FIGURE 1-1
LOCATION OF CIMARRON SITE
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MAJOR CONTOUR (100 FT)
- MINOR CONTOUR (10 FT)
- HIGHWAY
- CERT PROPERTY LINE - MARCH 2018
- CERT PROPERTY LINE - SEPT. 1984

CIMARRON CITY

74

CRESCENT - 6 MILES

33

OKLAHOMA CITY - 14 MILES

EDMOND - 11 MILES

33

GUTHRIE - 9 MILES

CEDAR VALLEY

0 1,000 2,000

SCALE IN FEET

N

	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/12/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: World Imagery: Maxar

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 1-1_Site_Location

FIGURE 1-2
CIMARRON SITE SHOWING SUBAREAS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

CERT PROPERTY LINE - MARCH 2018

SUBAREAS

Subarea	Status
A	Not Licensed
B	Not Licensed
C	Not Licensed
D	Not Licensed
E	Not Licensed
F	Under License
G	Releasable But Licensed
H	Not Licensed
I	Not Licensed
J	Not Licensed
K	Not Licensed
L	Not Licensed
M	Not Licensed
N	Releasable But Licensed
O	Not Licensed

NOTE

1) SUBAREAS I AND K ARE SHADED FOR CLARIFICATION DUE TO THEIR COMPLEX CONFIGURATION

0 750 1,500

SCALE IN FEET

N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: Imagery: Maxar

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 1-2_Site_Subareas

FIGURE 1-3
LOCATIONS OF BUILDINGS, IMPOUNDMENTS, AND BURIAL AREAS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- CERT PROPERTY LINE - MARCH 2018
- OLD SANITARY LAGOON
- BUILDING
- EMERGENCY POND
- WASTE POND
- LINED SANITARY LAGOON
- BURIAL AREA

NOTES

1) BASEMAP: GOOGLE EARTH 2017

2) THE NEW LINED SANITARY LAGOON WAS INSTALLED OVER THE CLOSED PLUTONIUM WASTE POND AND PORTIONS OF THE CLOSED EMERGENCY PONDS.

0 600 1,200

SCALE IN FEET

N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Path: \\?\UNC\bmcd.burnsmcd.com\dfs\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2021\D-Plan rev3\Figure 1-3_Locations of Buildings Impoundments Burial Grounds\Figure 1-3_Locations of Buildings Impoundments Burial Grounds.aprx

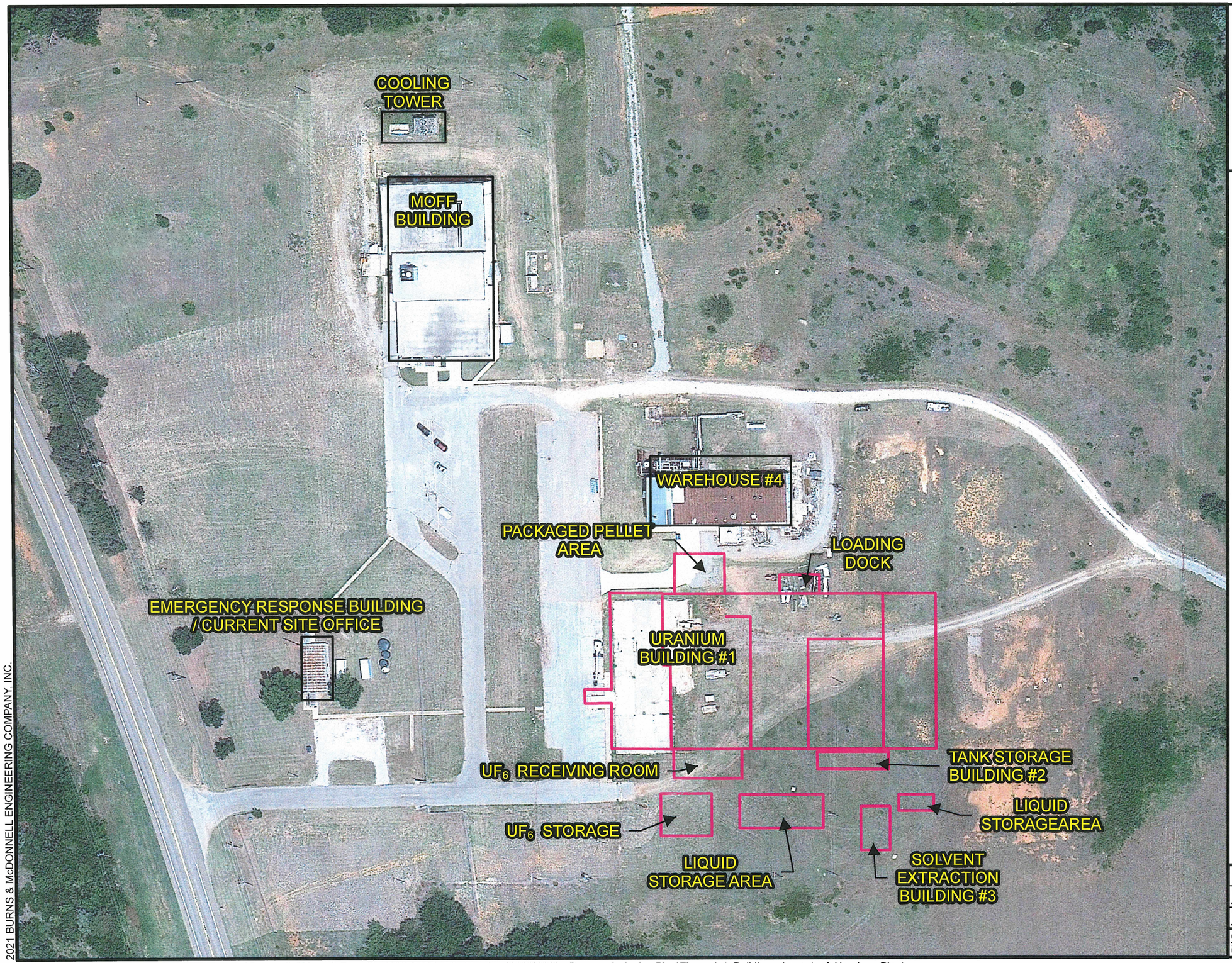


FIGURE 1-4
LOCATIONS OF BUILDINGS AND LAYOUT OF URANIUM BUILDING
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- FORMER BUILDING
- CURRENT BUILDING

NOTES

1) BASEMAP: GOOGLE EARTH 2017

0 100 200

SCALE IN FEET

N

	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/12/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 1-4_Buildings_Layout_of_Uranium_Plant

FIGURE 1-5
LOCATIONS OF PIPELINES BENEATH AND NEAR BUILDINGS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- SEPTIC PIPELINE (REMOVED)
- PROCESS PIPELINE (REMOVED)

4" To River
Siphon Box
West Sanitary Lagoon
East Sanitary Lagoon
Plutonium Waste Pond
New Sanitary Lagoon
Plutonium Emergency Pond
Uranium Emergency Pond
MOFF BUILDING
Septic Leach Field
Manhole
2,000-Gallon Septic Tank
Septic Lines
Manhole
Manhole
Manhole
Septic Tank
WAREHOUSE #4
URANIUM BUILDING #1
Manhole

NOTES
1) BASEMAP: GOOGLE EARTH 2017

0 125 250
SCALE IN FEET

N

	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/12/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 1-5_Pipelines_Beneath_and_Near_Buildings

FIGURE 1-6
LOCATIONS OF PIPELINES, SPILLS, AND RELEASES
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- PROCESS PIPELINE (REMOVED)
- SEPTIC PIPELINE (REMOVED)
- APPROXIMATE LOCATIONS OF PIPELINE RELEASES
- RELEASE FROM UNCAPPED WELL 1319

NOTES
1) BASEMAP: GOOGLE EARTH 2017

0 200 400
SCALE IN FEET

N

	Rev No: 0
Preparer: DHORNE	Date: 9/14/2021
Reviewer: EDULLE	Date: 9/12/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 1-6_Pipelines_Spills_Releases

FIGURE 2-1
AERIAL IMAGE OF SITE WITH TOPOGRAPHIC CONTOURS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MINOR CONTOUR (10 FT)
- MAJOR CONTOUR (100 FT)
- CERT PROPERTY LINE - MARCH 2018

NOTES

1) BASEMAP: GOOGLE EARTH 2017

0 540 1,080

SCALE IN FEET

N

	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/2/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Path: \\bmcd\dfs\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2021\D-Plan rev3\Figure 2-1_Aerial with Toporgraphic Contours\Figure 2-1_Aerial with Toporgraphic Contours.aprx

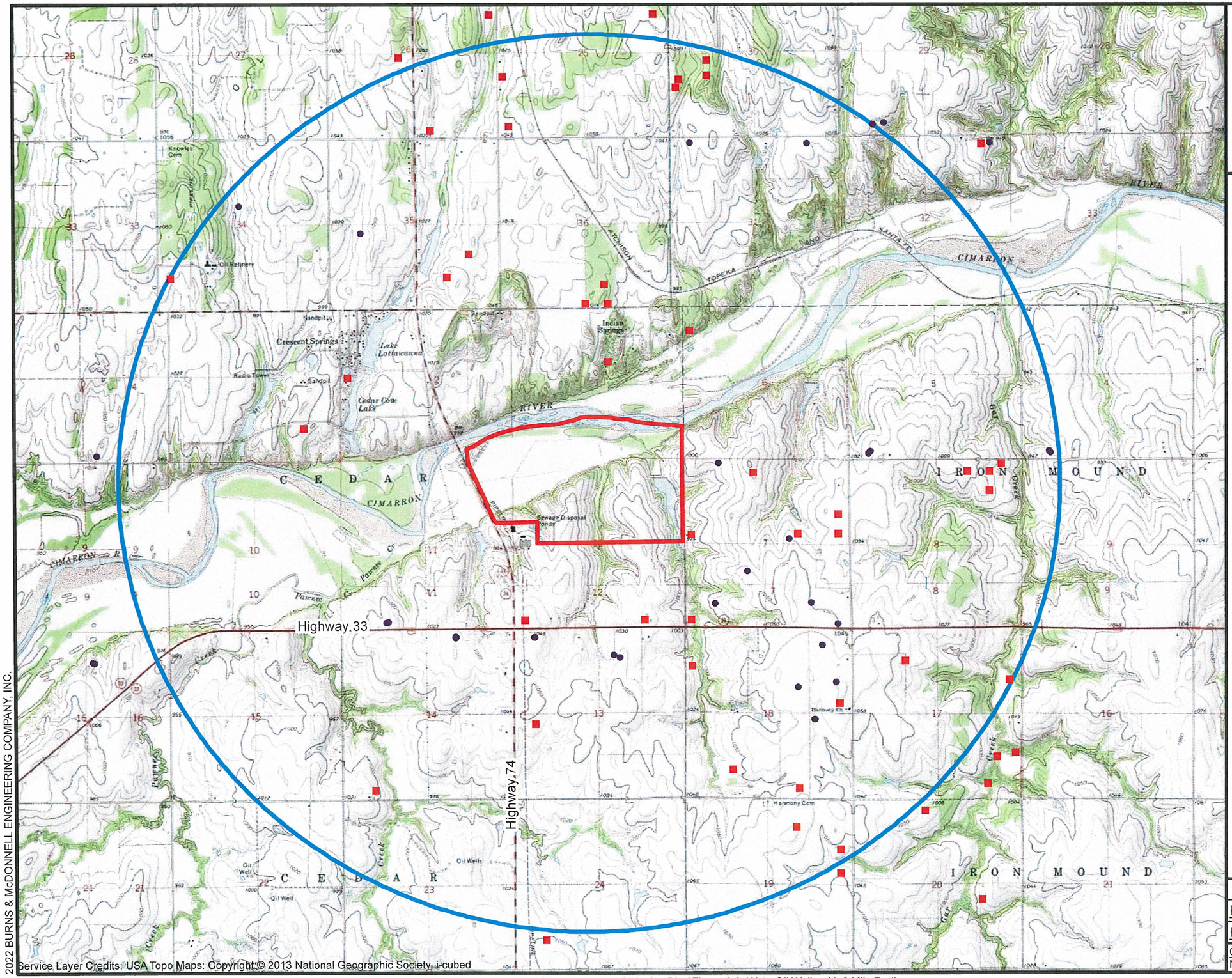


FIGURE 2-2
WATER WELLS AND OIL/GAS WELLS IN THE VICINITY OF THE CIMARRON SITE
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- OIL/GAS WELL PER OCC RECORDS *
- WATER WELL PER OWRB RECORDS *
- CERT PROPERTY LINE - MARCH 2018
- 2-MILE RADIUS AROUND THE SITE

*AS OF FEBRUARY 2021

NOTES

1) OCC - Oklahoma Corporation Commission
2) OWRB - Oklahoma Water Resources Board

0 3,000 6,000
SCALE IN FEET

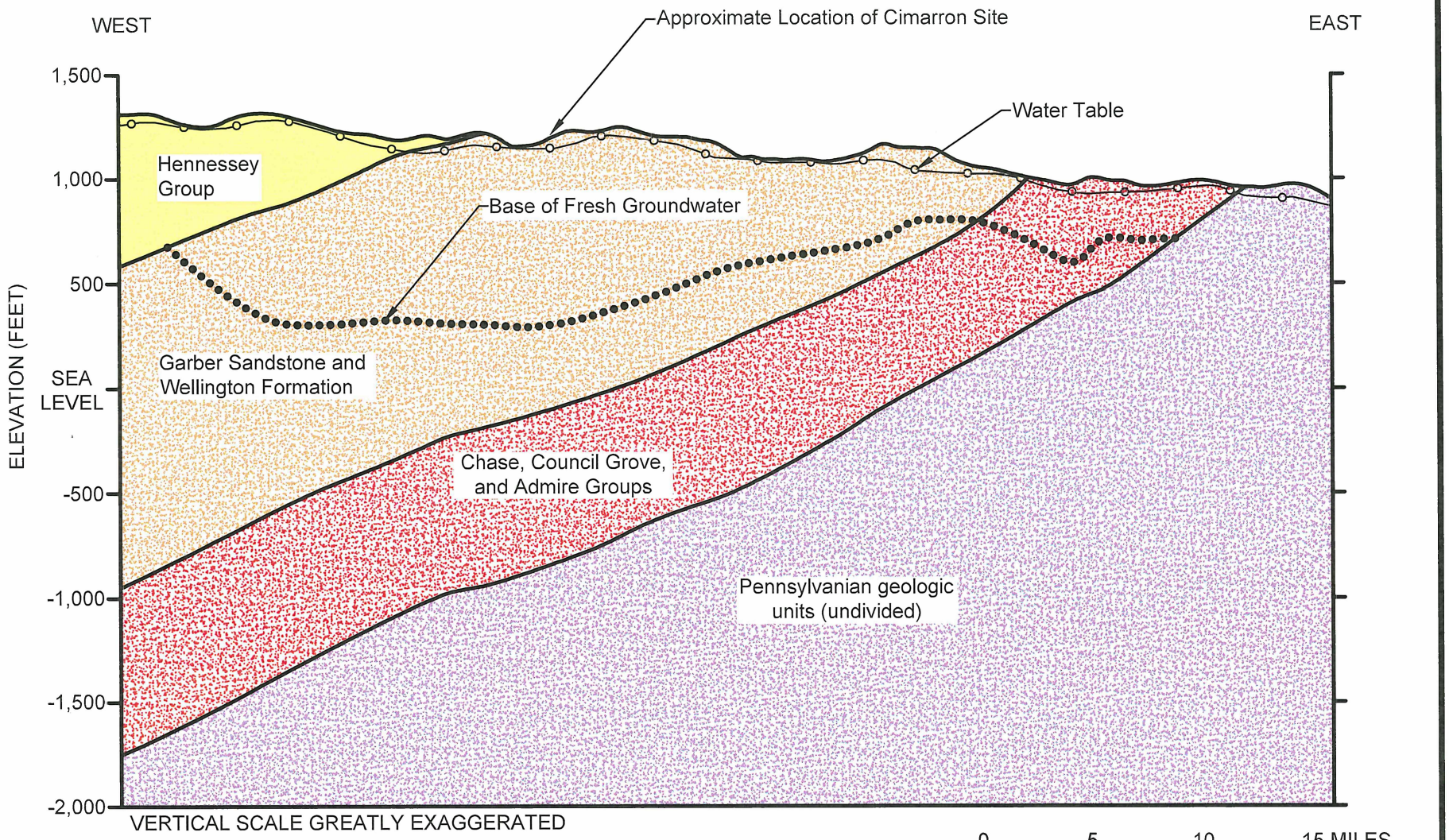
N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

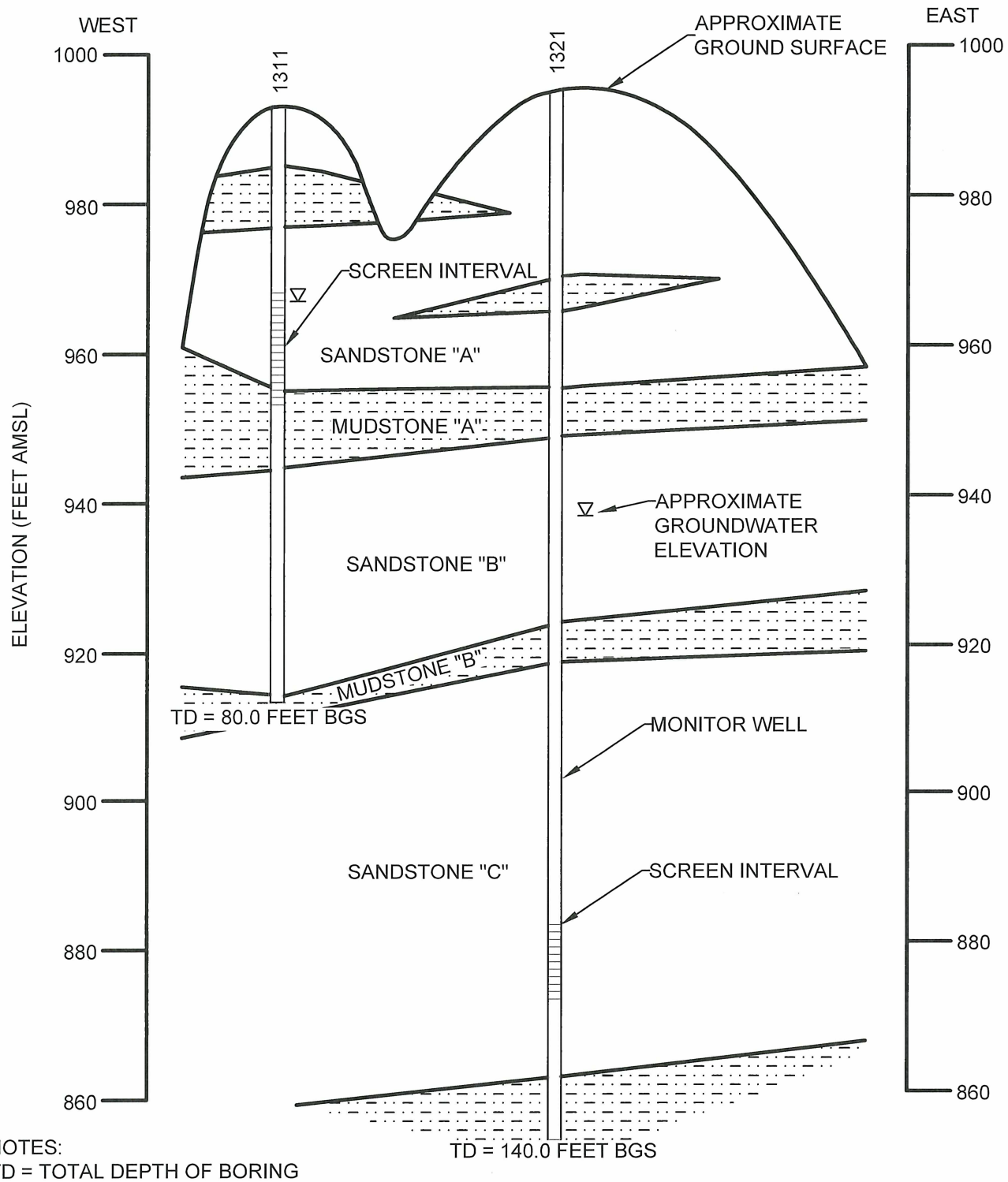
Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 2-2_WaterOil Wells with 2 Mile Radius

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\DPlanFigures.dwg



NOTE:
Adapted from Christensen and Havens, 1994

	Rev No.: 0	BURNS McDONNELL	FIGURE 2-3 GENERALIZED REGIONAL GEOLOGIC & HYDROGEOLOGIC CROSS-SECTION FACILITY DECOMMISSIONING PLAN REVISION 3
Preparer: D. HORNE	Date: 2/15/2021		
Reviewer: E. DULLE	Date: 5/12/2022		



NOTES:
TD = TOTAL DEPTH OF BORING
BGS = BELOW GROUND SURFACE
AMSL = ABOVE MEAN SEAL LEVEL

	Rev No.: 0	BURNS McDONNELL	FIGURE 2-4 SITE-SPECIFIC LITHOLOGICAL COLUMN FACILITY DECOMMISSIONING PLAN REVISION 3
Preparer: D. HORNE	**Date: 2/15/2021**		
Reviewer: E. DULLE	**Date: 5/15/2022**		

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\GeospatialMaps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\DPlanFigures.dwg
2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

FIGURE 2-5
FAULTS AND M3 EARTHQUAKES - 20 MILE RADIUS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- EARTHQUAKES M3 AND GREATER
- 20 MILE RADIUS AROUND THE SITE
- CERT PROPERTY LINE - MARCH 2018
- INTERPRETIVE FAULTS (OKLAHOMA)
- NEMAHA UPLIFT

NOTES

1) Interpretive faults taken from Comprehensive Fault Database and Interpretive Fault Map of Oklahoma, Open-File Report (OF2-2016), Stephen Marsh and Austin Holland. 2016.

2) M3 Earthquakes and greater data taken from USGS Earthquake Hazards Program. https://earthquake.usgs.gov/earthquakes. Accessed February 9, 2021.

0 25,000 50,000

SCALE IN FEET

N

	Rev No: 0
Preparer: BELOCKWOOD	Date: 9/14/2021
Reviewer: EDULLE	Date: 9/14/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: USA Topo Maps: Copyright © 2013 National Geographic Society, i-cubed

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 2-5_Faults with 20 Mile Radius

FIGURE 2-6
FAULTS AND M3 EARTHQUAKES - 200 MILE RADIUS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- EARTHQUAKES M3 AND GREATER
- LOCATION OF THE CIMARRON SITE
- 200 MILE RADIUS AROUND THE SITE
- INTERPRETIVE FAULTS (OKLAHOMA)

NOTES

1) Interpretive faults taken from Comprehensive Fault Database and Interpretive Fault Map of Oklahoma, Open-File Report (OF2-2016), Stephen Marsh and Austin Holland. 2016.

2) M3 Earthquakes and greater data taken from USGS Earthquake Hazards Program. https://earthquake.usgs.gov/earthquakes. Accessed February 9, 2021.

0 225,000 450,000

SCALE IN FEET

N

	Rev No: 0
Preparer: BELOCKWOOD	Date: 9/14/2021
Reviewer: EDULLE	Date: 9/12/2022

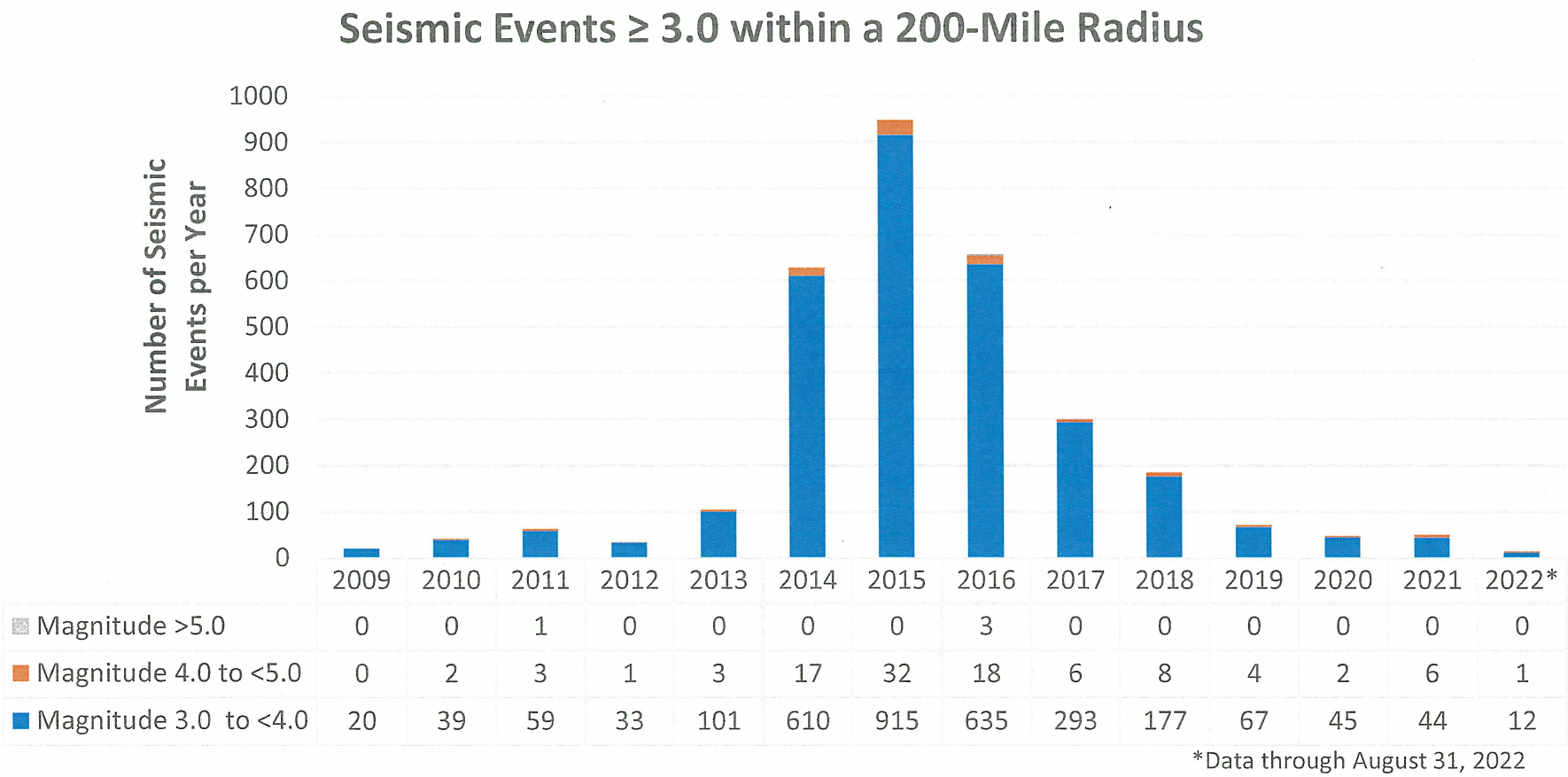
Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 2-6_Earthquakes with 200 Mile Radius

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2021\D-Plan rev3\Figure 2-7 - M3 Earthquakes.ai
2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022*
Magnitude >5.0	0	0	1	0	0	0	0	3	0	0	0	0	0	0
Magnitude 4.0 to <5.0	0	2	3	1	3	17	32	18	6	8	4	2	6	1
Magnitude 3.0 to <4.0	20	39	59	33	101	610	915	635	293	177	67	45	44	12

*Data through August 31, 2022

Data source: M3 earthquakes and greater data taken from USGS Earthquake Hazards Program https://earthquake.usgs.gov/earthquakes/ (accessed August 31, 2022)

	Rev No: 0
Preparer: D. HORNE	Date: 08/31/2022
Reviewer: E. DULLE	Date: 08/31/2022

BURNS McDONNELL

FIGURE 2-7
Frequency of M3 Earthquakes from 2009 through 2021
Facility Decommissioning Plan
Revision 3

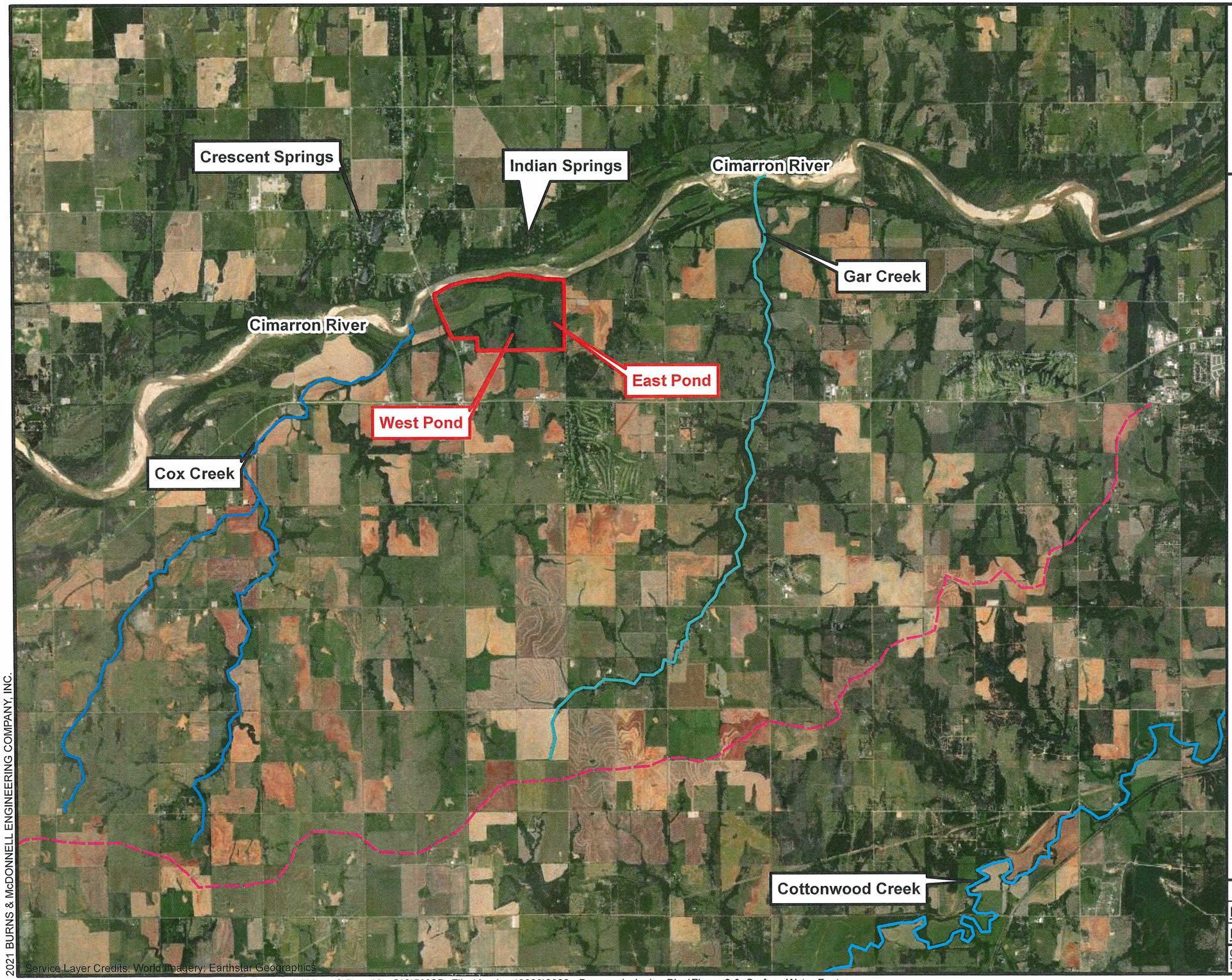


FIGURE 2-8
AREA MAP SHOWING SURFACE WATER FEATURES
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- CERT PROPERTY LINE - MARCH 2018
- COTTONWOOD CREEK DRAINAGE (APPROXIMATE)
- COX CREEK DRAINAGE (APPROXIMATE)
- GAR CREEK DRAINAGE (APPROXIMATE)
- CIMARRON RIVER AND COTTONWOOD CREEK DRAINAGE BOUNDARY (APPROXIMATE)

0 5,000 10,000

SCALE IN FEET

N

	Rev No: 0
Preparer: BELOCKWOOD	Date: 9/14/2021
Reviewer: EDULLE	Date: 9/12/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

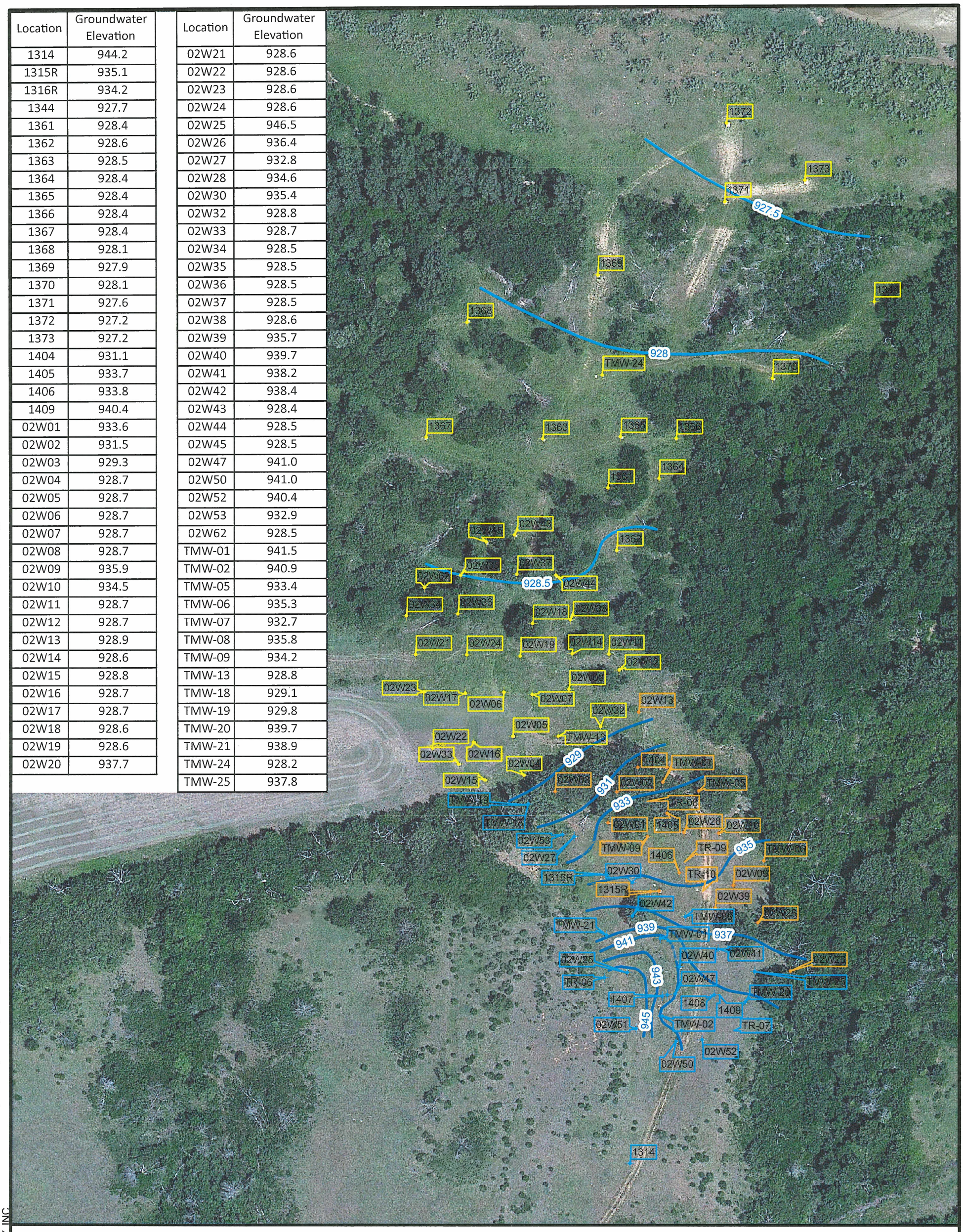
2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: World Imagery: Earthstar Geographics

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 2-8_Surface Water Features

Location	Groundwater Elevation
1314	944.2
1315R	935.1
1316R	934.2
1344	927.7
1361	928.4
1362	928.6
1363	928.5
1364	928.4
1365	928.4
1366	928.4
1367	928.4
1368	928.1
1369	927.9
1370	928.1
1371	927.6
1372	927.2
1373	927.2
1404	931.1
1405	933.7
1406	933.8
1409	940.4
02W01	933.6
02W02	931.5
02W03	929.3
02W04	928.7
02W05	928.7
02W06	928.7
02W07	928.7
02W08	928.7
02W09	935.9
02W10	934.5
02W11	928.7
02W12	928.7
02W13	928.9
02W14	928.6
02W15	928.8
02W16	928.7
02W17	928.7
02W18	928.6
02W19	928.6
02W20	937.7

Location	Groundwater Elevation
02W21	928.6
02W22	928.6
02W23	928.6
02W24	928.6
02W25	946.5
02W26	936.4
02W27	932.8
02W28	934.6
02W30	935.4
02W32	928.8
02W33	928.7
02W34	928.5
02W35	928.5
02W36	928.5
02W37	928.5
02W38	928.6
02W39	935.7
02W40	939.7
02W41	938.2
02W42	938.4
02W43	928.4
02W44	928.5
02W45	928.5
02W47	941.0
02W50	941.0
02W52	940.4
02W53	932.9
02W62	928.5
TMW-01	941.5
TMW-02	940.9
TMW-05	933.4
TMW-06	935.3
TMW-07	932.7
TMW-08	935.8
TMW-09	934.2
TMW-13	928.8
TMW-18	929.1
TMW-19	929.8
TMW-20	939.7
TMW-21	938.9
TMW-24	928.2
TMW-25	937.8



LEGEND

- MONITORING WELL IN ALLUVIUM
- MONITORING WELL IN SANDSTONE B
- MONITORING WELL IN TRANSITION ZONE
- ALLUVIUM GROUNDWATER CONTOURS
- SANDSTONE B GROUNDWATER CONTOURS

0 120 240

SCALE IN FEET

N

NOTES

1) Groundwater elevations are mean elevations from December 2012 through May 2018 sampling events.
2) Elevations are in feet above mean sea level (North American Vertical Datum of 1988).
3) Data from Monitor Wells 1407 and 1408 were not used because these wells are screened within former burial trenches.
4) Data from Monitor Well 02W51 was not used because this well is screened in a perched zone upgradient from BA1.
5) Data from trench monitor wells ("TR" wells) were not used.
6) Basemap: Google Earth 2017

FIGURE 2-9
POTENTIOMETRIC SURFACE MAP FOR
BURIAL AREA #1
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

Path: \\bmcd.burnsmcd.com\dfs\Clients\ENS\CERT_ClientInfo\Sites\Database\GeospatialMaps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2021\D-Plan rev3\Figure 2-9_BA1 Potentiometric Surface Map\Figure 2-9_BA1 Potentiometric Surface Map.aprx
2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Location	Groundwater Elevation
1311	967.2
1312	965.4
1313	965.2
1319A-1	971.1
1319A-2	970.0
1319A-3	969.4
1320	969.3
1322	968.3
1324	970.3
1325	973.4
1326	971.2
1327B	966.9
1329	968.6
1330	969.5
1331	966.1
1333	968.5
1334	967.2
1335A	972.2
1336A	960.4
1337	967.3
1340	963.1
1347	967.6
1348	976.9
1349	972.8
1350	976.5
1351	970.6
1352	967.7
1354	967.0
1355	969.5
1356	969.4
1357	970.6
1358	972.1
1359	972.3
1360	973.9
1374	968.2
1375	971.7
1376	970.1
1377	965.3
1378	963.1
1379	965.0
1380	968.8
1383	968.8
1385	965.9
1387	966.4
1389	966.3
1393	962.5
1395	965.3
1396	965.7
1397	965.2
1398	965.4
1399	966.6
1400	966.1
1401	968.3
1402	968.2
1403	968.4

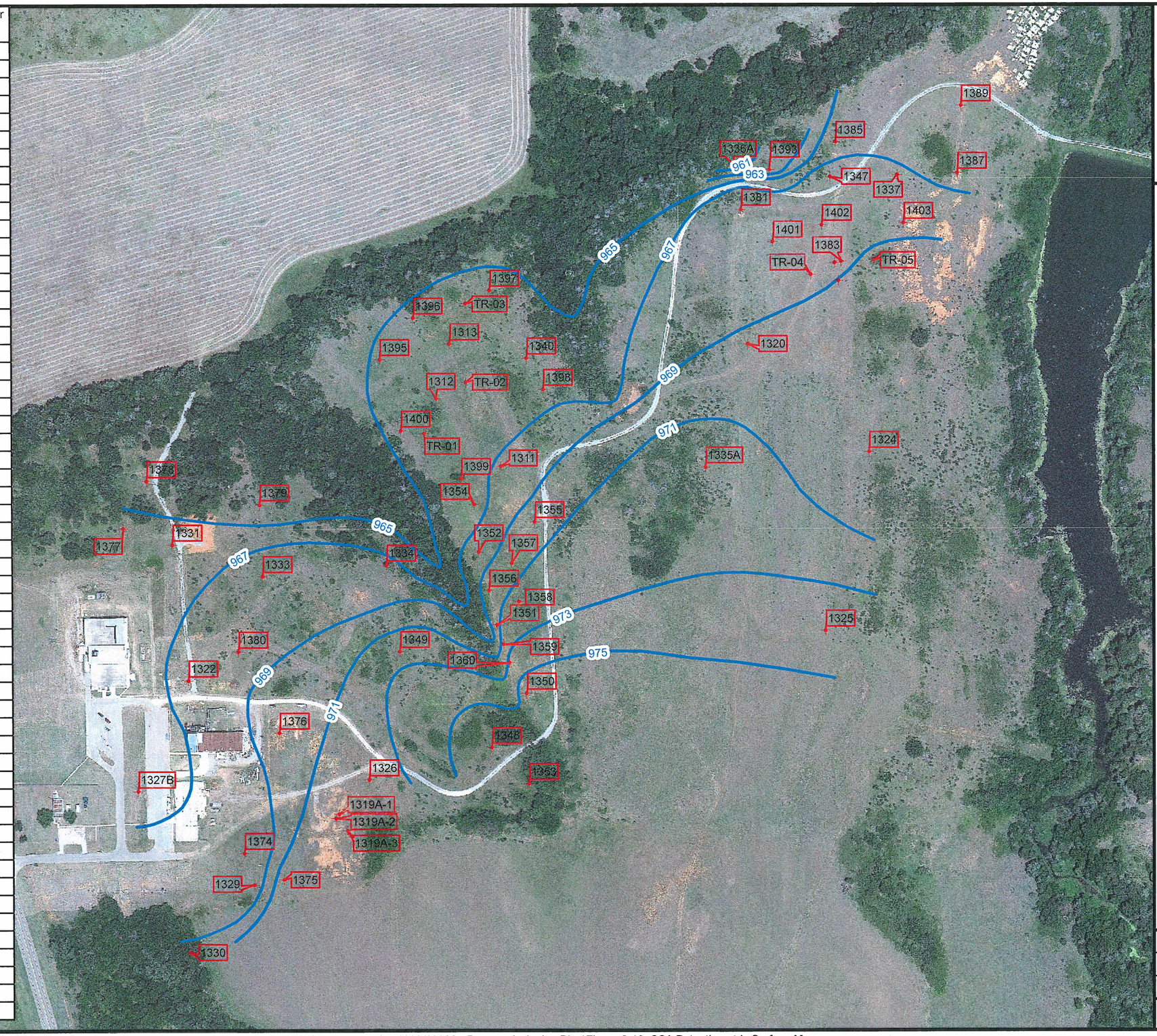


FIGURE 2-10
POTENTIOMETRIC SURFACE MAP FOR WESTERN AREAS - SANDSTONE A
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MONITOR WELL IN SANDSTONE A
- SANDSTONE A GROUNDWATER CONTOURS

NOTES

1) Groundwater elevations are mean elevations from December 2012 through May 2018 sampling events.

2) All elevations measured in feet above mean sea level (North American Vertical Datum of 1988).

3) Data from Monitor Well 1353 was not used because this well is screened in a perched zone.

4) Data from Monitor Well 1381 was not used because this well is screened in a perched zone.

5) Data from trench monitoring wells ("TR" wells) were not used.

6) Basemap: Google Earth 2017

275 550
SCALE IN FEET

N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 2-10_SSA Potentiometric Surface Map

FIGURE 2-11
POTENTIOMETRIC SURFACE MAP FOR WESTERN AREAS - SANDSTONE B AND ALLUVIUM
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MONITORING WELL IN ALLUVIUM
- MONITORING WELL IN SANDSTONE B
- MONITORING WELL IN TRANSITION ZONE
- SANDSTONE B GROUNDWATER CONTOURS
- ALLUVIUM GROUNDWATER CONTOURS

Location	Groundwater Elevation
1319B-1	947.7
1319B-2	948.8
1319B-3	947.7
1319B-4	947.2
1319B-5	945.6
1338	944.1
1341	938.0
1343	928.8
1345	934.8
1346	938.3
T-51	929.7
T-52	929.6
T-53	929.5
T-54	930.2
T-55	930.0
T-56	929.9
T-57	930.4
T-58	930.5
T-59	929.5
T-60	929.7
T-61	929.6
T-62	930.7
T-63	930.6
T-64	930.9
T-65	930.7
T-66	930.5
T-67	930.5
T-68	930.2
T-69	930.3
T-70R	930.6
T-72	930.4
T-73	930.5
T-74	930.7
T-75	930.3
T-76	930.5
T-77	930.3

Location	Groundwater Elevation
T-78	930.3
T-79	930.1
T-81	930.3
T-82	930.1
T-83	930.1
T-84	930.0
T-85	929.9
T-86	929.9
T-87	929.8
T-88	929.7
T-89	929.2
T-90	929.2
T-91	929.0
T-92R	929.6
T-93	929.2
T-94	928.9
T-95	929.4
T-96	929.8
MWWA-03	933.2
MWWA-09	936.9
T-97	929.1
T-98	929.0
T-99	928.7
T-100	928.3
T-101	928.5
T-102	929.2
T-103	929.7
1382	938.5
1384	944.7
1386	939.8
1388	946.4
1390	942.4
1391	951.8
1392	936.7
1394	940.9

NOTES

1) Groundwater elevations are mean elevations from December 2012 through May 2018 sampling events.

2) All elevations measured in feet above mean sea level (North American Vertical Datum of 1988).

0 400 800

SCALE IN FEET

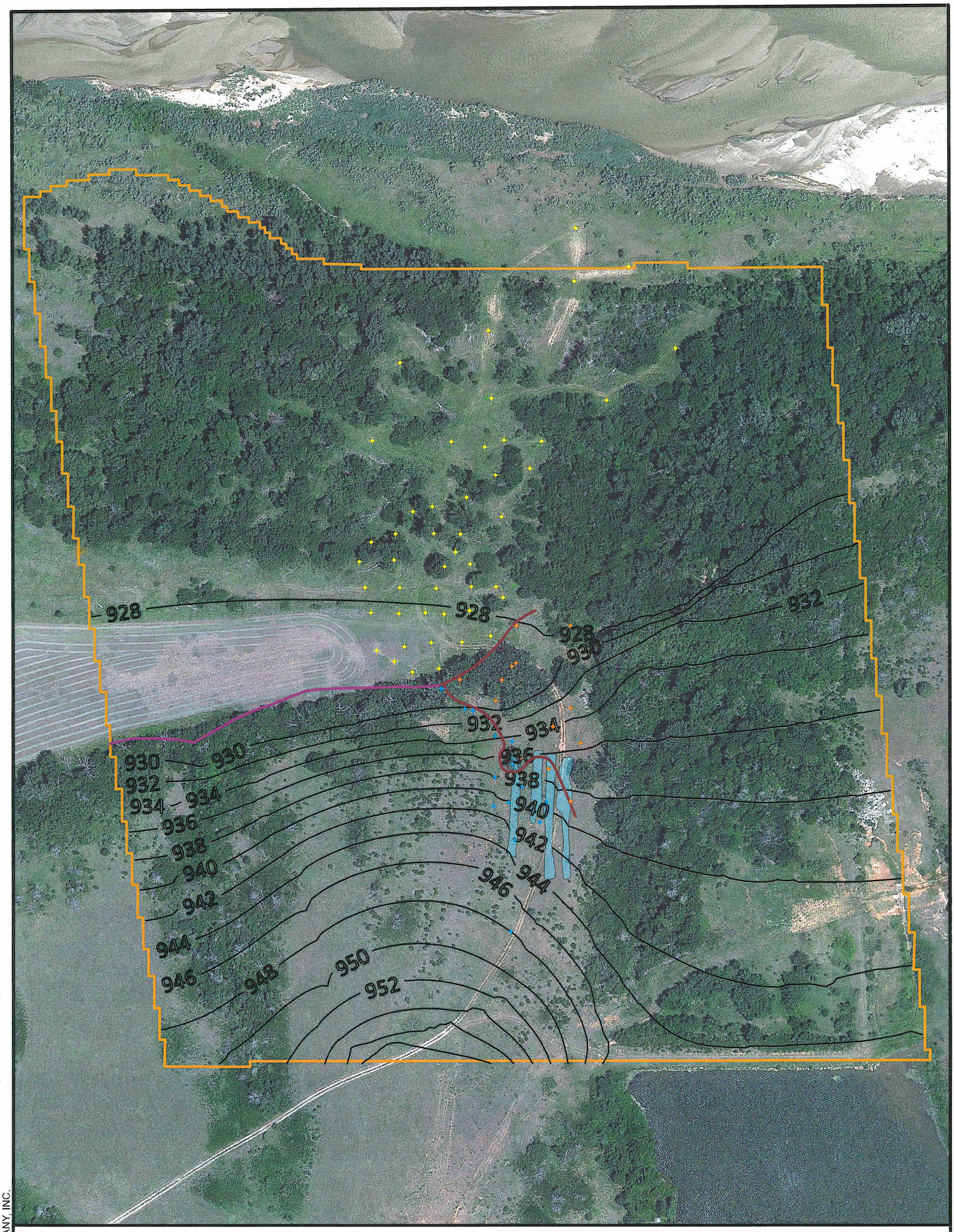
N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: Imagery: Maxar

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 2-11_WAA SSB Potentiometric Surface Map



LEGEND

- MONITORING WELL IN ALLUVIUM
- MONITORING WELL IN SANDSTONE A
- MONITORING WELL IN SANDSTONE B
- MONITORING WELL IN SANDSTONE C
- MONITORING WELL IN TRANSITION ZONE
- SIMULATED GROUNDWATER CONTOUR
- ESCARPMENT
- TRANSITION ZONE BOUNDARY
- FORMER BA1 WASTE TRENCH
- BA1 MODEL DOMAIN

NOTES

1) Groundwater elevations in feet above mean sea level (North American Vertical datum of 1988).
2) Basemap: Google Earth 2017

0 175 350
SCALE IN FEET

N

FIGURE 2-12
BURIAL AREA #1 MODEL DOMAIN AND POTENTIOMETRIC SURFACE
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/12/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

Path: \\bmcd\dfs\Clients\ENS\CERT_ClientInfo\Sites\Database\GeospatialMaps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2021\D-Plan rev3\Figure 2-12_BA1 Model Domain and Potent Surface\Figure 2-12_BA1 Model Domain and Potent Surface.aprx
2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

FIGURE 2-13
WESTERN ALLUVIAL AREA MODEL DOMAIN
AND POTENTIOMETRIC SURFACE
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE A
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE
- SIMULATED GROUNDWATER CONTOUR
- MODEL ACTIVE AREA
- MODEL BOUNDARY
- MODEL RESERVOIR

NOTES

1) Groundwater elevations in feet above mean sea level (North American Vertical datum of 1988).

0 550 1,100

SCALE IN FEET

N

	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/12/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: Imagery: Maxar

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 2-13_Western Area Model and Potent Surface

LOCATION	NITRATE
1343	6.45
1311	21.6
1312	380
1313	240
1319A-2	31.9
1319B-1	57.4
1319B-2	2.68
1319B-3	75.8
1319B-4	3.70
1319B-5	11.3
1320	18.6
1322	19.4
1324	3.76
1325	19.7
1326	27.1
1327B	36.4
1329	31.4
1330	13.1
1331	10.1
1333	4.19
1334	5.83
1335A	2.50
1336A	377
1337	53.3
1338	7.01
1340	53.8
1341	28.6
1345	7.66
1346	407
1347	65.0
1348	11.6
1349	20.2
1350	11.7
1351	76.1
1352	55.0
1353	7.75
1354	142
1355	14.0
1356	14.8
1357	52.0
1358	16.9
1359	21.7
1360	13.4
1375	34.3
1376	17.0
1377	8.73
1378	8.55
1379	7.37
1380	17.1
1381	839
1382	2.44
1383	227
1384	0.400
1385	1006
1386	15.4
1387	60.2
1388	9.15
1389	21.7
1390	4.89
1391	4.09
1392	1.11
1393	275
1394	4.25

LOCATION	NITRATE
1395	1.60
1396	17.5
1397	202
1398	0.748
1399	69.5
1400	104
1401	802
1402	217
1403	5.83
MWWA-03	42.4
MWWA-09	43.1
T-51	14.7
T-52	56.7
T-53	47.7
T-54	239
T-55	236
T-56	24.9
T-57	112
T-58	44.9
T-59	112
T-60	97.4
T-61	34.9
T-62	88.0
T-63	139
T-64	14.0
T-65	55.5
T-66	40.3
T-67	27.0
T-68	21.2
T-69	72.1
T-70R	4.41
T-72	25.8
T-73	0.028
T-74	1.47
T-75	1.66
T-76	30.4
T-77	3.07
T-78	0.164
T-79	1.26
T-81	0.071
T-82	0.068
T-83	0.054
T-84	46.5
T-85	100
T-86	43.9
T-87	108
T-88	75.4
T-89	68.5
T-90	34.5
T-91	30.9
T-92R	36.3
T-93	54.5
T-94	18.7
T-95	49.0
T-96	31.6
T-97	10.2
T-98	0.862
T-99	37.4
T-100	39.5
T-101	27.2
T-102	22.3
T-103	4.02

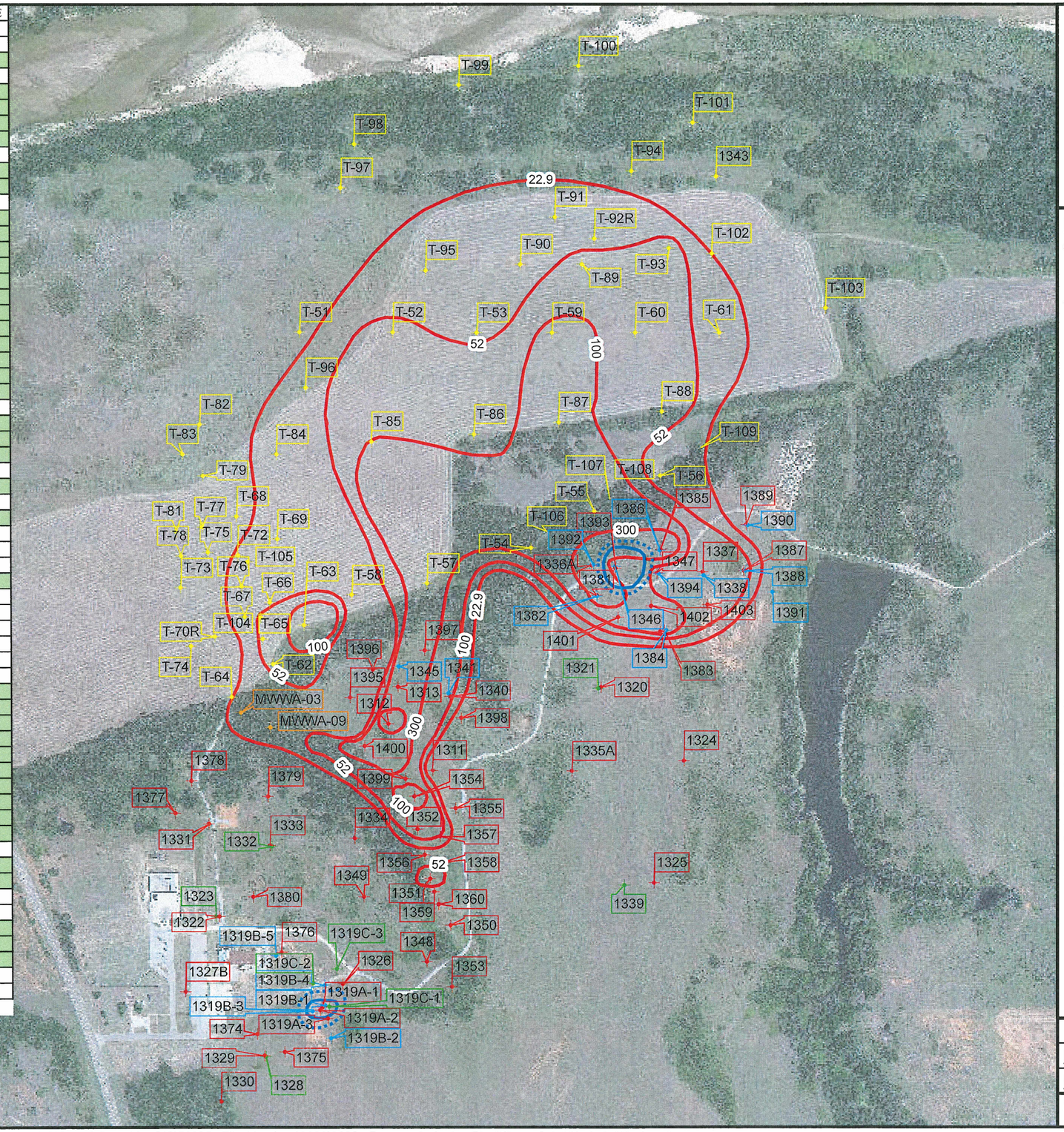


FIGURE 3-1
NITRATE IN WESTERN AREA
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

LEGEND

- NITRATE IN SSA/TRANSITION ZONE/WAA
- NITRATE IN SSB (>22.9 mg/L)
- NITRATE IN SSB (>52 mg/L)
- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE A
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE

NOTES

1) ALL CONCENTRATIONS REPORTED IN MILLIGRAMS PER LITER (mg/L).

2) GREEN HIGHLIGHTING IN TABLE INDICATES STATE CRITERION EXCEEDANCE (>22.9 mg/L).

3) CONCENTRATIONS ARE REPRESENTATIVE CONCENTRATION PER D-PLAN SECTION 3.5.3.

4) BASEMAP: GOOGLE EARTH 2017

0 450 900
SCALE IN FEET

N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/14/2022
Reviewer: EDULLE	Date: 9/14/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 3-1_Nitrate in Western Area

LOCATION	FLUORIDE
1311	0.477
1312	10.460
1313	48.900
1319A-2	0.342
1319B-1	0.337
1319B-2	0.447
1319B-3	0.307
1319B-4	0.412
1319B-5	0.403
1320	0.575
1322	0.549
1324	0.515
1325	0.506
1326	0.313
1327B	0.336
1329	0.413
1330	0.610
1331	0.557
1333	0.705
1334	0.553
1335A	0.358
1336A	9.627
1337	14.160
1338	0.878
1340	18.000
1341	0.645
1343	0.395
1345	0.530
1346	9.641
1347	4.753
1348	8.858
1349	1.016
1350	1.590
1351	1.063
1352	0.528
1353	1.720
1354	0.499
1355	0.439
1356	0.739
1357	0.556
1358	0.335
1359	0.973
1360	1.600
1375	0.371
1376	0.564
1377	0.464
1378	0.281
1379	0.725
1380	0.505
1381	1.648
1382	0.482
1383	11.763
1384	0.431
1385	7.651
1386	0.437
1387	8.206
1388	1.930
1389	0.175
1390	0.961
1391	2.853
1392	0.686
1393	11.890
1394	0.382

LOCATION	FLUORIDE
1395	0.405
1396	0.466
1397	12.5
1398	0.317
1399	0.448
1400	9.73
1401	7.03
1402	45.0
1403	32.3
MWWA-03	9.663
MWWA-09	3.965
T-51	0.439
T-52	1.54
T-53	0.885
T-54	2.23
T-55	2.19
T-56	0.984
T-57	4.64
T-58	0.861
T-59	0.328
T-60	0.485
T-61	0.456
T-62	3.75
T-63	5.28
T-64	2.51
T-65	3.22
T-66	1.84
T-67	2.70
T-68	1.72
T-69	1.24
T-70R	1.33
T-72	1.40
T-73	0.320
T-74	0.329
T-75	0.844
T-76	2.93
T-77	1.09
T-78	0.365
T-79	0.898
T-81	0.415
T-82	0.493
T-83	0.397
T-84	0.790
T-85	1.45
T-86	3.03
T-87	1.28
T-88	1.26
T-89	0.505
T-90	0.707
T-91	0.584
T-92R	0.396
T-93	0.468
T-94	0.540
T-95	1.565
T-96	0.533
T-97	0.385
T-98	0.340
T-99	0.552
T-100	0.772
T-101	0.534
T-102	0.315
T-103	0.356

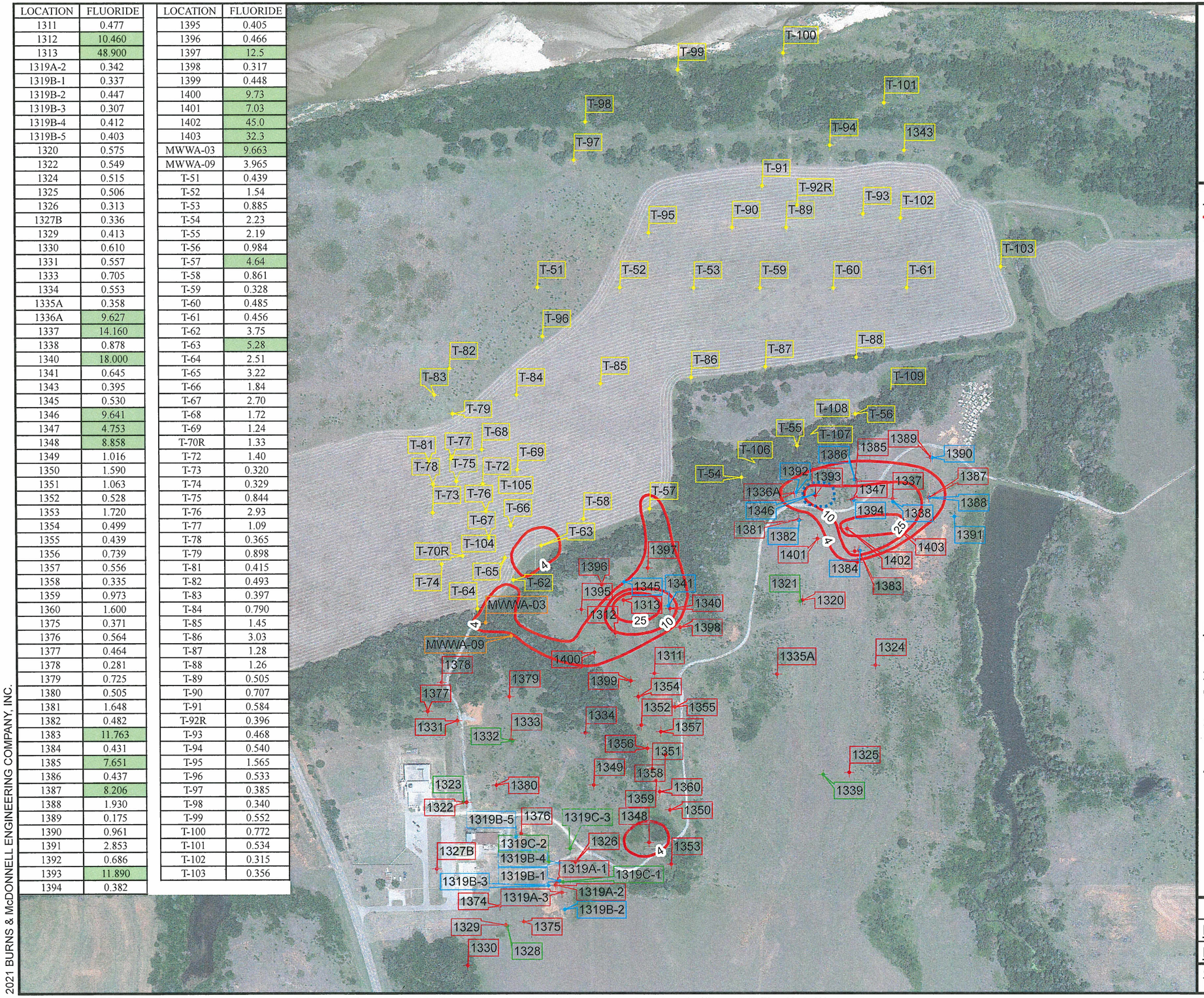


FIGURE 3-2
FLUORIDE IN WESTERN AREA
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- FLUORIDE IN SSA/TRANSITION ZONE/WAA
- FLUORIDE IN SSB (>4 MG/L)
- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE A
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE

NOTES

1) All concentrations reported in milligrams per liter (mg/L).

2) Green highlighting in table indicates state criterion exceedance (>4 mg/L).

3) Concentrations are representative concentration per D-Plan Section 3.5.3.

4) Basemap: Google Earth 2017

0 450 900

SCALE IN FEET

N

	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/12/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 3-2_Fluoride in Western Area

LOCATION	URANIUM
1311	2.72
1312	22.1
1313	18.8
1319A-2	6.28
1319B-1	38.0
1319B-2	1.41
1319B-3	28.5
1319B-4	1.62
1319B-5	2.45
1320	2.20
1322	12.8
1324	1.62
1325	0.938
1326	4.20
1327B	4.10
1329	4.39
1330	5.65
1331	32.1
1333	21.0
1334	11.5
1335A	6.09
1336A	36.1
1337	6.69
1338	0.764
1340	8.46
1341	2.36
1343	21.28
1345	2.08
1346	5.46
1347	34.5
1348	71.3
1349	29.6
1350	14.3
1351	875
1352	125
1353	44.7
1354	3.05
1355	2.58
1356	572
1357	2.16
1358	1.57
1359	12.1
1360	23.9
1375	3.55
1376	15.4
1377	16.5
1378	2.25
1379	18.3
1380	10.5
1381	81.9
1382	1.26
1383	10.0
1384	0.635
1385	19.0
1386	1.23
1387	20.4
1388	1.35
1389	1.40
1390	1.54
1391	1.66
1392	1.05
1393	24.2
1394	1.00

LOCATION	URANIUM
1395	2.31
1396	7.17
1397	12.9
1398	0.990
1399	4.35
1400	2.77
1401	65.7
1402	4.05
1403	1.70
MWWA-03	527
MWWA-09	140
T-51	36.4
T-52	23.2
T-53	33.6
T-54	3.79
T-55	7.39
T-56	5.77
T-57	13.6
T-58	19.9
T-59	92.3
T-60	48.6
T-61	30.4
T-62	178
T-63	104
T-64	126
T-65	152
T-66	122
T-67	159
T-68	150
T-69	77.3
T-70R	97.7
T-72	141
T-73	10.4
T-74	13.8
T-75	76.7
T-76	173
T-77	86.8
T-78	17.5
T-79	62.8
T-81	11.0
T-82	34.3
T-83	14.3
T-84	48.1
T-85	27.8
T-86	22.9
T-87	22.0
T-88	9.94
T-89	50.7
T-90	24.8
T-91	27.8
T-92R	38.3
T-93	32.7
T-94	20.2
T-95	29.3
T-96	34.7
T-97	64.1
T-98	53.1
T-99	42.1
T-100	29.1
T-101	34.8
T-102	32.3
T-103	10.2

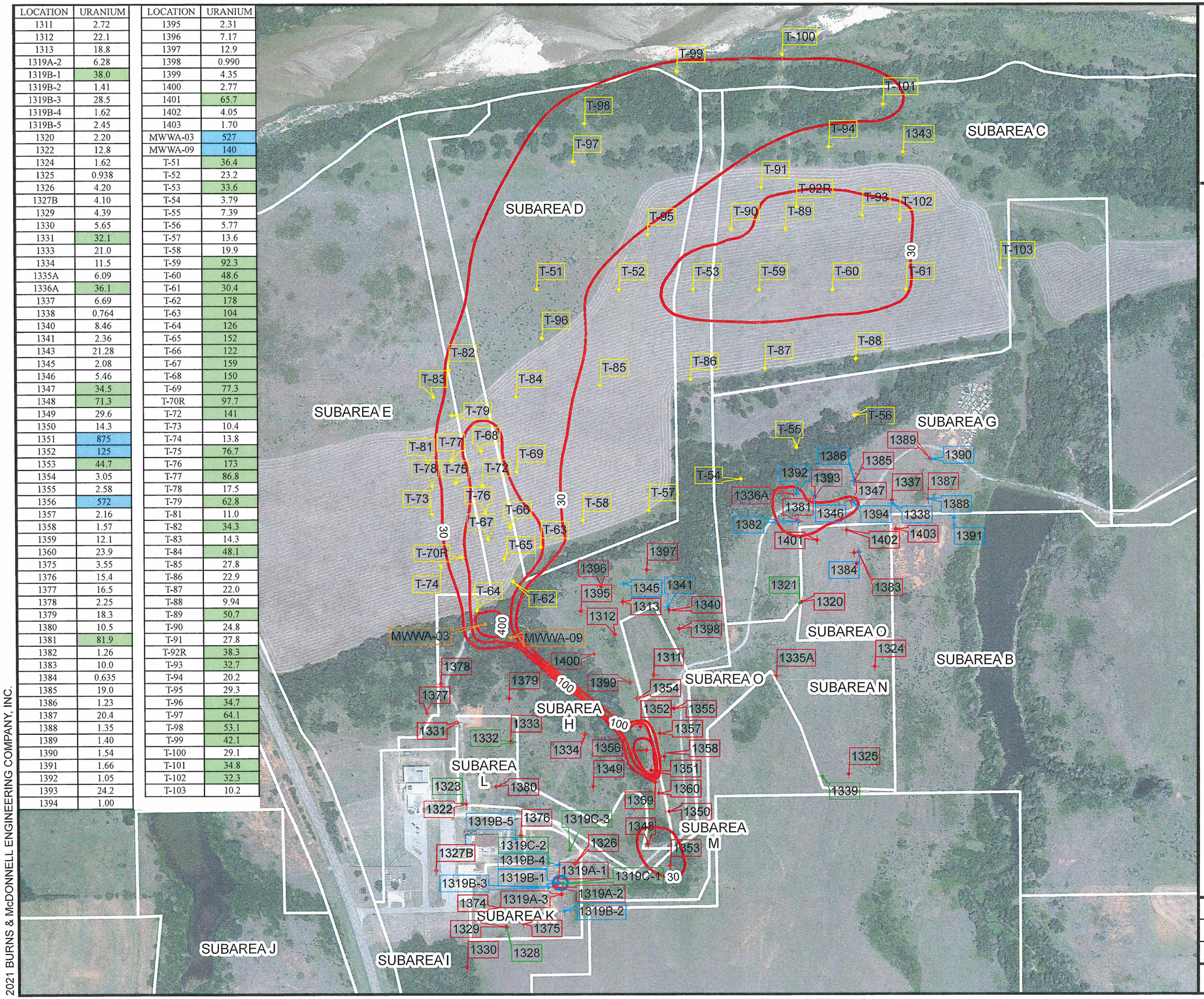


FIGURE 3-3
URANIUM IN WESTERN AREA
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE A
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE
- URANIUM CONTOUR IN SSB (>30 µg/L)
- URANIUM CONTOUR IN SSA/TRANSITION ZONE/WAA

NOTES

1) All concentrations reported in micrograms per liter (µg/L).

2) Green highlighting in table indicates state criterion exceedance (>30 µg/L).

3) Blue highlighting in table indicates NRC criterion exceedance (>201 µg/L; 119 in WU-BA3, 1206-North and WAA U>DCGL).

4) Concentrations are representative concentration per D-Plan Section 3.5.3.

5) Basemap: Google Earth 2017

0 450 900

SCALE IN FEET

N

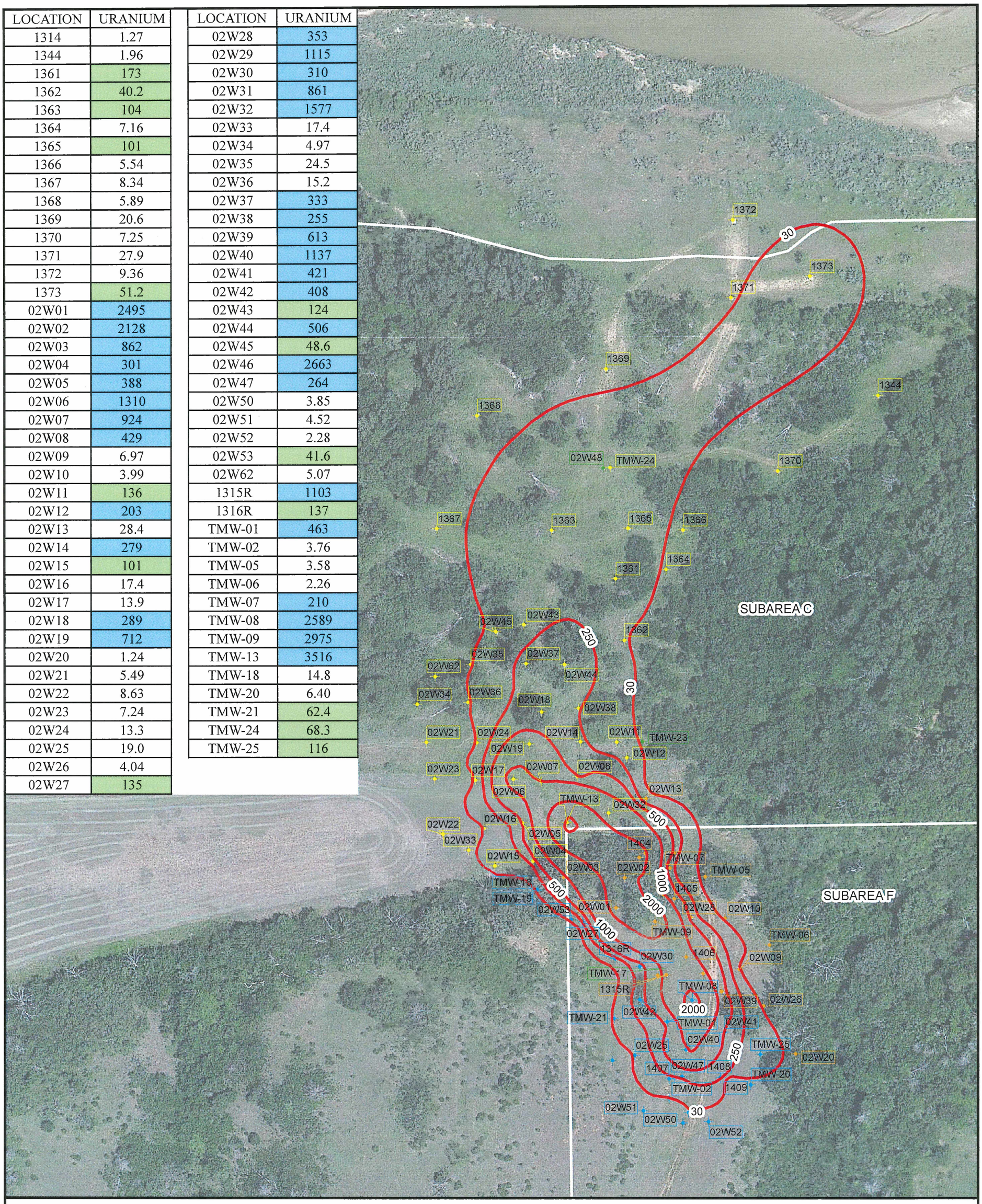
	Rev No: 0
Preparer: SNAG	Date: 11/2/2021
Reviewer: EDULLE	Date: 09/12/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 3-3_Uranium in Western Area

LOCATION	URANIUM
1314	1.27
1344	1.96
1361	173
1362	40.2
1363	104
1364	7.16
1365	101
1366	5.54
1367	8.34
1368	5.89
1369	20.6
1370	7.25
1371	27.9
1372	9.36
1373	51.2
02W01	2495
02W02	2128
02W03	862
02W04	301
02W05	388
02W06	1310
02W07	924
02W08	429
02W09	6.97
02W10	3.99
02W11	136
02W12	203
02W13	28.4
02W14	279
02W15	101
02W16	17.4
02W17	13.9
02W18	289
02W19	712
02W20	1.24
02W21	5.49
02W22	8.63
02W23	7.24
02W24	13.3
02W25	19.0
02W26	4.04
02W27	135

LOCATION	URANIUM
02W28	353
02W29	1115
02W30	310
02W31	861
02W32	1577
02W33	17.4
02W34	4.97
02W35	24.5
02W36	15.2
02W37	333
02W38	255
02W39	613
02W40	1137
02W41	421
02W42	408
02W43	124
02W44	506
02W45	48.6
02W46	2663
02W47	264
02W50	3.85
02W51	4.52
02W52	2.28
02W53	41.6
02W62	5.07
1315R	1103
1316R	137
TMW-01	463
TMW-02	3.76
TMW-05	3.58
TMW-06	2.26
TMW-07	210
TMW-08	2589
TMW-09	2975
TMW-13	3516
TMW-18	14.8
TMW-20	6.40
TMW-21	62.4
TMW-24	68.3
TMW-25	116



LEGEND

- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE A
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE
- URANIUM CONTOURS

NOTES

1) All concentrations reported in micrograms per liter (µg/L).

2) Green highlighting in table indicates state criterion exceedance (>30 µg/L).

3) Blue highlighting in table indicates NRC Criterion exceedance (>201 µg/L).

4) NRC - Nuclear Regulatory Commission

5) Concentrations are representative concentrations per D-Plan Section 3.5.3.

6) Basemap: Google Earth 2017

0 125 250

SCALE IN FEET

N

FIGURE 3-4
URANIUM IN BURIAL AREA #1
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\GeospatialMaps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\20201202022 - Decommissioning Plan\Figure 3-4_Uranium in BA1
2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

LOCATION	U ENRICHMENT
1311	0.6%
1312	1.9%
1313	1.9%
1320	0.7%
1322	1.4%
1324	0.7%
1326	0.7%
1327B	0.7%
1329	0.7%
1330	1.8%
1331	2.9%
1333	2.5%
1334	1.6%
1335A	1.8%
1336A	1.9%
1337	1.9%
1340	1.9%
1342	1.1%
1343	0.7%
1347	1.9%
1348	2.1%
1349	2.9%
1350	2.0%
1351	2.4%
1352	1.0%
1354	0.8%
1355	0.7%
1356	1.8%
1357	0.7%
1358	0.7%
1359	2.2%
1360	2.1%
1374	1.7%
1375	0.7%
1376	1.7%
1377	2.8%
1378	0.7%
1379	2.2%
1380	1.3%
1381	2.2%
1383	1.9%
1385	0.8%
1387	1.9%
1393	2.0%
1395	0.8%
1396	0.7%
1397	2.0%
1399	0.7%
1400	1.8%
1401	1.8%
1402	1.9%
1403	1.6%
MWWA-03	3.1%

LOCATION	U ENRICHMENT
MWWA-09	1.9%
T-51	1.3%
T-52	1.1%
T-53	0.8%
T-54	1.0%
T-55	0.9%
T-56	0.7%
T-57	1.9%
T-58	2.0%
T-59	0.7%
T-60	0.7%
T-61	0.7%
T-62	1.9%
T-63	2.1%
T-64	2.8%
T-65	1.7%
T-66	1.5%
T-67	2.1%
T-68	1.9%
T-69	1.6%
T-70R	4.0%
T-72	2.1%
T-73	0.7%
T-74	0.9%
T-75	4.4%
T-76	1.8%
T-77	3.7%
T-78	0.8%
T-79	3.4%
T-81	0.8%
T-82	1.5%
T-83	0.8%
T-84	1.5%
T-85	1.2%
T-86	1.4%
T-87	0.8%
T-88	0.7%
T-89	0.7%
T-90	0.8%
T-91	0.7%
T-92R	0.7%
T-93	0.7%
T-94	0.7%
T-95	0.9%
T-96	1.2%
T-97	1.8%
T-98	1.9%
T-99	0.8%
T-100	0.8%
T-101	0.7%
T-102	0.7%
T-103	0.7%

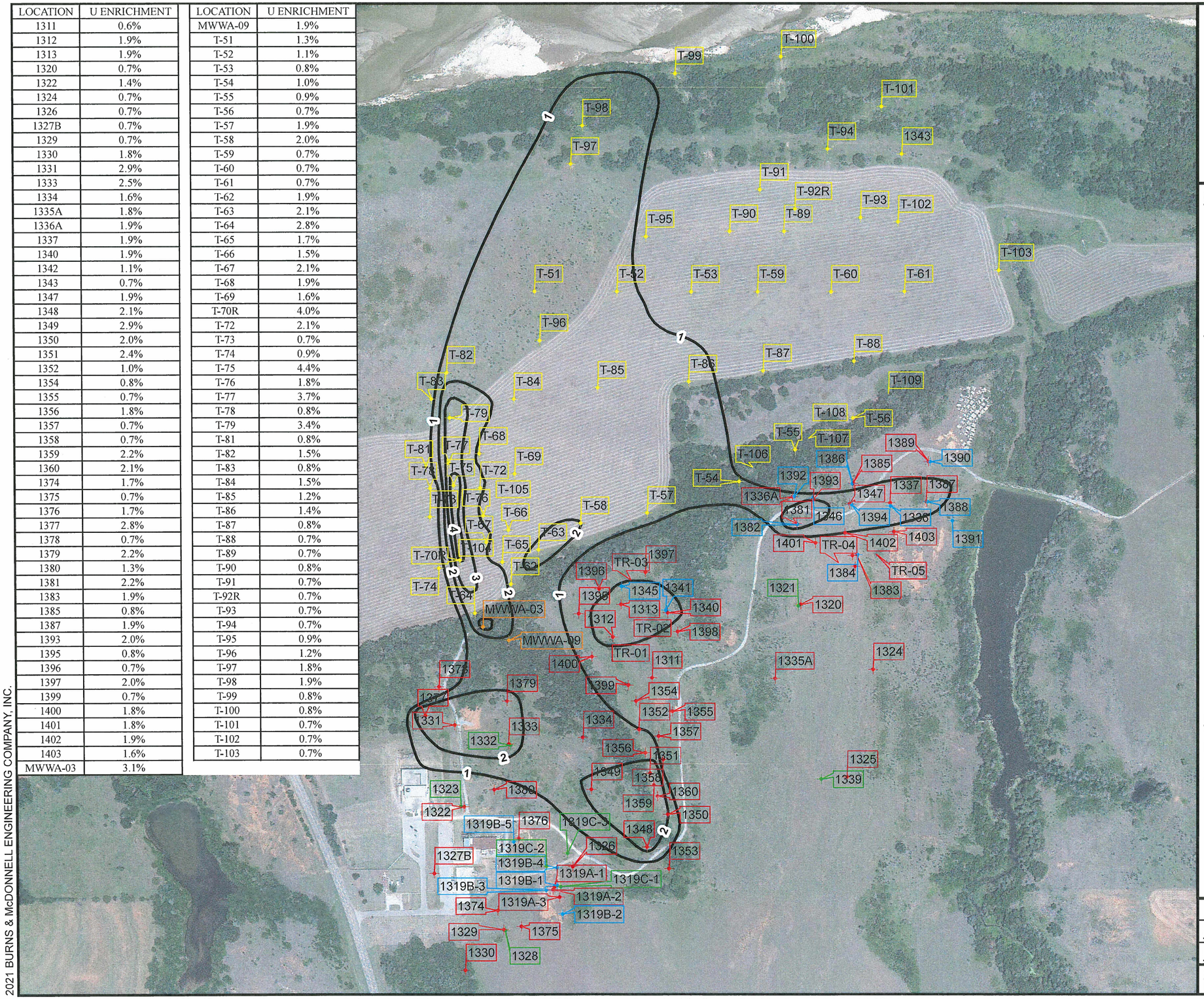


FIGURE 3-5
URANIUM ENRICHMENT IN WESTERN AREA
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE A
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE
- U-235 ENRICHMENT CONTOUR

NOTES

1) URANIUM ENRICHMENT VALUES ARE IN U-235 WEIGHT PERCENT.

2) BASEMAP: GOOGLE EARTH 2017

0 450 900
SCALE IN FEET

N

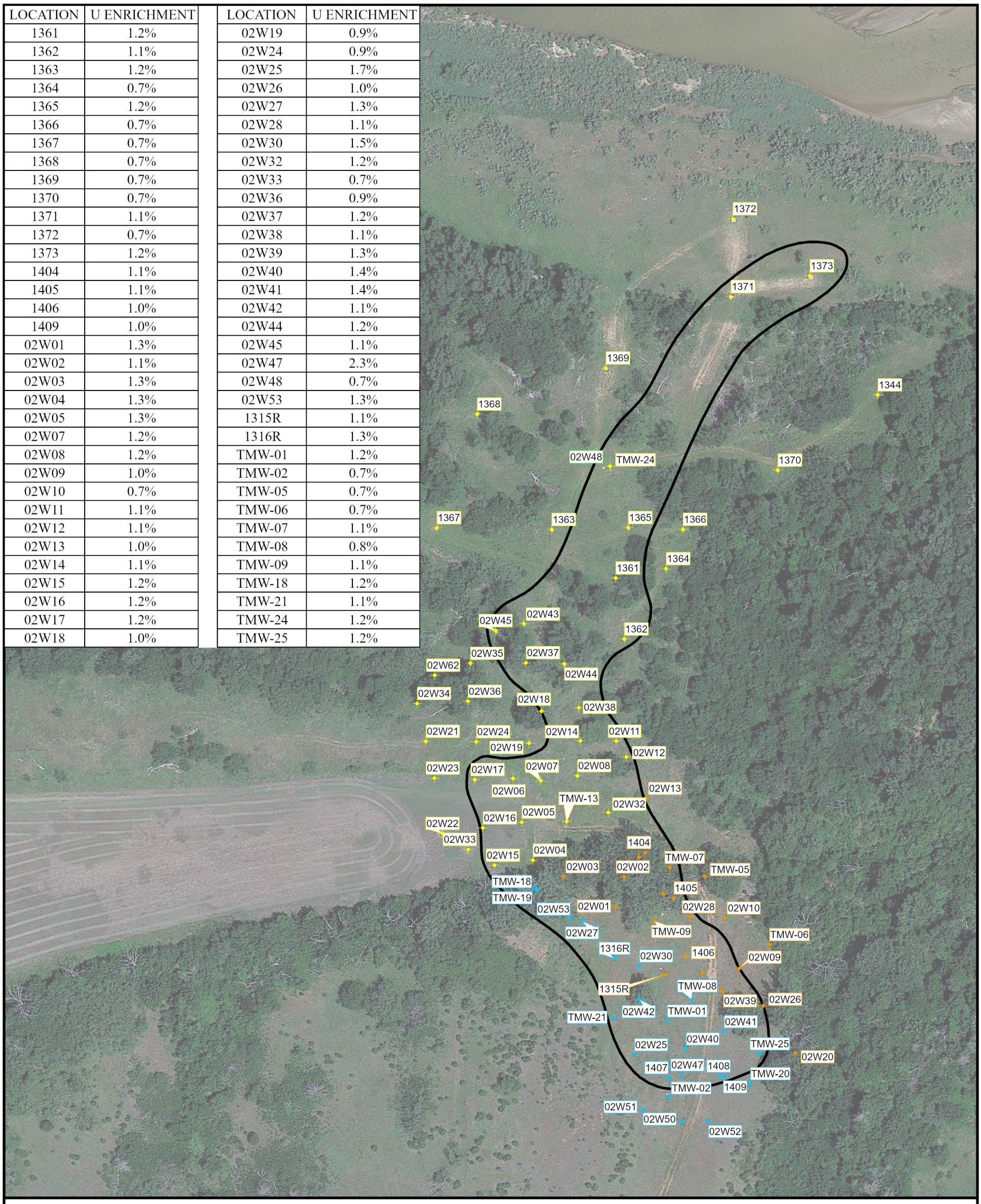
	Rev No: 0
Preparer: BELOCKWOOD	Date: 9/14/2021
Reviewer: EDULLE	Date: 9/12/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 3-5_Uranium Enrichment in Western Area

LOCATION	U ENRICHMENT
1361	1.2%
1362	1.1%
1363	1.2%
1364	0.7%
1365	1.2%
1366	0.7%
1367	0.7%
1368	0.7%
1369	0.7%
1370	0.7%
1371	1.1%
1372	0.7%
1373	1.2%
1404	1.1%
1405	1.1%
1406	1.0%
1409	1.0%
02W01	1.3%
02W02	1.1%
02W03	1.3%
02W04	1.3%
02W05	1.3%
02W07	1.2%
02W08	1.2%
02W09	1.0%
02W10	0.7%
02W11	1.1%
02W12	1.1%
02W13	1.0%
02W14	1.1%
02W15	1.2%
02W16	1.2%
02W17	1.2%
02W18	1.0%

LOCATION	U ENRICHMENT
02W19	0.9%
02W24	0.9%
02W25	1.7%
02W26	1.0%
02W27	1.3%
02W28	1.1%
02W30	1.5%
02W32	1.2%
02W33	0.7%
02W36	0.9%
02W37	1.2%
02W38	1.1%
02W39	1.3%
02W40	1.4%
02W41	1.4%
02W42	1.1%
02W44	1.2%
02W45	1.1%
02W48	2.3%
02W53	1.3%
1315R	1.1%
1316R	1.3%
TMW-01	1.2%
TMW-02	0.7%
TMW-05	0.7%
TMW-06	0.7%
TMW-07	1.1%
TMW-08	0.8%
TMW-09	1.1%
TMW-18	1.2%
TMW-21	1.1%
TMW-24	1.2%
TMW-25	1.2%



LEGEND

- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN TRANSITION ZONE
- 1% ENRICHMENT CONTOUR

NOTES

1) URANIUM ENRICHMENT VALUES ARE IN U-235 WEIGHT PERCENT.

2) BASEMAP: GOOGLE EARTH 2017

0 125 250

SCALE IN FEET

N

FIGURE 3-6
URANIUM ENRICHMENT IN BURIAL AREA #1
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

	Rev No: 0
Preparer: BELOCKWOOD	Date: 9/14/2021
Reviewer: MCRAWFORD	Date: 9/14/2021

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 3-6_Uranium Enrichment in BA1
2021 BURNS & McDONNELL ENGINEERING COMPANY, INC.

FIGURE 5-1
PROPERTY OWNED BY THE TRUST
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- 24 ACRES SOLD TO CIMARRON HOLDINGS LLC
- 117 ACRES SOLD TO SNAKE CREEK RANCH, INC.
- 140 ACRES SOLD TO CIMARRON HOLDINGS LLC
- 1 ACRE SOLD TO CIMARRON HOLDINGS LLC
- CERT PROPERTY LINE - MARCH 2018

117 ACRES
SOLD: 04/3/2015

24 ACRES
SOLD: 01/28/2015

1 ACRE
SOLD: 07/6/2018

140 ACRES
SOLD: 11/30/2017

0 700 1,400
SCALE IN FEET

N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: World Imagery: Maxar

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 5-2_Property Owned by CERT

FIGURE 5-2
LAND USE DURING OPERATING YEARS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- HISTORICALLY USED FOR GRAZING AND HARVESTING GRASS FOR CATTLE (APPROXIMATE)
- CERT PROPERTY LINE - MARCH 2018
- OLD SANITARY LAGOON
- BURIAL AREA
- BUILDING
- EMERGENCY POND
- WASTE POND
- NEW SANITARY LAGOON

NOTES

1) SHADED AREAS SHOW THE LOCATIONS OF OPERATING FACILITIES. SEE FIGURE 1-3 FOR SPECIFIC DETAILS.

0 750 1,500

SCALE IN FEET

N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/6/2022
Reviewer: EDULLE	Date: 9/6/2022
Coordinate System NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet	

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Service Layer Credits: World Imagery: Maxar

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 5-3_Land Use During Operating Years

FIGURE 5-3
WESTERN AREA INFRASTRUCTURE AND
STORMWATER CONTROLS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE A
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE
- EXTRACTION TEST WELL
- EXTRACTION WELL/SUMP
- INJECTION WELL
- WA OUTFALL PIPING
- SILT FENCE
- GROUNDWATER EXTRACTION PIPING
- TREATED WATER INJECTION PIPING
- GROUNDWATER EXTRACTION TRENCH
- TREATED WATER INJECTION TRENCH
- TREATMENT FACILITY BUILDING
- TREATMENT FACILITY ROAD
- TREATMENT FACILITY FENCE
- TREATMENT FACILITY FENCE
- SOIL MIXING AREA
- EXCAVATION AREA
- 1206 DRAINAGE PERFORATED PIPE
- CERT PROPERTY LINE - MARCH 2018

NOTES

1) BMPS WILL ALSO BE INSTALLED AROUND EQUIPMENT AND MATERIAL STAGING AREAS AS REQUIRED.

2) BASEMAP: GOOGLE EARTH 2017

0 400 800

SCALE IN FEET

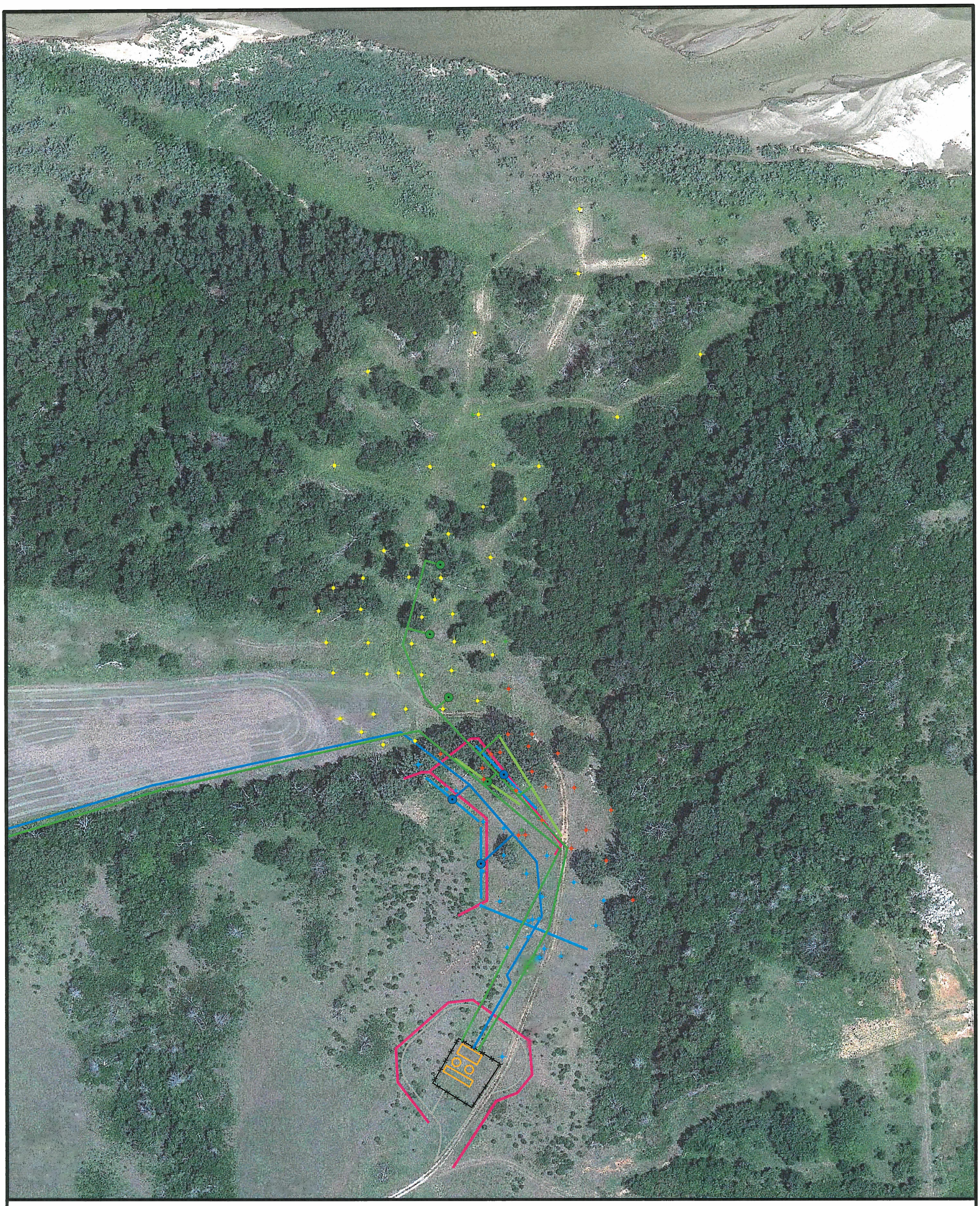
N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/9/2022
Reviewer: EDULLE	Date: 9/9/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 5-4_Western Area Infrastructure and Stormwater Controls



LEGEND

- MONITOR WELL IN ALLUVIUM
- MONITOR WELL IN SANDSTONE B
- MONITOR WELL IN SANDSTONE C
- MONITOR WELL IN TRANSITION ZONE
- EXTRACTION WELL/SUMP
- INJECTION WELL
- GROUNDWATER EXTRACTION PIPING
- TREATED WATER INJECTION PIPING
- GROUNDWATER EXTRACTION TRENCH
- TREATED WATER INJECTION TRENCH
- SILT FENCE
- TREATMENT FACILITY TRUEGRID
- TREATMENT FACILITY CONCRETE
- TREATMENT FACILITY FENCE

NOTES

1) BMPS WILL ALSO BE INSTALLED AROUND EQUIPMENT AND MATERIAL STAGING AREAS AS REQUIRED.

2) BMP LOCATIONS ARE APPROXIMATE AND SHOW AREAS TO BE ADDRESSED.

3) BASEMAP: GOOGLE EARTH 2017

0 150 300

SCALE IN FEET

N

FIGURE 5-4
BURIAL AREA #1 INFRASTRUCTURE AND STORMWATER CONTROLS
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/9/2022
Reviewer: EDULLE	Date: 9/9/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\GeospatialMaps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 5-5_Burial Area 1 Infrastructure and Stormwater Controls 2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

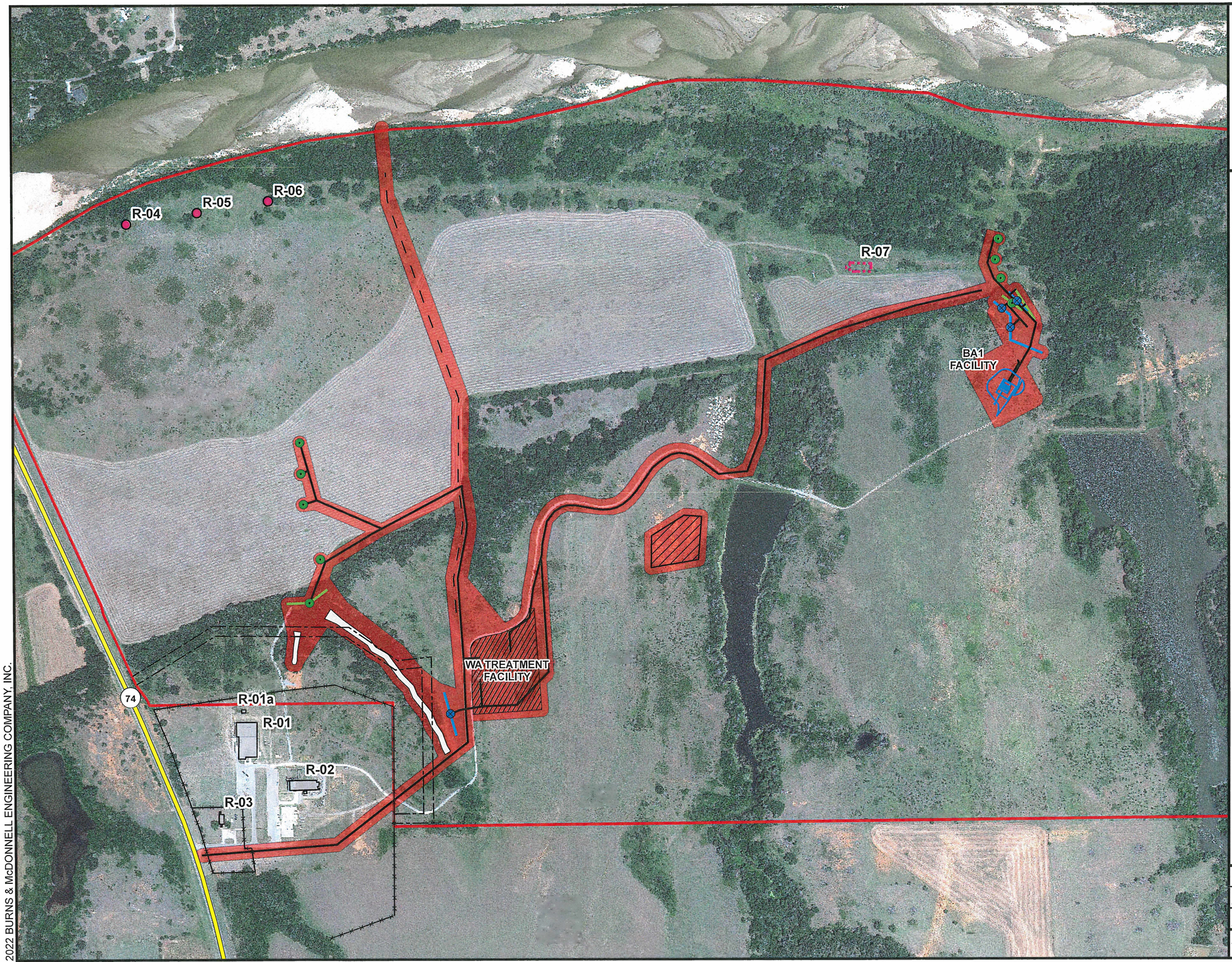


FIGURE 5-5
MAXIMUM POTENTIAL LAND DISTURBANCE
FACILITY DECOMMISSIONING PLAN
REVISION 3

BURNS McDONNELL

environmental properties management, LLC

LEGEND

- EXTRACTION WELL/SUMP
- INJECTION WELL
- DIESEL PUMP
- EXISTING FENCE
- PROPOSED OG&E EASEMENT (50 FEET)
- OUTFALL PIPING
- TRENCHING ASSOCIATED WITH UTILITY ROUTING
- GROUNDWATER EXTRACTION TRENCH
- TREATED WATER INJECTION TRENCH
- SOILS MIXING AREA
- 1206 NORTH DRAINAGE REMEDATION AREA
- GENERAL TREATMENT FACILITY LOCATIONS
- BA1 TREATMENT FACILITY
- HISTORIC CORRAL
- EXISTING BUILDING
- AREA OF POTENTIAL LAND DISTURBANCE
- CERT PROPERTY BOUNDARY - MARCH 2018

NOTES

R-01 - LABELS R-01 THROUGH R-07 IDENTIFY THE HISTORIC STRUCTURE OR ITEM REFERENCED IN THE CULTURAL RESOURCES SURVEY.

0 500 1,000
SCALE IN FEET

N

	Rev No: 0
Preparer: TJKIMMEL	Date: 9/20/2022
Reviewer: EDULLE	Date: 9/20/2022

Coordinate System
NAD 1983 StatePlane Oklahoma North FIPS 3501 Feet

2022 BURNS & McDONNELL ENGINEERING COMPANY, INC.

Z:\Clients\ENS\CERT_ClientInfo\Sites\Database\Geospatial\Maps & Dwgs\ArcGIS\BMCD_Files\Arcdocs\2020\2022 - Decommissioning Plan\Figure 5-6_Maximum Potential Land Disturbance