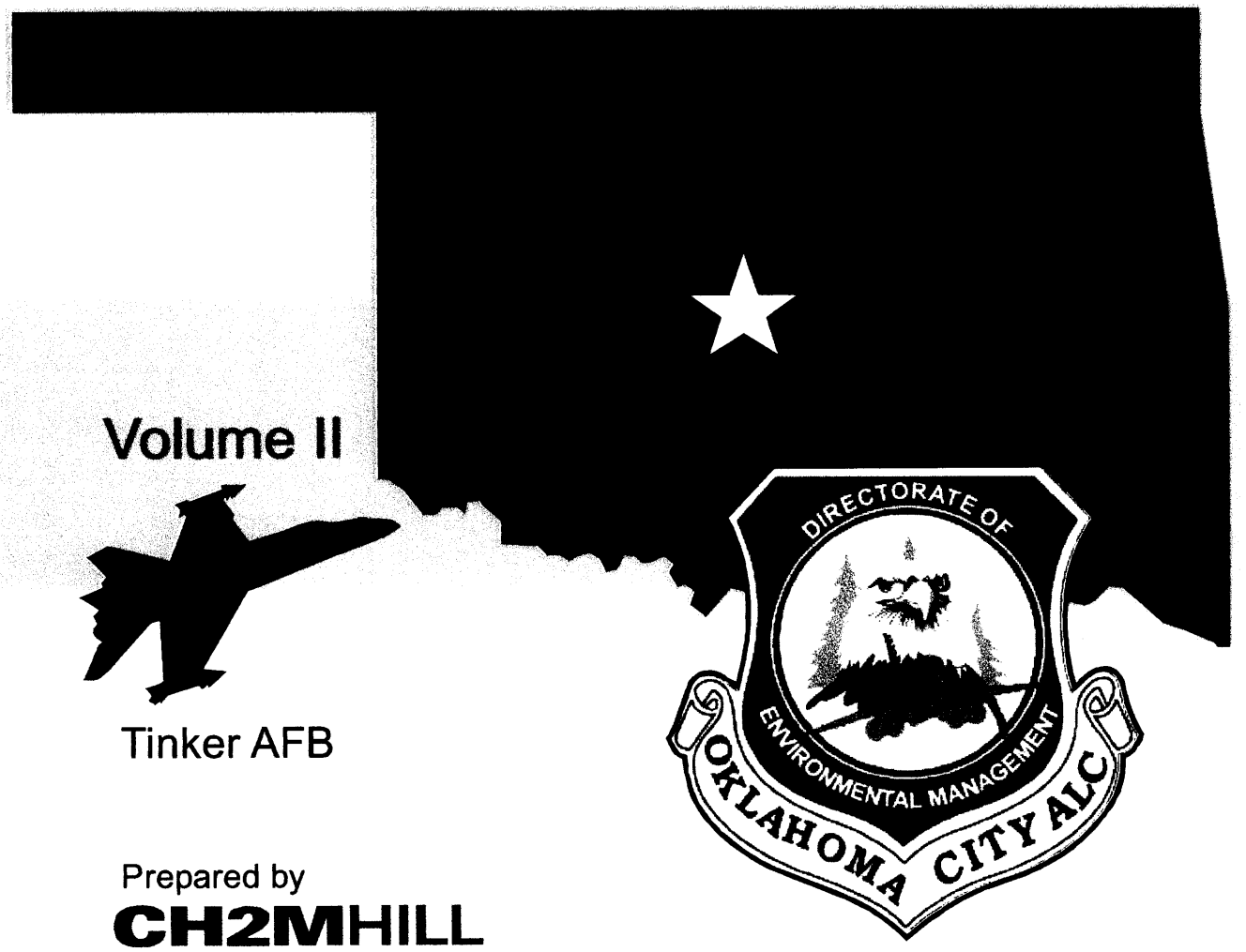
FINAL

Tinker AFB, Site CG038
RCRA Facility Investigation Report



Volume II

Tinker AFB

Prepared by
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Oklahoma City, OK 73104

Contract No. F34650-98-D-0032 Delivery Order 5017

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February 2002

FINAL

RCRA FACILITY INVESTIGATION REPORT

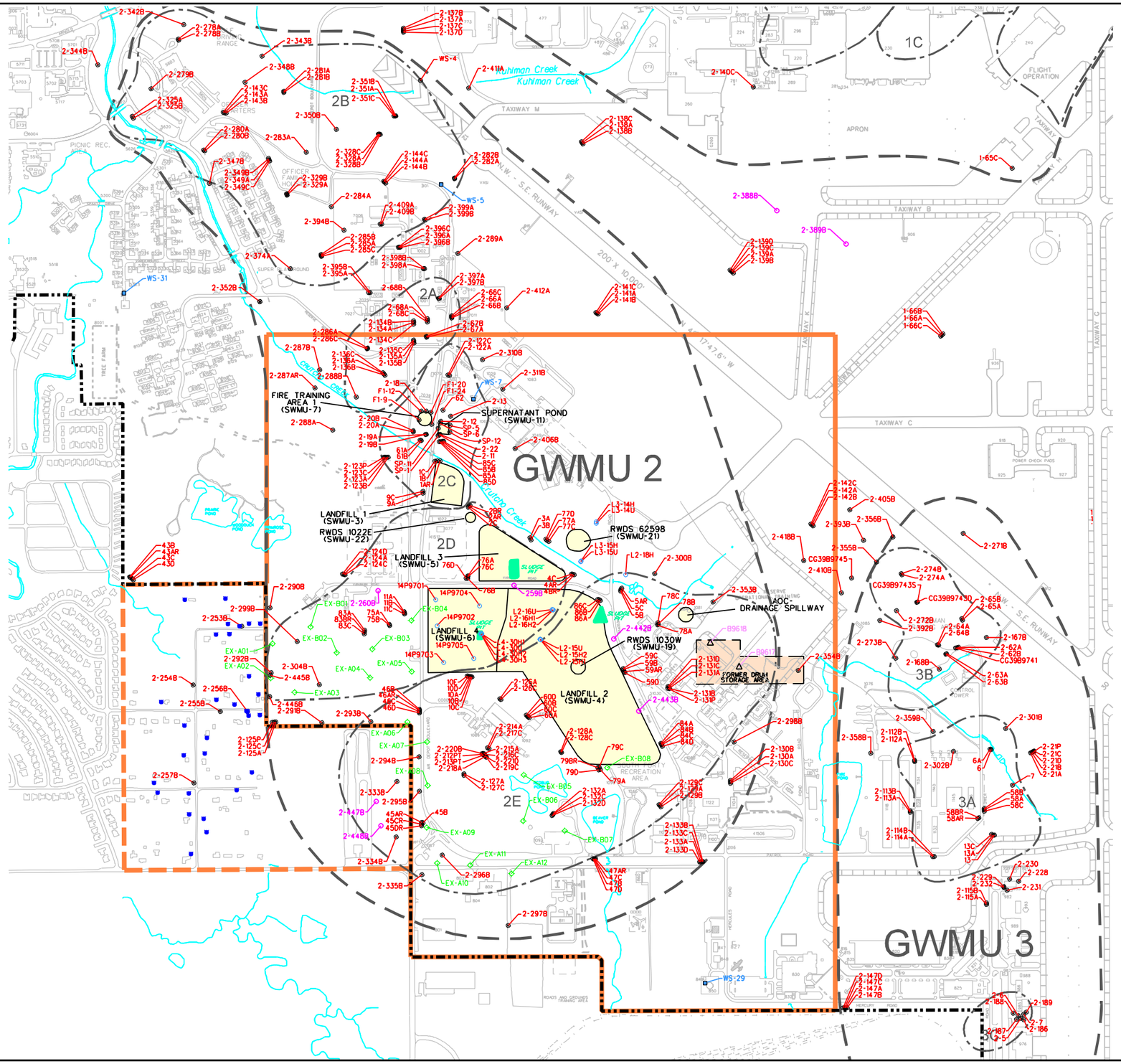
VOLUME 2

February 2002

The above document contains 11 X 17 maps. The majority of the maps were inserted from a PDF CD provided by the contractor. The following is a list of those still missing, not found on CD. The document is available in the Midwest City Library for preview.

MAPS Figure 3-5 through 3-16 and 4-25

EM Library
Tinker Air Force Base, Oklahoma



N

0 500' 1000' 1500'

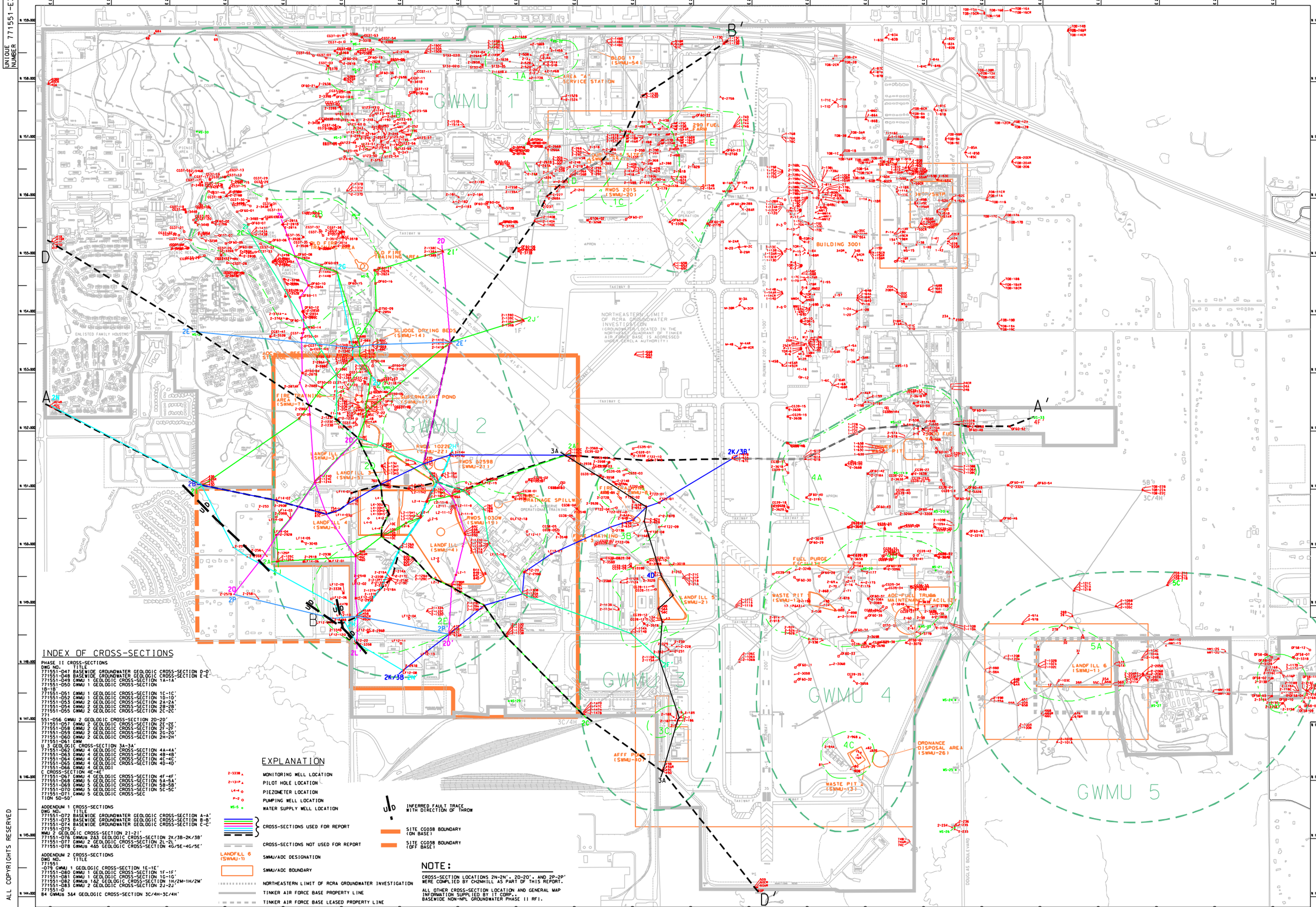
LEGEND

- Monitoring Well
- Piezometer
- Water Supply Well
- Monitoring Well (Installed after 1999)
- Temporary Well (Present 1996 only)
- Recovery Well
- Private Water Supply Well
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

FIGURE 1-4
Site CG038
Well Location Map
Tinker AFB, Oklahoma

CH2MHILL

UNIQUE NUMBER 771551-E34



INDEX OF CROSS-SECTIONS

PHASE II CROSS-SECTIONS

DWG NO.	TITLE
771551-D47	BASEWIDE GROUNDWATER GEOLOGIC CROSS-SECTION D-D'
771551-D48	BASEWIDE GROUNDWATER GEOLOGIC CROSS-SECTION E-E'
771551-D49	GWMU 1 GEOLOGIC CROSS-SECTION 1A-1A'
771551-D50	GWMU 1 GEOLOGIC CROSS-SECTION 1B-1B'
771551-D51	GWMU 1 GEOLOGIC CROSS-SECTION 1C-1C'
771551-D52	GWMU 1 GEOLOGIC CROSS-SECTION 1D-1D'
771551-D53	GWMU 2 GEOLOGIC CROSS-SECTION 2A-2A'
771551-D54	GWMU 2 GEOLOGIC CROSS-SECTION 2B-2B'
771551-D55	GWMU 2 GEOLOGIC CROSS-SECTION 2C-2C'
771 551-D56	GWMU 2 GEOLOGIC CROSS-SECTION 2D-2D'
771551-D57	GWMU 2 GEOLOGIC CROSS-SECTION 2E-2E'
771551-D58	GWMU 2 GEOLOGIC CROSS-SECTION 2F-2F'
771551-D59	GWMU 2 GEOLOGIC CROSS-SECTION 2G-2G'
771551-D60	GWMU 2 GEOLOGIC CROSS-SECTION 2H-2H'
771551-D61	GWM U 3 GEOLOGIC CROSS-SECTION 3A-3A'
771551-D62	GWMU 4 GEOLOGIC CROSS-SECTION 4A-4A'
771551-D63	GWMU 4 GEOLOGIC CROSS-SECTION 4B-4B'
771551-D64	GWMU 4 GEOLOGIC CROSS-SECTION 4C-4C'
771551-D65	GWMU 4 GEOLOGIC CROSS-SECTION 4D-4D'
771551-D66	GWMU 4 GEOLOGI C CROSS-SECTION 4E-4E'
771551-D67	GWMU 4 GEOLOGIC CROSS-SECTION 4F-4F'
771551-D68	GWMU 5 GEOLOGIC CROSS-SECTION 5A-5A'
771551-D69	GWMU 5 GEOLOGIC CROSS-SECTION 5B-5B'
771551-D70	GWMU 5 GEOLOGIC CROSS-SECTION 5C-5C'
771551-D71	GWMU 5 GEOLOGIC CROSS-SEC TION 5D-5D'

ADDENDUM 1 CROSS-SECTIONS

DWG NO.	TITLE
771551-D72	BASEWIDE GROUNDWATER GEOLOGIC CROSS-SECTION A-A'
771551-D73	BASEWIDE GROUNDWATER GEOLOGIC CROSS-SECTION B-B'
771551-D74	BASEWIDE GROUNDWATER GEOLOGIC CROSS-SECTION C-C'
771551-D75	GWMU 2 GEOLOGIC CROSS-SECTION 2I-2I'
771551-D76	GWMU8 2&3 GEOLOGIC CROSS-SECTION 2K/3B-2K/3B'
771551-D77	GWMU 2 GEOLOGIC CROSS-SECTION 2L-2L'
771551-D78	GWMU8 4&5 GEOLOGIC CROSS-SECTION 4G/5E-4G/5E'

ADDENDUM 2 CROSS-SECTIONS

DWG NO.	TITLE
771551 -D79	GWMU 1 GEOLOGIC CROSS-SECTION 1E-1E'
771551-D80	GWMU 1 GEOLOGIC CROSS-SECTION 1F-1F'
771551-D81	GWMU 1 GEOLOGIC CROSS-SECTION 1G-1G'
771551-D82	GWMU8 1&2 GEOLOGIC CROSS-SECTION 1H/2M-1H/2M'
771551-D83	GWMU 2 GEOLOGIC CROSS-SECTION 2J-2J'
771551-D 84	GWMU8 3&4 GEOLOGIC CROSS-SECTION 3C/4H-3C/4H'

EXPLANATION

- 2-333B — MONITORING WELL LOCATION
- 2-131P — PILOT HOLE LOCATION
- L4-4 — PIEZOMETER LOCATION
- P-2 — PUMPING WELL LOCATION
- WS-5 — WATER SUPPLY WELL LOCATION
- CROSS-SECTIONS USED FOR REPORT
- CROSS-SECTIONS NOT USED FOR REPORT
- LANDFILL 6 (SWMU-1) — SWMU/ADC DESIGNATION
- SWMU/ADC BOUNDARY
- NORTHEASTERN LIMIT OF RCRA GROUNDWATER INVESTIGATION
- TINKER AIR FORCE BASE PROPERTY LINE
- TINKER AIR FORCE BASE LEASED PROPERTY LINE
- UP/DOWN — INFERRED FAULT TRACE WITH DIRECTION OF THROW
- SITE CG038 BOUNDARY (ON BASE)
- SITE CG038 BOUNDARY (OFF BASE)

NOTE:

CROSS-SECTION LOCATIONS 2N-2N', 2O-2O', AND 2P-2P' WERE COMPILED BY CH2MHILL AS PART OF THIS REPORT.

ALL OTHER CROSS-SECTION LOCATION AND GENERAL MAP INFORMATION SUPPLIED BY IT CORP., BASEWIDE NON-NPL GROUNDWATER PHASE II RFI.

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NO.	REVISION	BY	DATE	CHK'D	APR'VD

DRAWN BY:	CFB	STARTING DATE	02/03/99
REVISED BY:	CFB	DATE LAST REV	12/08/99
INITIATOR:	BH	DATE:	02/03/99
DRAFT. CHK.:		DATE:	/ /
ENG. CHK.:		DATE:	/ /
PROJ. MGR.:		DATE:	/ /

N

0 500 1000
FEET

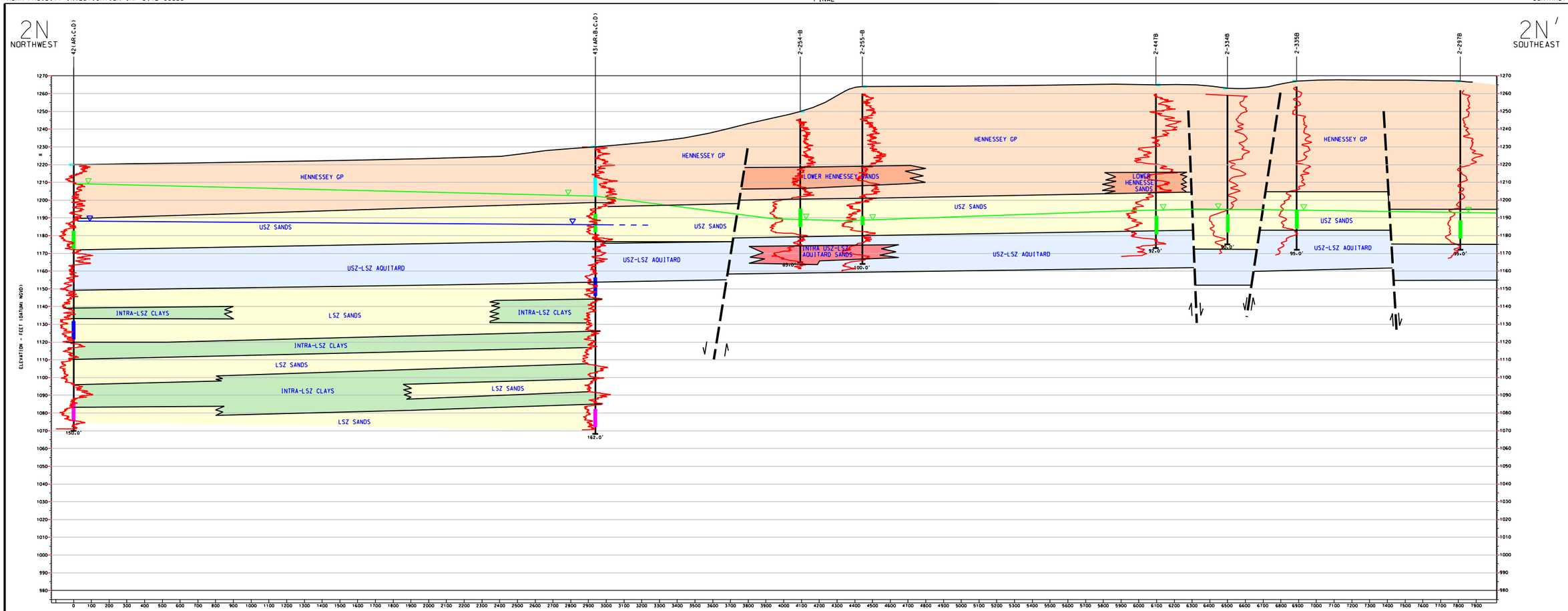
MAP OF GEOLOGIC CROSS-SECTION LOCATIONS

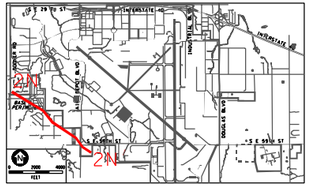
PREPARED FOR
TINKER AIR FORCE BASE
OKLAHOMA CITY, OKLAHOMA

PROJ. NO. 771551

FIG. 3-4

UNIQUE NUMBER 771551-E34





NOTES:

1. ABBREVIATIONS USED ON CROSS-SECTIONS:
   HENNESSEY GRP -- HENNESSEY GRP
   USZ ---℄ UPPER SATURATED ZONE
   LSZ ---℄ LOWER SATURATED ZONE

(4AA') CROSS-SECTION TIE POINT(S)
WELL IDENTIFICATION
WELL
WATER LEVEL ELEVATION (2001)
SCREENED INTERVAL
GAMMA LOG
45.0' TOTAL DEPTH DRILLED
✳ DIGITIZED ANALOG GAMMA LOGS

UPPER SATURATED ZONE USZ POTENTIOMETRIC SURFACE
LOWER SATURATED ZONE LSZ POTENTIOMETRIC SURFACE
LOWER LOWER SATURATED ZONE LLSZ POTENTIOMETRIC SURFACE

NOTE:
POTENTIOMETRIC SURFACES, HYDROGEOLOGIC BOUNDARIES, AND LITHOLOGIC CONTACTS DASHED WHERE INFERRED.

INFERRED FAULT WITH DIRECTION OF THROW

VERTICAL EXAGGERATION = 200 400

GARBER-WELLINGTON AQUIFER
- HENNESSEY GROUP (GP)
- LOWER HENNESSEY SANDS
- USZ SANDS
- INTRA-USZ CLAYS
- INTRA USZ-LSZ AQUITARD SANDS
- USZ-LSZ AQUITARD
- LSZ SANDS
- INTRA-LSZ CLAYS

Job No. 154887

FIGURE 3-17

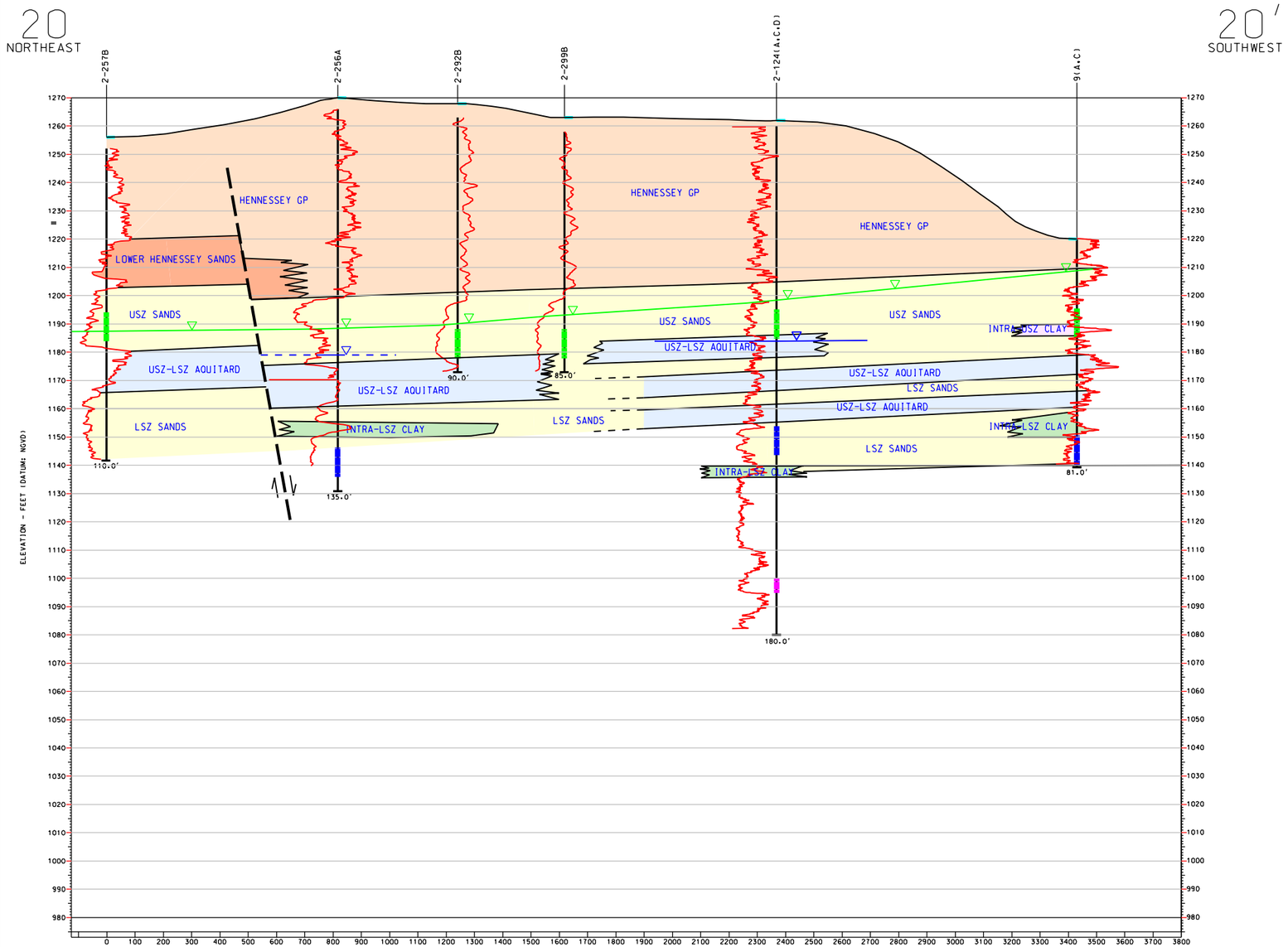
GROUNDWATER MANAGEMENT UNIT 2 AND OFF-SITE GEOLOGIC CROSS-SECTION 2N-2N'
TINKER AIR FORCE BASE
OKLAHOMA CITY, OKLAHOMA

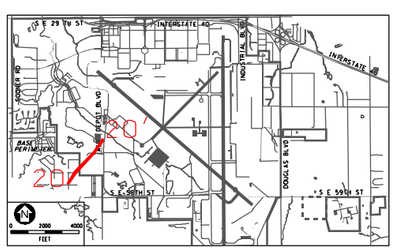
CH2MHILL

No.	Date	Revisions	App.

Date: NOV. 2001
Designed by: PS
Drawn by: RO
Checked by: JC

FILE: 54887-2N.DLV





NOTES:

1. ABBREVIATIONS USED ON CROSS-SECTIONS:
   HENNESSEY GRP -- HENNESSEY GRP
   USZ --- UPPER SATURATED ZONE
   LSZ --- LOWER SATURATED ZONE

WELL IDENTIFICATION
WELL
WATER LEVEL ELEVATION (2001)
SCREENED INTERVAL
GAMMA LOG
45.0' TOTAL DEPTH DRILLED
✳ DIGITIZED ANALOG GAMMA LOGS

UPPER SATURATED ZONE USZ POTENTIOMETRIC SURFACE
LOWER SATURATED ZONE LSZ POTENTIOMETRIC SURFACE
LOWER LOWER SATURATED ZONE LLSZ POTENTIOMETRIC SURFACE

NOTE:
POTENTIOMETRIC SURFACES, HYDROGEOLOGIC BOUNDARIES, AND LITHOLOGIC CONTACTS DASHED WHERE INFERRED.

INFERRED FAULT WITH DIRECTION OF THROW

VERTICAL EXAGGERATION = 200 400

GARBER-WELLINGTON AQUIFER:
- HENNESSEY GROUP (GP)
- LOWER HENNESSEY SANDS
- USZ SANDS
- INTRA-USZ CLAYS
- INTRA-AQUITARD SANDS
- USZ-LSZ AQUITARD
- LSZ SANDS
- INTRA-LSZ CLAYS

Job No. 154887

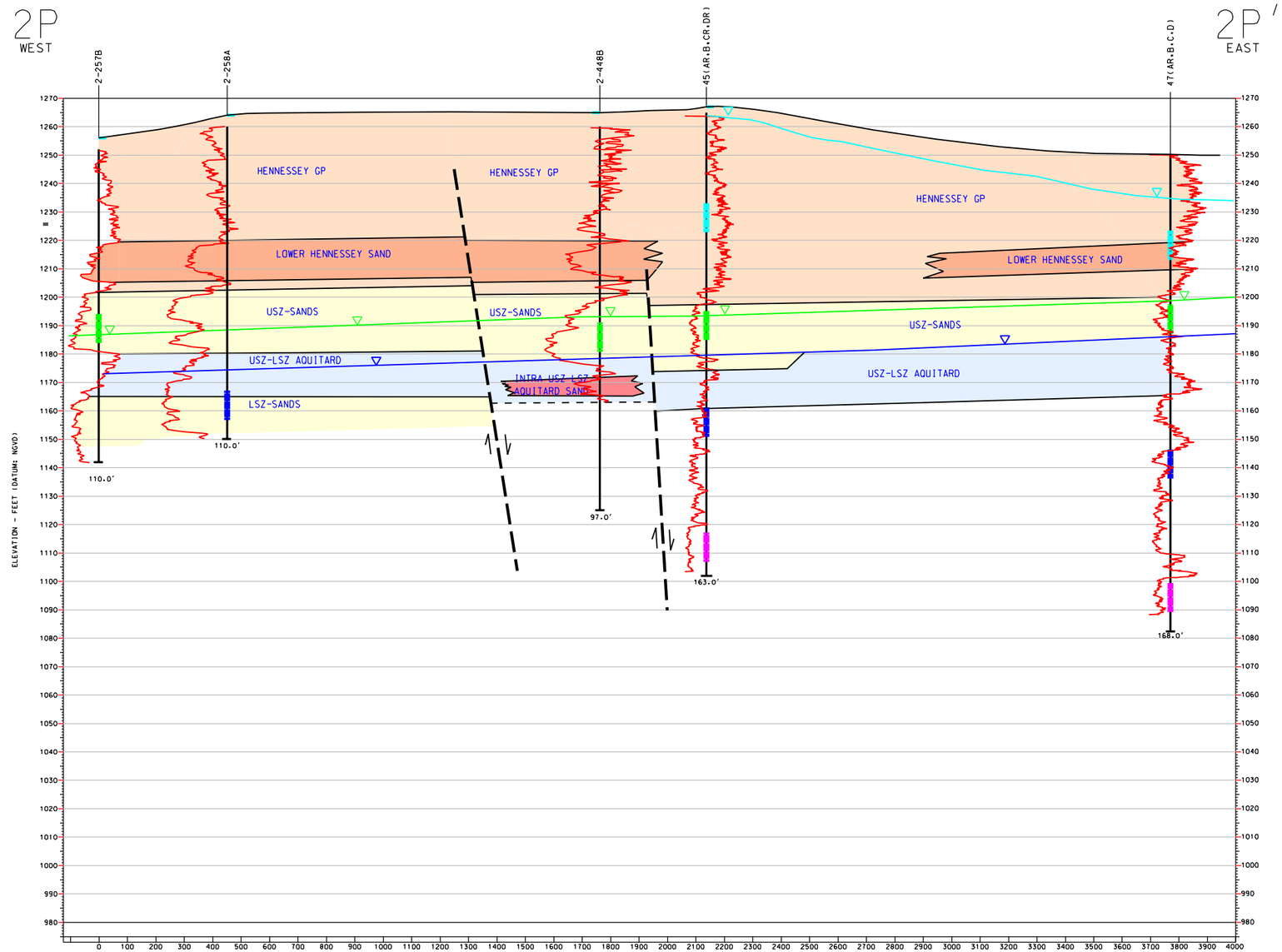
FIGURE 3-18

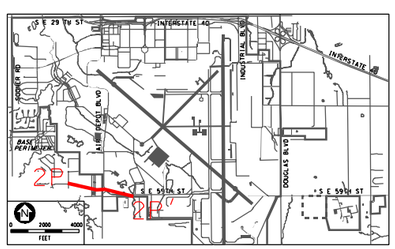
GROUNDWATER MANAGEMENT
UNIT 2 AND OFF-SITE
GEOLOGIC CROSS-SECTION 20-20'
TINKER AIR FORCE BASE
OKLAHOMA CITY, OKLAHOMA

CH2MHILL

No.	Date	Revisions	App.

Date: NOV. 2001
Designed by: PS
Drawn by: RD
Checked by: JC
FILE: 54887-20.DLV





NOTES:

1. ABBREVIATIONS USED ON CROSS-SECTIONS:
   HENNESSEY GRP -- HENNESSEY GRP
   USZ ---℄ UPPER SATURATED ZONE
   LSZ ---℄ LOWER SATURATED ZONE

WELL IDENTIFICATION
WELL
WATER LEVEL ELEVATION (2001)
SCREENED INTERVAL
GAMMA LOG
45.0' TOTAL DEPTH DRILLED
✳ DIGITIZED ANALOG GAMMA LOGS

HENNESSEY SATURATED ZONE
HENNESSEY POTENTIOMETRIC SURFACE
UPPER SATURATED ZONE
USZ POTENTIOMETRIC SURFACE
LOWER SATURATED ZONE
LSZ POTENTIOMETRIC SURFACE
LOWER LOWER SATURATED ZONE
LLSZ POTENTIOMETRIC SURFACE

NOTE:
POTENTIOMETRIC SURFACES, HYDROGEOLOGIC BOUNDARIES, AND LITHOLOGIC CONTACTS DASHED WHERE INFERRED.
INFERRED FAULT WITH DIRECTION OF THROW

40
20
0
VERTICAL EXAGGERATION =
200 400

GARBER-WELLINGTON AQUIFER
- HENNESSEY GROUP (GP)
- LOWER HENNESSEY SANDS
- USZ SANDS
- INTRA-USZ CLAYS
- INTRA USZ-LSZ AQUITARD SANDS
- USZ-LSZ AQUITARD
- LSZ SANDS
- INTRA-LSZ CLAYS

Job No.
154887

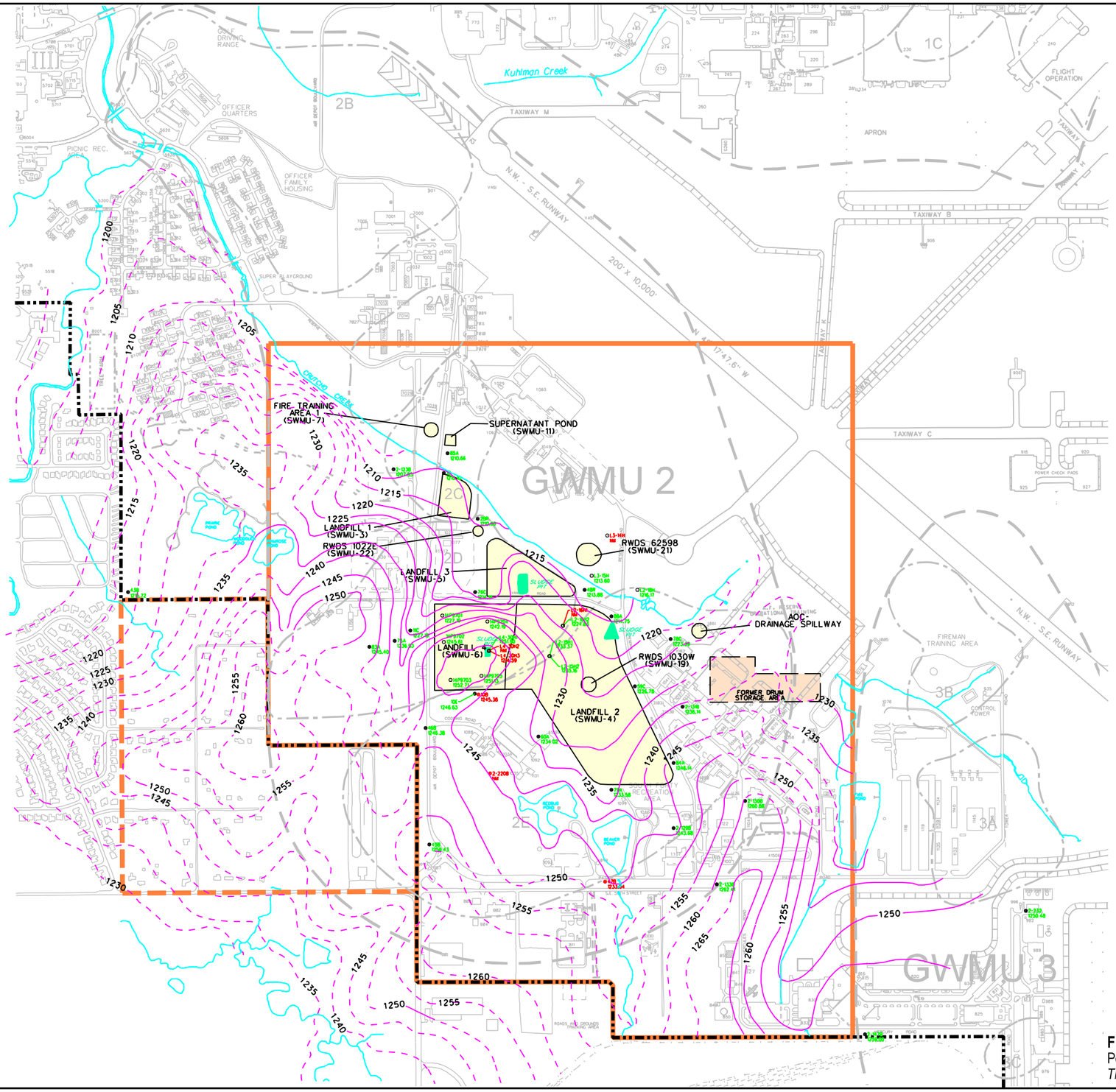
FIGURE 3-19

GROUNDWATER MANAGEMENT
UNIT 2 AND OFF-SITE
GEOLOGIC CROSS-SECTION 2P-2P'
TINKER AIR FORCE BASE
OKLAHOMA CITY, OKLAHOMA

CH2MHILL

No.	Date	Revisions	App.

Date: NOV. 2001
Designed by: PS
Drawn by: RD
Checked by: JC
FILE: 54887-2P.DLV



N

0 500' 1000' 1500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Groundwater Elevation Contour (feet NGVD) (dashed where inferred) — 650
- Closed Depression in Water Level Surface
- Creek / Pond
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES:

1. Elevations are in feet above National Geodetic Vertical Datum (NGVD).
2. Contour interval is 5 foot.
3. Contours indicate approximate average NGVD elevations and are estimates of spatial variations throughout the site. Actual levels may vary point to point due to changes in hydraulic or other influences.
4. "NM" indicates water level not measured in October 1999.
5. In cases where there is more then one well in the same zone, the highest groundwater elevation was utilized.

FIGURE 3-20
Potentiometric Surface of the Hennessey Water Bearing Zone, October 1999
Tinker AFB, Oklahoma

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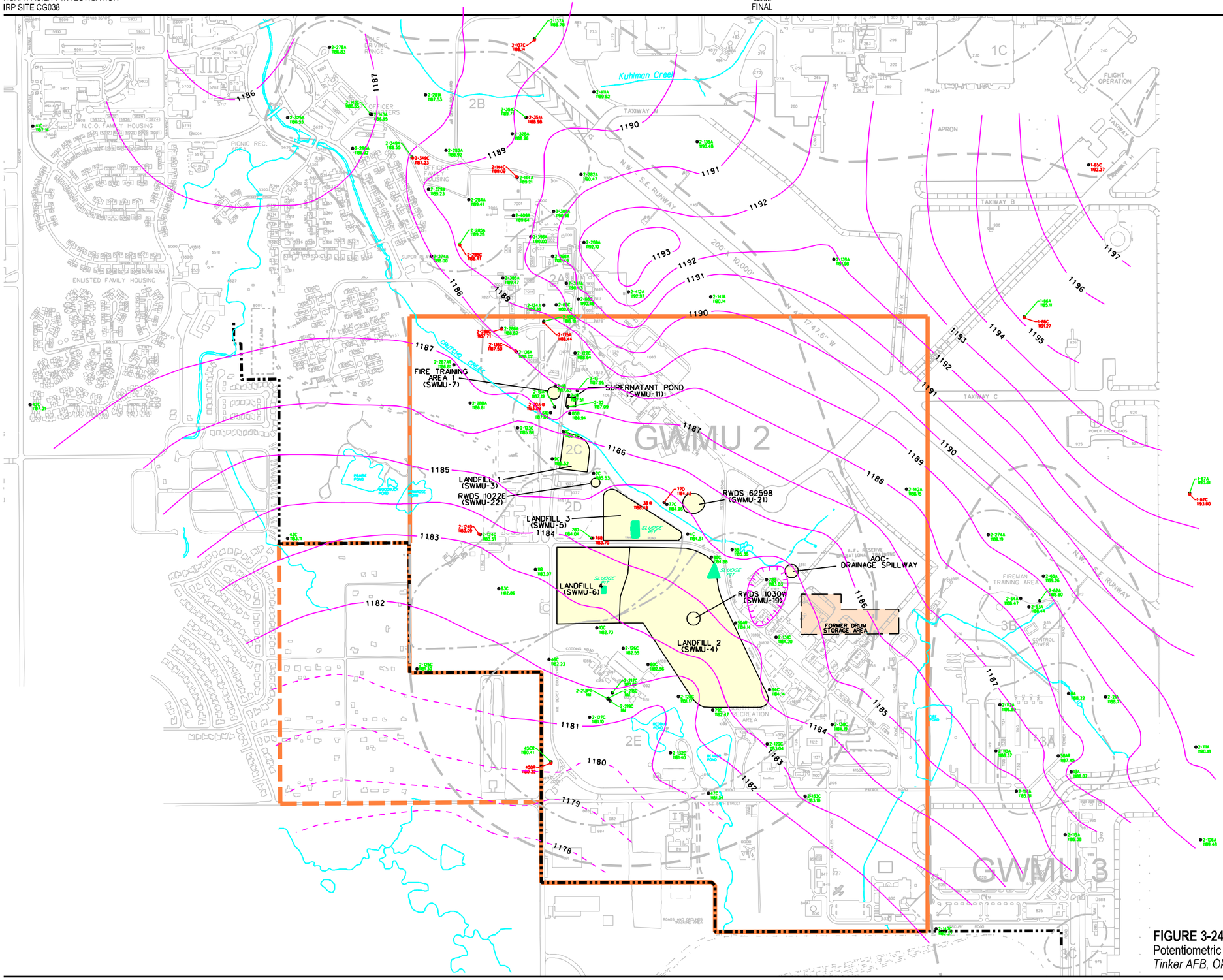

N

0 500' 1000' 1500'

LEGEND

- Monitoring Well
- Monitoring Well (data not used)
- Groundwater Elevation Contour (feet NGVD) (dashed where inferred) — 650
- Closed Depression in Water Level Surface
- Creek / Pond
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES:

1. Elevations are in feet above National Geodetic Vertical Datum (NGVD).
2. Contour interval is 1 foot.
3. Contours indicate approximate average NGVD elevations and are estimates of spatial variations throughout the site. Actual levels may vary point to point due to changes in hydraulic or other influences.
4. "NM" indicates water level not measured in October 1999.
5. In cases where there is more then one well in the same zone, the highest groundwater elevation was utilized.

FIGURE 3-24
Potentiometric Surface of the Lower Saturated Zone, October 1999
Tinker AFB, Oklahoma

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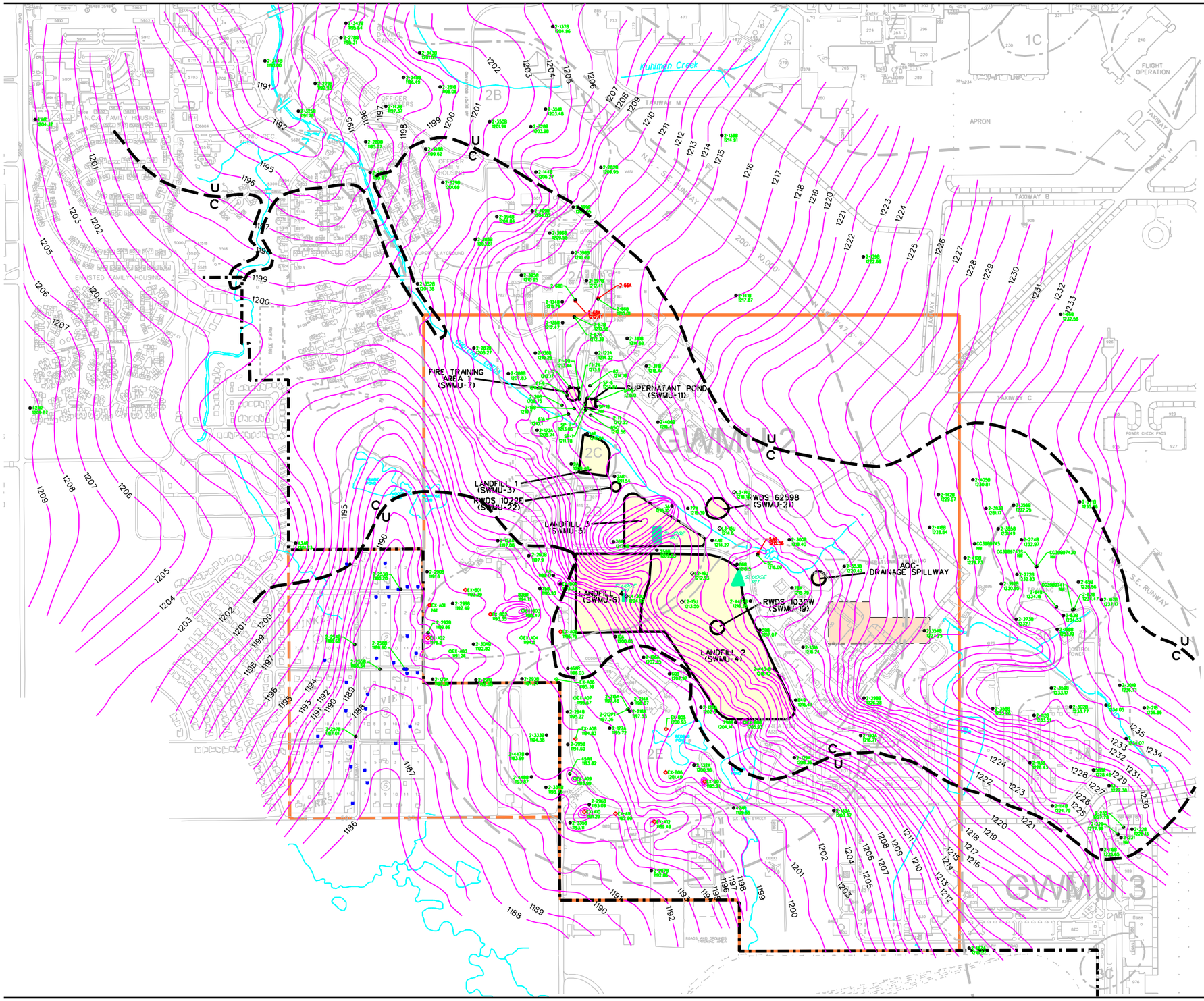

N

0 500' 1000' 1500'

LEGEND

- Monitoring Well
- Piezometer
- Recovery Well (Not Pumping)
- Recovery Well (Pumping)
- Monitoring Well (data not used)
- Private Water Supply Wells
- Groundwater Elevation Contour (feet NGVD) (dashed where inferred) — 650
- Closed Depression in Water Level Surface
- Creek / Pond
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map
- Approximate Confined/Unconfined Boundary of USZ — C U

NOTES:

1. Elevations are in feet above National Geodetic Vertical Datum (NGVD).
2. Contour interval is 1 foot.
3. Contours indicate approximate average NGVD elevations and are estimates of spatial variations throughout the site. Actual levels may vary point to point due to changes in hydraulic or other influences.
4. Contours in areas of Crutcho Creek, and its tributaries based upon surface topographic information.
5. "NM" Indicates water level not measured in May 2001.
6. Off-Site monitoring wells installed in Tinker View Acres Subdivision as well as 2-259B, and 2-260Bwere measured in August 2001.
7. In Tinker View Acres, Private Water Supply Wells other than those shown are know to be present. These wells are located on private property and are yet to be specifically located.

FIGURE 3-23
Site CG038
Potentiometric Surface Map of the Upper Saturated Zone, May 2001
Tinker AFB, Oklahoma

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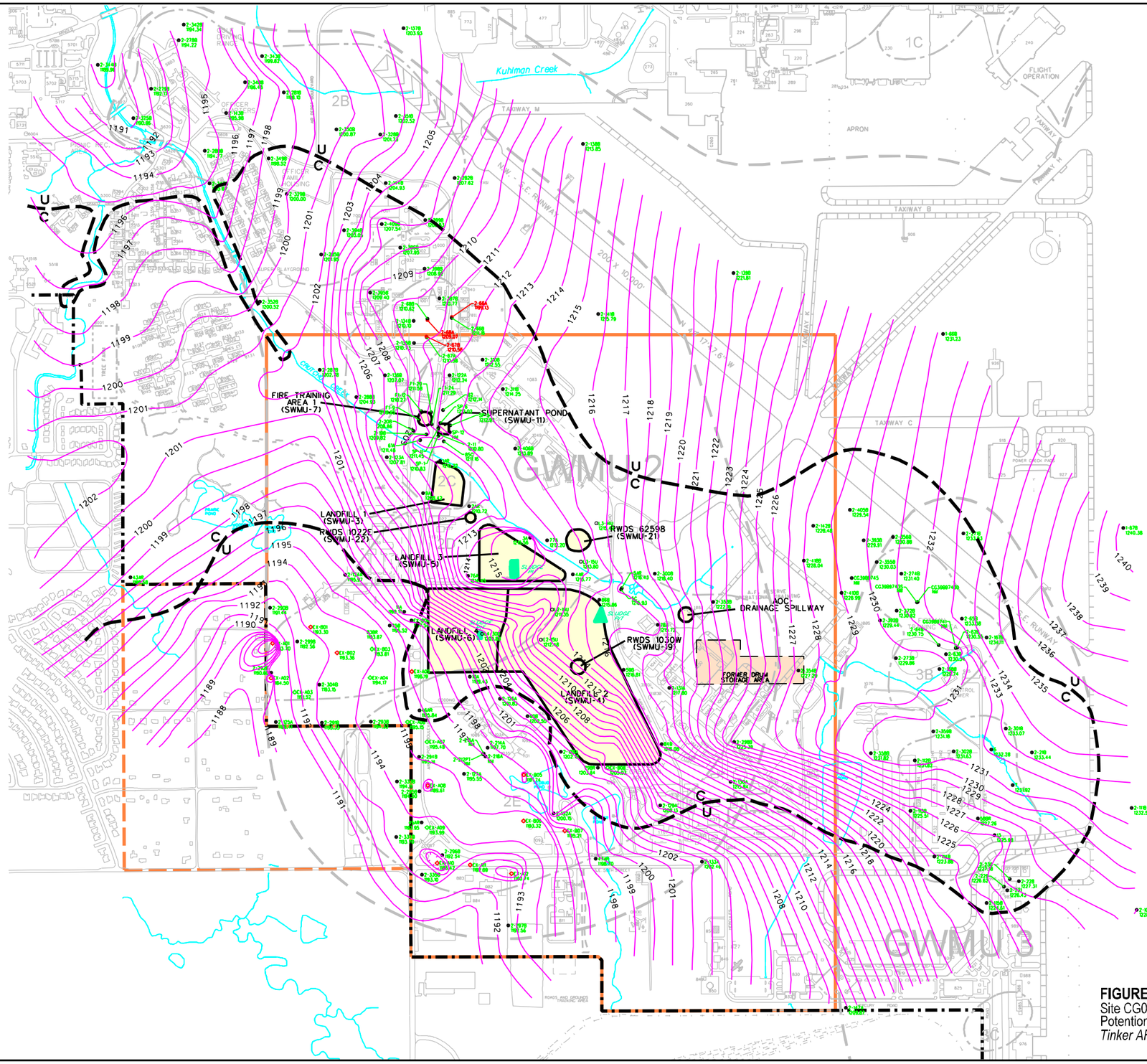

N

0 500' 1000' 1500'

LEGEND

- Monitoring Well
- Piezometer
- Recovery Well (Not Pumping)
- Recovery Well (Pumping)
- Monitoring Well (data not used)
- Groundwater Elevation Contour (feet NGVD) (dashed where inferred) — 650
- Closed Depression in Water Level Surface
- Creek / Pond
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map
- Approximate Confined/Unconfined Boundary of USZ — C/U

NOTES:

1. Elevations are in feet above National Geodetic Vertical Datum (NGVD).
2. Contour interval is 1 foot.
3. Contours indicate approximate average NGVD elevations and are estimates of spatial variations throughout the site. Actual levels may vary point to point due to changes in hydraulic or other influences.
4. Contours in areas of Crutcho Creek, and its tributaries based upon surface topographic information.
5. "NM" indicates water level not measured in October 1999.
6. In cases where there is more than one well in the same zone, the highest groundwater elevation was utilized.

DIRECTORATE OF ENVIRONMENTAL MANAGEMENT
OKLAHOMA CITY ALC

FIGURE 3-22
Site CG038
Potentiometric Surface Map of the Upper Saturated Zone, October 1999
Tinker AFB, Oklahoma

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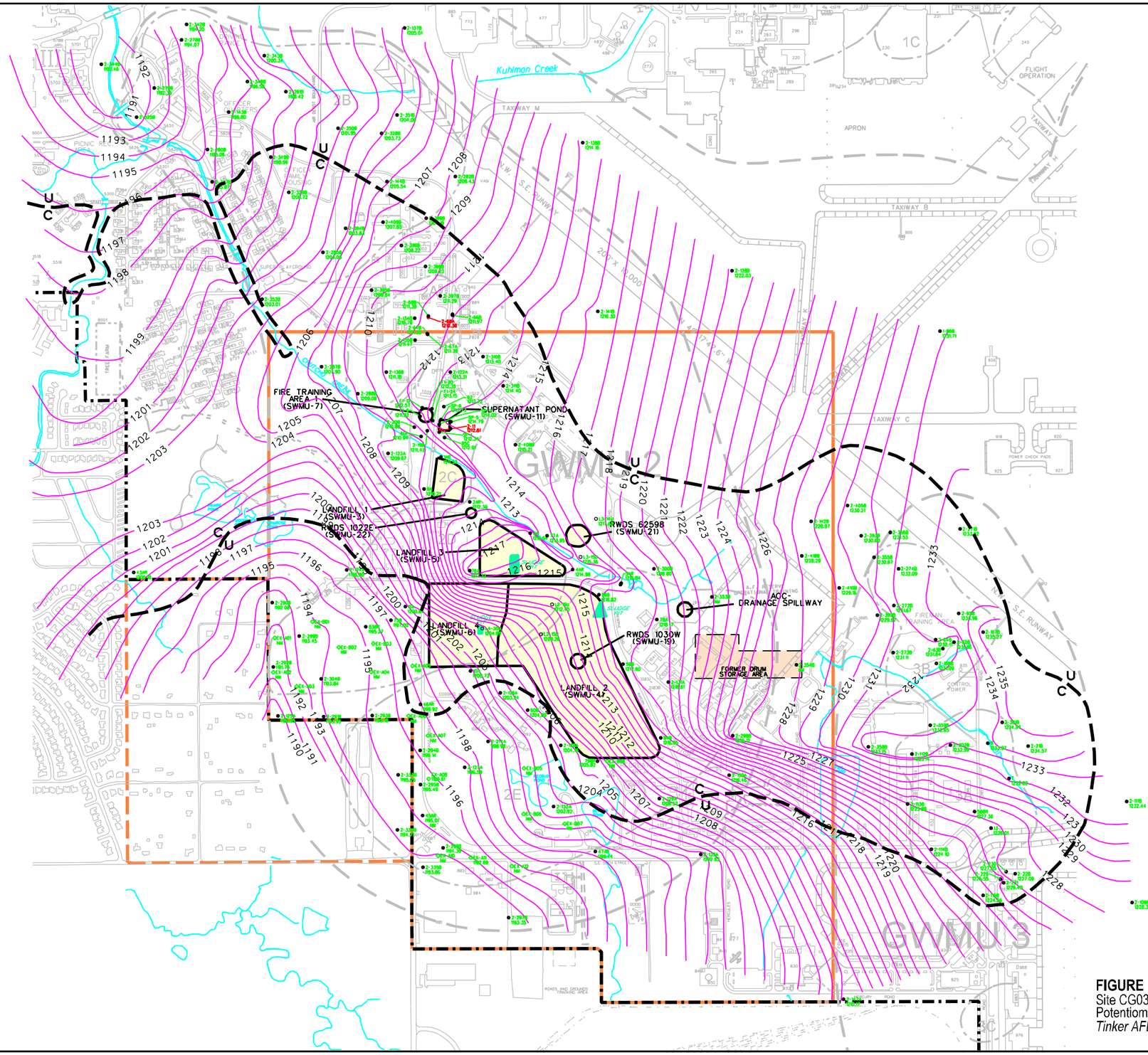


N

0 500' 1000' 1500'

LEGEND

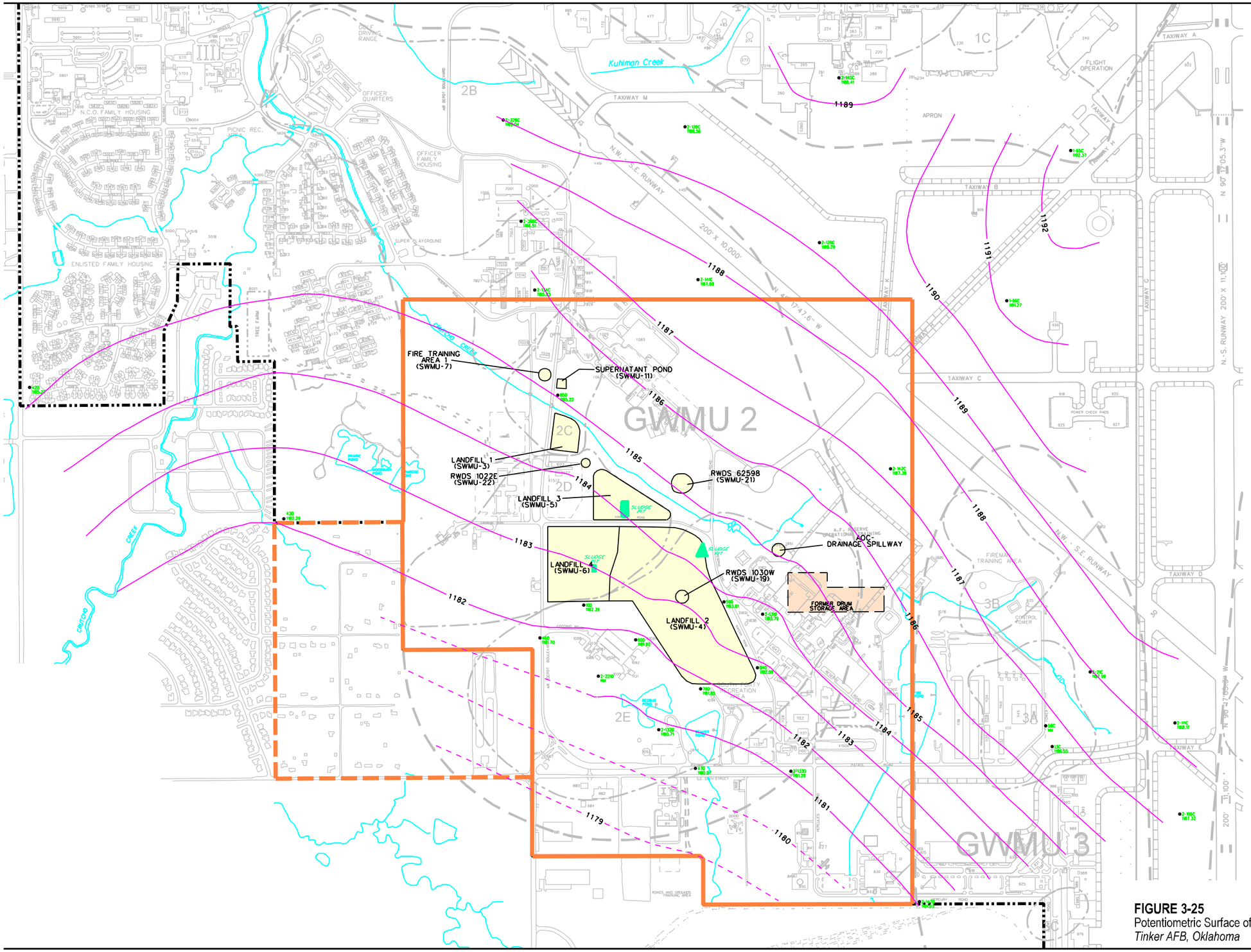
- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Recovery Well (Not Pumping)
- Recovery Well (Pumping)
- Groundwater Elevation Contour (feet NGVD) (dashed where inferred) — 650
- Closed Depression in Water Level Surface
- Creek / Pond
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map
- Approximate Confined/Unconfined Boundary of USZ — C U

NOTES:

1. Elevations are in feet above National Geodetic Vertical Datum (NGVD).
2. Contour interval is 1 foot.
3. Contours indicate approximate average NGVD elevations and are estimates of spatial variations throughout the site. Actual levels may vary point to point due to changes in hydraulic or other influences.
4. "NM" indicates water level not measured in November 1998.
5. In cases where there is more then one well in the same zone, the highest groundwater elevation was utilized.

FIGURE 3-21
Site CG038
Potentiometric Surface Map of the Upper Saturated Zone, November 1998
Tinker AFB, Oklahoma City, Oklahoma

CH2MHILL



LEGEND

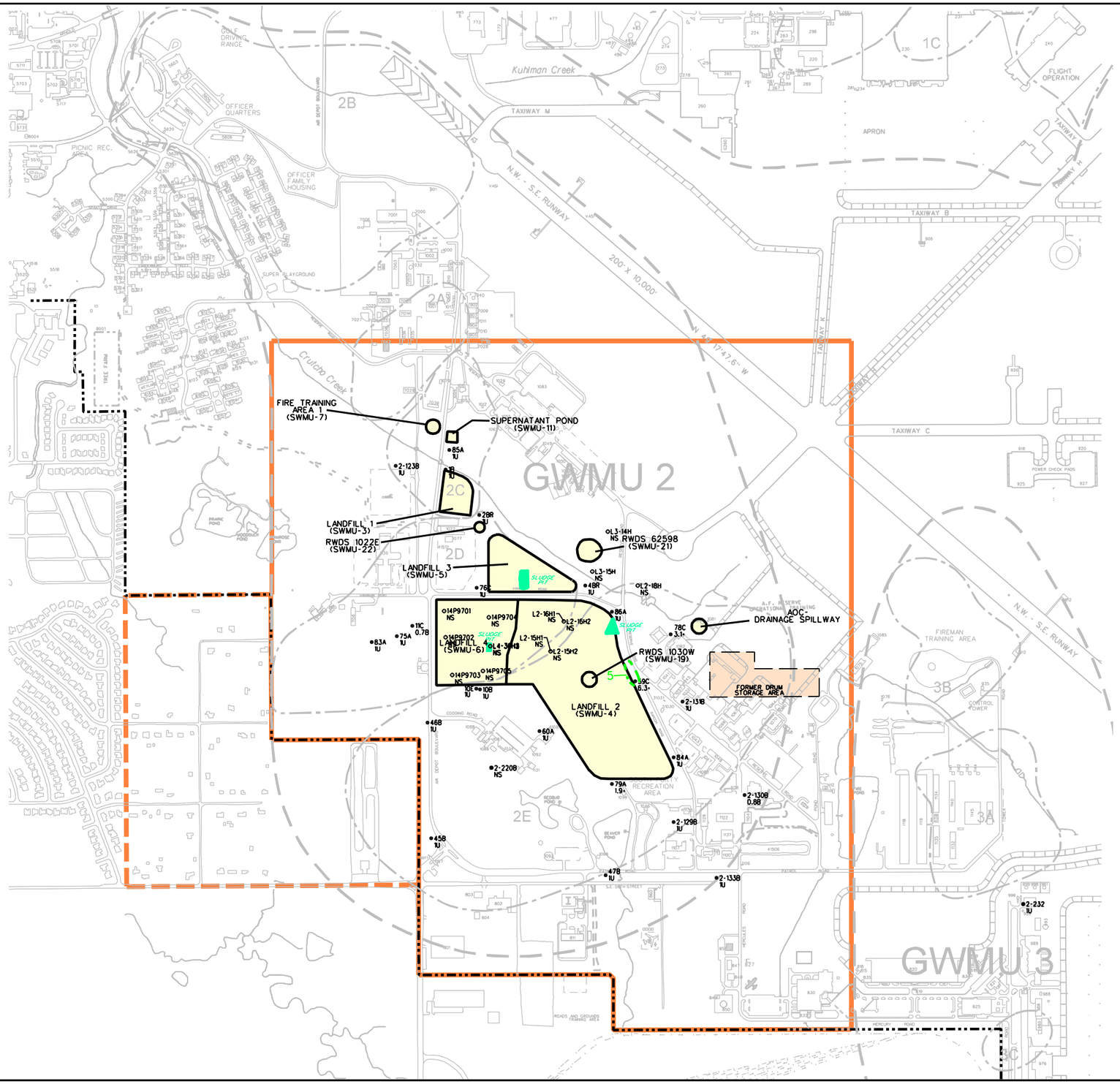
- Monitoring Well
- Groundwater Elevation Contour (feet NGVD) (dashed where inferred) — 650
- Closed Depression in Water Level Surface
- Creek / Pond
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES:

1. Elevations are in feet above National Geodetic Vertical Datum (NGVD).
2. Contour interval is 1 foot.
3. Contours indicate approximate average NGVD elevations and are estimates of spatial variations throughout the site. Actual levels may vary point to point due to changes in hydraulic or other influences.
4. "NM" indicates water level not measured in October 1999.
5. In cases where there is more then one well in the same zone, the highest groundwater elevation was utilized.

FIGURE 3-25
Potentiometric Surface of the Lower - Lower Saturated Zone, October 1999
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

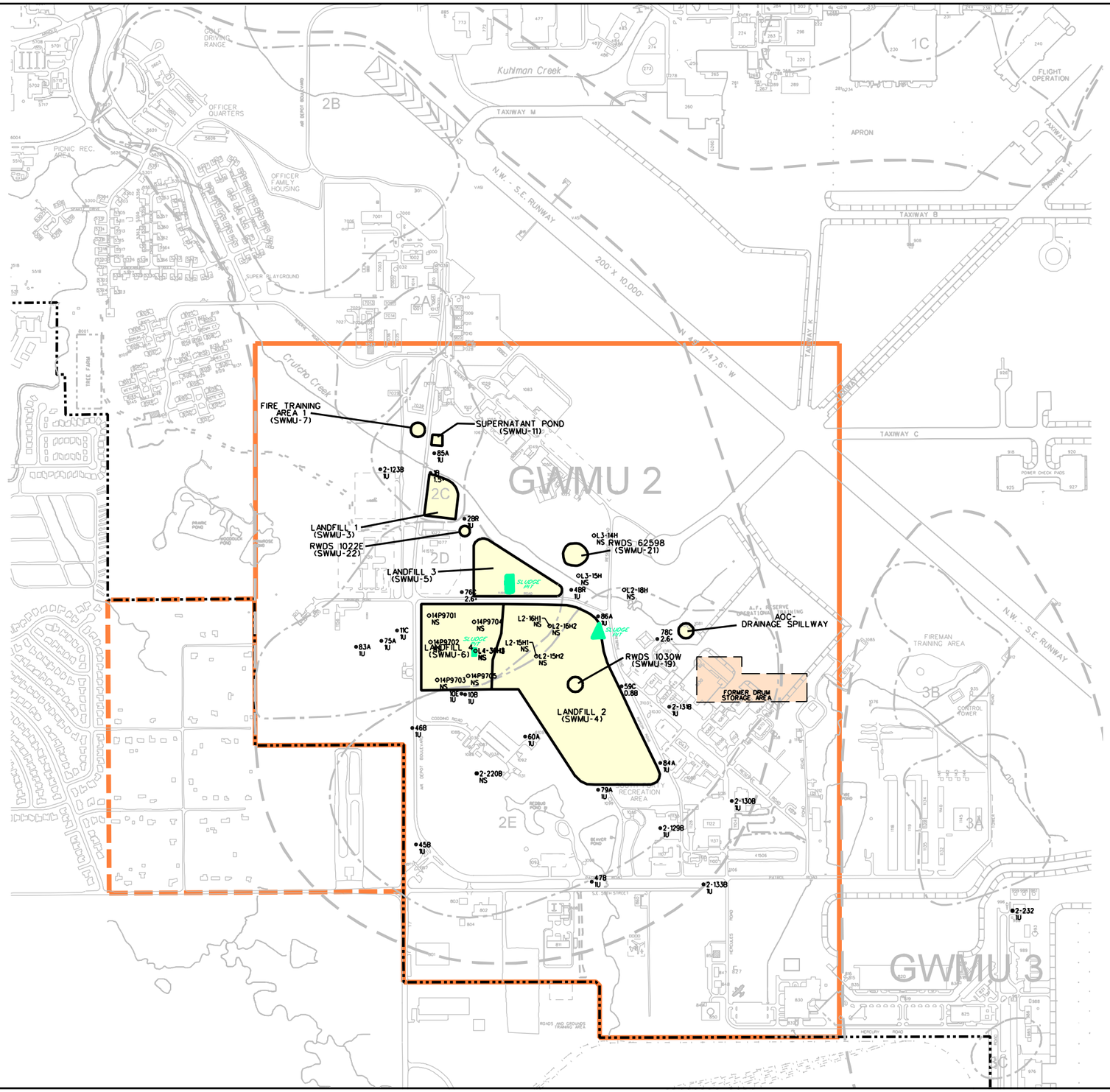
- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- MCL Isoconcentration Contour (dashed where inferred) — 5
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. All samples were collected between October and December 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for TCE is 5 µg/L.

FIGURE 4-2
Distribution of TCE in the Hennessey Water Bearing Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- MCL Isoconcentration Contour (dashed where inferred) — 70
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

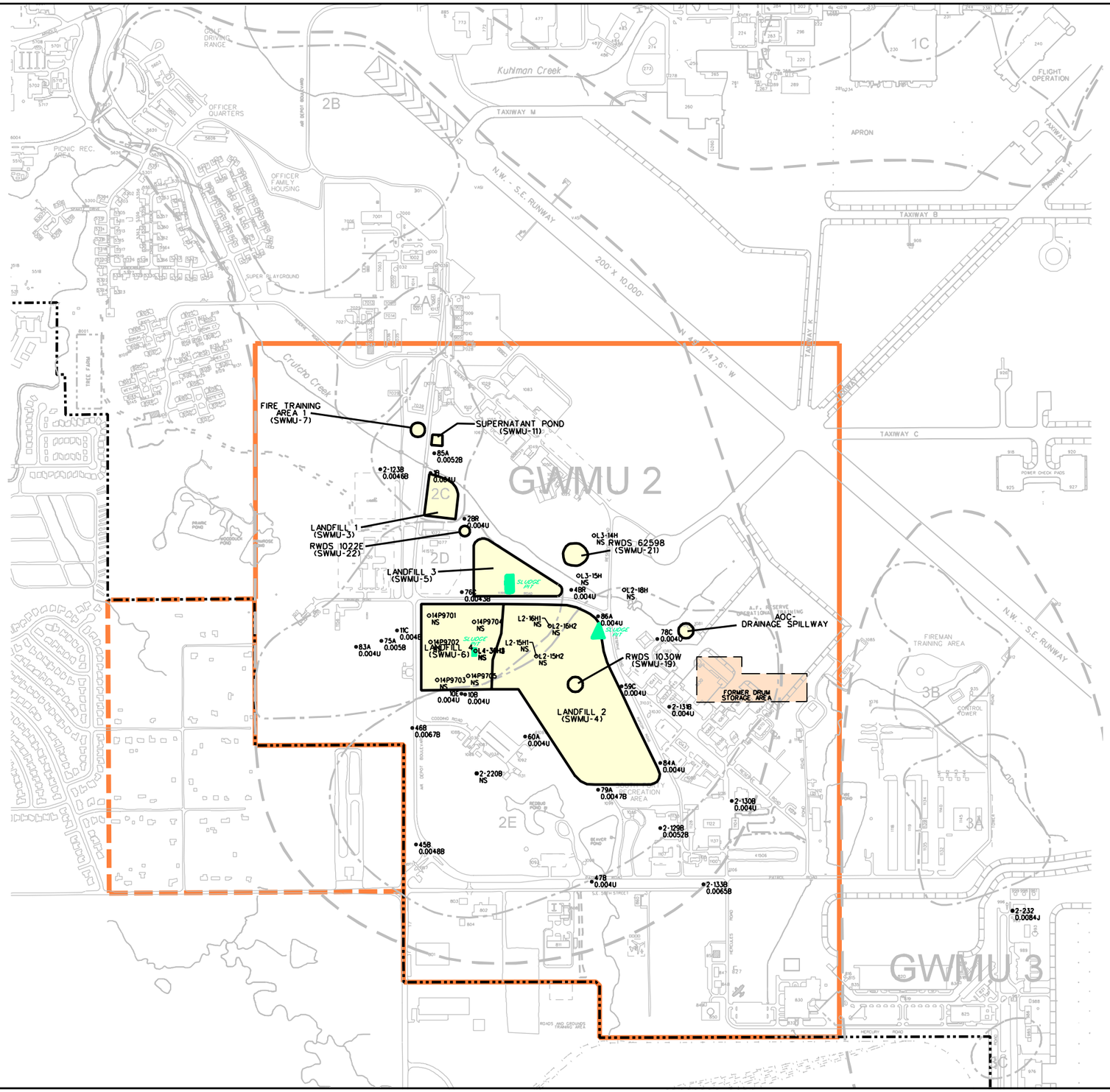
Contaminant concentrations were not contoured, because there were no detections above MCL.

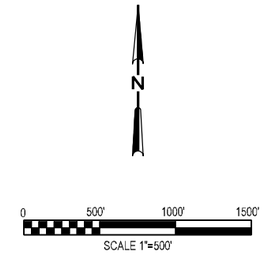
NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. All samples were collected between October and December 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Cis-1,2-DCE is 70 µg/L.

FIGURE 4-3
Distribution of Cis-1,2-Dichloroethene in the Hennessey Water Bearing Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL





LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- MCL Isoconcentration Contour (dashed where inferred) — 0.05 —
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

Contaminant concentrations were not contoured, because there were no detections above MCL.

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. All samples were collected between October and December 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Arsenic is 0.050 mg/L.

FIGURE 4-4
Distribution of Arsenic in the Hennessey Water Bearing Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL

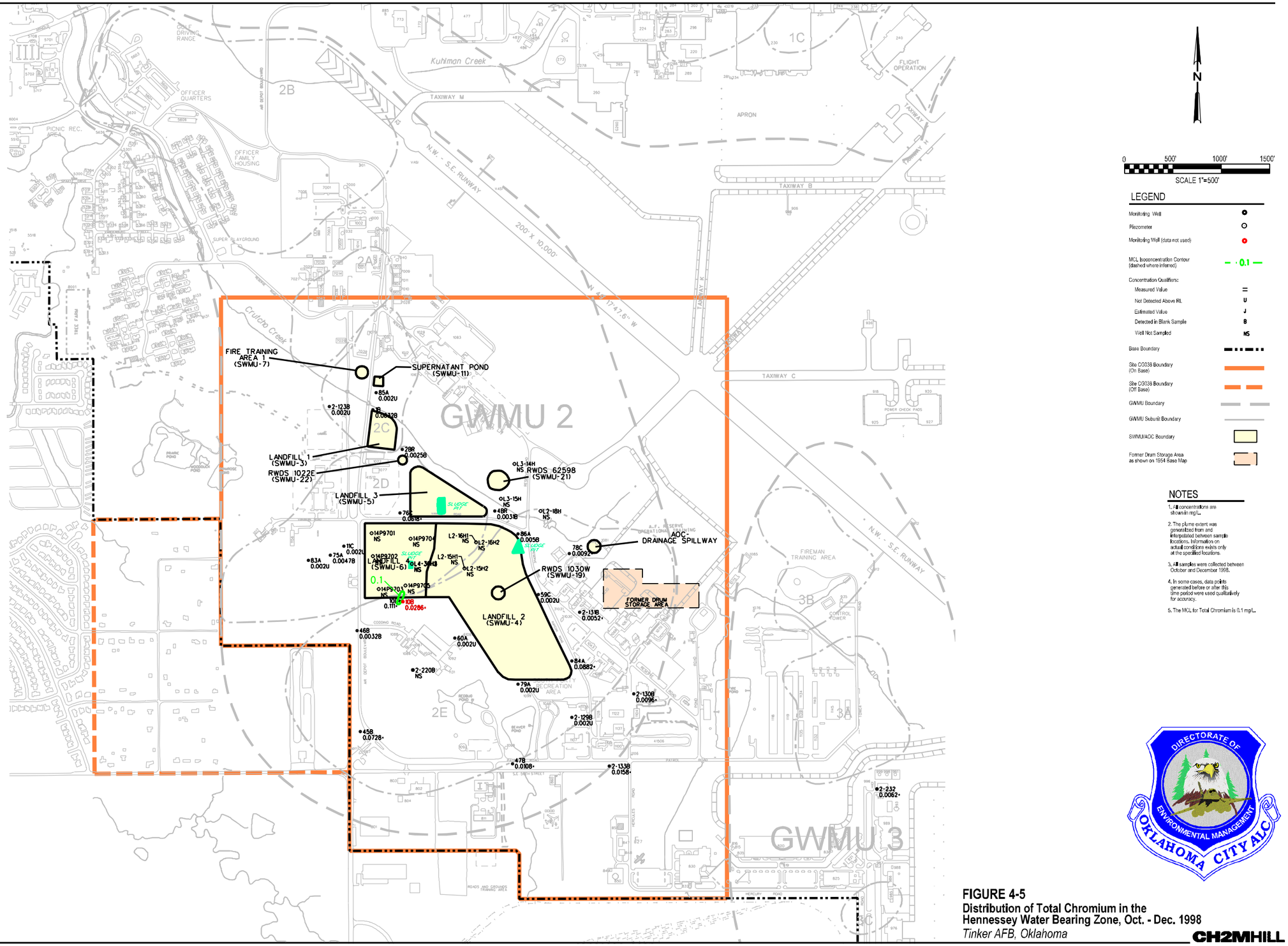
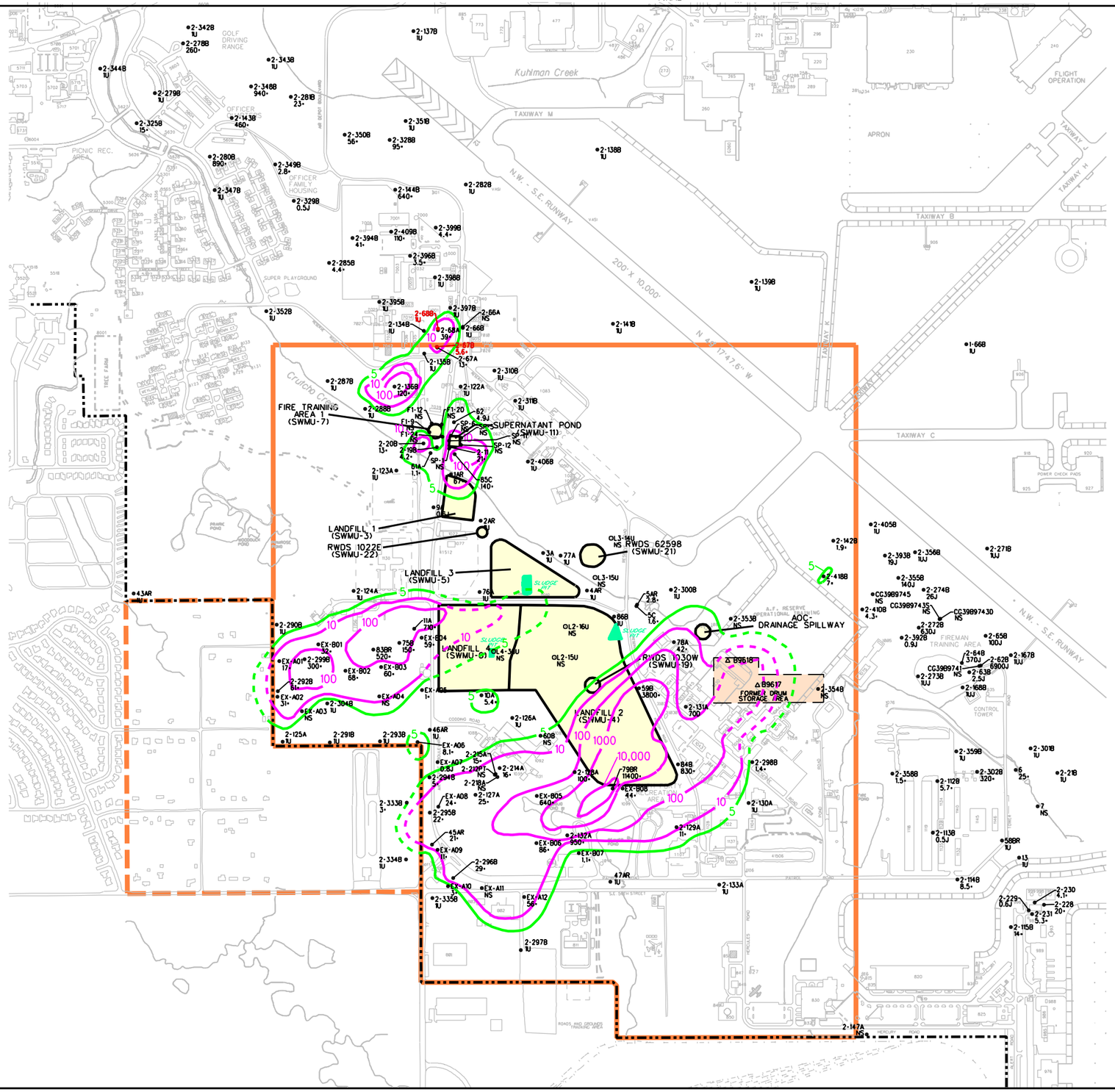


FIGURE 4-5
Distribution of Total Chromium in the Hennessey Water Bearing Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1999 only)
- Isoconcentration Contour (dashed where inferred) — 10
- MCL Isoconcentration Contour (dashed where inferred) — 5

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS

- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between September and November 1999. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for TCE is 5 µg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-8
Distribution of TCE in the Upper Saturated Zone, Sept. - Nov. 1999
Tinker AFB, Oklahoma

CH2MHILL

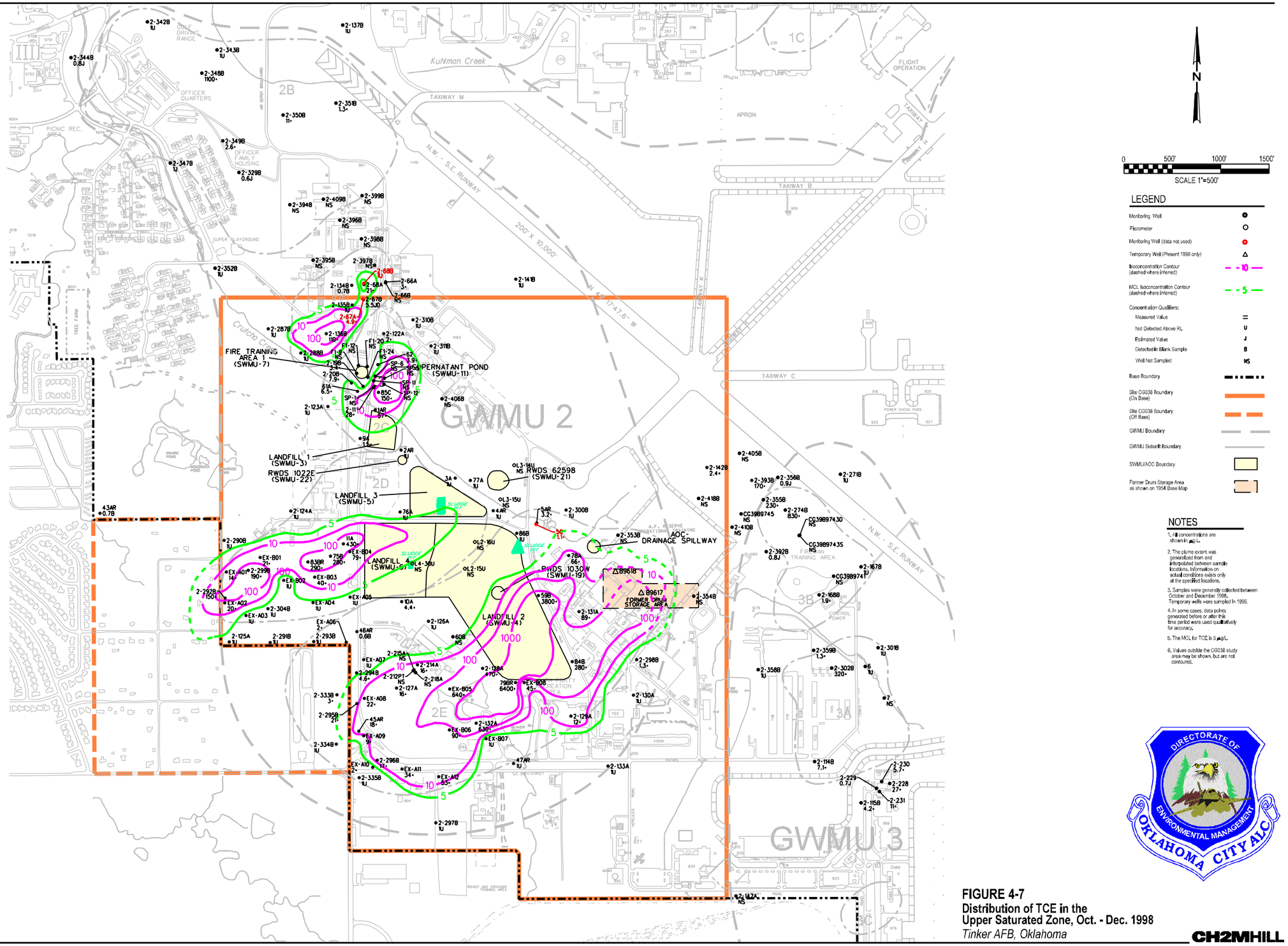
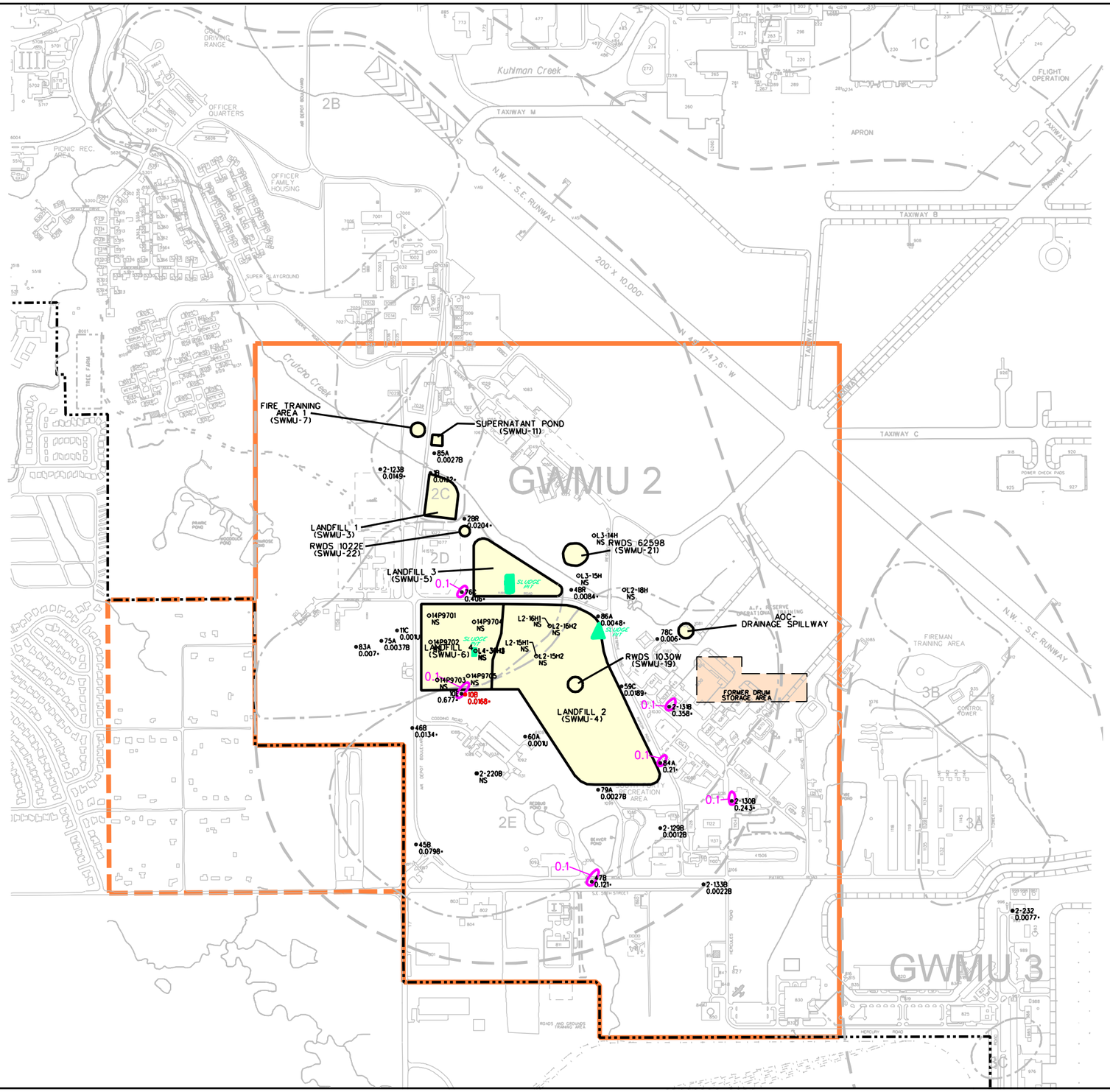
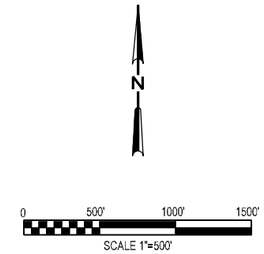


FIGURE 4-7
Distribution of TCE in the Upper Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL





LEGEND

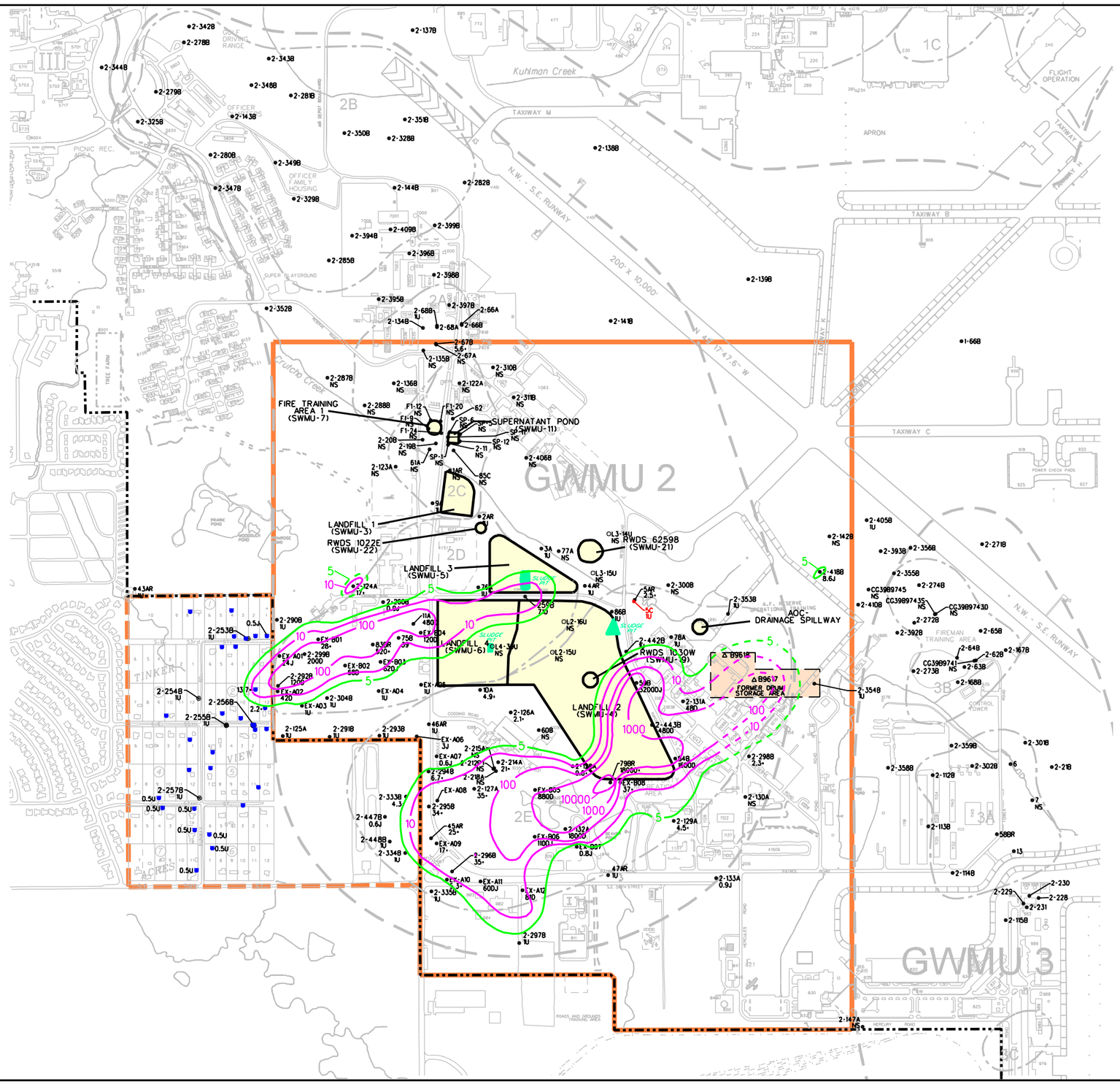
- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Isoconcentration Contour (dashed where inferred) — 0.1
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. All samples were collected between October and December 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. There is currently no MCL for Nickel.

FIGURE 4-6
Distribution of Nickel in the Hennessey Water Bearing Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1996 only)
- Private Water Supply Wells
- Isoconcentration Contour (dashed where Inferred) — 10
- MCL Isoconcentration Contour (dashed where Inferred) — 5

Concentration Qualifiers:

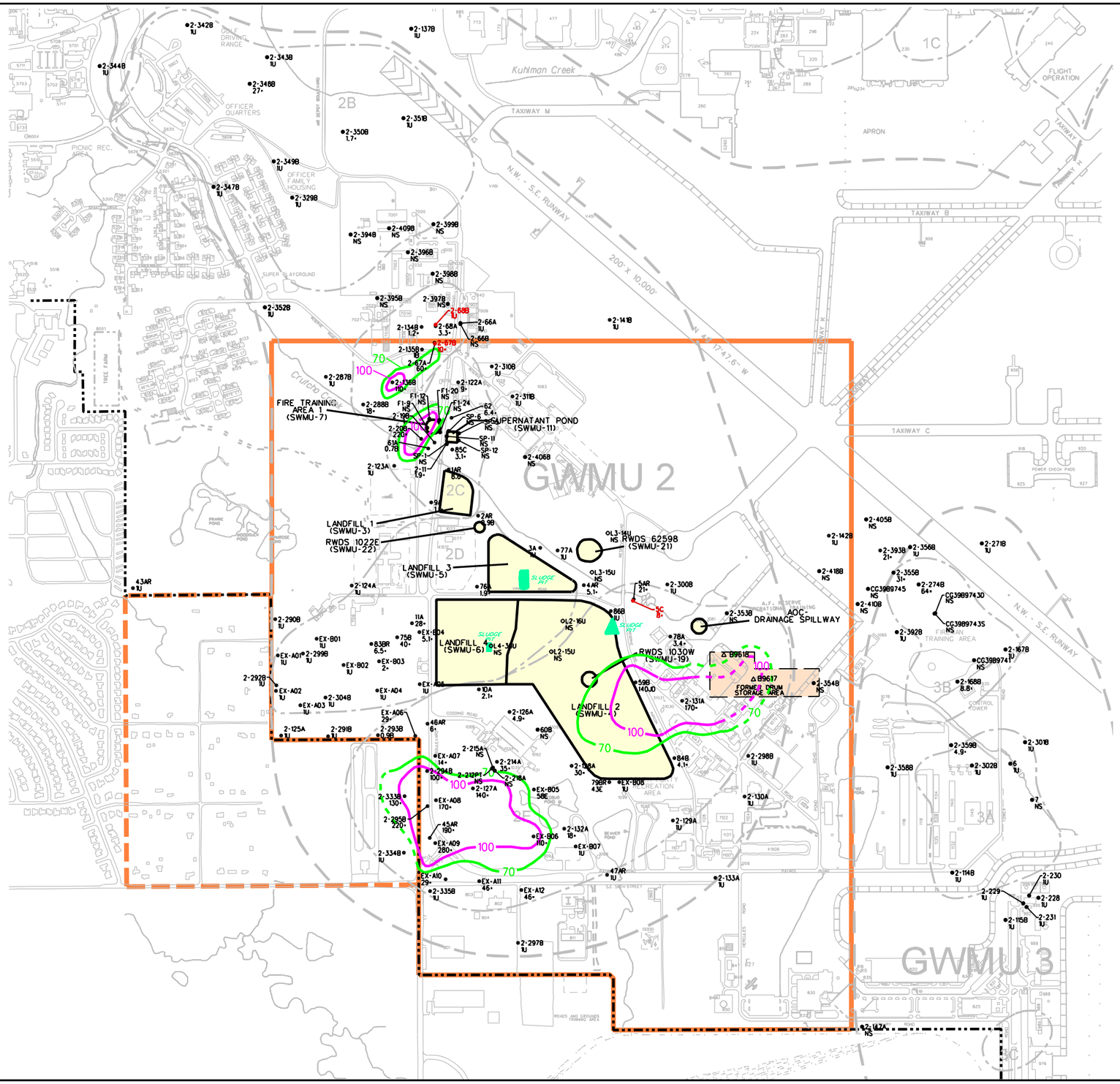
- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS
- Sampled was Diluted D
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Most samples were generally collected between January, 2001 and April, 2001. Wells installed on Tinker View Acres SubdMain, as well as 2-2598 and 2-2608 were sampled in July, 2001.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. Off-Site private wells were sampled by ODEQ.
6. The MCL for TCE is 5 µg/L.
7. In Tinker View Acres, Private Water Supply Wells other than those shown are know to be present. These wells are located on private property and are yet to be specifically located.
8. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-9
Distribution of TCE in the Upper Saturated Zone, Jan. - April 2001
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1998 only)
- Isoconcentration Contour (dashed where inferred) — 100 —
- MCL Isoconcentration Contour (dashed where inferred) — 70 —

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS

- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

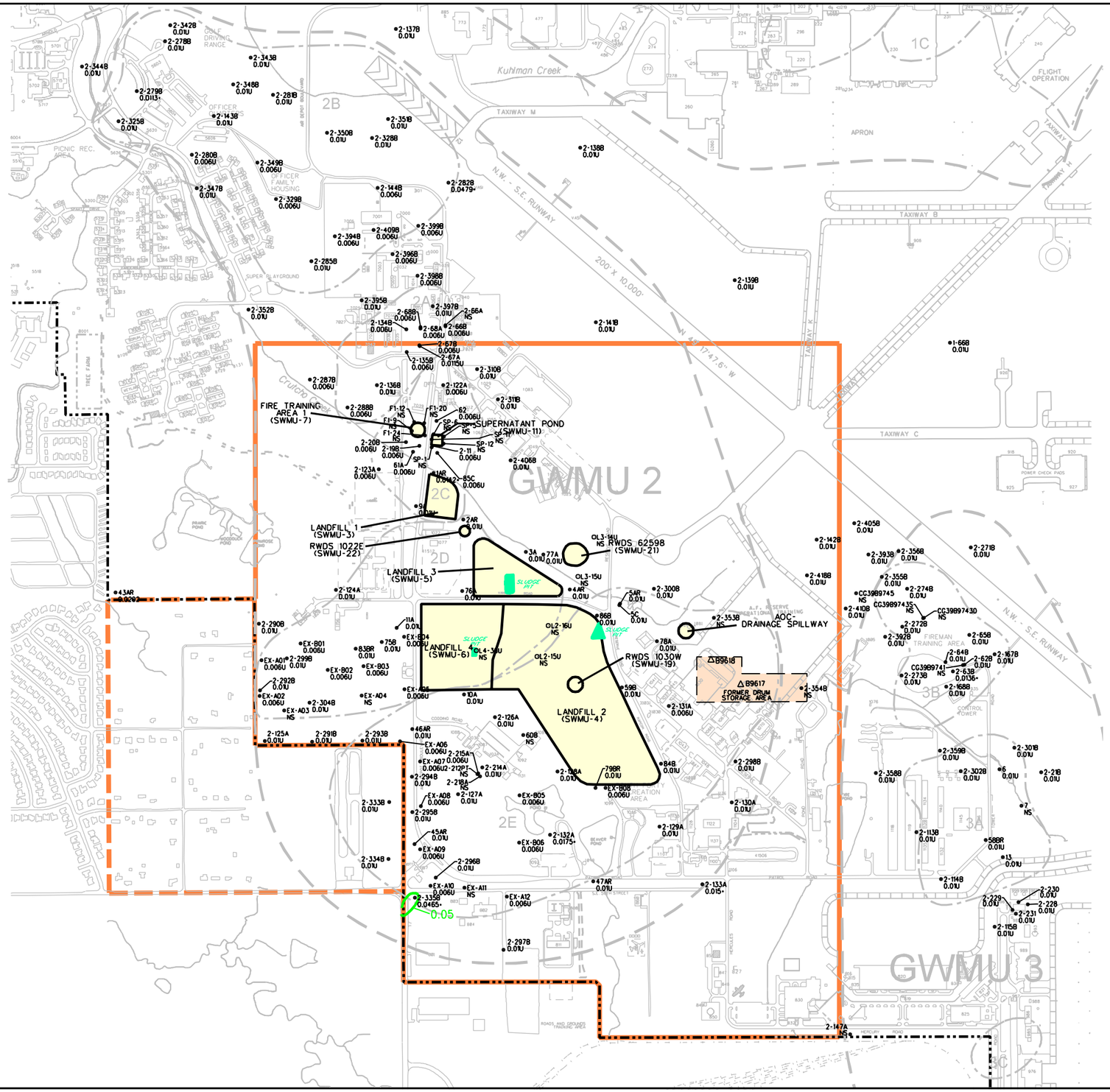
NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between October and December 1998. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Cis-1,2-DCE is 70 µg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

DIRECTORATE OF ENVIRONMENTAL MANAGEMENT
OKLAHOMA CITY ALC

FIGURE 4-10
Distribution of Cis-1,2-Dichloroethene in the Upper Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

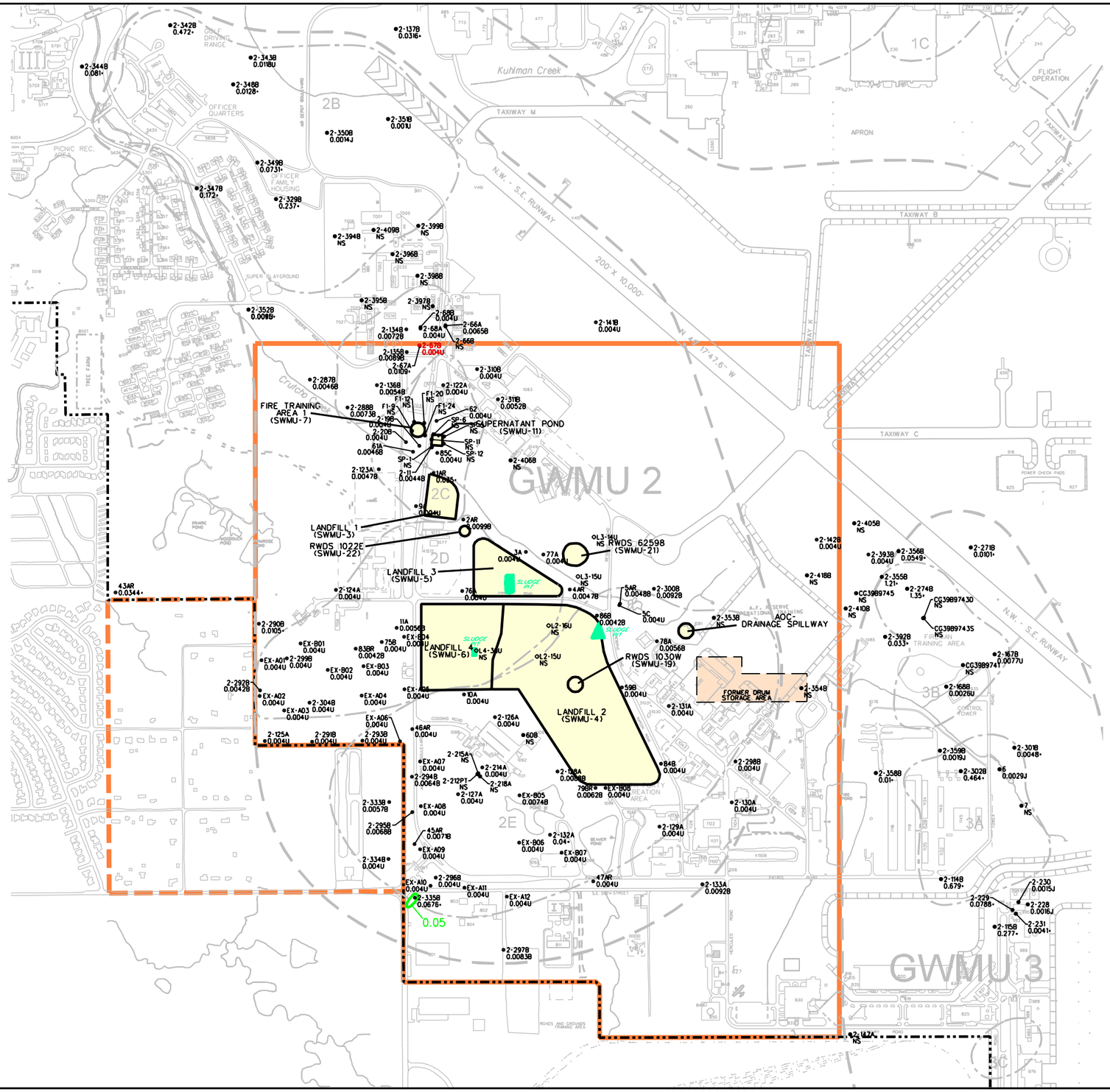
- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1996 only)
- MCL Isoconcentration Contour (dashed where inferred) — 0.05 —
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1994 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between September and November 1999. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Arsenic is 0.050 mg/L.

FIGURE 4-18
Distribution of Arsenic in the Upper Saturated Zone, Sept. - Nov. 1999
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

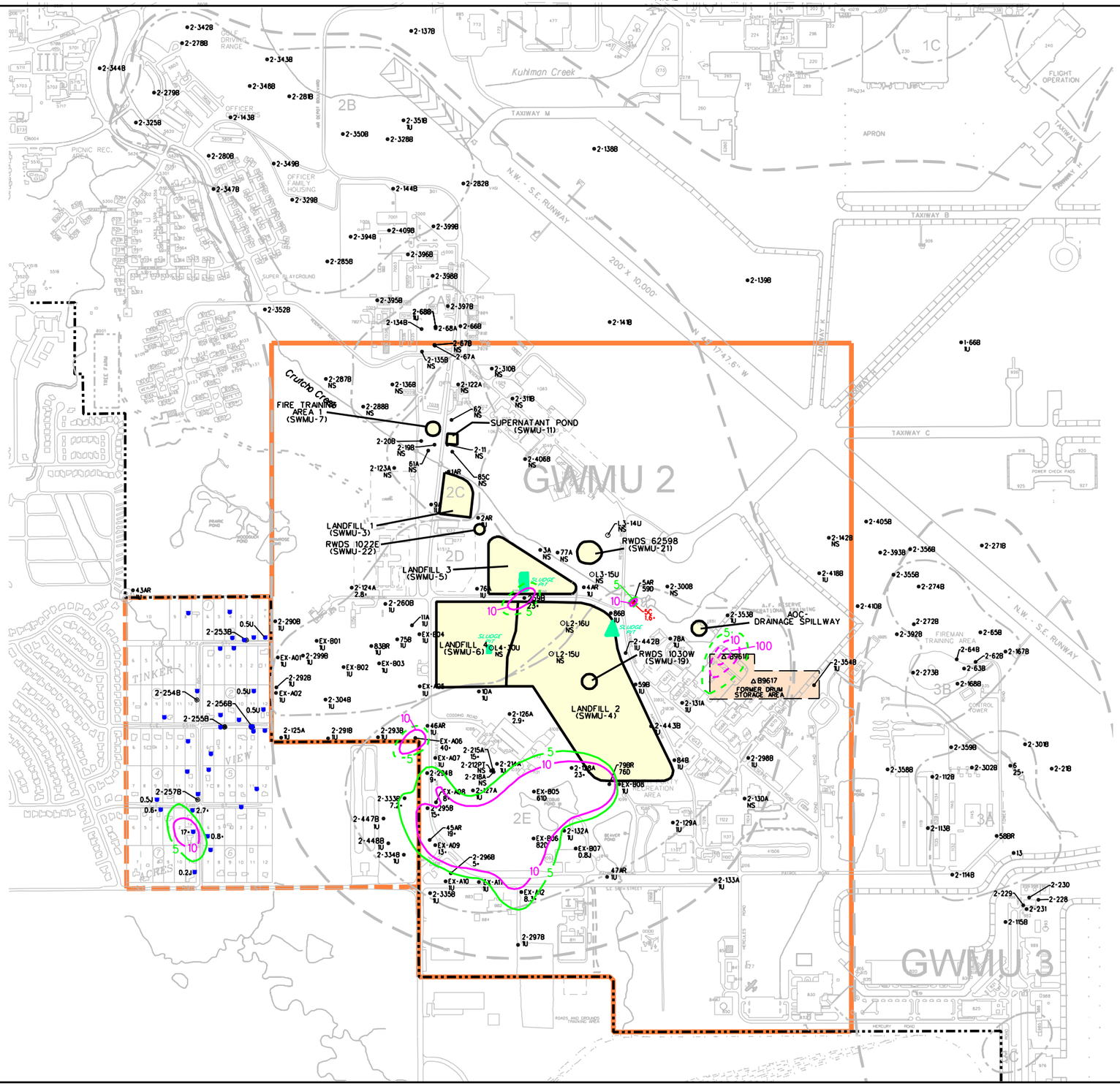
- Monitoring Well
- Monitoring Well (data not used)
- Piezometer
- MCL Isoconcentration Contour (dashed where inferred) — 0.05 —
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected In Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1994 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. All samples were collected between October and December 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Arsenic is 0.050 mg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-17
Distribution of Arsenic in the Upper Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'

SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1998 only)
- Private Water Supply Wells
- Isoconcentration Contour (dashed where inferred) — 10
- MCL Isoconcentration Contour (dashed where inferred) — 5

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS
- Sampled was Diluted D
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Most samples were generally collected between January 2001 and April 2001. Wells installed on Tinker View Acres Subdivision, as well as 2-2568, and 2-2598 were sampled in July, 2001.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. Off-Site private wells were sampled by ODEQ.
6. The MCL for 1,2-Dichloroethane is 5 µg/L.
7. In Tinker View Acres, Private Water Supply Wells other than those shown are know to be present. These wells are located on private property and are yet to be specifically located.
8. Values outside the CG038 study area may be shown, but are not contoured.

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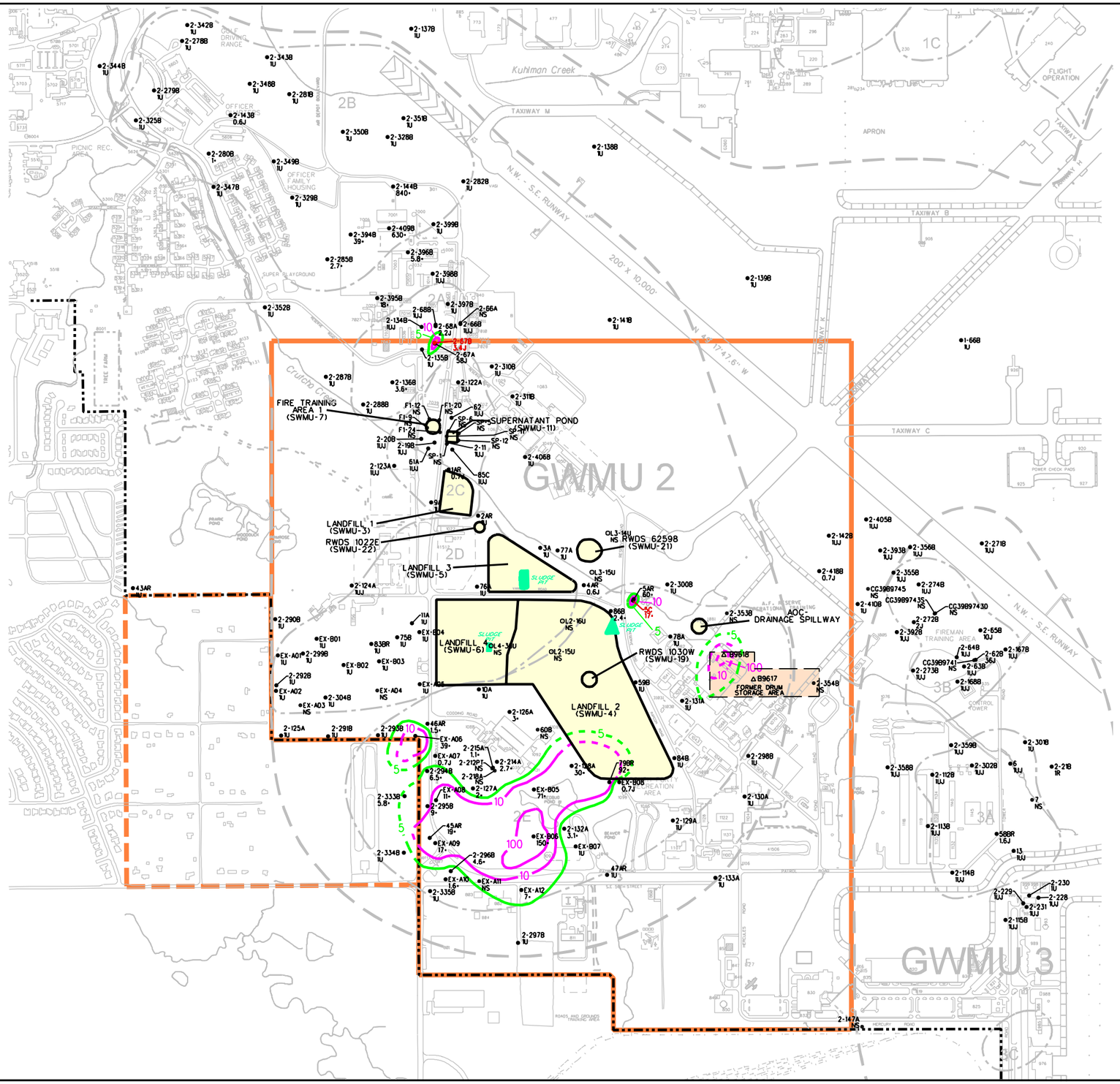
OKLAHOMA CITY ALC

FIGURE 4-16
Distribution of 1,2-Dichloroethane in the Upper Saturated Zone, Jan. - April 2001
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1996 only)
- Isoconcentration Contour (dashed where inferred) — 10
- MCL Isoconcentration Contour (dashed where inferred) — 5

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected In Blank Sample B
- Well Not Sampled NS

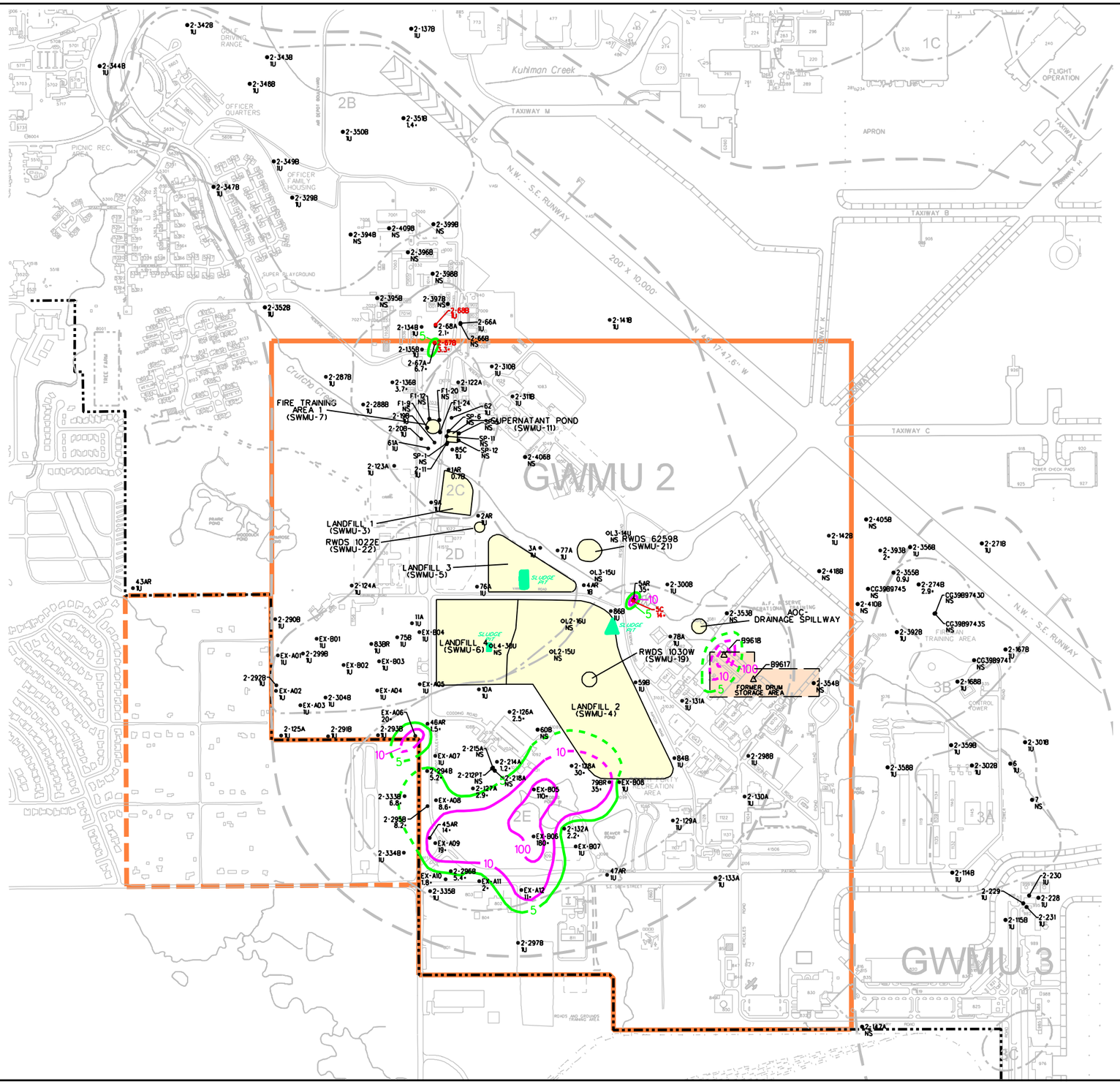
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between September and November 1999. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for 1,2-DCA is 5 µg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-15
Distribution of 1,2-Dichloroethane in the Upper Saturated Zone, Sept. - Nov. 1999
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1996 only)
- Isoconcentration Contour (dashed where inferred) — 10
- MCL Isoconcentration Contour (dashed where inferred) — 5

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS

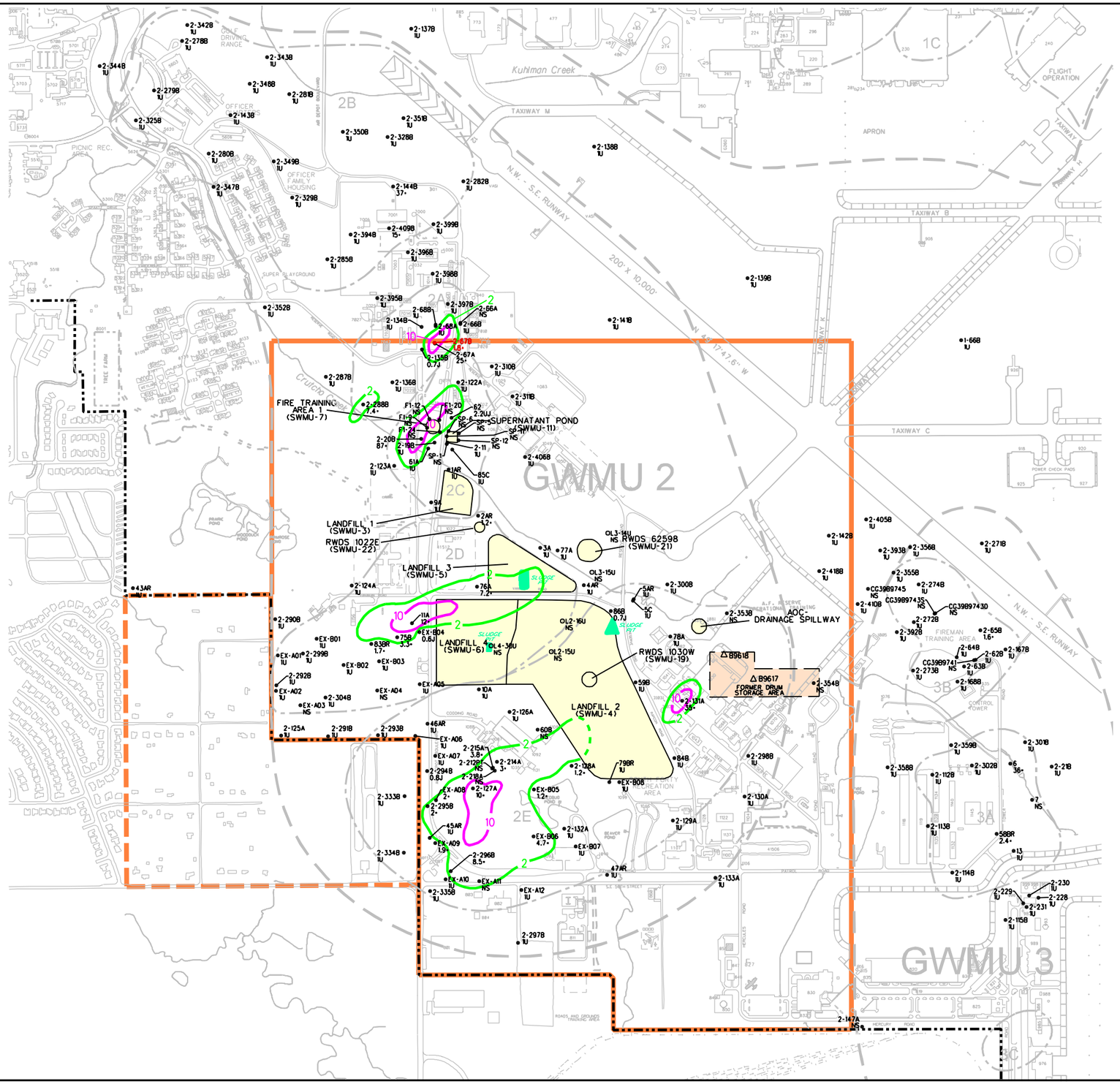
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1964 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between September and November 1998. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for 1,2-DCA is 5 µg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-14
Distribution of 1,2-Dichloroethane in the Upper Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1996 only)
- Isoconcentration Contour (dashed where Inferred) — 10
- MCL Isoconcentration Contour (dashed where Inferred) — 2

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS

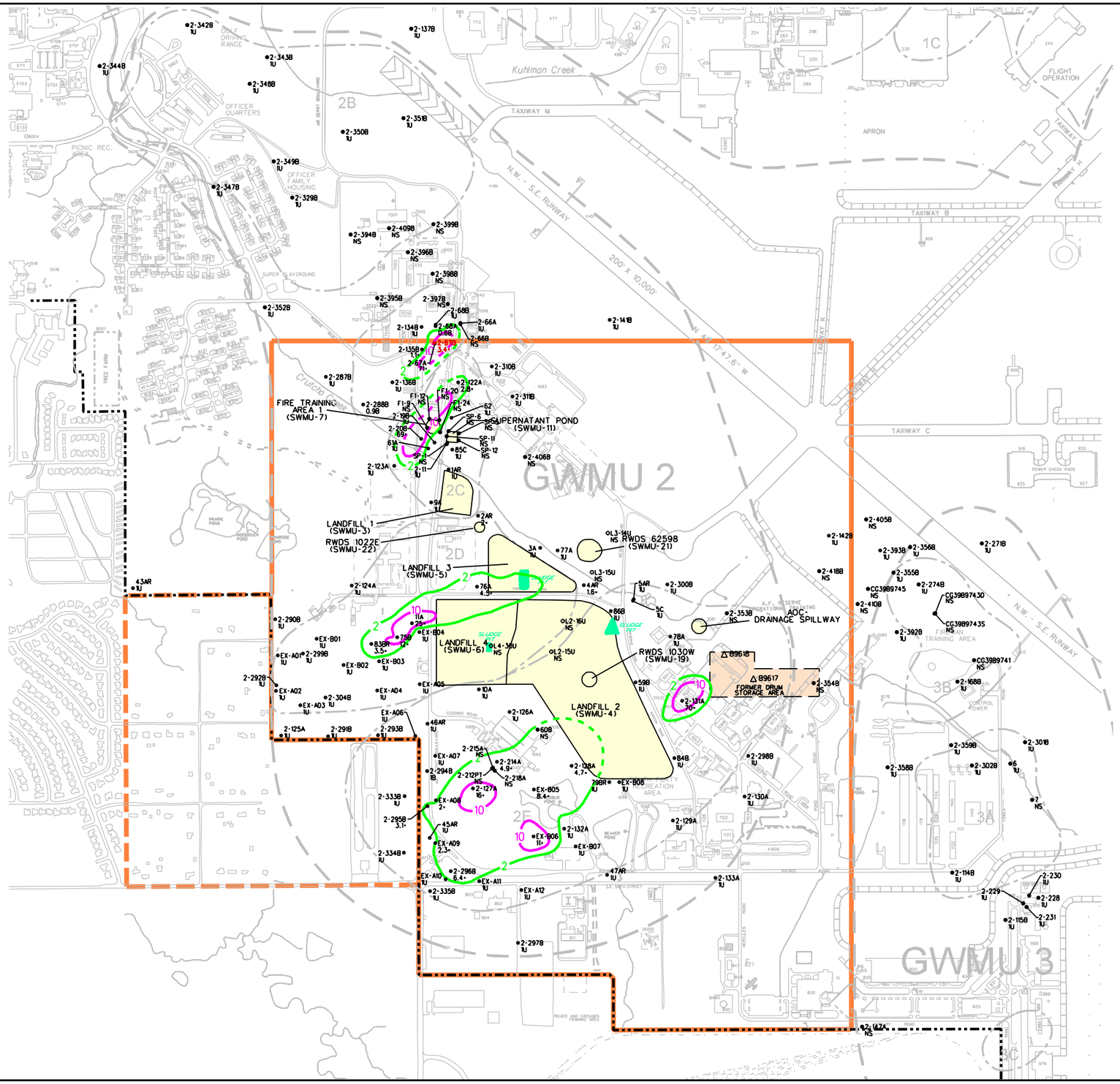
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1994 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between September and November 1999. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Vinyl Chloride MCL is 2 µg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-13
Distribution of Vinyl Chloride in the Upper Saturated Zone - Sept. - Nov. 1999
Tinker AFB, Oklahoma

CH2MHILL



0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1996 only)
- Isoconcentration Contour (dashed where Inferred) — 10
- MCL Isoconcentration Contour (dashed where Inferred) — 2

Concentration Qualifiers:

Measured Value	=
Not Detected Above RL	U
Estimated Value	J
Detected in Blank Sample	B
Well Not Sampled	NS

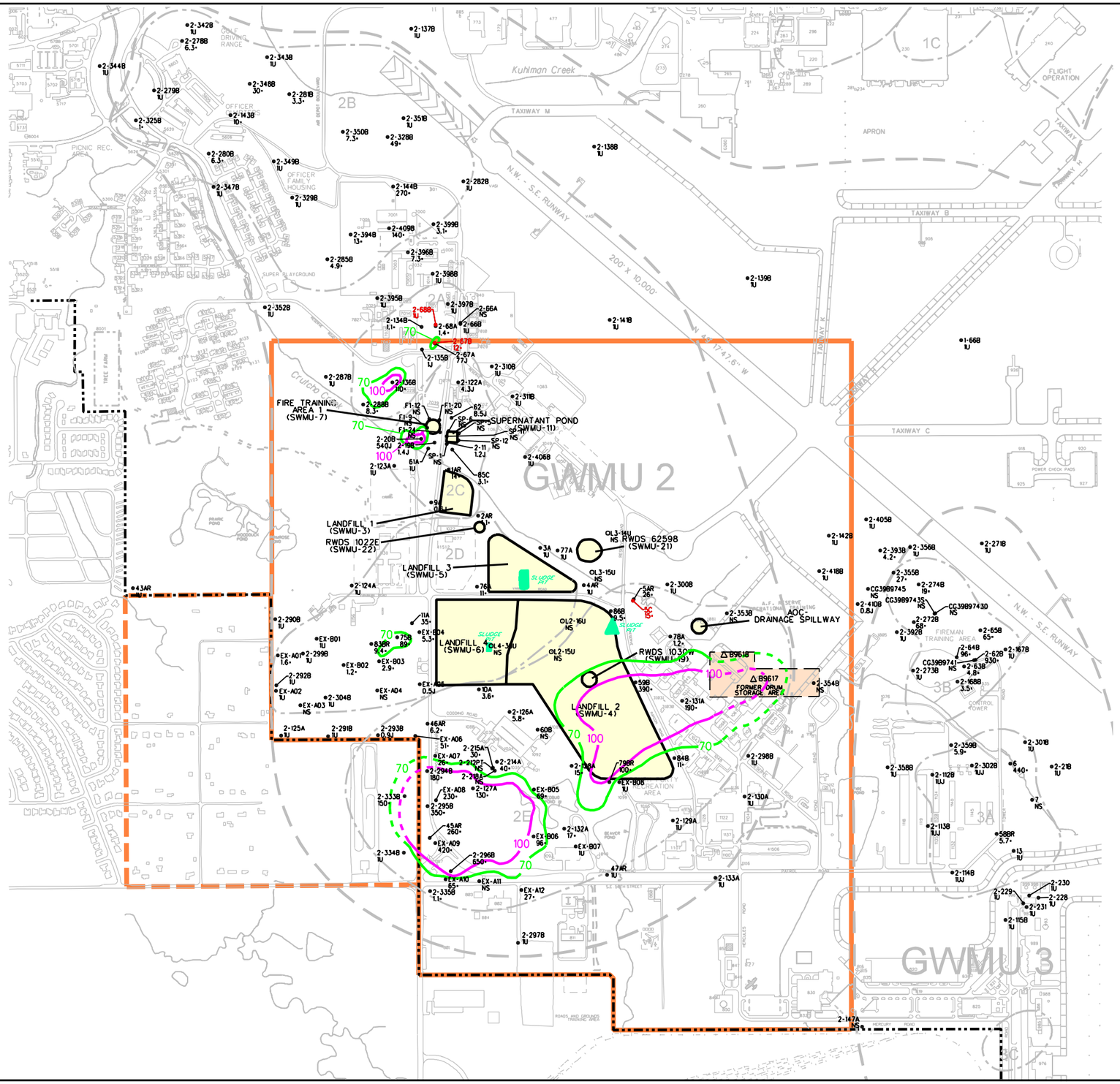
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between October and December 1998. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Vinyl Chloride MCL is 2 µg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-12
Distribution of Vinyl Chloride in the Upper Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1999 only)
- Isoconcentration Contour (dashed where inferred) — 100
- MCL Isoconcentration Contour (dashed where inferred) — 70

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS

- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

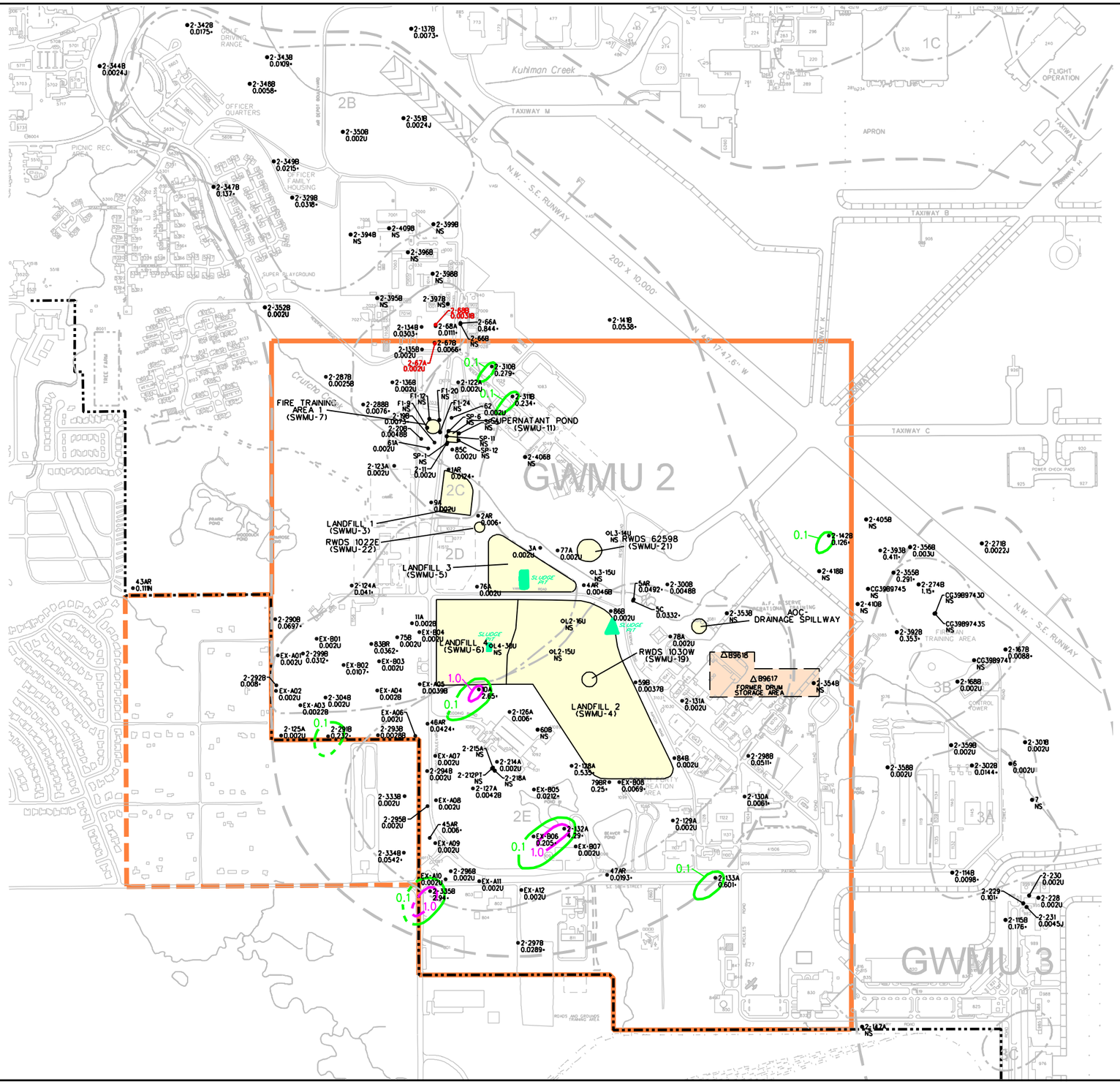
NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were collected between September and November 1999. Temporary Wells samples were collected in 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Cis-1,2-DCE is 70 µg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

DIRECTORATE OF ENVIRONMENTAL MANAGEMENT
OKLAHOMA CITY ALC

FIGURE 4-11
Distribution of Cis-1,2-Dichloroethene in the Upper Saturated Zone, Sept. - Nov. 1999
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

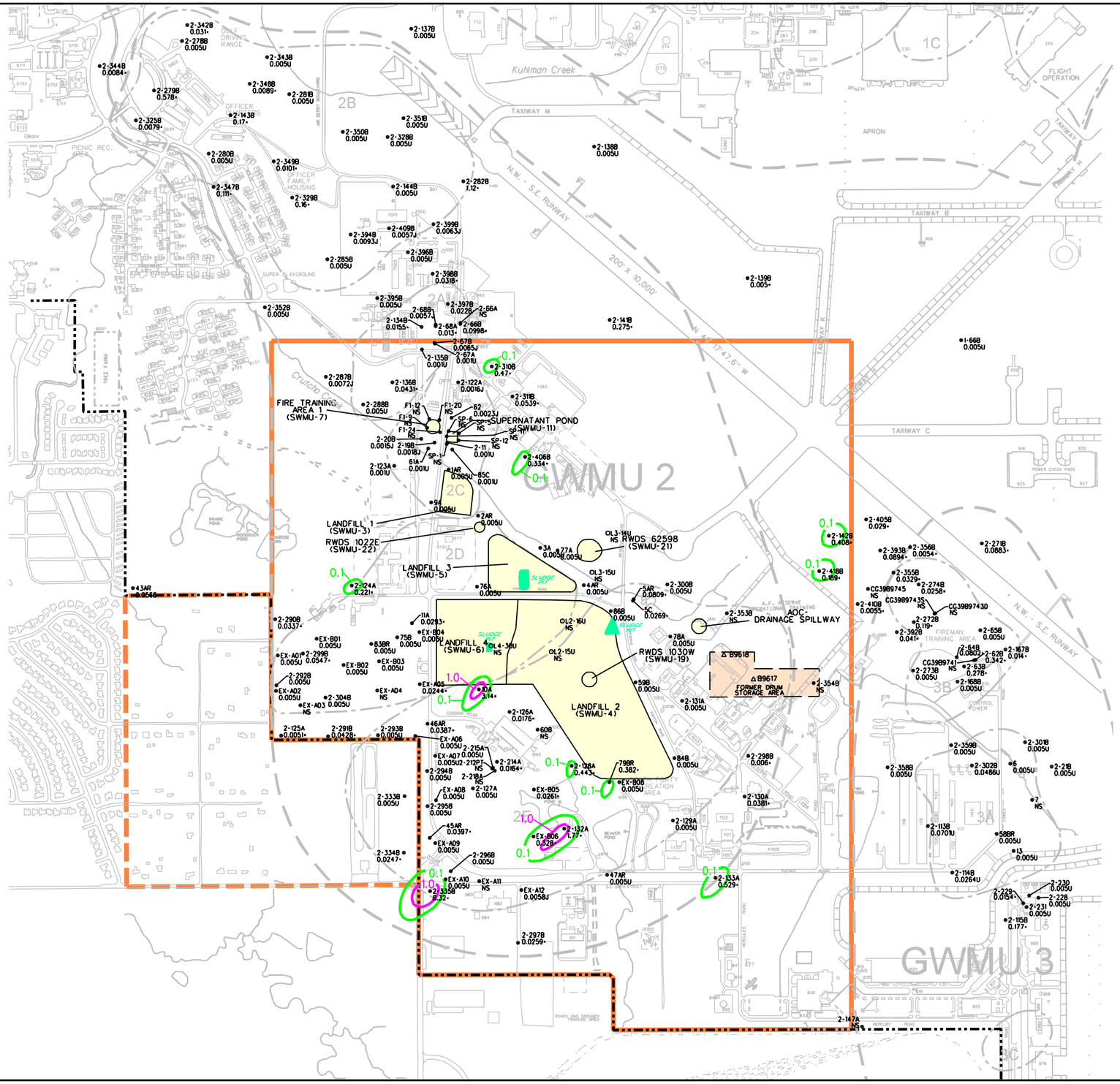
- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1998 only)
- Isoconcentration Contour (dashed where inferred) — 1.0
- MCL Isoconcentration Contour (dashed where inferred) — 0.1
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between October and December 1998. Temporary wells were sampled in 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Chromium is 0.1 mg/L.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-19
Distribution of Total Chromium in the Upper Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1999 only)
- Isoconcentration Contour (dashed where inferred) — 1.0
- MCL Isoconcentration Contour (dashed where inferred) — 0.1

Concentration Qualifiers:

- Measured Value =
- Not Detected Above RL U
- Estimated Value J
- Detected in Blank Sample B
- Well Not Sampled NS

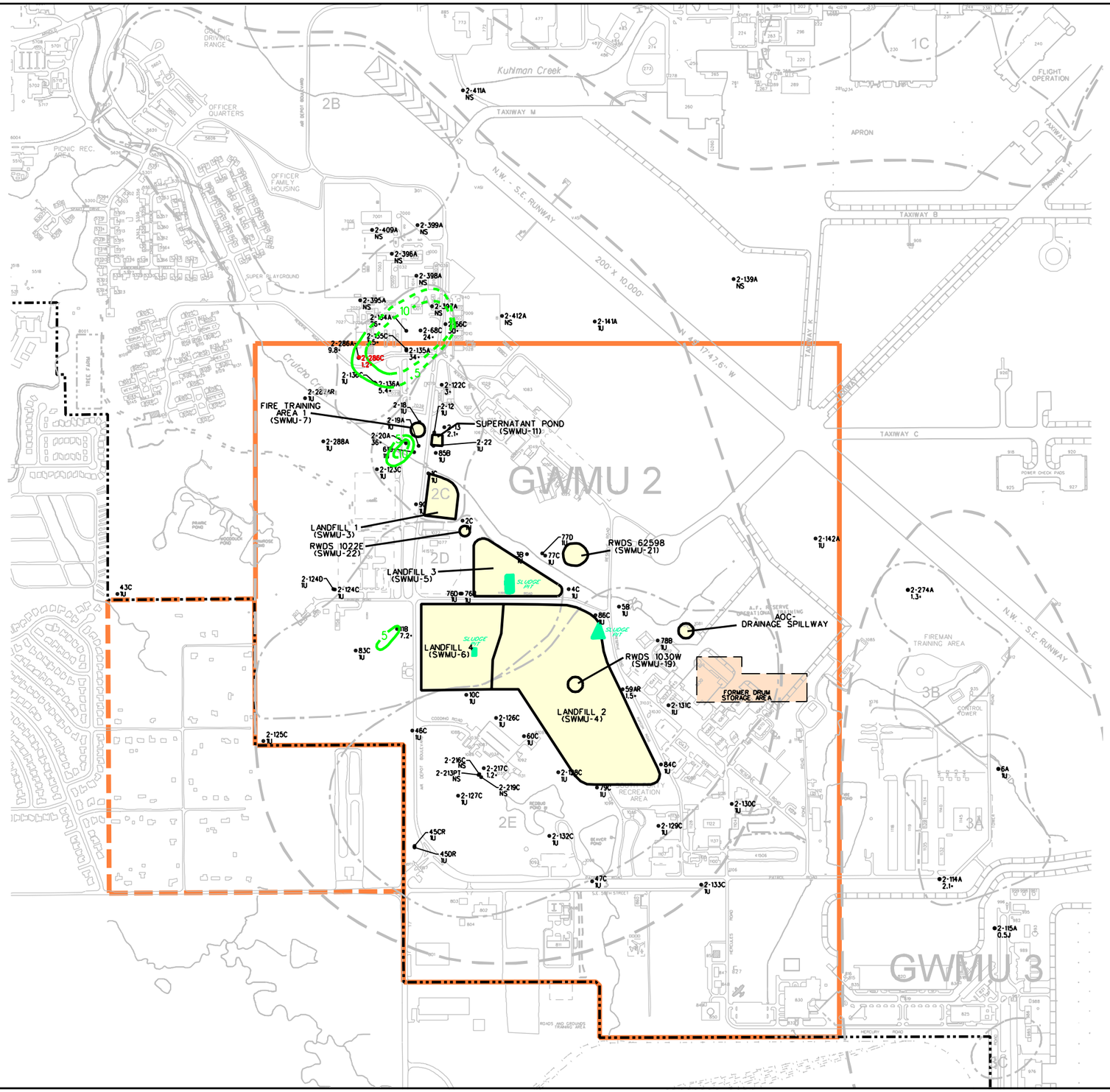
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between September and November 1999. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. The MCL for Chromium is 0.1 mg/L.

FIGURE 4-20
Distribution of Chromium in the Upper Saturated Zone, Sept. - Nov. 1999
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- MCL Isoconcentration Contour (dashed where inferred) — 5 —

Concentration Qualifiers:

Measured Value	=
Not Detected Above RL	U
Estimated Value	J
Detected In Blank Sample	B
Well Not Sampled	NS

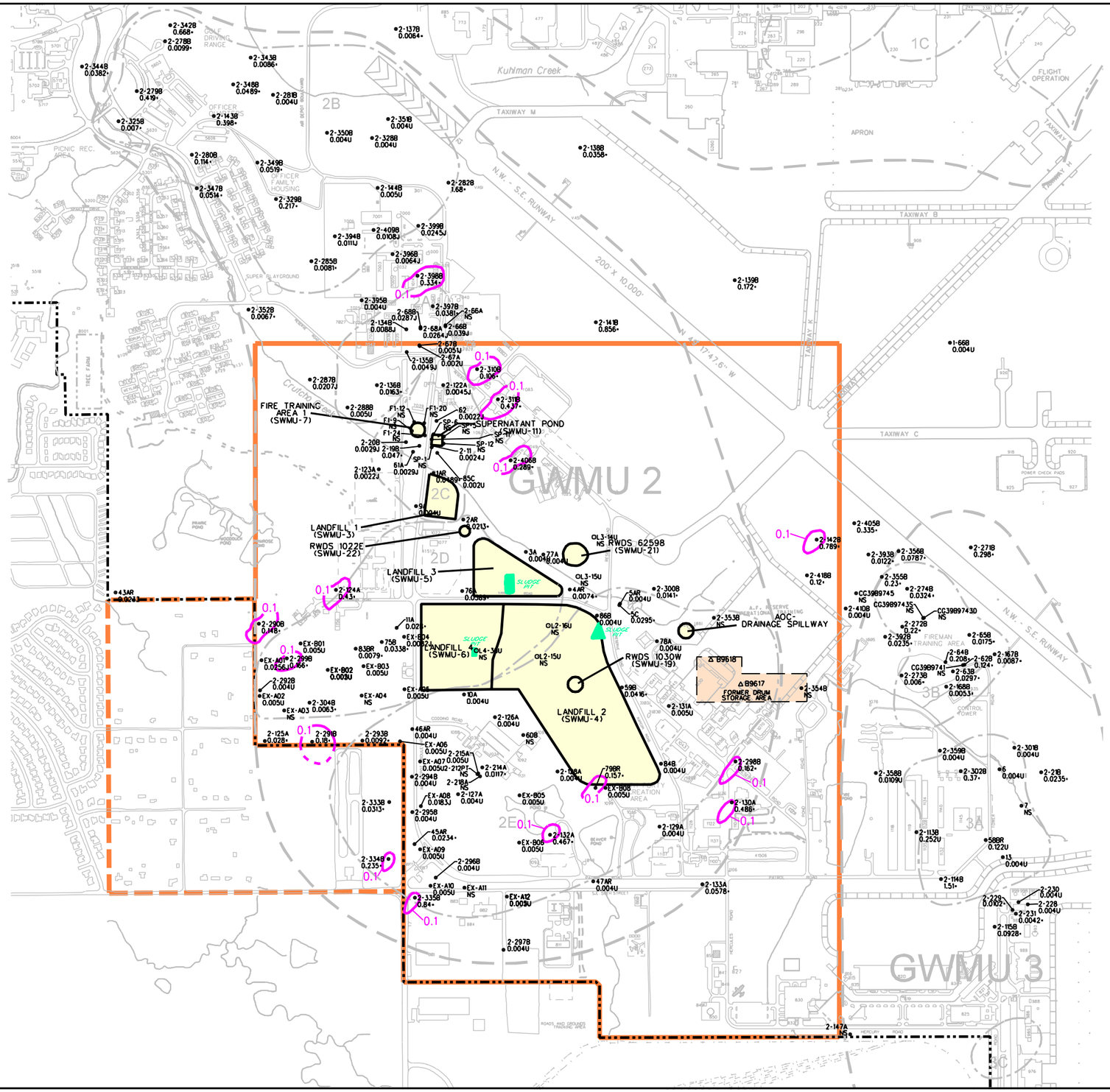
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. For LSZ well clusters 2-124C/D, 2-135A/C, 2-136A/C, 2-286A/C, 45CR/OR, 76C/D, and 77C/D, the "lower" alphanumeric descriptor represents the shallower well in the cluster.
4. All samples were collected between October and December 1998.
5. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
6. The MCL for TCE is 5 µg/L.
7. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-23
Distribution of TCE in the Lower Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Temporary Well (Present 1996 only)
- Isoconcentration Contour (dashed where inferred) — 0.1 —

Concentration Qualifiers:

Measured Value	=
Not Detected Above RL	U
Estimated Value	J
Detected in Blank Sample	B
Well Not Sampled	NS

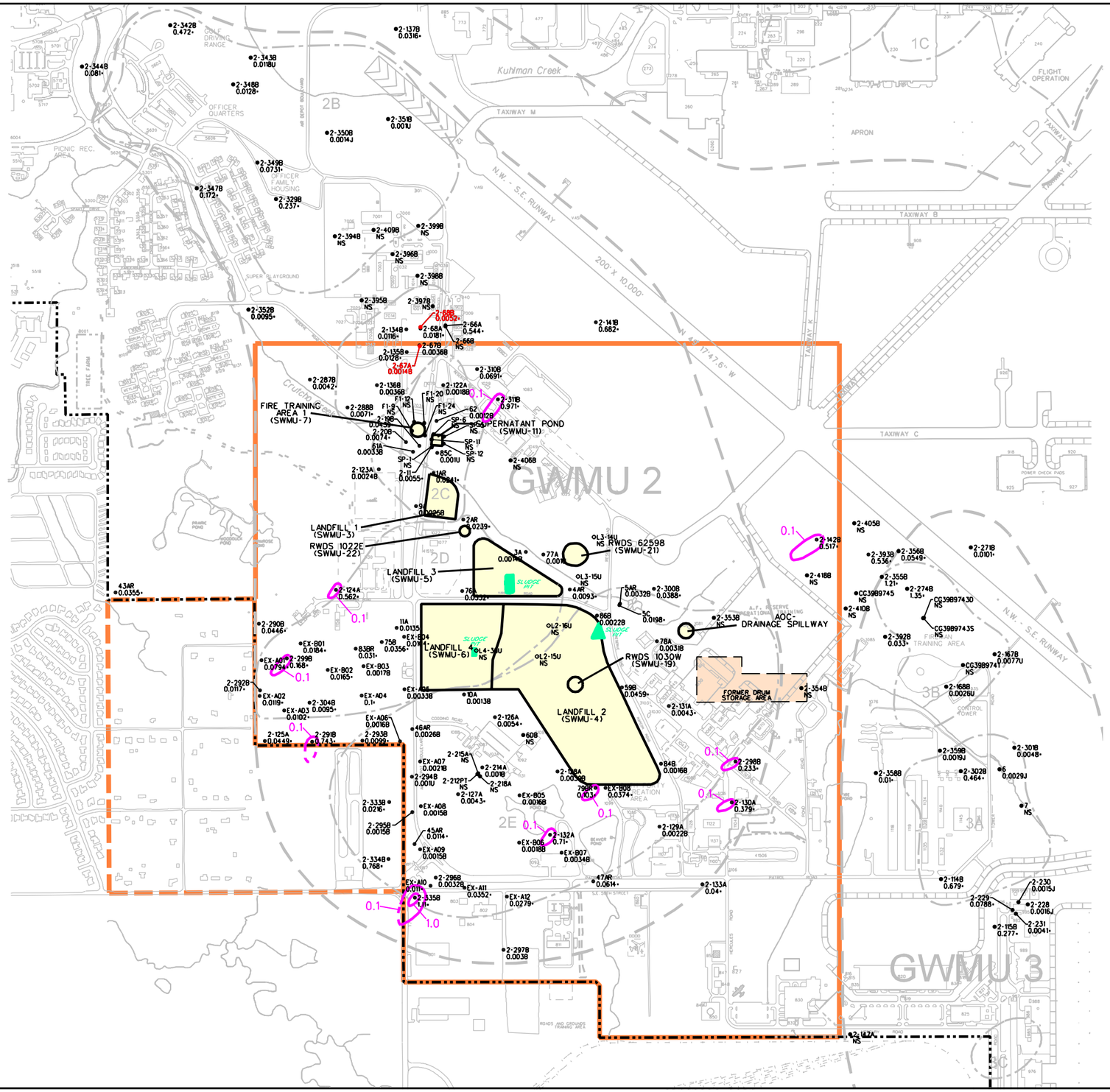
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Suburb Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. Samples were generally collected between September and November 1999. Temporary wells were sampled in 1996.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. There is currently no MCL for Nickel.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-22
Distribution of Nickel in the Upper Saturated Zone, Sept. - Nov. 1999
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

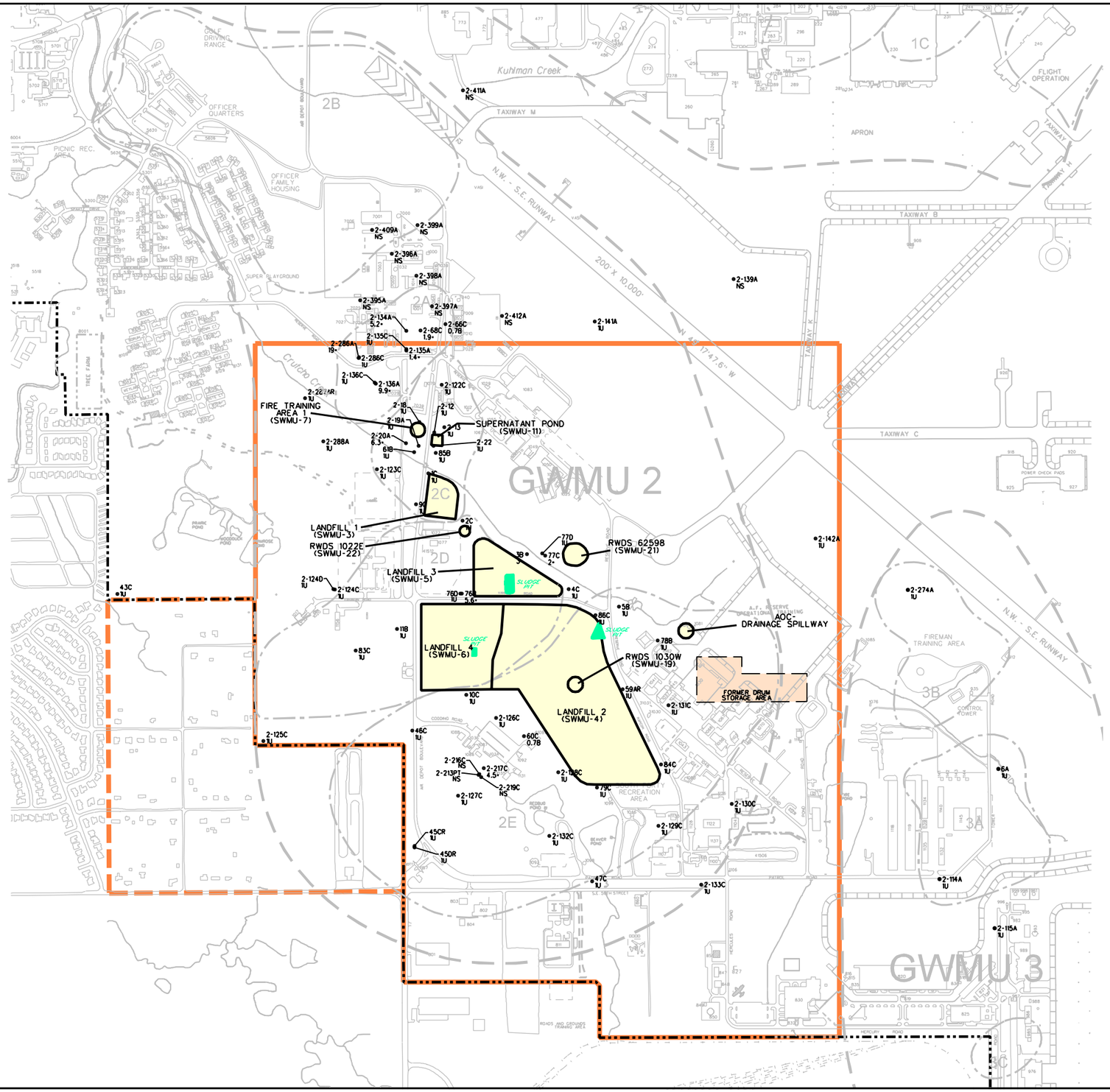
- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- Isoconcentration Contour (dashed where inferred) — 0.1 —
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. All samples were collected between October and December 1998.
4. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
5. There is currently no MCL for Nickel.
6. Values outside the CG038 study area may be shown, but are not contoured.

FIGURE 4-21
Distribution of Nickel in the Upper Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- MCL Isoconcentration Contour (dashed where inferred) — 70
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

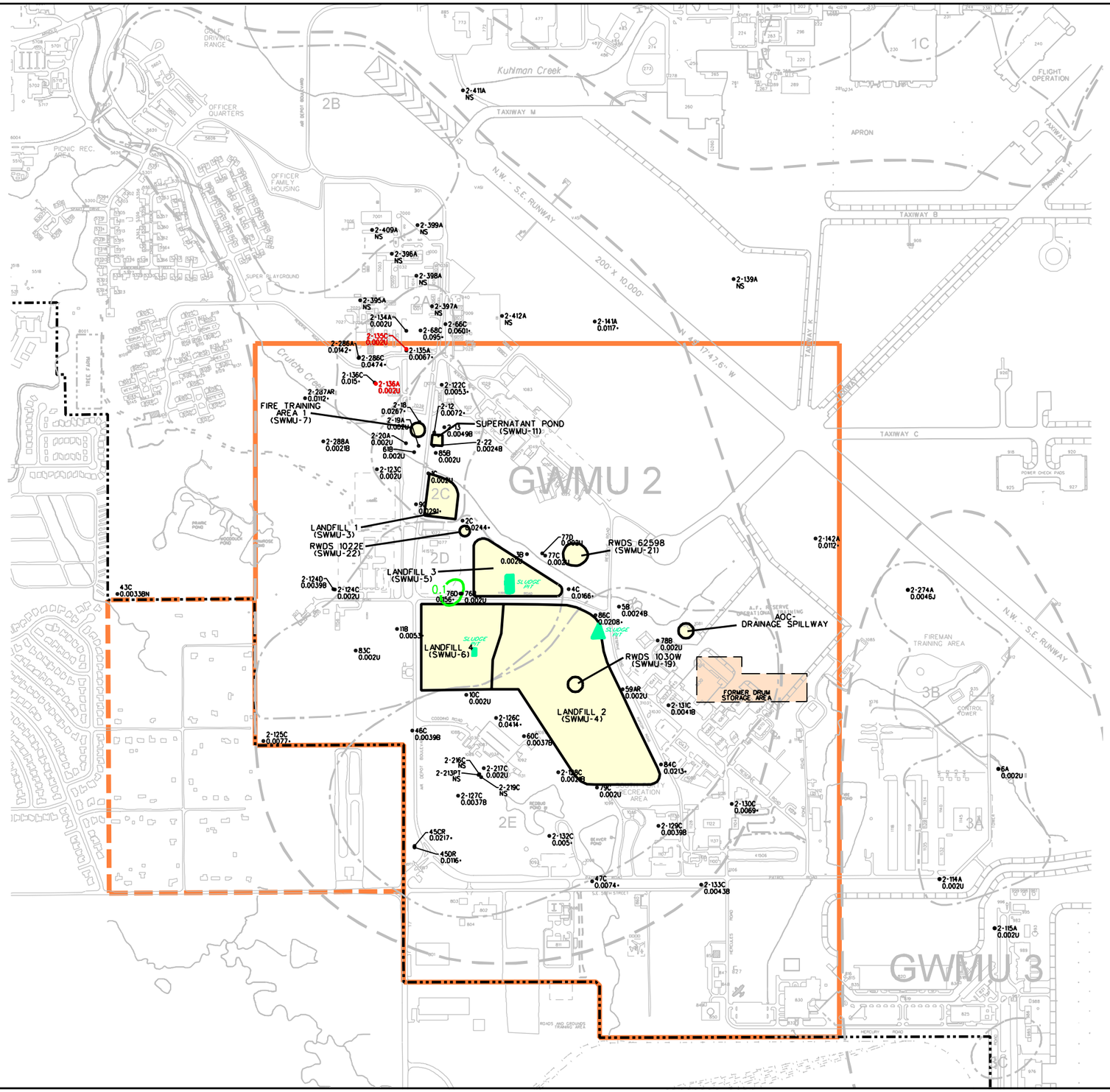
Contaminant concentrations were not contoured, because there were no detections above MCL.

NOTES

1. All concentrations are shown in µg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. For LS2 well clusters 2-124C/D, 2-135A/C, 2-136A/C, 2-288A/C, 45CR/DR, 76D/O, and 77C/O, the "lower" alphanumeric description represents the shallower well in the cluster.
4. All samples were collected between October and December 1998.
5. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
6. The MCL for Cis-1,2-DCE is 70 µg/L.

FIGURE 4-24
Distribution of Cis-1,2-Dichloroethene in the Lower Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

- Monitoring Well
- Piezometer
- Monitoring Well (data not used)
- MCL Isoconcentration Contour (dashed where inferred) — 0.1
- Concentration Qualifiers:
  - Measured Value =
  - Not Detected Above RL U
  - Estimated Value J
  - Detected in Blank Sample B
  - Well Not Sampled NS
- Base Boundary
- Site CG038 Boundary (On Base)
- Site CG038 Boundary (Off Base)
- GWMU Boundary
- GWMU Subunit Boundary
- SWMU/AOC Boundary
- Former Drum Storage Area as shown on 1954 Base Map

NOTES

1. All concentrations are shown in mg/L.
2. The plume extent was generalized from and interpolated between sample locations. Information on actual conditions exists only at the specified locations.
3. For LSZ well clusters 2-124C/D, 2-135A/C, 2-136A/C, 2-286A/C, 45CR/DR, 78C/D, and 77C/D, the "lower" alphanumeric description represents the shallower well in the cluster.
4. All samples were collected between October and December 1998.
5. In some cases, data points generated before or after this time period were used qualitatively for accuracy.
6. The MCL for Total Chromium is 0.1 mg/L.

FIGURE 4-26
Distribution of Total Chromium in the Lower Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL

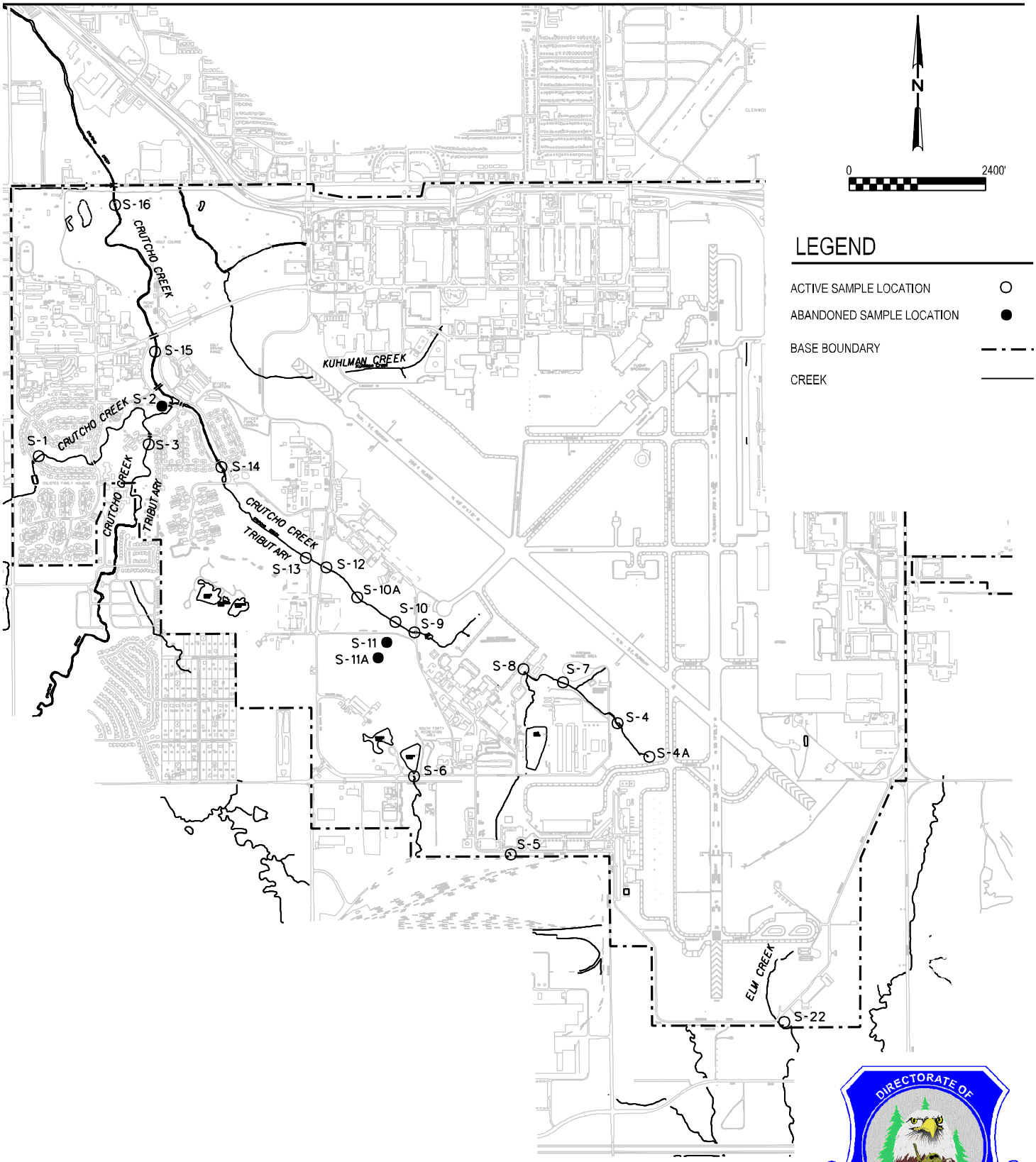


FIGURE 4-28
Crutcho Creek Sample Locations from Parsons E-S April 1999
Tinker AFB, Oklahoma

CH2MHILL

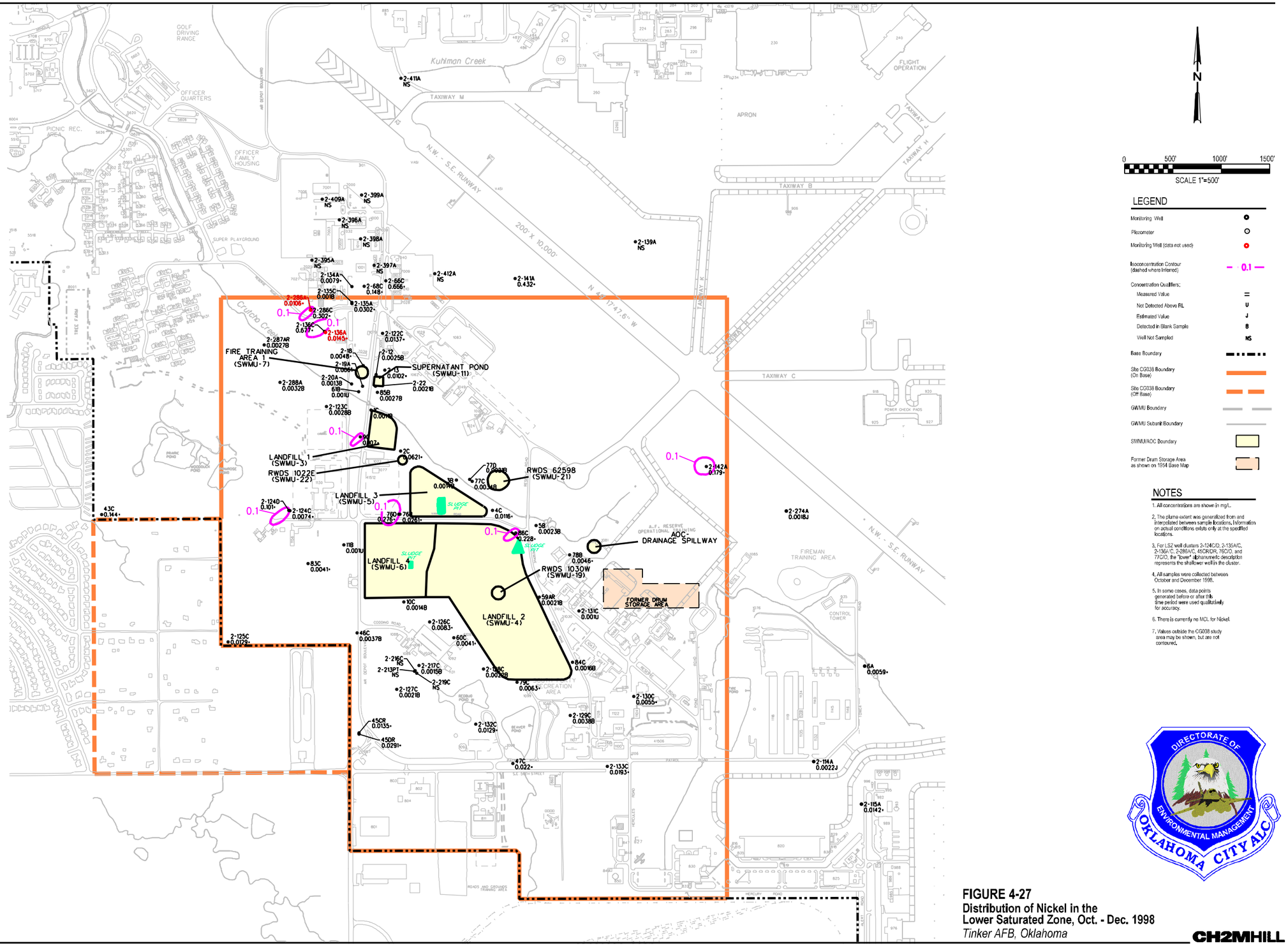
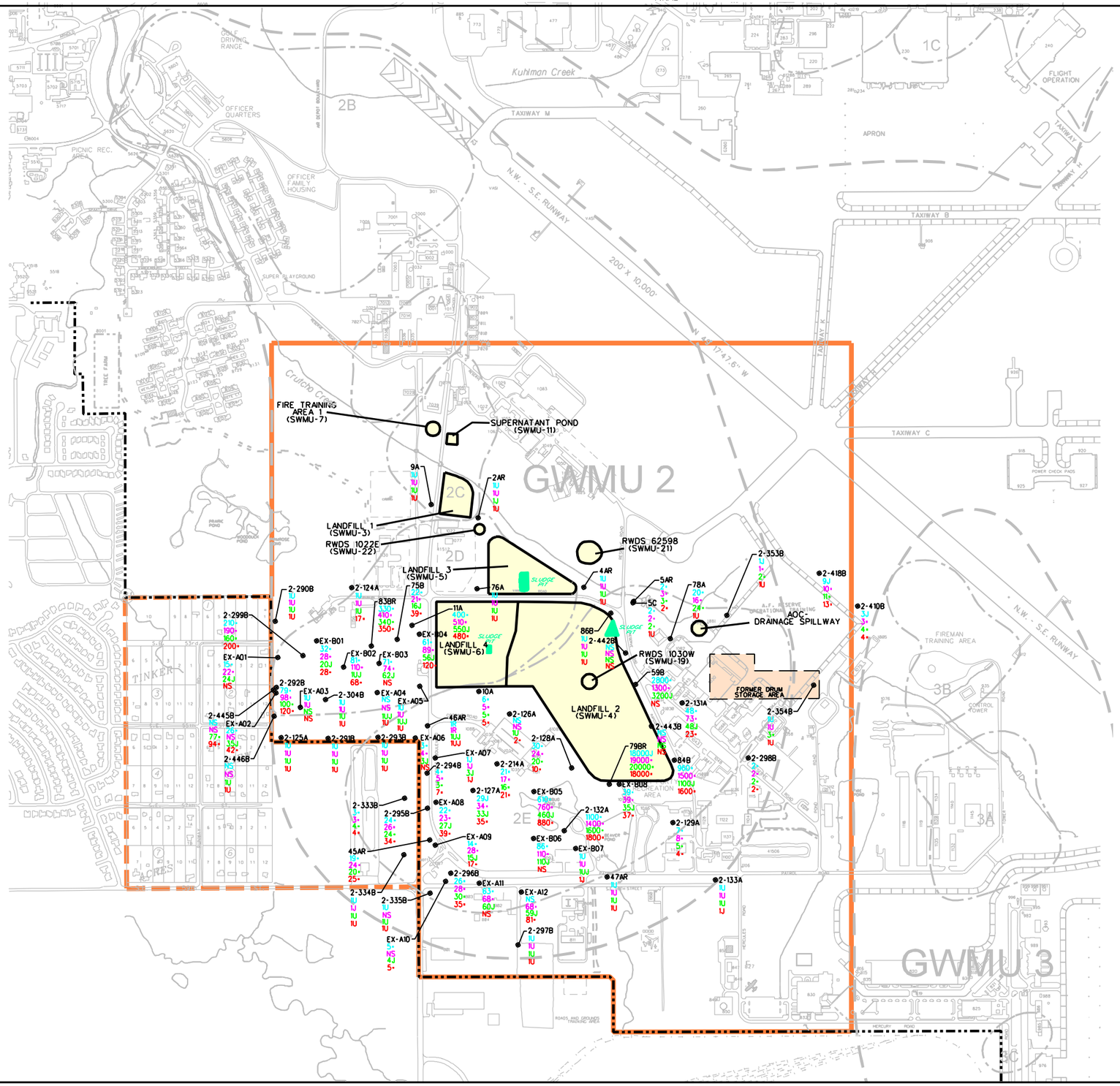


FIGURE 4-27
Distribution of Nickel in the Lower Saturated Zone, Oct. - Dec. 1998
Tinker AFB, Oklahoma

CH2MHILL



N

0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

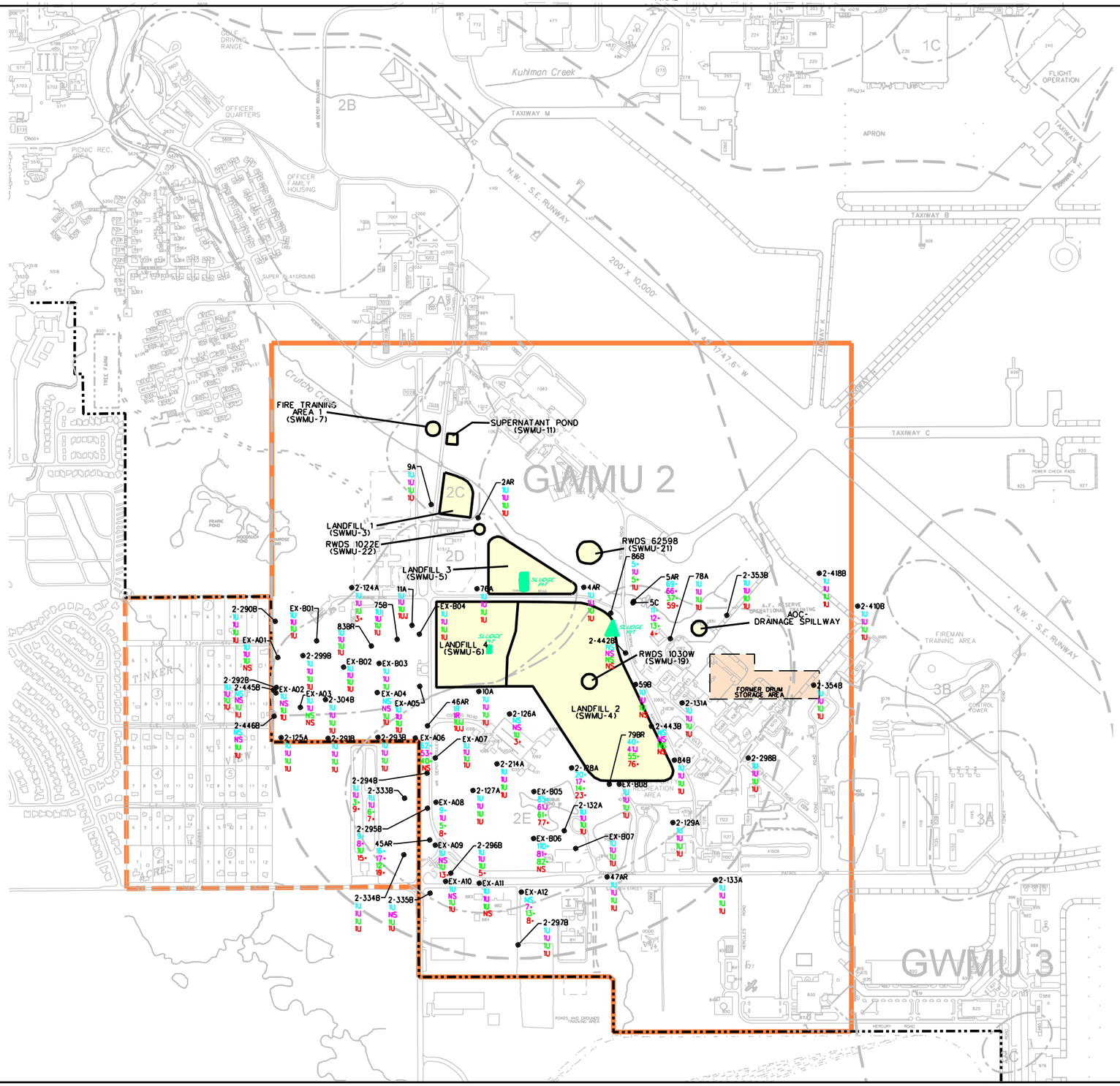
Monitoring Well	●
First Quarter Sampling Event (May - June, 2000)	1U
Second Quarter Sampling Event (July - August, 2000)	1U
Third Quarter Sampling Event (September - October, 2000)	1U
Fourth Quarter Sampling Event (January - February, 2001)	1U
Concentration Qualifiers:	
Measured Value	=
Not Detected Above RL	U
Estimated Value	J
Detected in Blank Sample	B
Well Not Sampled	NS
Data Was Rejected	R
Base Boundary	
Site CG038 Boundary (On Base)	
Site CG038 Boundary (Off Base)	
GWMU Boundary	
GWMU Subunit Boundary	
SWMU/AOC Boundary	
Former Drum Storage Area as shown on 1954 Base Map	

NOTES

1. "NS" Indicates well was not sampled during a particular event.

FIGURE 4-29
Quarterly Sampling Results of Pre-2001 Monitoring Wells for TCE in the Upper Saturated Zone, 2000 - 2001
Tinker AFB, Oklahoma

CH2MHILL



0 500' 1000' 1500'
SCALE 1"=500'

LEGEND

Monitoring Well	●
First Quarter Sampling Event (May - June, 2000)	1U
Second Quarter Sampling Event (July - August, 2000)	1U
Third Quarter Sampling Event (September - October, 2000)	1U
Fourth Quarter Sampling Event (January - February, 2001)	1U
Concentration Qualifiers:	
Measured Value	=
Not Detected Above RL	U
Estimated Value	J
Detected in Blank Sample	B
Well Not Sampled	NS
Data Was Rejected	R
Base Boundary	
Site CG038 Boundary (On Base)	
Site CG038 Boundary (Off Base)	
GWMU Boundary	
GWMU Subunit Boundary	
SWMU/AOC Boundary	
Former Drum Storage Area as shown on 1954 Base Map	

NOTES

1. "NS" Indicates well was not sampled during a particular event.

FIGURE 4-30
Quarterly Sampling Results of Pre-2001 Monitoring Wells for 1,2-Dichloroethane in the Upper Saturated Zone, 2000 - 2001
Tinker AFB, Oklahoma

CH2MHILL