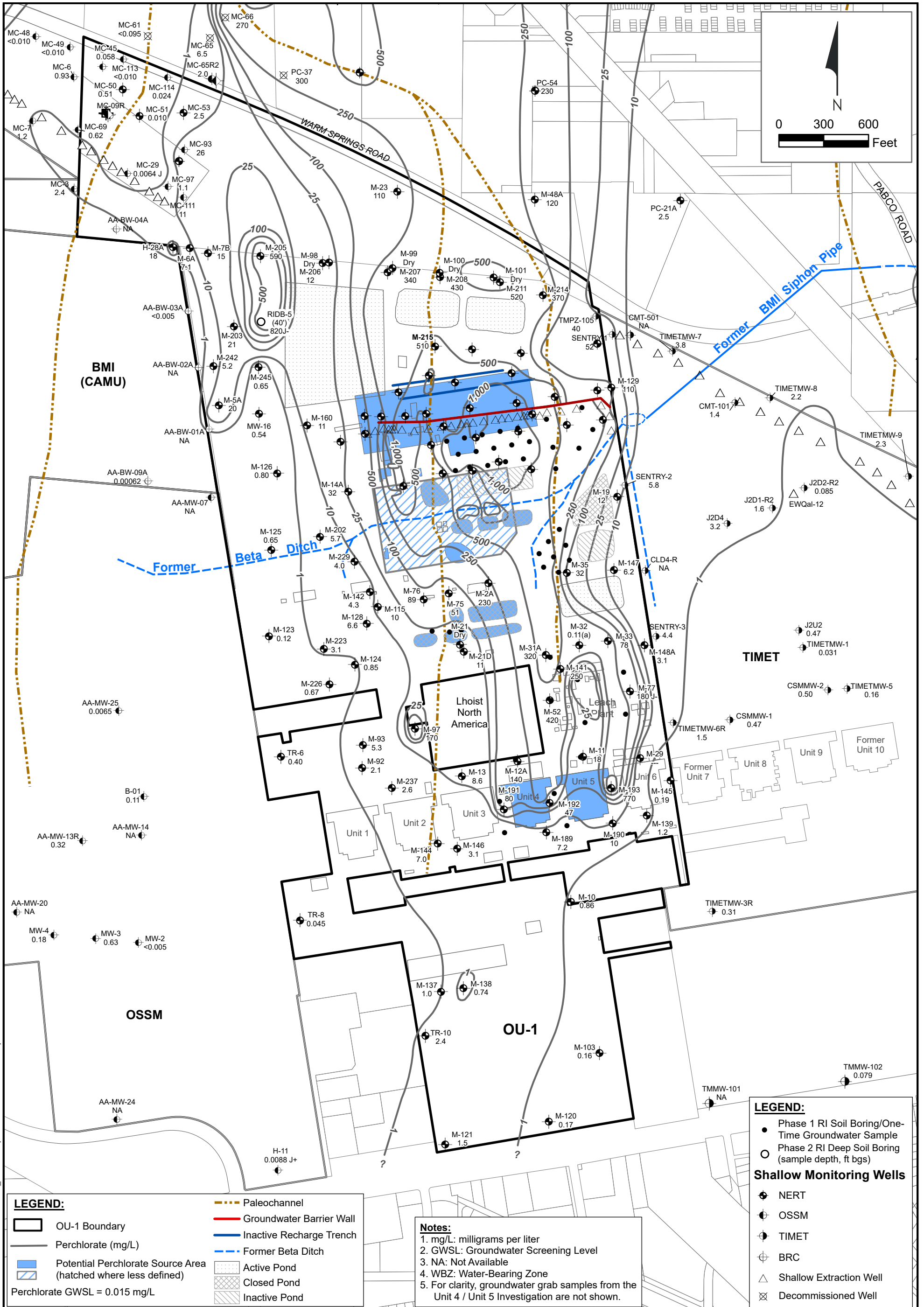
ALLUVIUM (Qal)	
GRAVEL/SANDY GRAVEL	SAND, SILTY AND GRAVELLY
CALICHE	ALLUVIUM
CALICHE	SANDY CLAY/CLAYEY SAND
UPPER MUDDY CREEK FORMATION (UMCf)	
SILT/SILT WITH SAND	SANDY SILT (fine to very fine sand)
SILTY SAND/SANDY BED	SILTY SAND/ GRAVEL
CLAYEY SILT/SILTY CLAY	



Schematic Subsurface Cross-Section N-N' with Chromium Concentrations

Nevada Environmental Response Trust Site
Henderson, Nevada



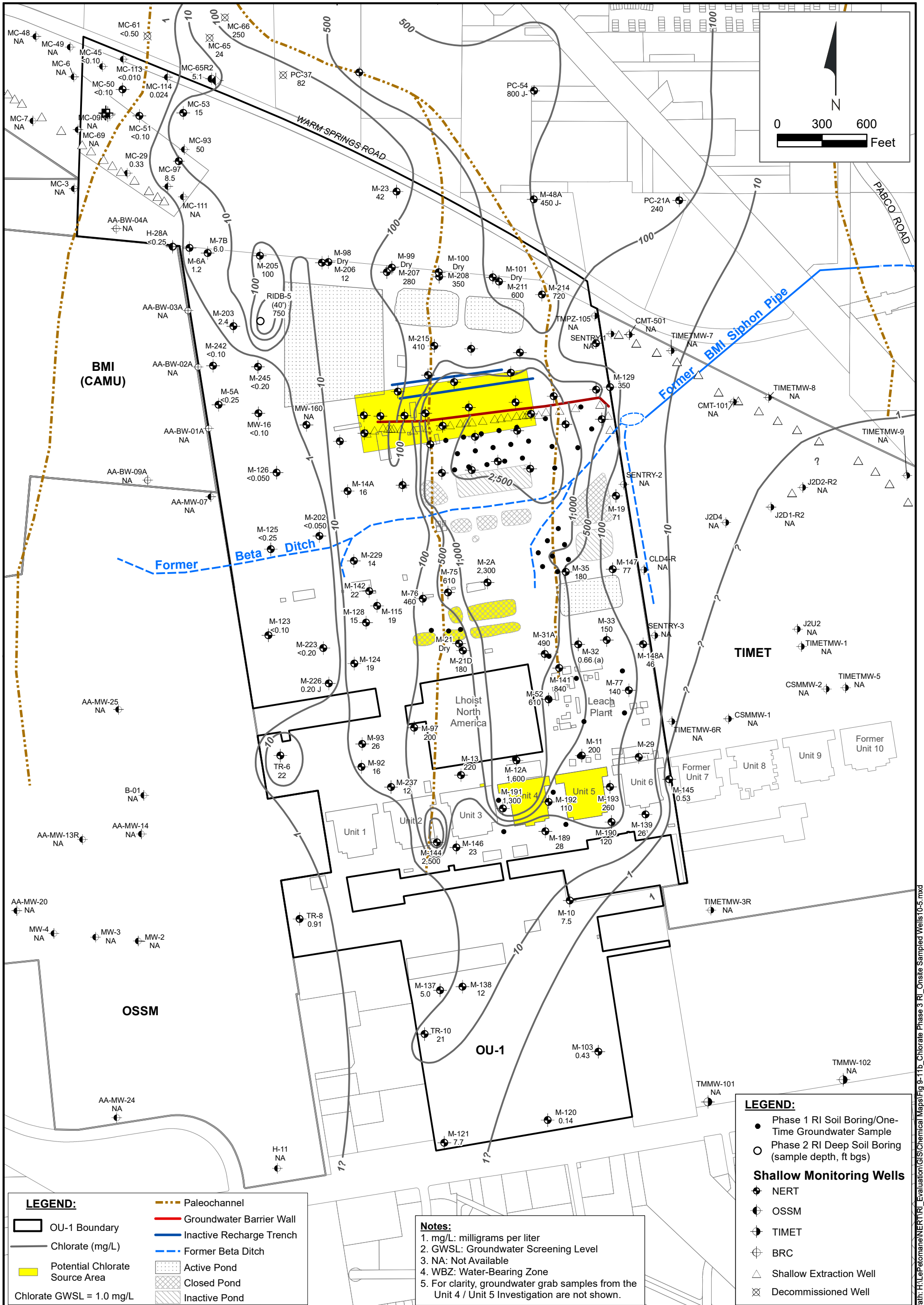


Path: H:\LePetomane\NERT\RI OU-1 OU-2 RI Report\GIS\revision1\revision1.aprx



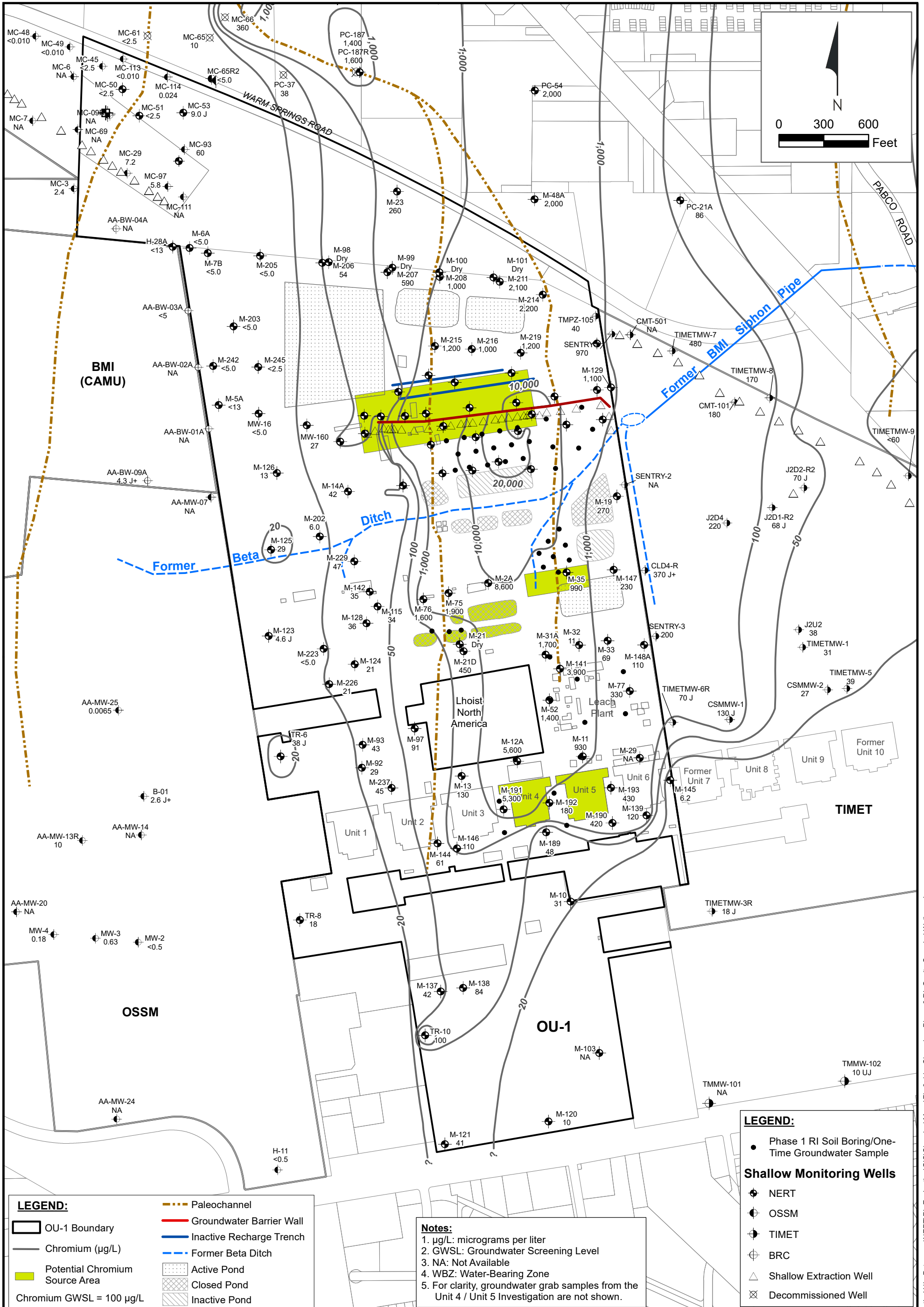
Potential Perchlorate Source Areas and Shallow WBZ (0-55 ft bgs) Plume
 Nevada Environmental Response Trust Site; Henderson, Nevada

Figure
9-11a



Potential Chlorate Source Areas and Shallow WBZ (0-55 ft bgs) Plume
Nevada Environmental Response Trust Site; Henderson, Nevada

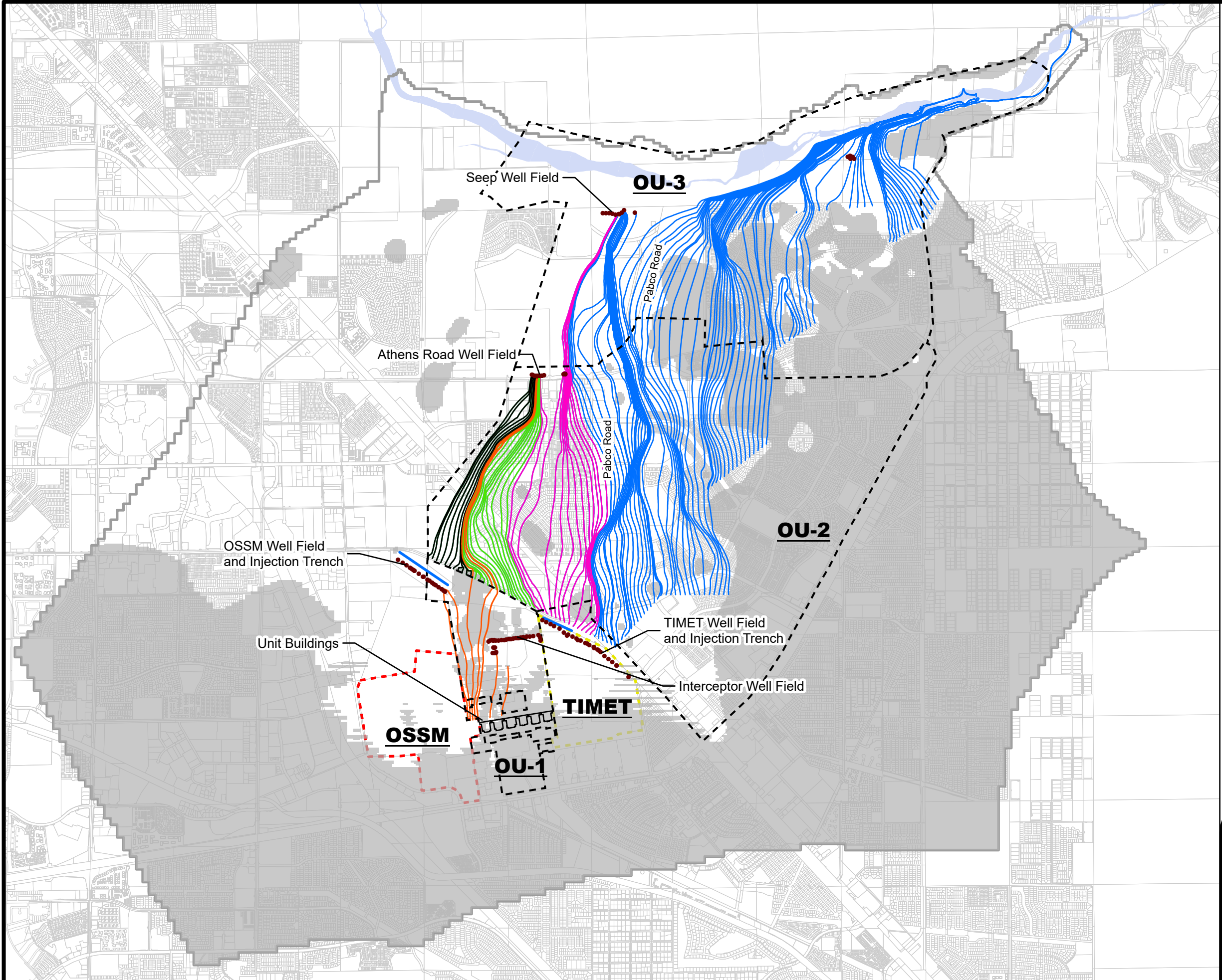
Figure
9-11b



Potential Chromium Source Areas and Shallow WBZ (0-55 ft bgs) Plume
 Nevada Environmental Response Trust Site; Henderson, Nevada

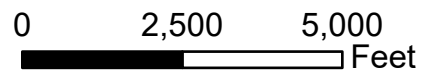
Figure
9-11c

Path: H:\LePetomane\NERTRI\OU-1_OU-2_RI\Report\GIS\revision1\revision1.aprx



Legend

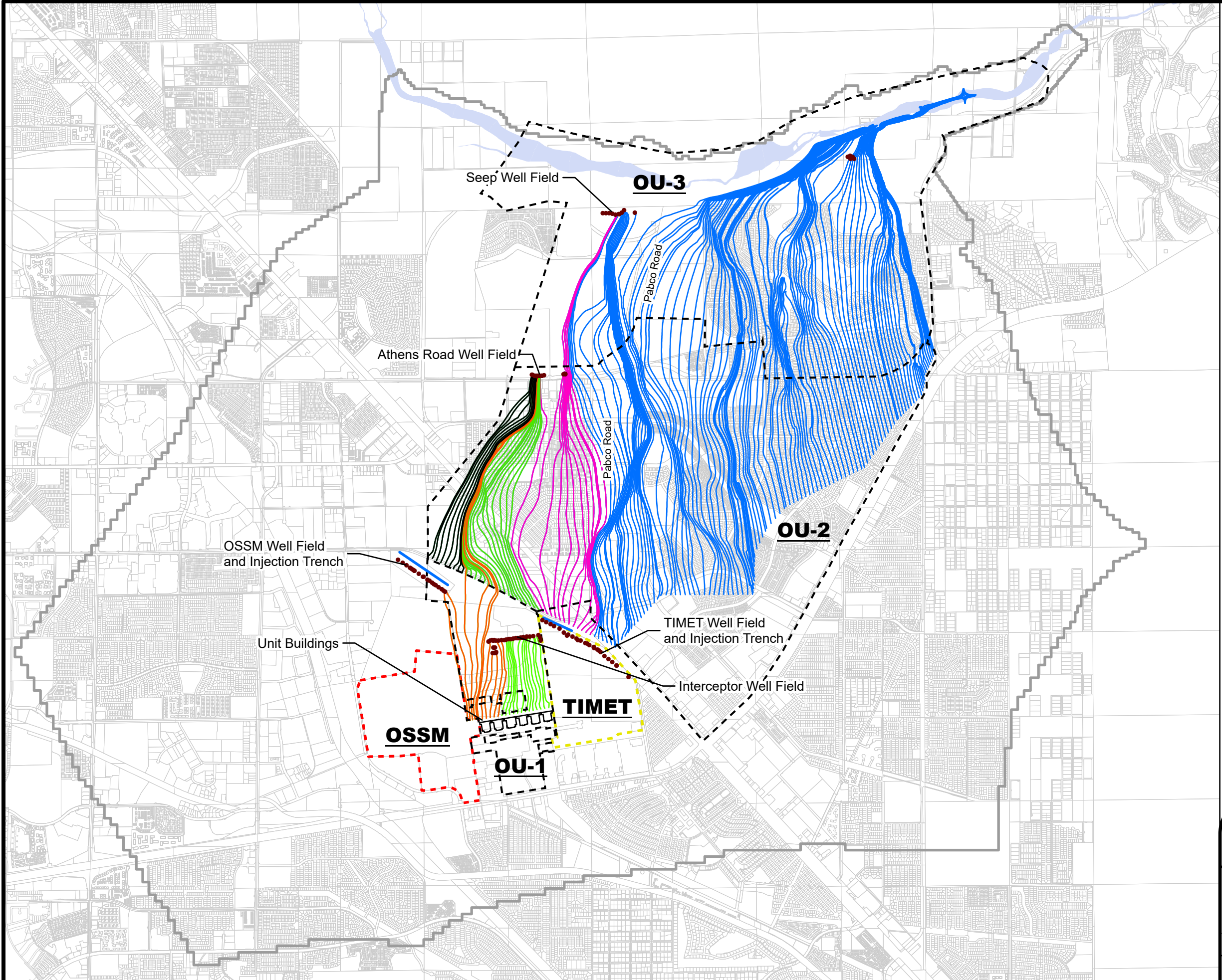
- Extraction Well
- Injection Trench
- - - OSSM Site Boundary
- - - TIMET Site Boundary
- Particle Tracks Starting from the Northwestern OU-1 Boundary
- Particle Tracks Starting from the Northeastern OU-1 Boundary
- Particle Tracks Starting North of TIMET Site
- Particle Tracks Starting East of Pabco Rd
- Particle Tracks Starting from Unit Buildings 1-2
- Unsaturated Alluvium
- Phase 6 Model Boundary
- Las Vegas Wash



**Tracking of Particles in OU-2 and OU-3
Released in Alluvium of Shallow WBZ
Nevada Environmental Response Trust Site
Henderson, Nevada**

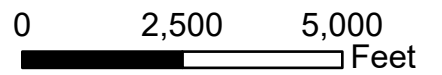
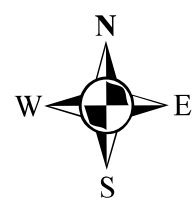
Date: 2023-06-15	Contract Number: 169002 9369	Figure
Drafter: AS	Approved:	Revised:
		9-12a

Path: H:\LaPetomane\NERTRI\OU-1_OU-2_RI_Report\GIS\revision1\revision1.aprx



Legend

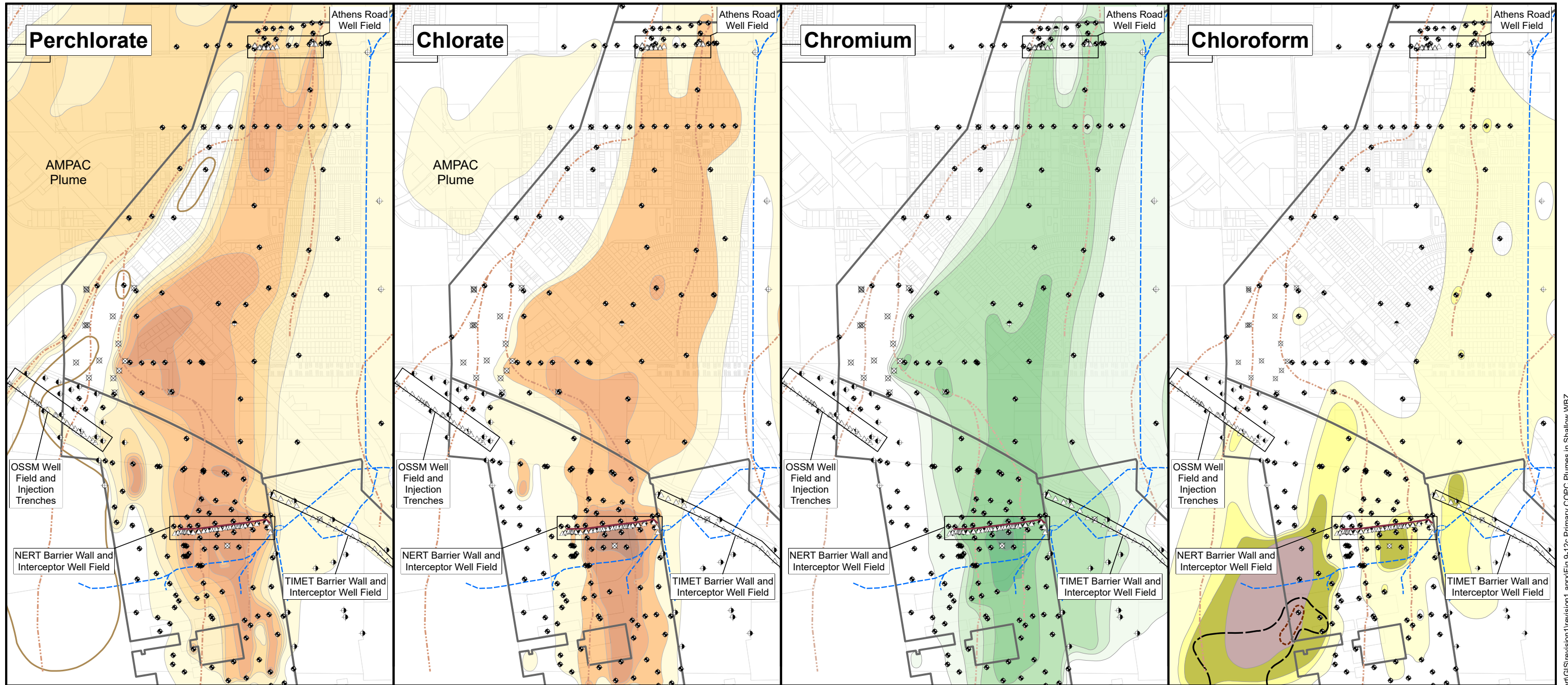
- Extraction Well
- Injection Trench
- - - OSSM Site Boundary
- - - TIMET Site Boundary
- - - Particle Tracks Starting from the Northwestern OU-1 Boundary
- - - Particle Tracks Starting from the Northeastern OU-1 Boundary
- - - Particle Tracks Starting North of TIMET Site
- - - Particle Tracks Starting East of Pabco Rd
- - - Particle Tracks Starting from Unit Buildings 1-2
- - - Particle Tracks Starting from Unit Buildings 3-6
- ▭ Phase 6 Model Boundary
- ▭ Las Vegas Wash



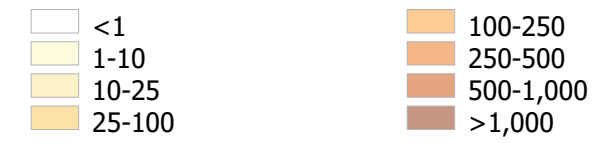
**Tracking of Particles in OU-2 and OU-3
Released in UMCf of Shallow WBZ
Nevada Environmental Response Trust Site
Henderson, Nevada**

Date: 2023-06-15	Contract Number: 169002 9369	Figure
Drafter: AS	Approved:	Revised:

9-12b



Perchlorate Concentration - mg/L



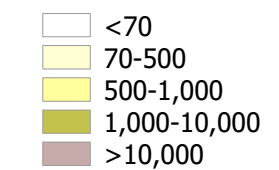
Chlorate Concentration - mg/L



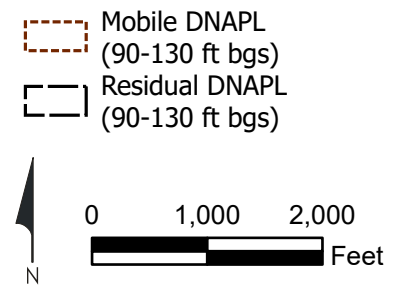
Chromium Concentration - µg/L



Chloroform Concentration - µg/L



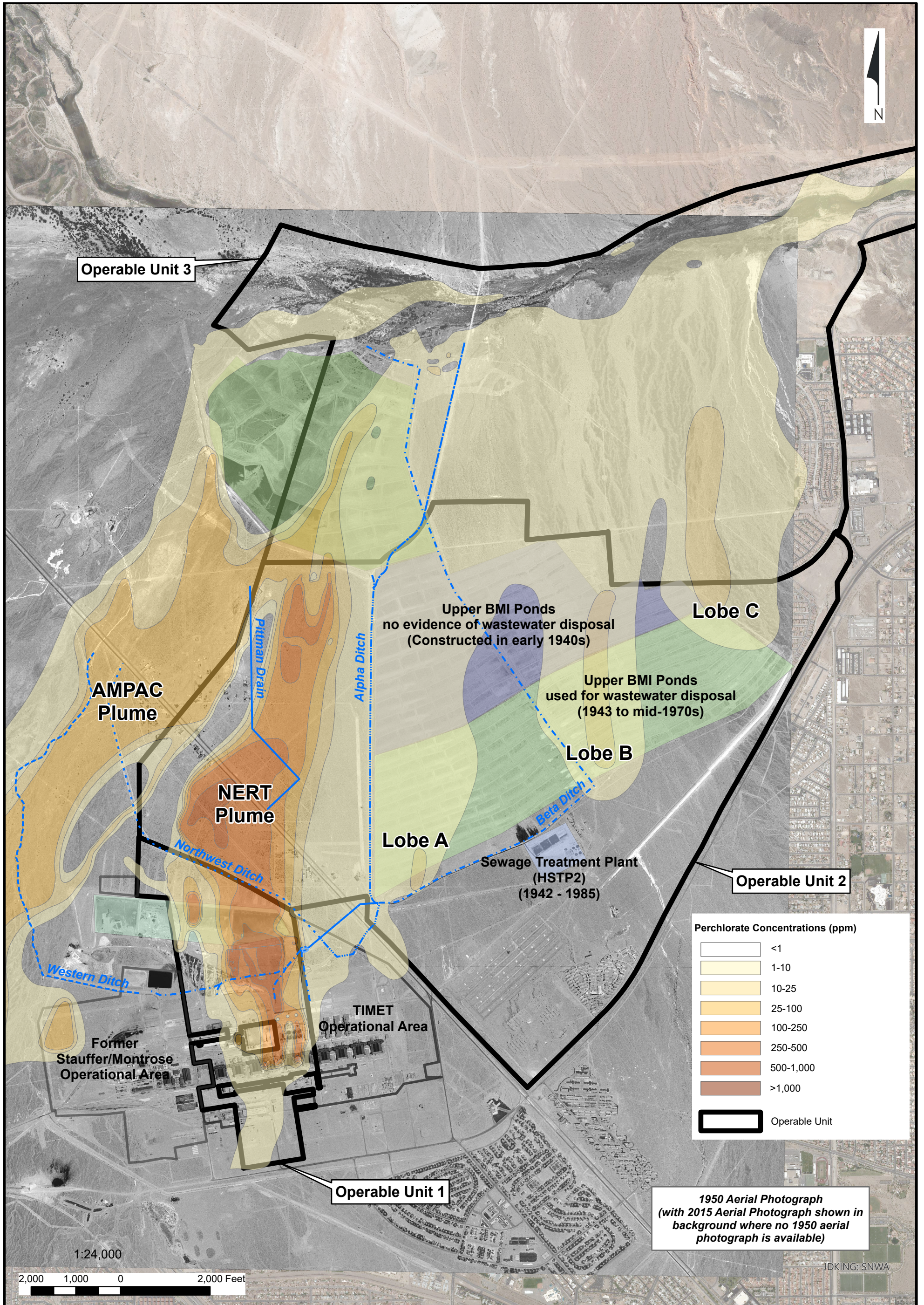
- - - Paleochannel (approximate)
- - - Former Ditch
- ▭ OU Boundary
- Barrier Wall
- ▭ Well Field Area
- △ Extraction Well

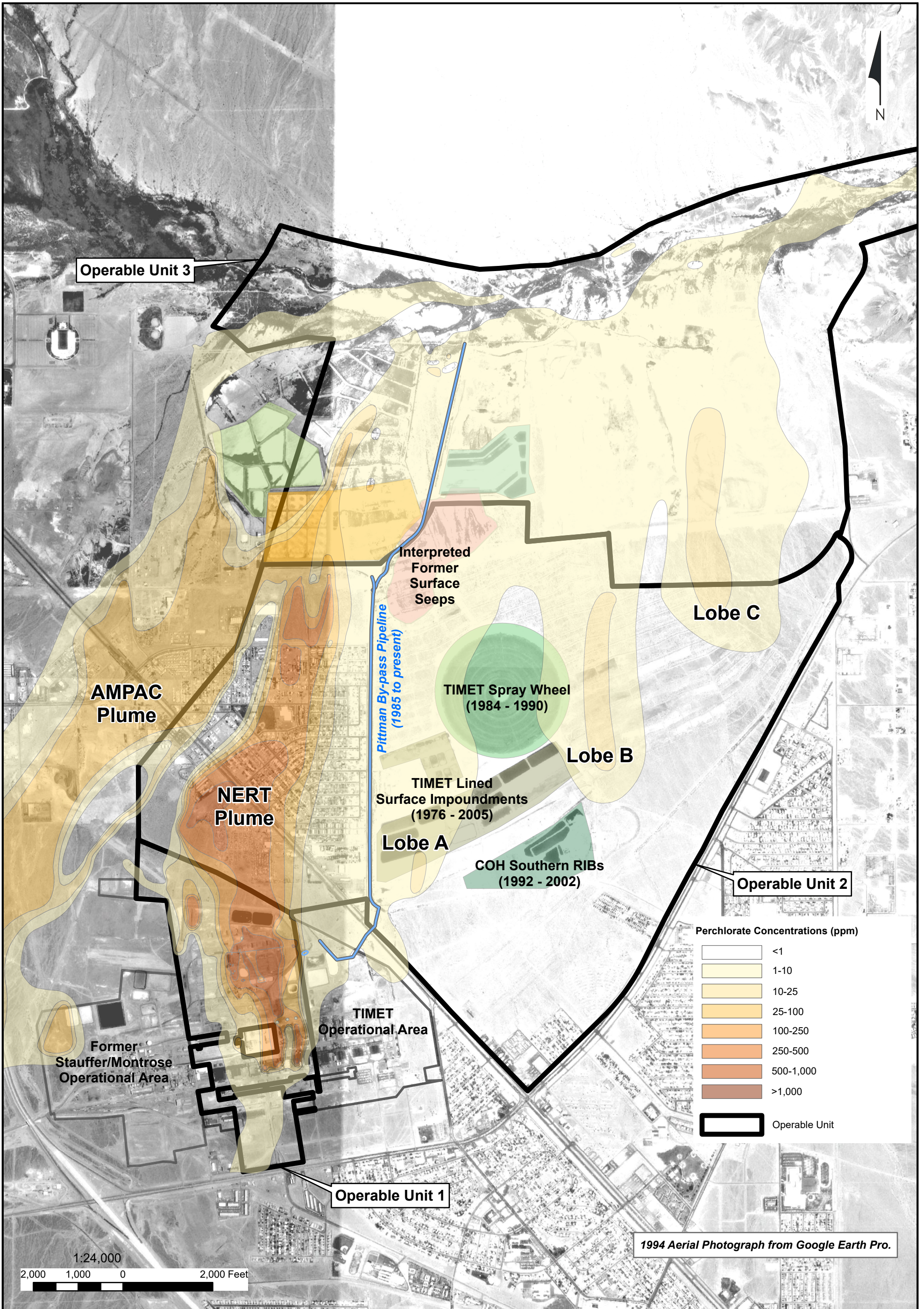


Primary COPC Plumes in the Shallow WBZ (0-55 ft bgs)
 Nevada Environmental Response Trust Site
 Henderson, Nevada

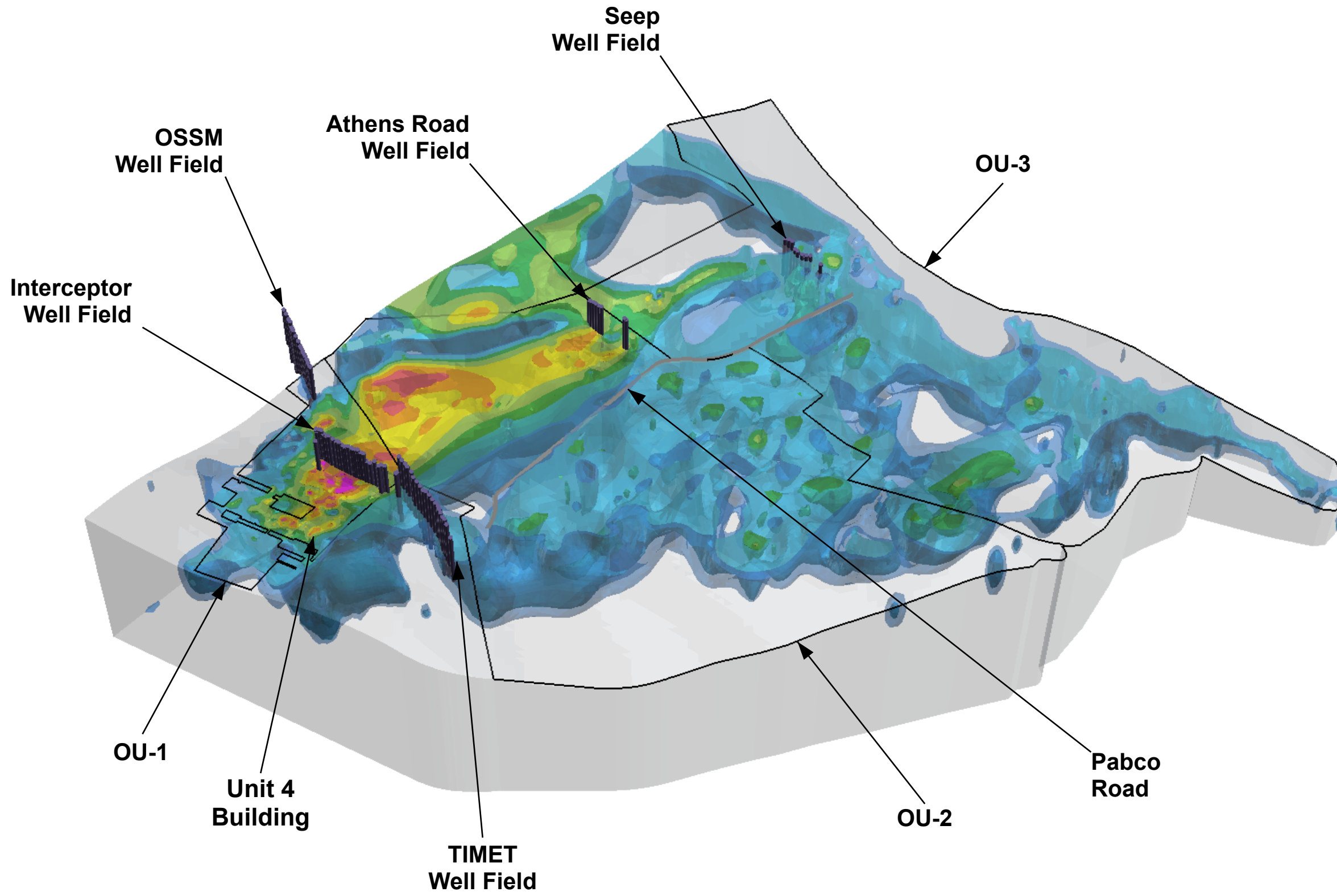
Figure
9-12c

Path: H:\LePetomane\NERT\OU-1_OU-2 RI Report\GIS\revision1\revision1.aprx\Fig 9-12c Primary COPC Plumes in Shallow WBZ

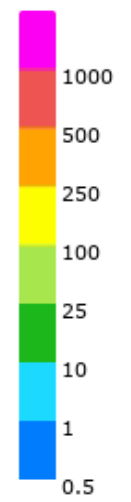




Perchlorate Concentration
> 0.5 mg/L



Perchlorate Concentration
(mg/L)



Perchlorate GWSL = 0.015 mg/L



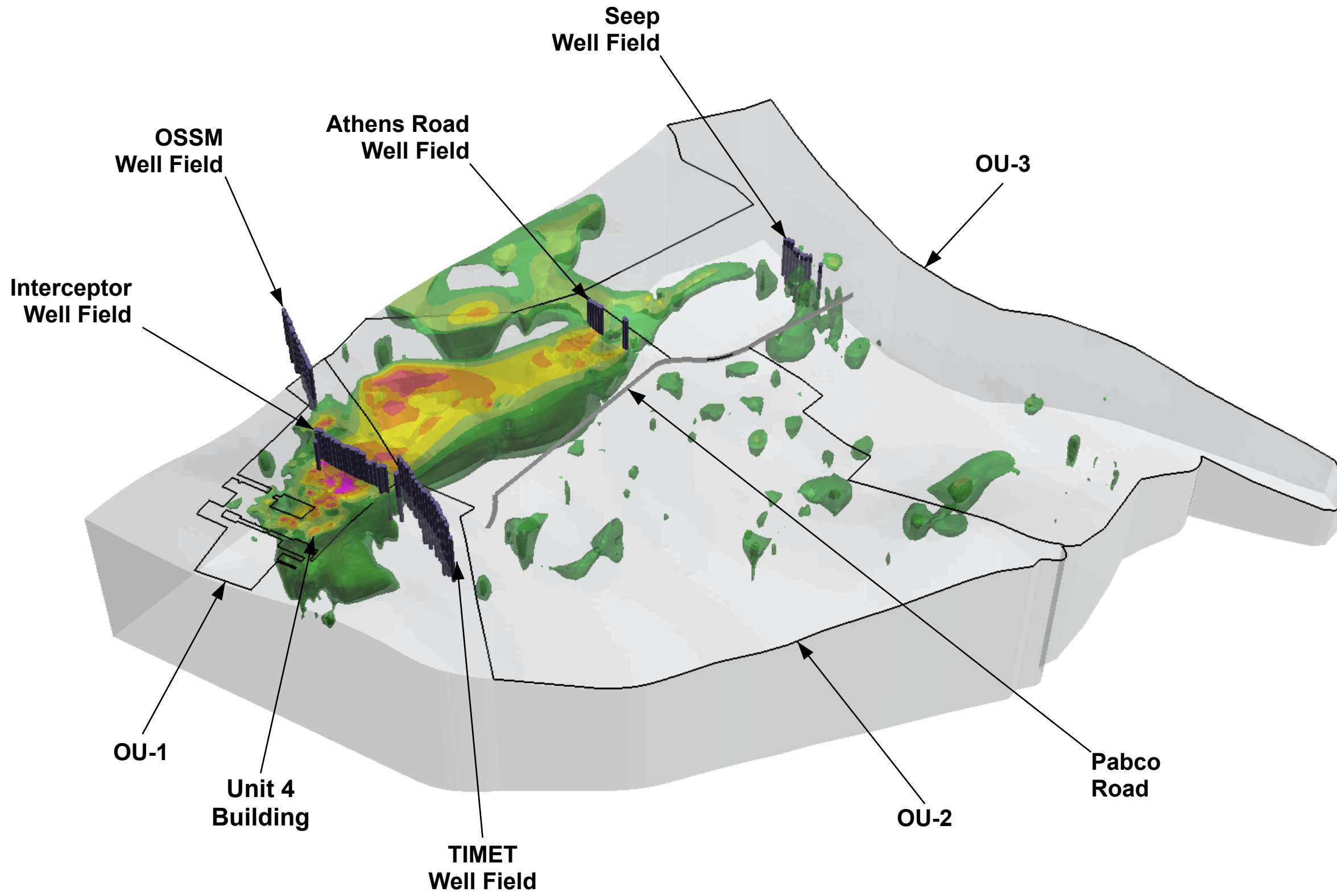
**Perchlorate in Groundwater,
NERT RI Study Area, >0.5 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

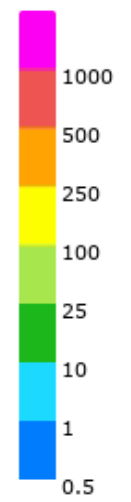
9-14a

H:\John C\NERT\Leapfrog\RI_OU3_figures.aprx (Fig 9-14a_perchlorate_3D

Perchlorate Concentration
> 10 mg/L



Perchlorate Concentration
(mg/L)



Perchlorate GWSL = 0.015 mg/L



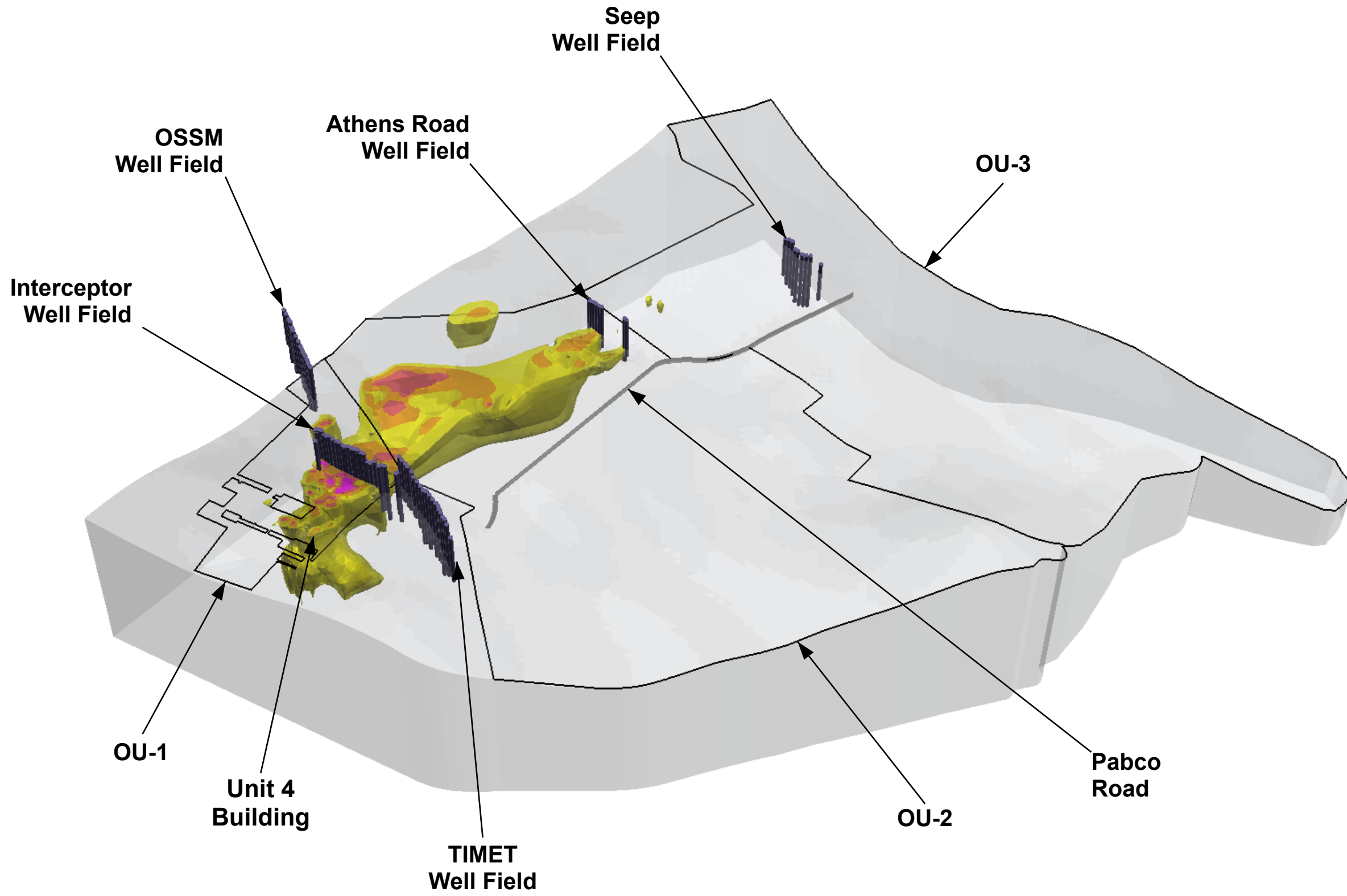
**Perchlorate in Groundwater,
NERT RI Study Area, >10 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

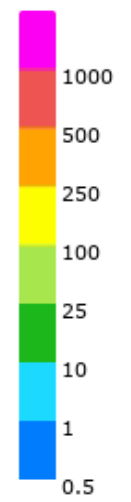
9-14b

H:\John C\NERT\Leapfrog\RL_OU3_figures.aprx (Fig 9-14b_perchlorate_3D

Perchlorate Concentration
> 100 mg/L



Perchlorate Concentration
(mg/L)



Perchlorate GWSL = 0.015 mg/L

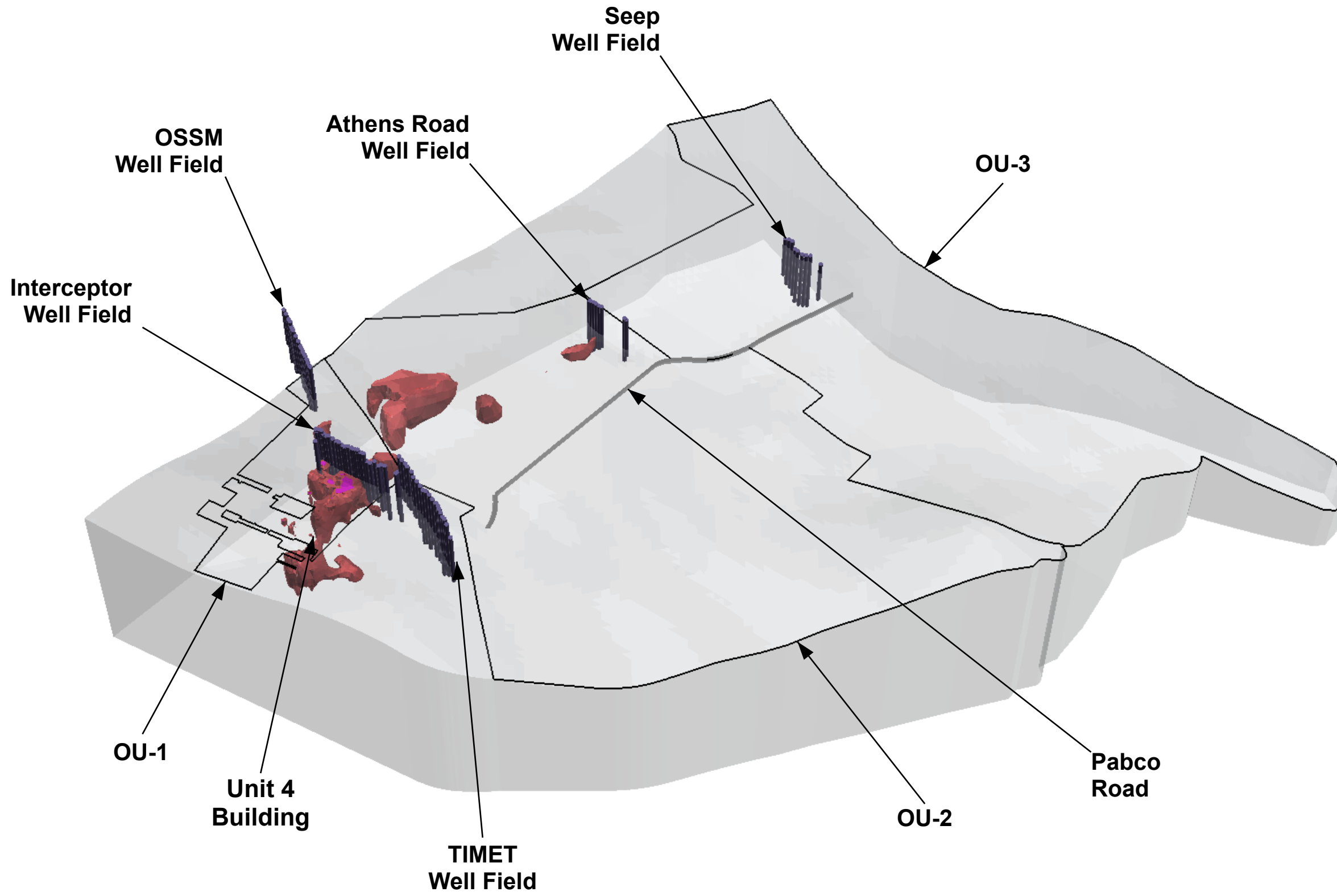


**Perchlorate in Groundwater,
NERT RI Study Area, >100 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

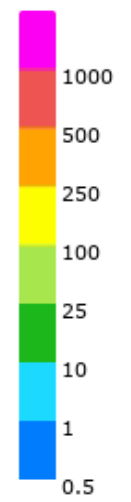
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

H:\John C\NERT\Leapfrog\RL_OU3_figures.aprx (Fig 9-14c_perchlorate_3D

Perchlorate Concentration
> 500 mg/L



Perchlorate Concentration
(mg/L)



Perchlorate GWSL = 0.015 mg/L



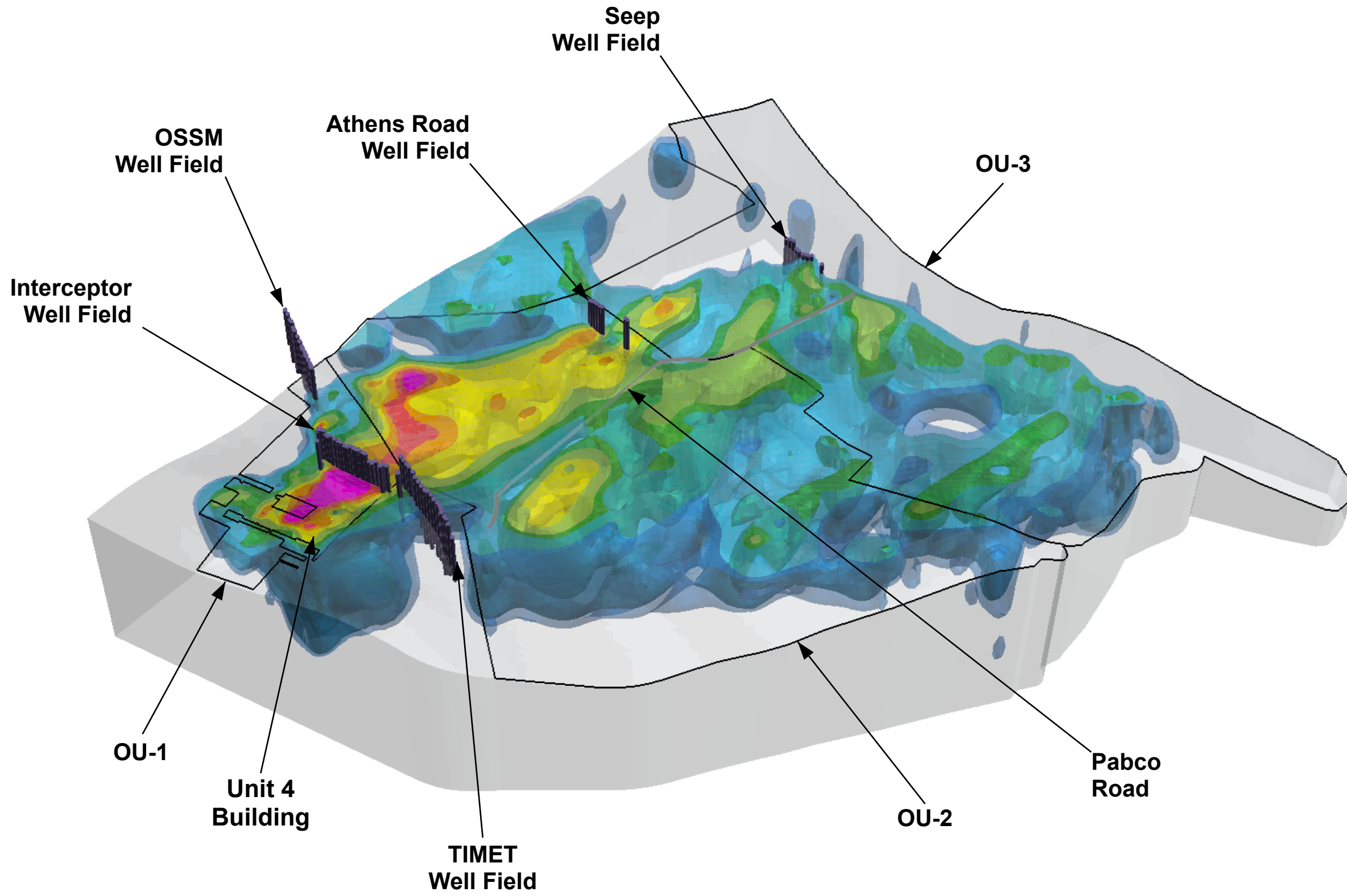
**Perchlorate in Groundwater,
NERT RI Study Area, >500 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

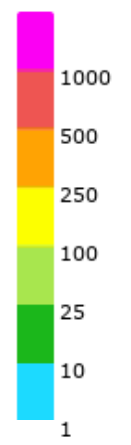
9-14d

H:\John C\NERT\Leapfrog\RL_OU3_figures.aprx [Fig 9-14d_perchlorate_3D

Chlorate Concentration
> 0.5 mg/L



Chlorate Concentration
(mg/L)



Chlorate GWSL = 1 mg/L



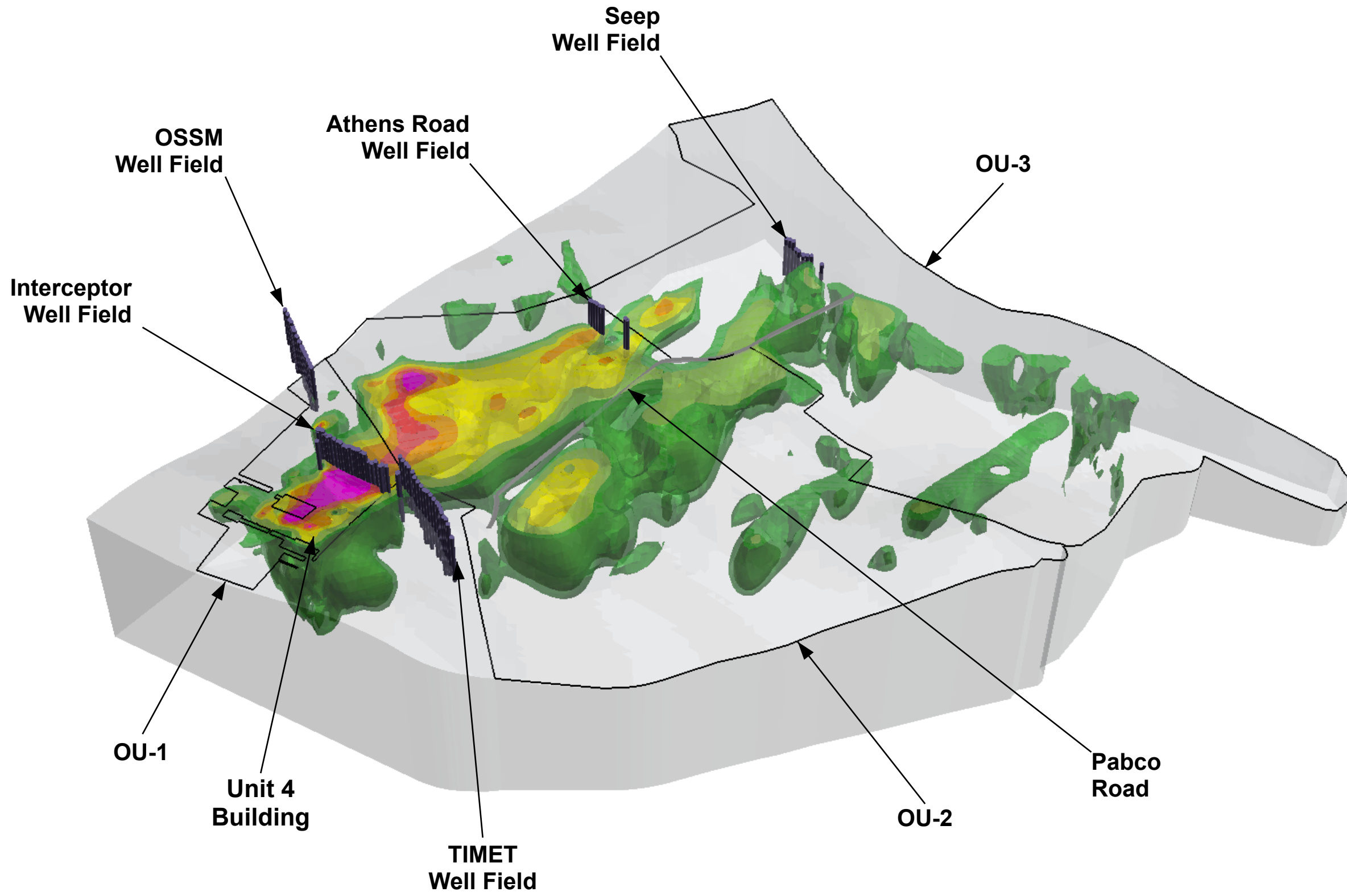
**Chlorate in Groundwater,
NERT RI Study Area, >0.5 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

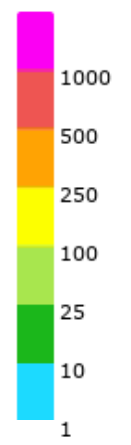
9-15a

H:\John C\NERT\Leapfrog\RI_OU3_figures.aprx (Fig 9-15a_chlorate_3D

Chlorate Concentration
> 10 mg/L



Chlorate Concentration
(mg/L)



Chlorate GWSL = 1 mg/L

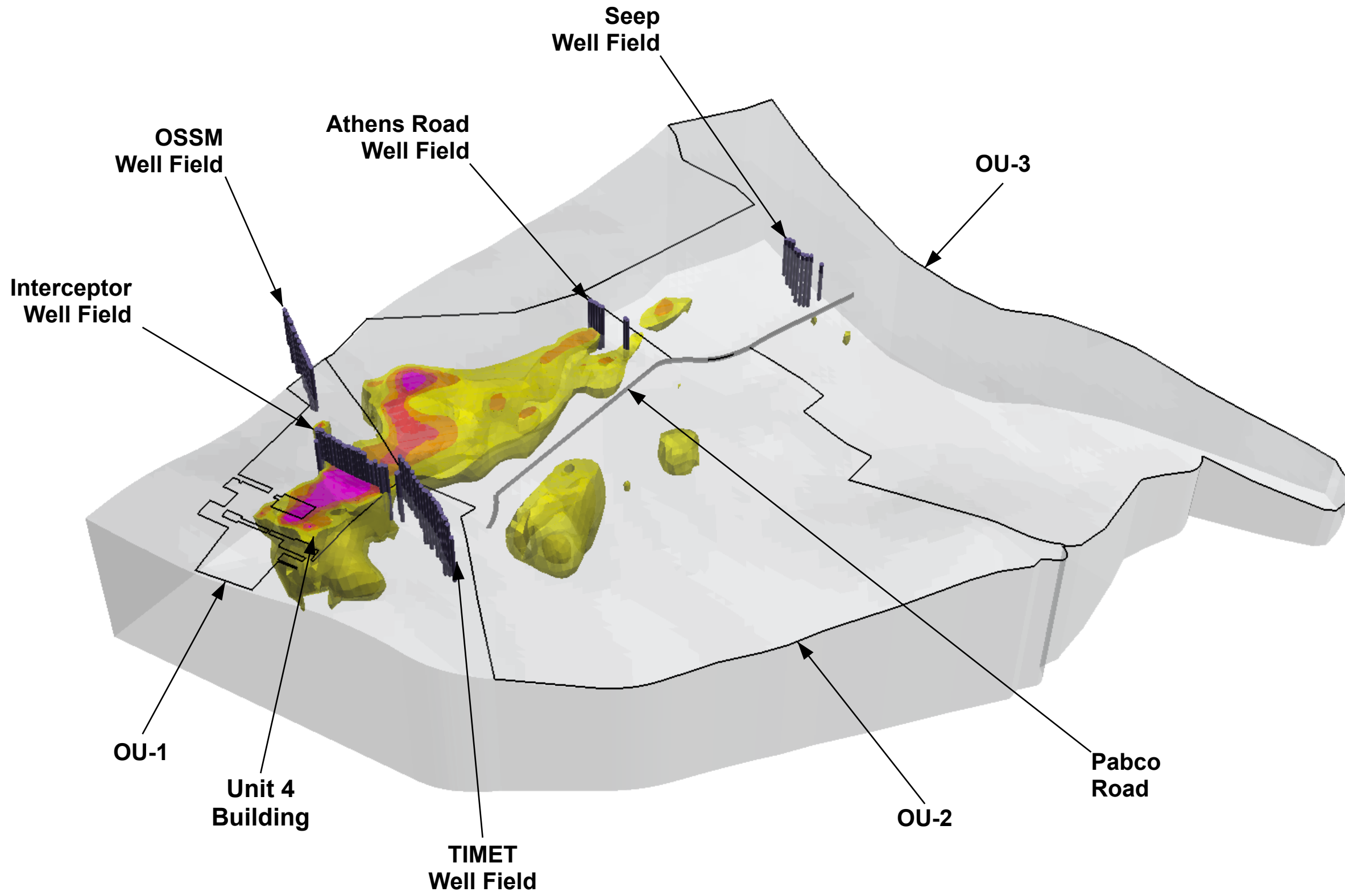


**Chlorate in Groundwater,
NERT RI Study Area, >10 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

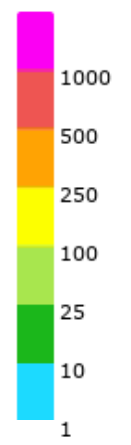
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

H:\John C\NERT\Leapfrog\RI_OU3_figures.aprx (Fig 9-15b_chlorate_3D

Chlorate Concentration
> 100 mg/L



Chlorate Concentration
(mg/L)



Chlorate GWSL = 1 mg/L



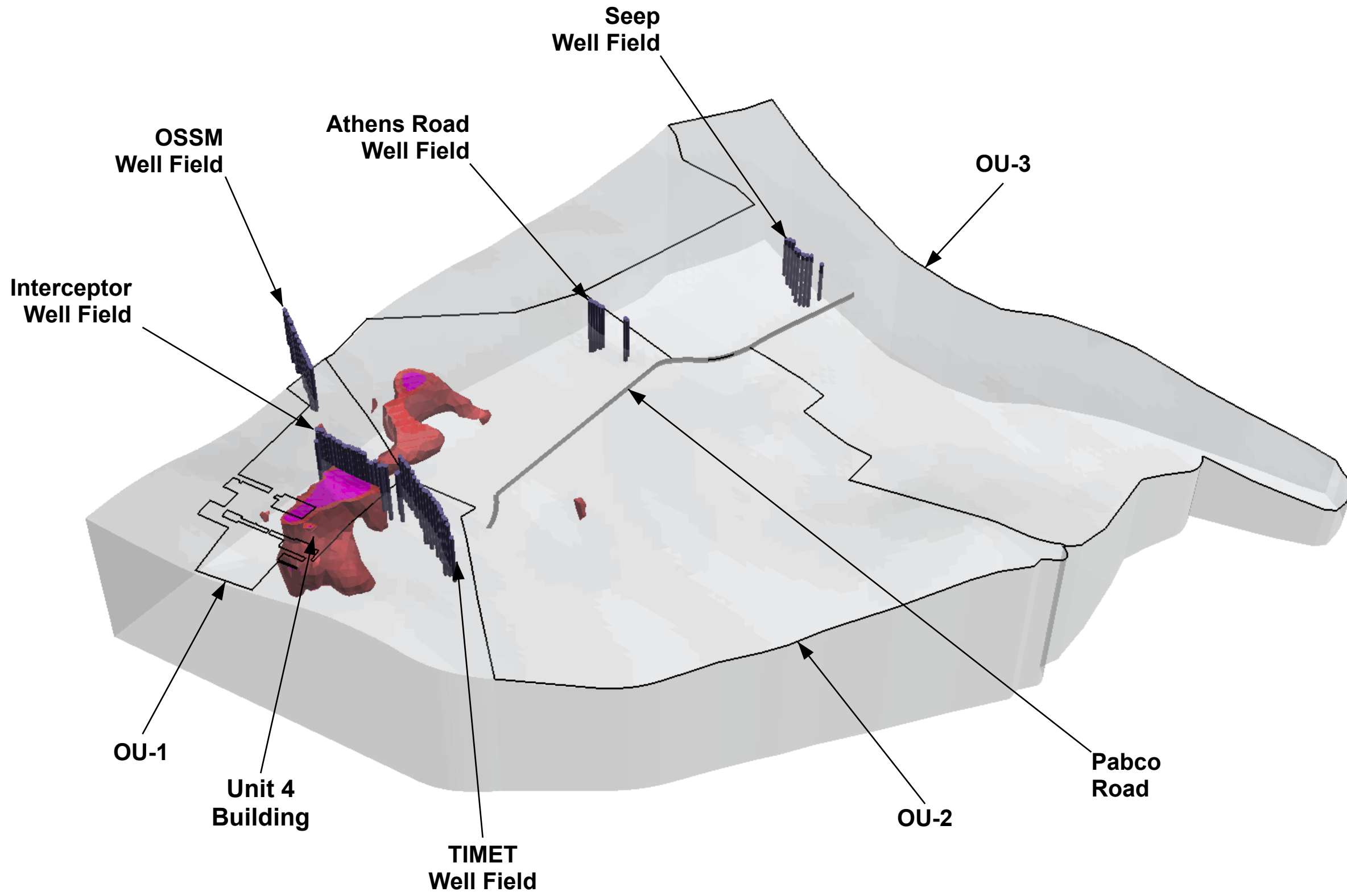
**Chlorate in Groundwater,
NERT RI Study Area, >100 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

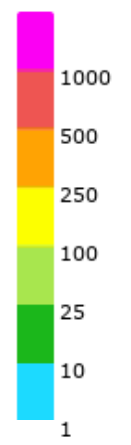
9-15c

H:\John C\NERT\Leapfrog\RI_OU3_figures.aprx (Fig 9-15c_chlorate_3D

Chlorate Concentration
> 500 mg/L



Chlorate Concentration
(mg/L)



Chlorate GWSL = 1 mg/L

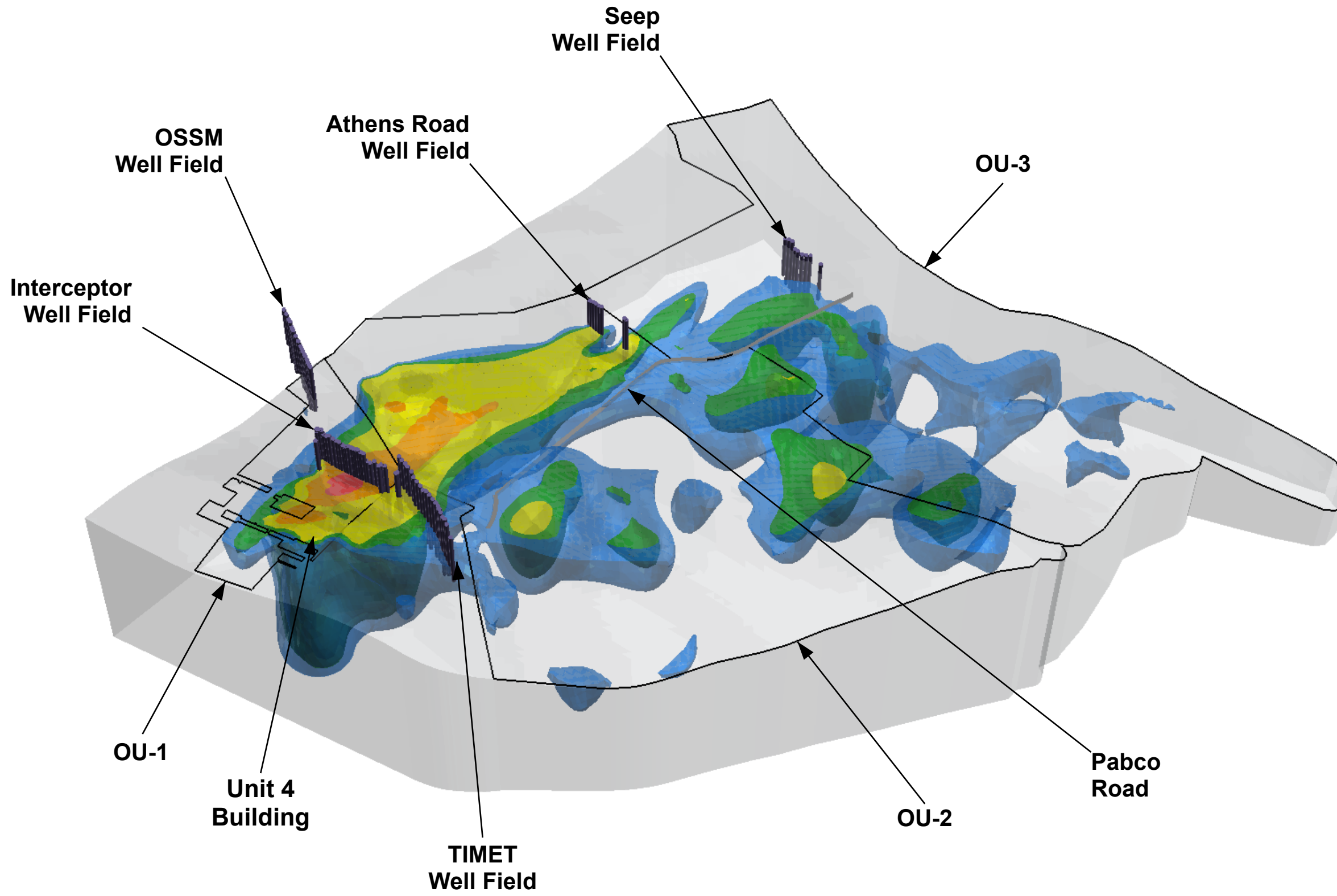


**Chlorate in Groundwater,
NERT RI Study Area, >500 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

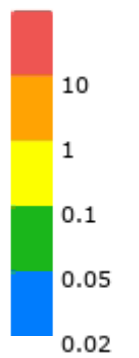
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

H:\John C\NERT\Leapfrog\RI_OU3_figures.aprx (Fig 9-15d_chlorate_3D

Chromium Concentration
> 0.02 mg/L



Chromium Concentration
(mg/L)



Chromium GWSL = 0.10 mg/L

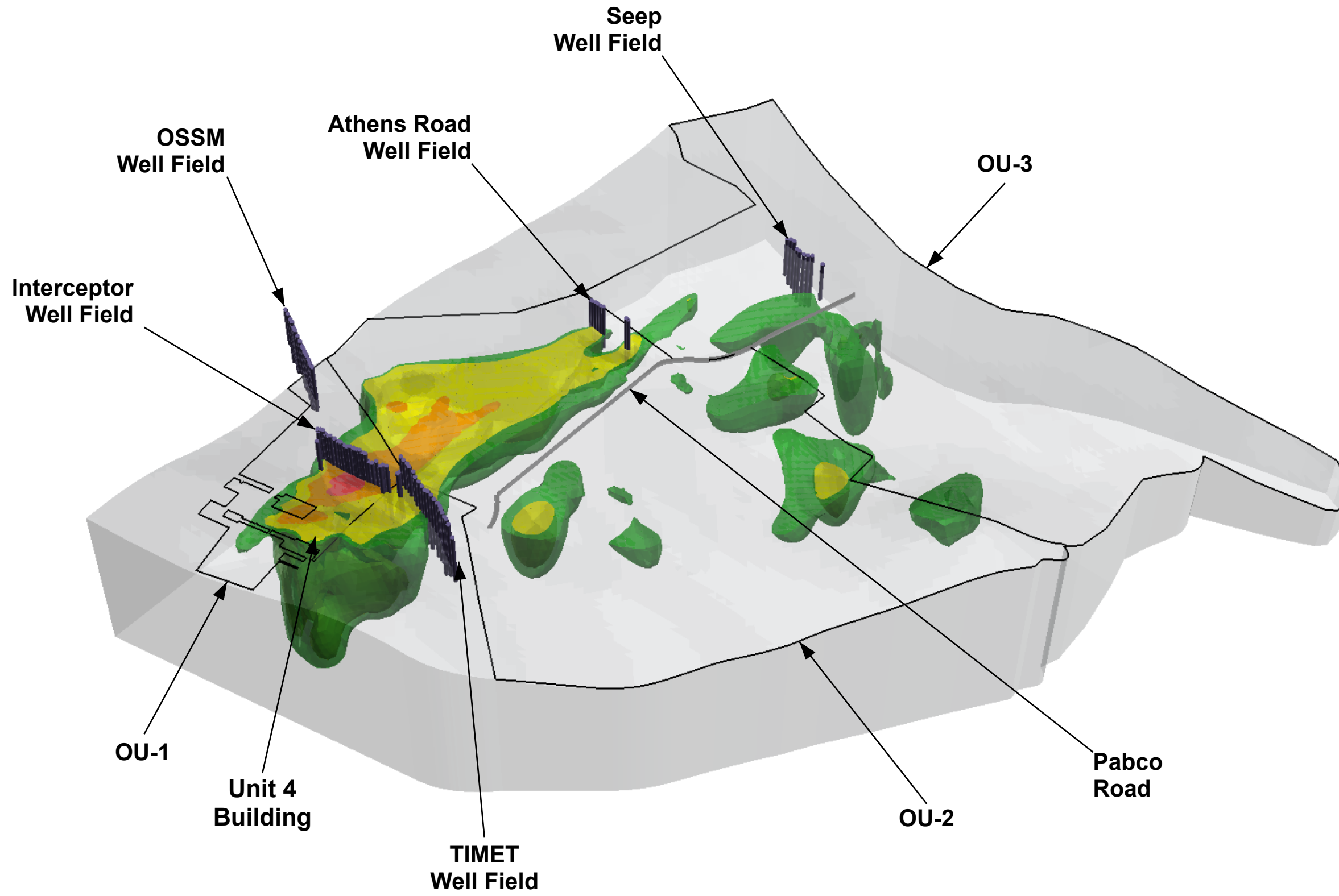


**Chromium in Groundwater,
NERT RI Study Area, >0.02 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

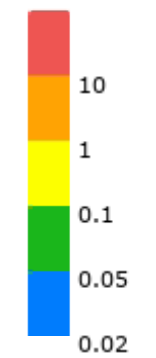
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

9-16a

Chromium Concentration
> 0.05 mg/L



Chromium Concentration
(mg/L)



Chromium GWSL = 0.10 mg/L

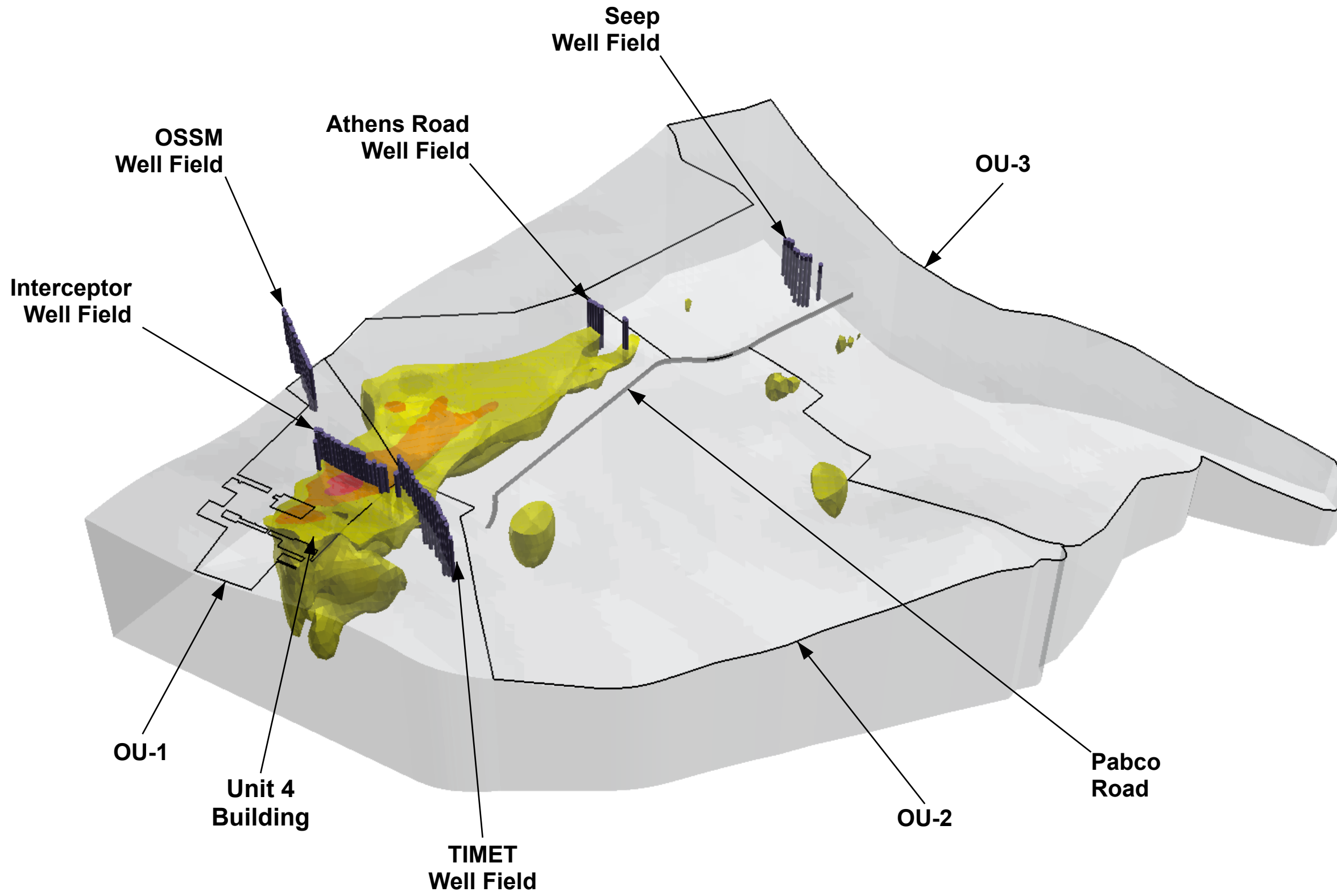


**Chromium in Groundwater,
NERT RI Study Area, >0.05 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

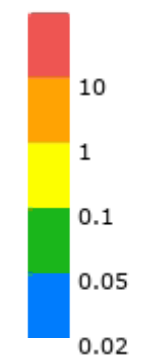
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

9-16b

Chromium Concentration
> 0.1 mg/L



Chromium Concentration
(mg/L)



Chromium GWSL = 0.10 mg/L



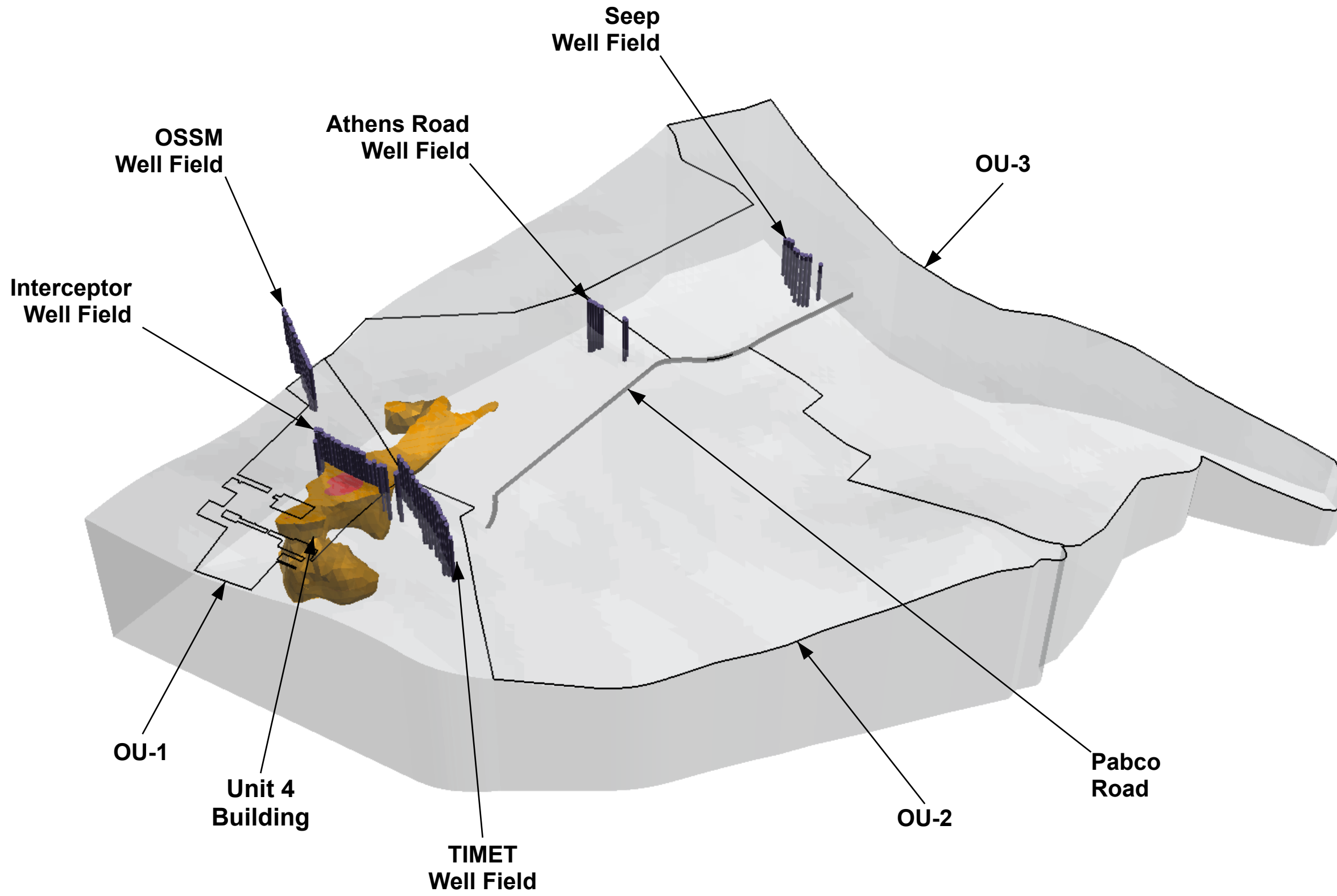
**Chromium in Groundwater,
NERT RI Study Area, >0.1 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

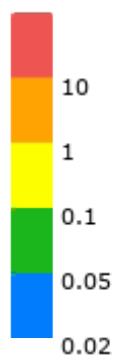
9-16c

H:\John C\NERT\Leapfrog\RI_OU3_figures.aprx [Fig 9-16c_chromium_3D

Chromium Concentration
> 1 mg/L



Chromium Concentration
(mg/L)



Chromium GWSL = 0.10 mg/L

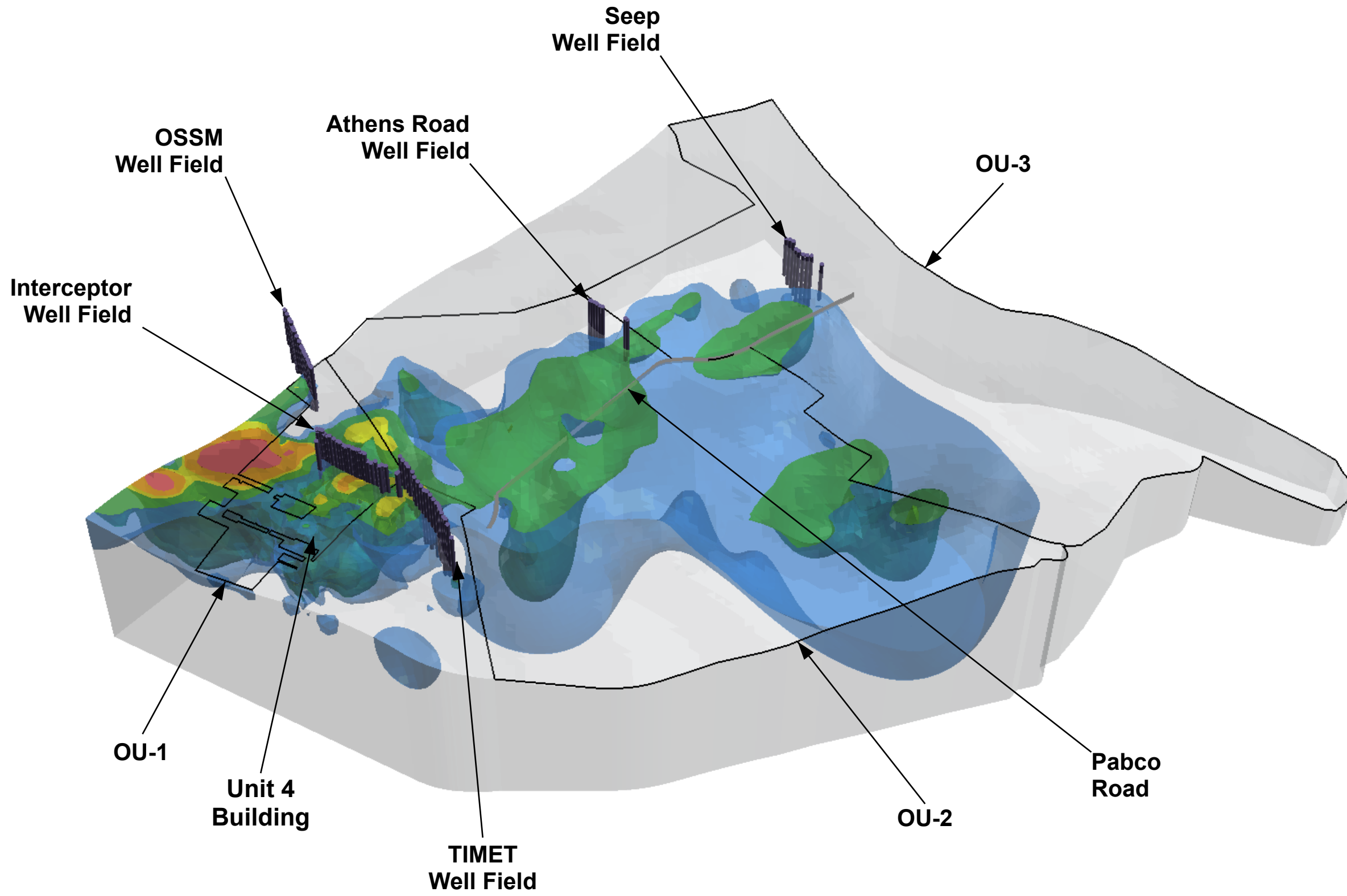


**Chromium in Groundwater,
NERT RI Study Area, >1 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

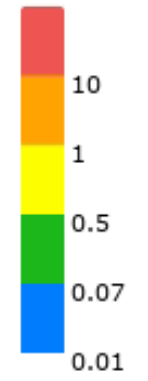
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

H:\John C\NERT\Leapfrog\RI_OU3_figures.aprx (Fig 9-16d_chromium_3D)

Chloroform Concentration
> 0.01 mg/L



Chloroform Concentration
(mg/L)



Chloroform GWSL = 0.070 mg/L



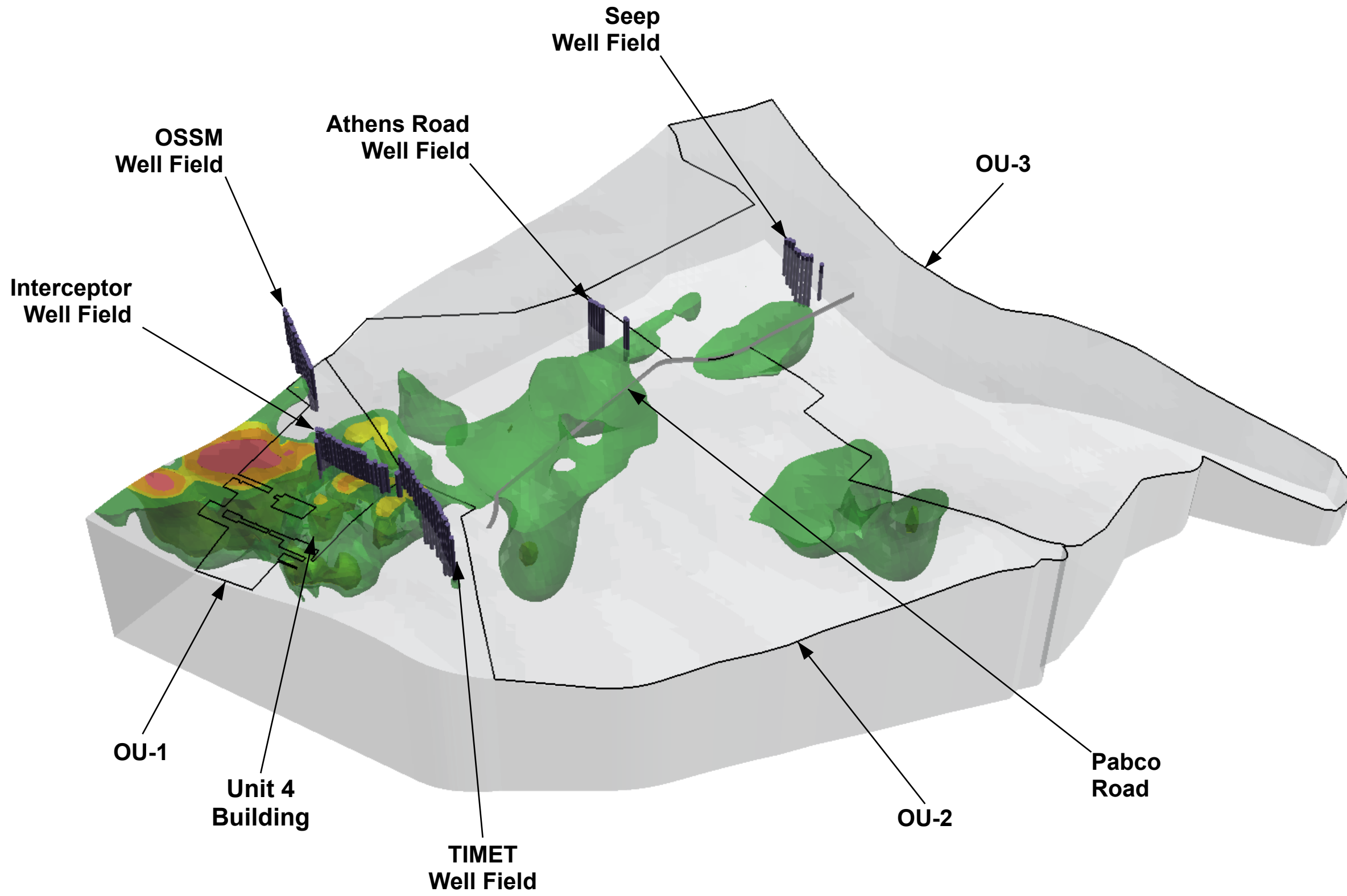
**Chloroform in Groundwater,
NERT RI Study Area, >0.01 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

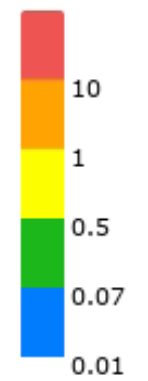
9-17a

H:\John C\NERT\Leapfrog\RL_OU3_figures.aprx (Fig 9-17a_chloroform_3D

Chloroform Concentration
> 0.07 mg/L



Chloroform Concentration
(mg/L)



Chloroform GWSL = 0.070 mg/L

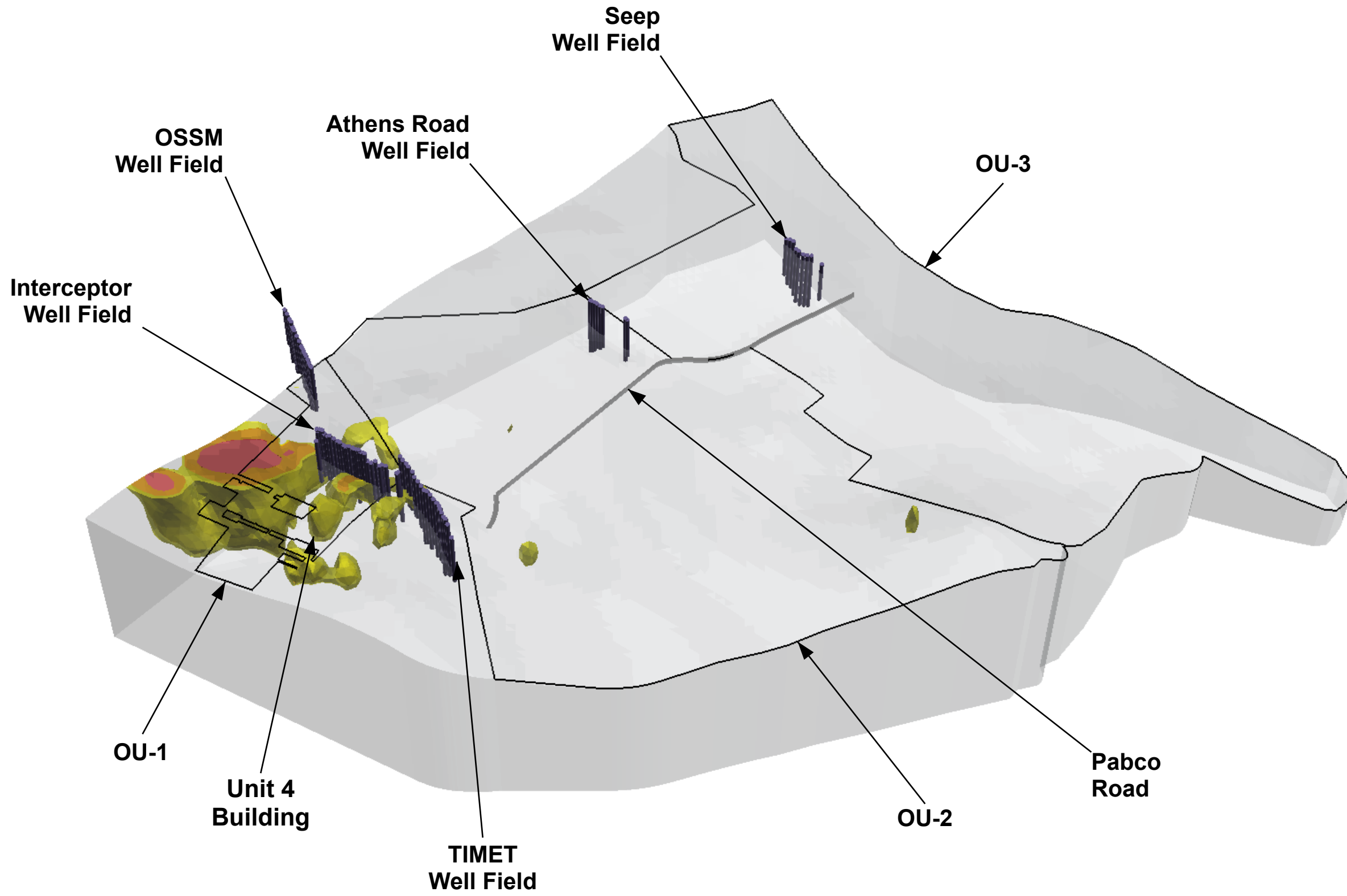


**Chloroform in Groundwater,
NERT RI Study Area, >0.07 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

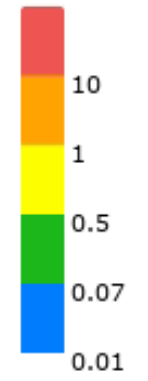
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

H:\John C\NERT\Leapfrog\RL_OU3_figures.aprx (Fig 9-17b_chloroform_3D

Chloroform Concentration
> 0.5 mg/L



Chloroform Concentration
(mg/L)



Chloroform GWSL = 0.070 mg/L

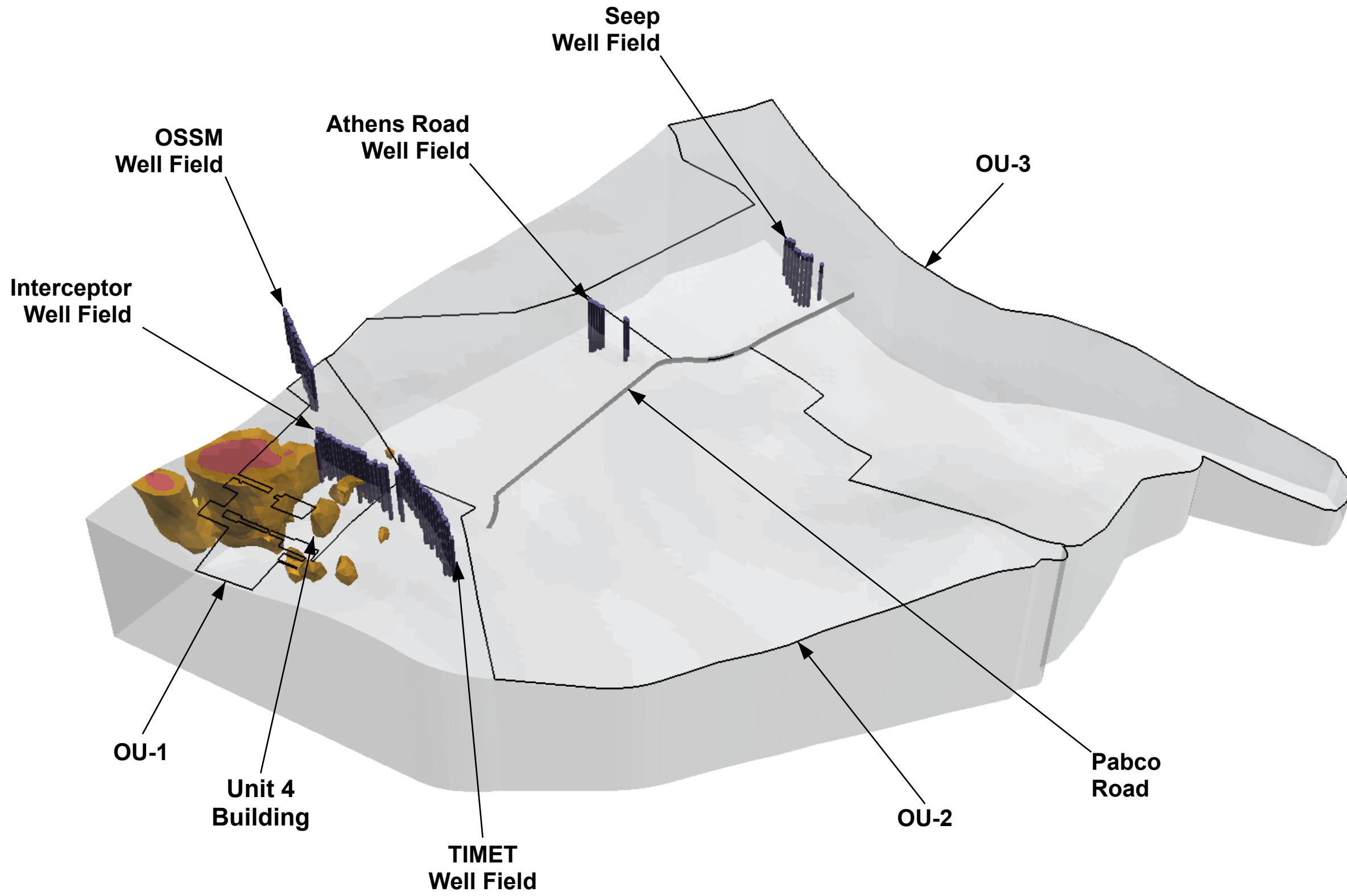


**Chloroform in Groundwater,
NERT RI Study Area, >0.5 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

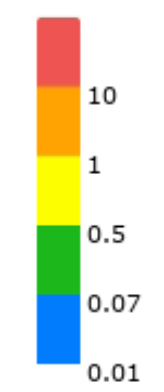
Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

H:\John C\NERT\Leapfrog\RL_OU3_figures.aprx (Fig 9-17c_chloroform_3D

Chloroform Concentration
> 1 mg/L



Chloroform Concentration
(mg/L)



Chloroform GWSL = 0.070 mg/L

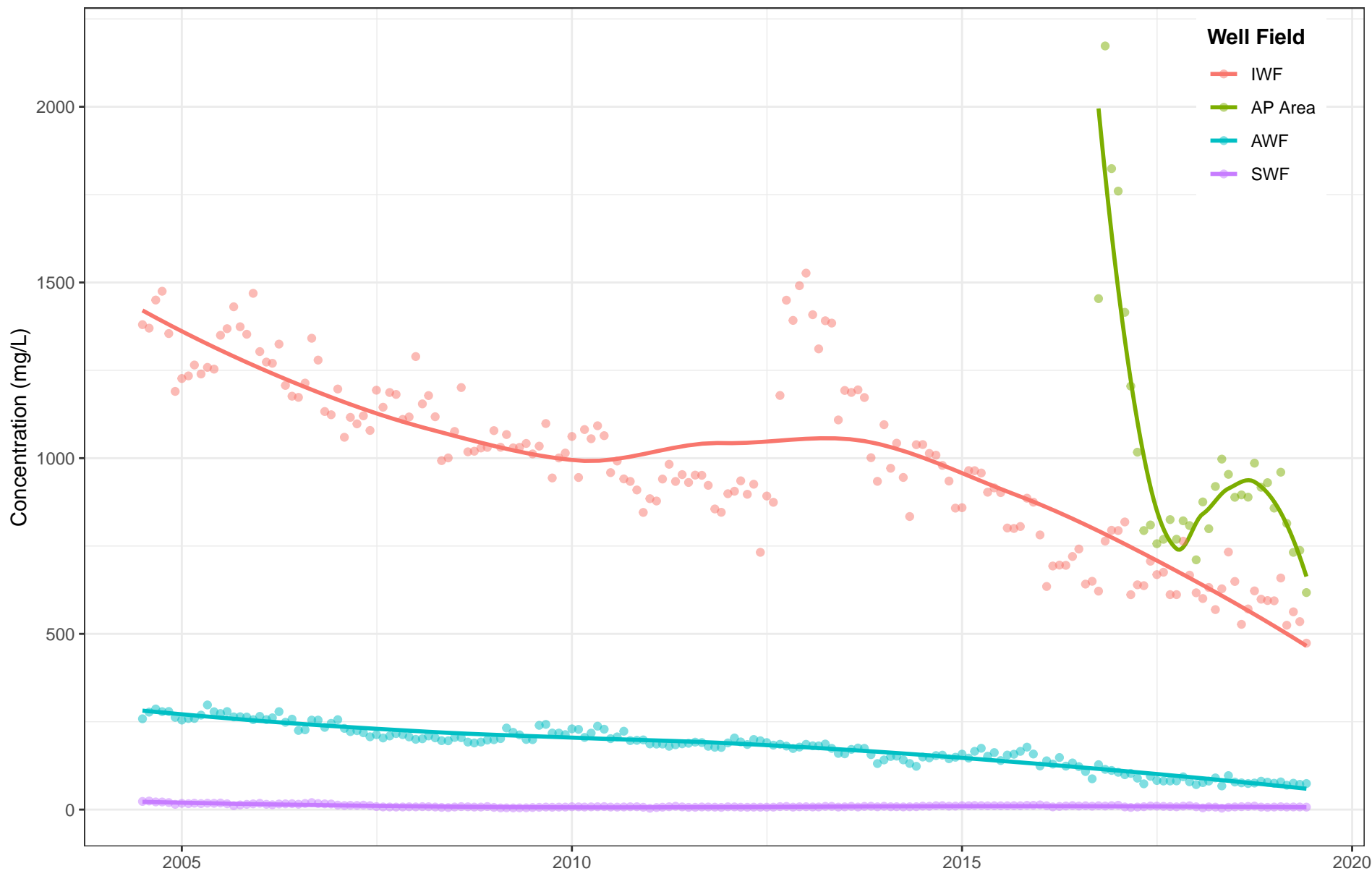


**Chloroform in Groundwater,
NERT RI Study Area, >1 mg/L**
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2023-05-11	Contract Number: 169002 9369	Figure
Drafter: JC	Approved:	Revised:

9-17d

H:\John C\NERT\Leapfrog\RL_OU3_figures.aprx (Fig 9-17d_chloroform_3D)

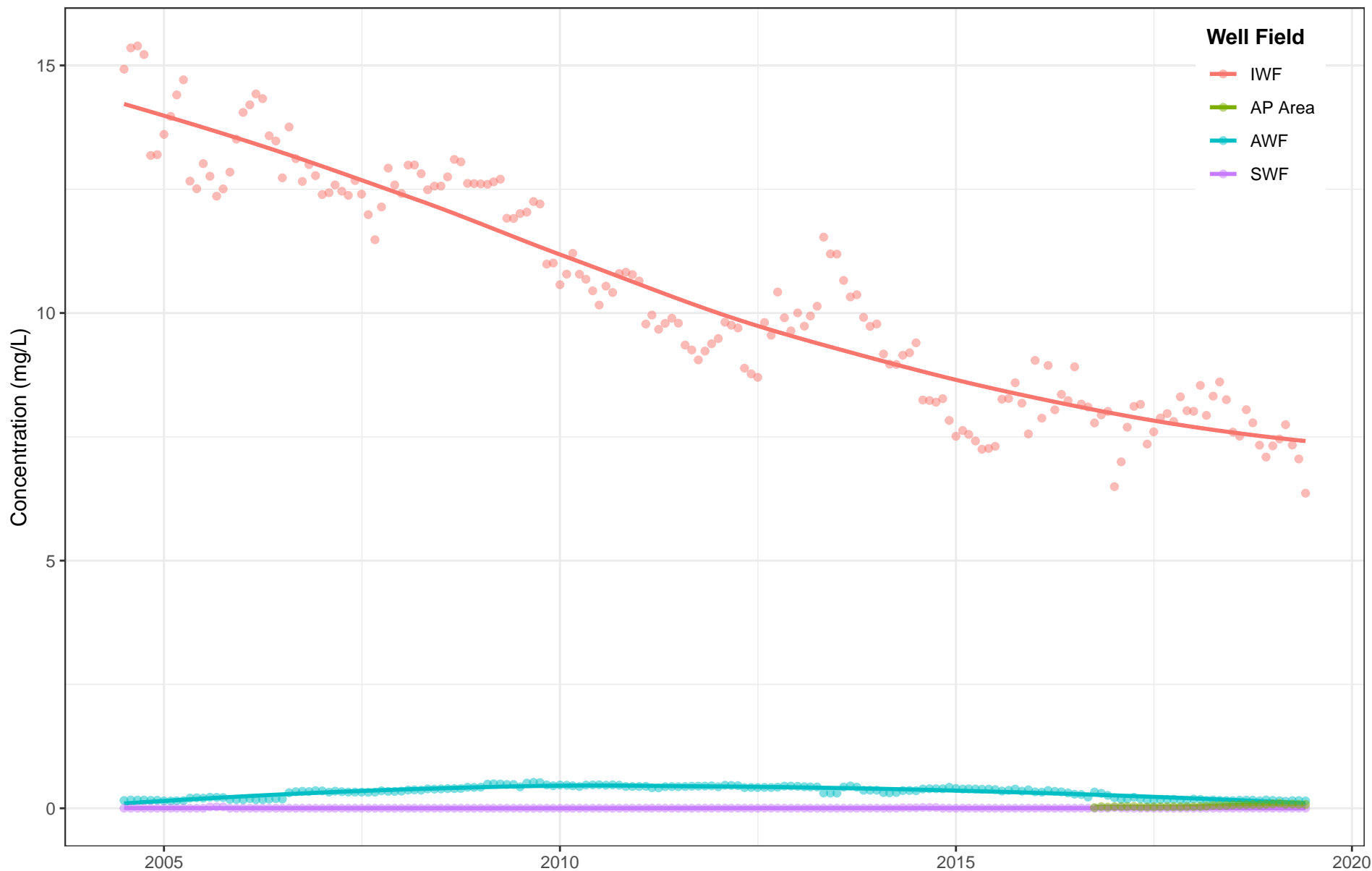


Average Perchlorate Concentration by Extraction Well Field
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure

9-18a

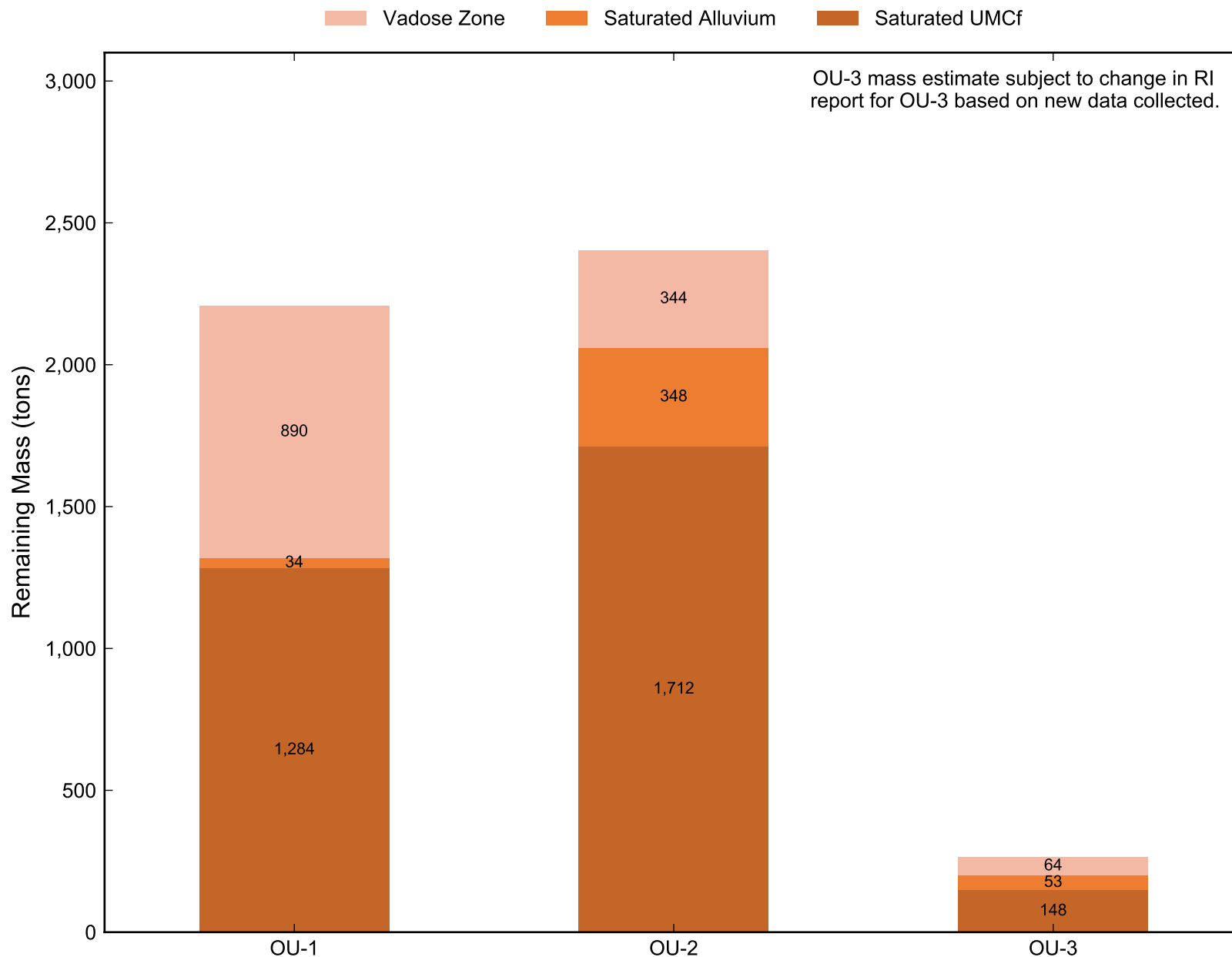




Average Hexavalent Chromium Concentration by Extraction Well Field
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure

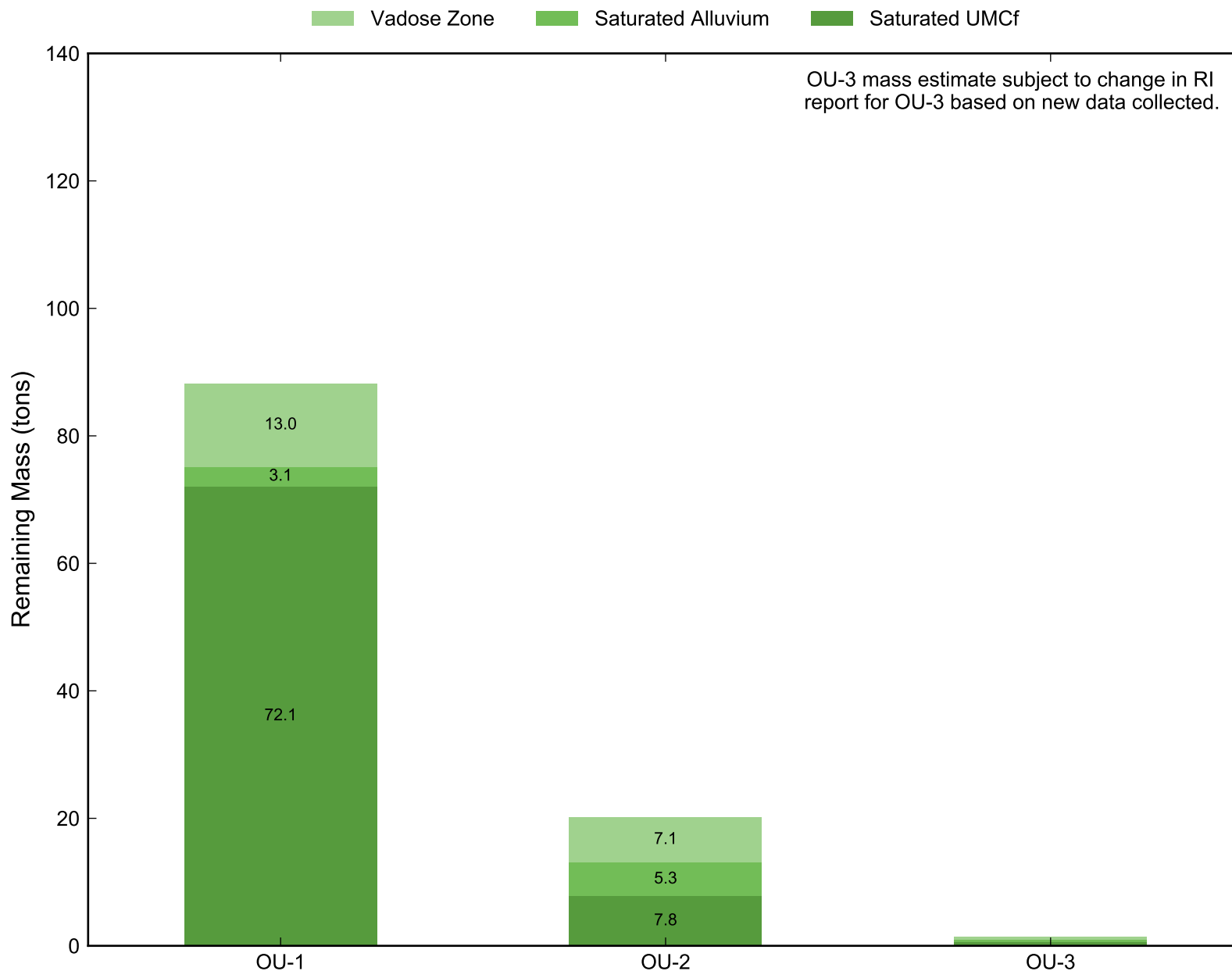
9-18b



Perchlorate Mass Distribution
 Nevada Environmental Response Trust Site
 Henderson, Nevada

Figure

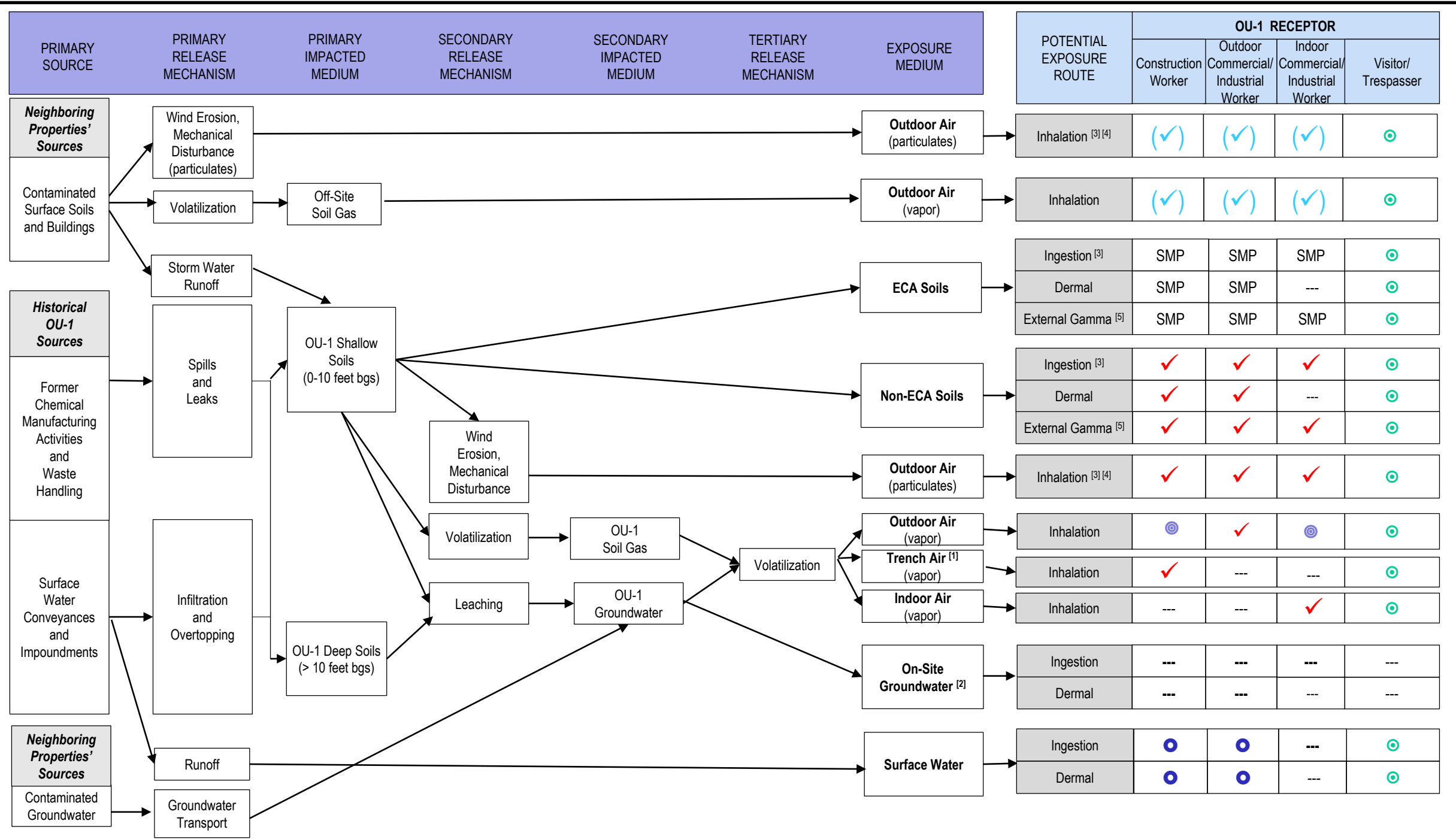
9-19a



Hexavalent Chromium Mass Distribution
 Nevada Environmental Response Trust Site
 Henderson, Nevada

Figure

9-19b



See Figure 9-20d for notes and symbol key



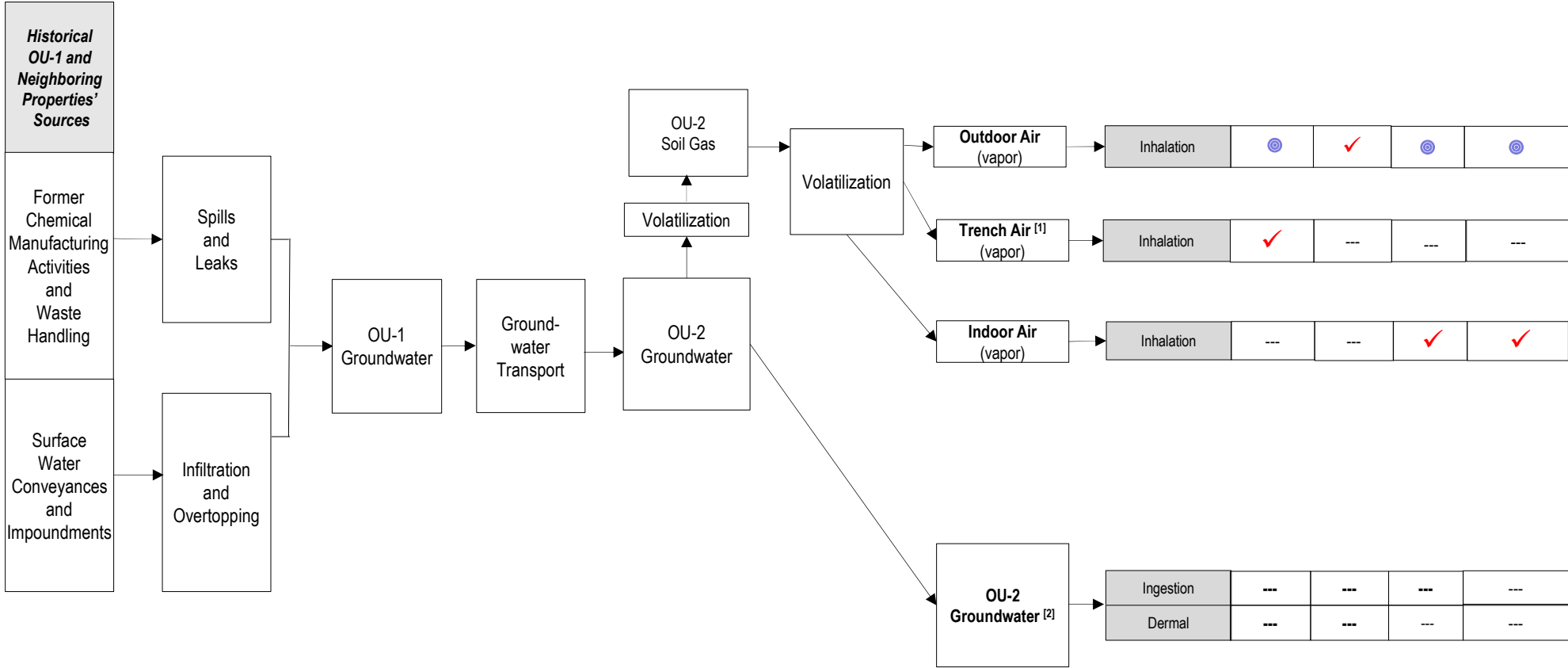
Conceptual Site Model for OU-1 - Human Receptors
Nevada Environmental Response Trust Site, Henderson, Nevada

Figure
9-20a

H:\LePetomane\NERT\B\HRA\Report\Figures

PRIMARY SOURCE	PRIMARY RELEASE MECHANISM	PRIMARY IMPACTED MEDIUM	SECONDARY RELEASE MECHANISM	SECONDARY IMPACTED MEDIUM	TERTIARY RELEASE MECHANISM	EXPOSURE MEDIUM
----------------	---------------------------	-------------------------	-----------------------------	---------------------------	----------------------------	-----------------

POTENTIAL EXPOSURE ROUTE	OU-2 RECEPTOR			
	Construction Worker	Outdoor Commercial/Industrial Worker	Indoor Commercial/Industrial Worker	Resident



See Figure 9-20d for notes and symbol key



Conceptual Site Model for the NERT Off-Site Study Area in OU-2 – Human Receptors
 Nevada Environmental Response Trust Site, Henderson, Nevada

Figure
9-20b

H:\LePetomane\NERT\BHR\Report\Figures

Notes:

- BHRA Baseline health risk assessment
- ECA Excavation control area
- NDEP Nevada Division of Environmental Protection
- OSHA Occupational Safety and Health Administration
- OU Operable unit
- VOC Volatile organic compound

- [1] To be conservative, construction workers are assumed to be exposed to vapors migrating from soil/soil gas/groundwater while standing in a 10-foot trench in the unsaturated zone, placing them closer to the potential sources.
- [2] Exposure via domestic use of groundwater is not evaluated because groundwater is not and will not be used as a source of drinking water. Incidental ingestion of and dermal contact with groundwater by on-site construction workers are considered to be incomplete exposure pathways because depth to groundwater is >10 feet below ground surface (bgs). Depths to groundwater in a very limited area near monitoring wells PC-161 and PC-162 were identified to be shallower than 10 ft bgs in OU-2. Potential exposures through direct contact with groundwater may occur during construction excavation activities. Due to limited numbers of wells with depth to groundwater shallower than 10 ft bgs in OU-2 and the low concentrations detected at these two wells, significant health risks are not expected to occur through the groundwater direct contact pathway in this area. Therefore, the health risks associated with this pathway are not quantitatively evaluated.
- [3] Includes radionuclide exposures, if applicable.
- [4] Includes asbestos exposures.
- [5] Only radionuclide exposures, if applicable.

Key:

- Incomplete exposure pathway
- SMP Site Management Plan -- potential exposures via direct-contact pathways are managed through the SMP.
- ✓ Complete exposure pathway; evaluated quantitatively in the BHRA.
- (✓) Complete exposure pathway. Ramboll understands that exposures of on-site receptors to airborne releases from neighboring properties would be evaluated in the risk assessments being prepared for those properties, under the oversight of NDEP. This and the results of these offsite risk assessments are discussed quantitatively in the BHRA.
- ⊙ The exposure to VOCs in outdoor air is not quantitatively evaluated for construction workers and indoor commercial/industrial workers (and residents in the case of OU-2) because it is expected to be much lower than the exposure to VOCs in trench air and indoor air.
- Potentially complete, but insignificant exposure pathway; not evaluated quantitatively because such exposures would be intermittent and of short duration or regulated under OSHA.
- ⊙ Potentially complete exposure pathway; not evaluated quantitatively because public access is generally restricted at industrial sites and potential exposures of a visitor/trespasser would be less than exposures of an on-site worker; the visitor/trespasser is discussed qualitatively.
- Potentially complete and will be considered qualitatively in the risk assessment.



Conceptual Site Model - Notes and Key
 Nevada Environmental Response Trust Site, Henderson, Nevada

Figure
9-20d

Drafter: AG Date: 05/12/2021 Contract Number: 1690020169 Approved by: Revised: