



**Y-12 GROUNDWATER PROTECTION PROGRAM
EXTENT OF THE PRIMARY GROUNDWATER CONTAMINANTS
AT THE Y-12 NATIONAL SECURITY COMPLEX**

December 2013

Prepared by

**Elvado Environmental LLC
Under Subcontract No. 4300087609**

for the

**Environmental Compliance Department
Environment, Safety, and Health Division
Y-12 National Security Complex
Oak Ridge, Tennessee 37831**

Managed by

**Babcock & Wilcox Technical Services Y-12, LLC
for the U.S. Department of Energy
Under Contract No. DE-AC05-00OR22800**

**MANAGED BY
B&W Y-12, LLC
FOR THE UNITED STATES
DEPARTMENT OF ENERGY**

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1.0 INTRODUCTION

This report presents data summary tables (Appendix A) and maps (Appendix B) used to define and illustrate the approximate lateral extent of groundwater contamination at the U.S. Department of Energy (DOE) Y-12 National Security Complex (Y-12) in Oak Ridge, Tennessee. The data tables and maps address the following primary (i.e., most widespread and mobile) organic, inorganic, and radiological contaminants in the groundwater:

<u>Organic Contaminants</u>	<u>Inorganic Contaminants</u>	<u>Radiological Contaminants</u>
<ul style="list-style-type: none">• Tetrachloroethene (PCE)• Trichloroethene (TCE)• cis-1,2-Dichloroethene (c12DCE)• 1,1-Dichloroethene (11DCE)• Vinyl chloride (VC)• Carbon tetrachloride (CTET)	<ul style="list-style-type: none">• Nitrate• Uranium (total)	<ul style="list-style-type: none">• Gross alpha activity• Gross beta activity• Technetium-99 (Tc-99)

Maps delineating the approximate extent of these primary groundwater contaminants were prepared to support Groundwater Protection Program (GWPP) surveillance monitoring of contaminated groundwater at Y-12 per the requirements of applicable DOE Orders, as described in the *Y-12 Groundwater Protection Program Management Plan* (B&W Y-12 2006). For the purposes of the GWPP, these maps update analogous groundwater contaminant plume maps presented in the *Report on the Remedial Investigation of Bear Creek Valley at the Oak Ridge Y-12 Plant, Oak Ridge, Tennessee* (DOE 1997) and the *Report on the Remedial Investigation of the Upper East Fork Poplar Creek Characterization Area at the Oak Ridge Y-12 Plant, Oak Ridge, Tennessee* (DOE 1998). Groundwater contaminant plume maps in both remedial investigation (RI) reports delineate the approximate extent of nitrate, uranium, volatile organic compounds (VOCs), gross alpha activity, and gross beta activity based on groundwater sampling/analysis results obtained more than 15 years ago. Groundwater contaminant plume maps in Appendix B are based on the extensive subsequent and more recent sampling/analysis results, including data for additional sampling locations not used for the respective RIs, which characterize respective plume boundaries more accurately in some areas and/or reflect substantially different (higher or lower) contaminant concentrations. In the time period since the RI maps were produced, the GWPP collected groundwater samples from previously unsampled wells and encountered at wells 55-3A, 55-3B, and 55-3C the highest VOC concentrations at Y-12. Also, a pumping plume capture well at the east end of the complex (GW-845) has effectively reduced organic contaminant concentrations in wells located near the Oak Ridge Reservation boundary (e.g., Westbay™ well GW-722). Other variations in the current plume maps reflect changes in concentrations over time (long-term contaminant concentration trends).

Under the limitations and considerations outlined below, the groundwater contaminant plume maps in this report are sufficient for delineating the generalized extent of groundwater contamination at Y-12, particularly the areas where contaminant concentrations are highest and most likely to pose the greatest risk to human health and the environment:

- The groundwater contaminant plume maps are simplified and idealized two-dimensional illustrations of the complex, heterogeneous, and three-dimensional distribution of contaminants in the groundwater at Y-12.
- The delineated contaminant plume boundaries and color-coded concentration shading shown on each map were approximated, inferred, and extrapolated based on the network of groundwater sampling locations, available historical data (including the above-referenced RI reports),

interpretive assumptions related to the hydrogeologic characteristics (e.g., preferential contaminant transport in directions that parallel geologic strike of the bedrock), and subjective professional judgment.

- Contaminant plume boundaries delineated in most areas at Y-12 define the approximate extent of contamination in shallow groundwater less than 100 ft below ground surface (bgs) and reflect the maximum downgradient transport from the applicable source area(s). In several areas at Y-12, however, contaminant concentrations remain highest in groundwater from more than 100 ft bgs. The generalized contaminant plume maps reflect data from all depth ranges within the groundwater monitoring network. Consequently, the color-coded concentration shading on the contaminant plume maps may encompass shallower groundwater sampling locations shown with concentrations values that are below the specified color-coded range.

2.0 GROUNDWATER CONTAMINANT PLUME DELINEATION

The following discussion describes the sampling locations, calculated contaminant concentrations, plume boundary values, and paired map format used to define, quantify, delineate, and illustrate the approximate extent of the primary organic, inorganic, and radiological contaminants in groundwater at Y-12.

2.1 SAMPLING LOCATIONS

Groundwater sampling/analysis results for a total of 222 wells, three springs, two building basement sumps, and an underdrain sump at Lake Reality were used to define the approximate extent of groundwater contamination at Y-12. All of the wells and springs currently retain “active” status per the *Y-12 Groundwater Protection Program Monitoring Optimization Plan for Groundwater Monitoring Wells at the U.S. Department of Energy Y-12 National Security Complex, Oak Ridge, Tennessee*. (B&W Y-12 2009), which describes the criteria used to optimize implementation of the GWPP in terms of surveillance monitoring sampling locations, sampling frequency and priority, and laboratory analyses. For each well, the data summarized in Appendix A include the respective depths to the top and bottom of the monitored interval. Approximately two-thirds (148 wells) of the wells yield groundwater from less than 100 ft bgs, with most of those (101 wells) being less than 50 ft bgs. About one-third (74 wells) of the wells have monitored intervals more than 100 ft bgs, including 21 wells more than 200 ft bgs, five of which are equipped with Westbay multiport sampling systems configured to collect samples from several depth intervals in each well.

All of the sumps and springs and approximately 85% of the wells are located in Bear Creek Valley (BCV), where groundwater contamination from multiple source areas is widespread, and the remaining wells are located on Chestnut Ridge, where groundwater contamination of relatively limited extent occurs at only a few source areas. In BCV, the well locations are distributed between the Bear Creek watershed (85 wells) west of Y-12 and the adjacent Upper East Fork Poplar Creek watershed (102 wells) extending east to Scarboro Road. Most of the wells on Chestnut Ridge are located along the crest of the ridge directly south of Y-12.

2.2 CONTAMINANT CONCENTRATIONS

Groundwater sampling/analysis data downloaded from the Groundwater Information System (GIMS) maintained by the GWPP and from the Oak Ridge Environmental Information System (OREIS) were used to quantify contaminant concentrations. Groundwater sampling/analysis results obtained by the GWPP and other organizations are compiled in the GIMS, with the combined data managed in accordance with the *Y-12 Groundwater Protection Program Data Management Plan* (B&W Y-12 2012). However, the data downloaded from GIMS did not include available analytical results for duplicate groundwater samples, filtered groundwater samples, or the groundwater samples obtained by the GWPP (during 2008) to evaluate the suitability of passive groundwater sampling methods/equipment (Hydrasleeve and passive diffusion bag samplers) for Y-12 surveillance monitoring purposes.

Average contaminant concentrations calculated from analytical results reported for groundwater samples collected between January 1, 2008 and December 31, 2012 were used to delineate the approximate lateral extent of groundwater contamination and associated color-coded ranges of contaminant concentrations shown on each contaminant plume map in Appendix B. For each groundwater sampling location, the data summary tables in Appendix A show the calculated average concentrations of the organic contaminants

(Table A.1) and the inorganic and radiological contaminants (Table A.2) along with other pertinent information, including the number of sampling/analysis results and associated range of sampling dates.

Average concentrations used for contaminant plume delineation purposes are based on total concentrations detected in unfiltered groundwater samples from each well, spring, and sump, including estimated concentrations of organic contaminants below the analytical reporting limits. For calculation purposes, a concentration of zero was assumed for all non-detect analytical results reported for organic and inorganic contaminants, and results for radiological contaminants that are below the associated minimum detectable activity (MDA) and/or total propagated uncertainty.

Calculated average contaminant concentrations do not include groundwater sampling/analysis results (if any) reported as “Not Sampled” or “Not Analyzed” for each applicable sampling location. Groundwater sampling/analysis results that do not meet applicable data quality objectives (e.g., false positive results for VOCs) described in the above-referenced GWPP data management plan also were excluded from the calculated average concentrations, as were a total of 20 groundwater sampling/analysis results (listed in the Appendix A data summary table explanations) identified as suspected outliers compared to available historical data for the applicable sampling locations.

As noted previously, five of the wells used to delineate the approximate extent of groundwater contamination are equipped with multi-port sampling systems that yield groundwater samples from several different depth intervals. For each of these wells, the depth interval with the highest calculated average concentration of the applicable organic, inorganic, or radiological contaminants (see data tables in Appendix A) was used for contaminant plume delineation purposes.

Instead of showing average concentration values of zero, each of the groundwater contaminant plume maps in Appendix B use open (unfilled) symbols/markers to designate the applicable groundwater sampling locations having 100% non-detect analytical results for the contaminant. Respective contaminant plume maps for gross alpha activity, gross beta activity, and Tc-99 also use the same open symbols/markers for applicable sampling locations with average concentration values below 5 pCi/L, 10 pCi/L, and 15 pCi/L, respectively, which the GWPP designates as programmatic MDAs for the purposes of surveillance monitoring at Y-12.

2.3 PLUME BOUNDARY VALUES

Groundwater contaminant plume maps in Appendix B use the boundary values and color-coded shading listed below to delineate and illustrate the approximate extent and concentrations of the primary organic contaminants (in micrograms per liter [$\mu\text{g/L}$]), inorganic contaminants (in milligrams per liter [mg/L]), and radiological contaminants (in picoCuries per liter [pCi/L]) in the groundwater at Y-12. The selected plume boundary values are current federal and state drinking water maximum contaminant levels (MCLs) established for PCE, TCE, c12DCE, 11DCE, VC, CTET, nitrate, uranium, and gross alpha activity. Plume boundary values for gross beta activity and Tc-99 represent threshold levels that correspond to a 4 millirem per year dose equivalent (the drinking water MCL for gross beta activity). For comparative context, the plume boundaries and color-coded concentration shading shown on the respective plume maps for PCE, TCE, c12DCE, 11DCE, VC, and CTET are superimposed over grey shading that delineates summed concentrations (above 5 $\mu\text{g/L}$) for all detected VOCs.

Contaminant	Concentration Units	Boundary Value	Concentration Range		
			Yellow Shading	Orange Shading	Red Shading
PCE	µg/L	5	5 – 99	100 – 999	≥ 1,000
TCE	µg/L	5	5 – 99	100 – 999	≥ 1,000
c12DCE	µg/L	70	70 – 699	700 – 6999	≥ 7,000
11DCE	µg/L	7	7 – 99	100 – 999	≥ 1,000
VC	µg/L	2	2 – 99	100 – 999	≥ 1,000
CTET	µg/L	5	5 – 99	100 – 999	≥ 1,000
Nitrate	mg/L	10	10 – 99	100 – 999	≥ 1000
Uranium (total)	mg/L	0.03	0.03 – 0.099	0.1 – 0.99	≥ 1.0
Gross alpha activity	pCi/L	15	15 – 99	100 – 999	≥ 1,000
Gross beta activity	pCi/L	50	50 – 499	500 – 4,999	≥ 5,000
Tc-99	pCi/L	900	900 – 8,999	9,000 – 89,999	≥ 90,000

2.4 PAIRED MAP FORMAT

Appendix B provides two maps of equal size (11 x 17 in.) and scale (1 in. = 900 ft) that illustrate the extent of each primary organic, inorganic, and radiological groundwater contaminant: a “West”-designated map that delineates the contaminant plume boundaries and color-coded concentrations in the Bear Creek watershed downgradient to the west of the hydrologic divide located at the west end of Y-12, and an “East” –designated map that delineates the contaminant plume boundaries and color-coded concentrations in the Upper East Fork Poplar Creek watershed downgradient to the east of the hydrologic divide, including areas along the crest of Chestnut Ridge directly south of Y-12 and a section of Union Valley east of Scarboro Road. Additionally, the paired maps for each primary groundwater contaminant are presented in a configuration such that, when unfolded, the maps together provide a complete west-to-east (left-to-right) profile of the lateral extent and concentrations of the contaminant.

The Y-12 GWPP monitoring network includes areas not shown on the paired maps because none of the locations yield groundwater with elevated contaminant concentrations (i.e., greater than boundary values shown above). The map extents are designed to show all areas with elevated contaminant concentrations and provide as much detail as possible. For example, some wells located in Union Valley east of the “East”-designated map boundary have low levels of VOCs within the gray-shading for summed VOCs >5 µg/L, but do not have individual compound concentrations that exceed applicable drinking water MCLs.

3.0 REFERENCES

- B&W Y-12. 2006. *Y-12 Groundwater Protection Program Management Plan*.
- B&W Y-12. 2009. *Y-12 Groundwater Protection Program Monitoring Optimization Plan for Groundwater Monitoring Wells at the U.S. Department of Energy Y-12 National Security Complex, Oak Ridge, Tennessee*. Prepared by Elvado Environmental LLC (Y/TS-2031/R1).
- B&W Y-12. 2012. *Y-12 Groundwater Protection Program Data Management Plan*. Prepared by the Environment, Safety, and Health Division and the Information Technology Organization (Y/TS-2007/R1).
- DOE. 1997. *Report on the Remedial Investigation of Bear Creek Valley at the Oak Ridge Y-12 Plant, Oak Ridge, Tennessee*, U.S. Department of Energy, Office of Environmental Management, Oak Ridge, TN (DOE/OR/01-1455/V1&D2).
- DOE. 1998. *Report on the Remedial Investigation of the Upper East Fork Poplar Creek Characterization Area at the Oak Ridge Y-12 Plant, Oak Ridge, Tennessee*, U.S. Department of Energy, Office of Environmental Management, Oak Ridge, TN (DOE/OR/01-1641/D1&V1).

APPENDIX A
DATA SUMMARY TABLES

EXPLANATION

Sampling Point:

- GW - Groundwater monitoring well (also 1090 and hyphenated numbers [e.g., 55-3A])
- LRS - Lake Reality Sump
- SCR - South Chestnut Ridge (tributary prefix for spring sampling locations)
- SS - South Side (of Bear Creek, spring sampling station)
- (EEVOC) - East End VOC plume extraction well, sampling location is at the influent to the Removal Action Treatment Facility
- (WB) - Westbay™ well compiled data. The row with this designation shows the maximum concentration for all depths in the wells (shown in bold typeface). Information for each sampling port is presented beneath the compilation row.

Location:

- B4 - Beta-4 Security Pits
- B8110 - Building 81-10
- B9103 - Building 9103
- B9201-2 - Building 9201-2
- B9201-5 - Building 9201-5
- BG - Bear Creek Burial Grounds WMA
- CDLVII - Construction/Demolition Landfill VII
- CPT - Coal Pile Trench
- CRBAWP - Chestnut Ridge Borrow Area Waste Pile
- CRSDB - Chestnut Ridge Sediment Disposal Basin
- CRSP - Chestnut Ridge Security Pits
- ECRWP - East Chestnut Ridge Waste Pile
- EMWMF - Environmental Management Waste Management Facility
- EXP - Exit Pathway Monitoring Location:
 - Maynardville Limestone Picket (-A, -B, -C, -E, -I, -J, and -W)
 - Along Scarboro Road in the gap through Pine Ridge (-SR)
 - East of Scarboro Road in Union Valley (-UV)
 - Spring sampling location (SW)
- FCAP - Filled Coal Ash Pond
- FF - Fuel Facility; former Garage Underground Tanks near Bldgs 9754, 9754-2, and 9754-3
- FTF - Fire Training Facility
- GRID - Comprehensive Groundwater Monitoring Plan Grid Location (MMES 1990b)
- KHQ - Kerr Hollow Quarry
- LD - Lysimeter Demonstration
- LII - Industrial Landfill II
- LIV - Industrial Landfill IV
- LV - Industrial Landfill V
- NHP - New Hope Pond
- OLF - Oil Landfarm WMA
- RG - Rust Garage Area
- RS - Rust Spoil Area

EXPLANATION

Location: (continued)

- S2 - S-2 Site
- S3 - S-3 Site
- SCF - South Campus Facility
- SPI - Spoil Area I
- SSCR - South Side Chestnut Ridge
- SY - Y-12 Salvage Yard
- T0134 - Tank 0134-U
- T2331 - Tank 2331-U, near Building 9201-1
- UNCS - United Nuclear Corporation Site
- UOV - Uranium Oxide Vault
- WCPA - Waste Coolant Processing Area
- Y12 - Y-12 Complex

Monitored Interval:

- Top - Depth to top of filter pack or open-hole (feet below ground surface)
- Bottom - Depth to bottom of filter pack or open-hole (feet below ground surface)
- . - Unknown or not applicable (Westbay™ ports)

Date Range:

Shows the first and last (most recent) sampling date in the data set used to calculate the average concentration/activity value.

- NS - Not sampled

Number of Samples:

Indicates the number of samples used to calculate the average concentration/activity value.

- NS -Not sampled

The number of samples is the same for all organic contaminants on Table A.1, but may differ for inorganic and radiological contaminants as shown in three columns on Table A.2.

- N/U - Nitrate and uranium
- A/B - Gross alpha and gross beta activities
- Tc-99 - Technetium-99 activity

EXPLANATION

Average Calendar Year 2008 to 2012 (CY 08-12) Concentration:

Except for uranium, the average concentration is rounded to the nearest whole number.

NA - Not analyzed

0 - Not detected

Table A.1 provides the average concentration in micrograms per liter ($\mu\text{g/L}$) for the following primary organic contaminants:

- PCE - Tetrachloroethene
- TCE - Trichloroethene
- c12DCE - cis-1,2-Dichloroethene
- 11DCE - 1,1-Dichloroethene
- VC - Vinyl chloride
- CTET - Carbon Tetrachloride

Table A.2 provides the average concentration in milligrams per liter (mg/L) for the nitrate and uranium and in picoCuries per liter (pCi/L) for gross alpha activity, gross beta activity, and technetium-99 (Tc-99) activity.

All results with a data evaluation qualifier of "Q" per the Y-12 GWPP data evaluation/validation procedure (suspected outliers) were reviewed in conjunction with subsequent monitoring data. The table below lists results excluded from the average calculations.

Suspected outlier results excluded from average calculations

Well	Date	Contaminant	Units	Result	Lab Qual.	Evaluation Qualifier
Table A.1						
GW-068	08/21/12	1,1-Dichloroethene	ug/L	34	D	Q
		Trichloroethene		12		Q
		Vinyl chloride		28		Q
		cis-1,2-Dichloroethene		290		Q
GW-383	08/30/11	Tetrachloroethene	ug/L	37	D	Q
		Trichloroethene		14		Q
		cis-1,2-Dichloroethene		840		Q
GW-557	07/23/12	Tetrachloroethene	ug/L	31.8		Q
GW-648	02/13/08	Trichloroethene	ug/L	10		Q
GW-686	05/13/09	Tetrachloroethene	ug/L	6	J	Q
		Trichloroethene		4		Q
Table A.2						
GW-225	02/26/09	Nitrate Nitrogen	mg/L	0.313		Q
GW-246	03/12/08	Technetium-99	pCi/L	140,000		Q
GW-274	04/21/09	Gross Beta	pCi/L	3.4		Q
GW-505	04/20/09	Uranium	mg/L	0.0629		Q
GW-562	07/19/12	Gross Beta	pCi/L	27.5		Q
GW-615	09/15/10	Uranium	mg/L	0.0958		Q
GW-633	04/28/09	Gross Beta	pCi/L	1.7		Q
GW-725	02/25/09	Nitrate Nitrogen	mg/L	0.315		Q
GW-726-06	05/04/09	Gross Alpha	pCi/L	41		Q

Results shown in bold typeface are higher than historical measurements.

Table A.1. Data summary of mapped organic contaminants

Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)											
		Top	Bottom	First	Last		PCE	NA	NA	e12DCE	NA	NA	11DCE	VC	NA	NA	CTET	
1090	UNCS		96.7	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
55-1A	GRIDB2	11.3	19.3	04/14/08	04/14/08	1	0	0	0	0	0	0	0	0	0	0	0	
55-2A	GRIDB3	6.1	14.1	04/17/08	04/27/11	3	223	110	293	7	5	0	0	0	0	0	0	
55-2B	GRIDB3	19.6	27.6	04/16/08	10/22/12	5	436	190	446	12	12	0	0	0	0	0	0	
55-2C	GRIDB3	67.9	75.9	04/16/08	10/23/12	5	288	160	478	14	11	0	0	0	0	0	0	
55-3A	B9201-5	6.3	14.3	04/21/08	11/08/12	10	16,670	1,565	1,245	29	43	0	0	0	0	0	0	
55-3B	B9201-5	30.1	38.1	04/21/08	11/05/12	9	57,333	6,911	1,591	187	349	0	0	0	0	0	0	
55-3C	B9201-5	69.5	77.5	04/21/08	11/05/12	9	7,656	1,344	1,291	35	126	0	0	0	0	0	0	
55-6A	B9103	4.9	12.9	04/21/08	04/21/08	1	0	0	0	0	0	0	0	0	0	0	0	
56-1A	Y12	11	19	04/24/08	11/01/12	5	0	0	0	0	0	0	0	0	0	0	0	
56-1C	Y12	67.3	75.3	04/28/08	11/01/12	5	0	0	0	0	0	0	0	0	0	0	0	
56-2A	GRIDC3	7.1	15.1	04/23/08	11/08/12	6	9	2	2	0	0	0	0	0	0	0	0	
56-2B	GRIDC3	30.8	38.8	04/23/08	10/24/12	5	994	66	82	1	0	0	0	0	0	0	0	
56-2C	GRIDC3	69.3	77.3	04/23/08	10/25/12	5	193	263	1,124	17	63	0	0	0	0	0	0	
56-3A	Y12	9.8	17.8	05/01/08	11/05/12	5	28	4	5	0	0	0	0	0	0	0	0	
56-3B	Y12	25.4	33.4	05/01/08	10/30/12	5	85	8	10	0	0	0	0	0	0	0	0	
56-3C	Y12	47.5	55.5	05/01/08	11/05/12	5	390	30	54	1	0	0	0	0	0	0	0	
56-4A	Y12	4.1	12.1	04/30/08	11/05/12	5	2	0	0	0	0	0	0	0	0	0	0	
56-6A	Y12	13	21	04/29/08	05/02/12	3	0	0	0	0	0	0	0	0	0	0	0	
60-1A	Y12	15.2	23.2	12/15/08	04/10/12	3	0	0	0	0	0	0	0	0	0	0	0	
GW-006	OLF	15.3	46.8	03/12/08	09/11/12	4	1	3	4	0	0	0	0	0	0	0	0	
GW-008	OLF	13	25.5	01/02/08	07/11/12	10	40	10	24	6	0	0	0	0	0	0	0	
GW-014	BG	5	13.2	09/17/08	08/01/12	5	25	180	1,086	69	194	0	0	0	0	0	0	
GW-046	BG	5	20.3	01/03/08	07/11/12	10	945	787	2,743	59	347	0	0	0	0	0	0	
GW-053	BG	11.4	32.8	03/03/09	02/09/11	2	0	2	9	0	0	0	0	0	0	0	0	
GW-058	BG	38.8	44.2	01/23/08	01/26/11	5	0	0	0	0	0	0	0	0	0	0	0	
GW-065	OLF	24.5	34	03/03/08	01/19/12	7	0	2	0	0	0	0	0	0	0	0	0	
GW-068	BG	70	83.6	09/16/08	02/09/11	4	4	88	1,900	240	370	0	0	0	0	0	0	
GW-071	BG	195.1	219	03/25/08	08/22/11	8	421	54	28	70	2	0	0	0	0	0	0	
GW-077	BG	87.4	100.3	02/26/08	08/16/12	10	0	0	0	0	0	0	0	0	0	0	0	
GW-078	BG	11.7	21.1	02/21/08	08/16/12	10	0	0	0	0	0	0	0	0	0	0	0	

Table A.1. Data summary of mapped organic contaminants

Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)							
		Top	Bottom	First	Last		PCE	TCE	c12DCE	11DCE	VC	CTET		
GW-079	BG	49.9	64.9	02/21/08	07/23/12	10	0	0	0	0	0	0	0	0
GW-080	BG	20.8	29.7	02/21/08	07/23/12	10	0	0	0	0	0	0	0	0
GW-082	BG	24.1	34.4	09/25/08	01/24/12	5	2	3	526	8	162	0	0	0
GW-085	OLF	48.4	58.8	03/13/08	08/06/12	4	0	0	0	0	0	0	0	0
GW-089	BG	20	25	09/24/08	09/24/08	1	2	0	0	0	0	0	0	0
GW-098	OLF	76.6	104	03/11/08	08/06/12	5	0	6	2	1	0	0	0	0
GW-100	S3	3.8	20.7	02/19/09	08/07/12	4	0	0	0	0	0	0	0	0
GW-101	S3	10.1	17.5	02/19/09	08/07/12	4	0	0	0	0	0	0	0	0
GW-105	S3	9.5	17	05/14/08	05/14/08	1	0	0	0	0	0	0	0	0
GW-106	S3	53.3	75	05/14/08	10/19/10	2	0	0	0	0	0	0	0	0
GW-108	S3	41	58.6	01/07/08	07/19/12	10	8	4	0	1	0	0	0	0
GW-109	S3	96.6	128.5	06/10/08	10/31/12	4	85	2	0	0	0	0	0	0
GW-122	S3	92	142	03/11/08	08/08/11	3	0	0	0	0	0	0	0	0
GW-127	S3	14	24	02/17/09	08/08/11	2	0	0	0	0	0	0	0	0
GW-141	LIV	141	156	01/24/08	07/30/12	10	0	0	0	0	0	0	0	0
GW-148	NHP	4.6	11.1	08/19/08	10/31/12	3	0	0	55	0	3	0	0	0
GW-151	NHP	85	96.5	02/26/08	07/31/12	10	713	122	68	2	0	1,125	0	0
GW-153	NHP	45	60	08/20/08	01/31/12	5	1	0	0	0	0	0	81	0
GW-154	NHP	4.7	11.2	02/27/08	08/01/12	10	0	0	0	0	0	0	0	0
GW-156	CRSDB	145	157.6	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-159	CRSDB	145	157	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-161	ECRWP	350	400	01/07/08	07/10/12	10	0	0	0	0	0	0	0	0
GW-173	CRSP	154	165	04/14/08	11/13/08	2	5	0	0	0	0	0	0	0
GW-174	CRSP	134	145	10/13/09	08/09/11	2	0	0	0	0	0	0	0	0
GW-175	CRSP	148.3	166.7	11/11/08	08/10/11	4	3	0	0	0	0	0	0	0
GW-176	CRSP	134	145	10/13/09	08/09/11	2	0	0	0	23	0	0	0	0
GW-177	CRSP	130	145	01/09/08	07/18/12	10	0	0	0	5	0	0	0	0
GW-178	CRSP	117.5	133	11/11/08	11/11/08	1	0	0	0	5	0	0	0	0
GW-179	CRSP	106	117	04/19/12	04/19/12	1	0	0	0	12	0	0	0	0
GW-180	CRSP	126	144	10/13/09	08/09/11	2	9	0	1	0	0	0	0	0
GW-190	B4	8	26.2	05/07/08	05/07/08	1	0	0	0	0	0	0	0	0

Table A.1. Data summary of mapped organic contaminants

Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)							
		Top	Bottom	First	Last		PCE	TCE	c12DCE	11DCE	VC	CTET		
GW-192	B4	6.5	17.5	05/05/08	05/05/08	1	1	3	22	0	0	0	0	0
GW-193	T2331	5.5	18.45	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-203	UNCS	144	156	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-204	T0134	6.5	17.3	10/27/08	07/31/12	3	0	0	0	0	0	0	0	0
GW-205	UNCS	152	164	10/15/09	07/25/12	7	0	0	0	0	0	0	0	0
GW-217	LIV	165.2	180	01/22/08	07/25/12	10	0	1	0	0	0	0	0	0
GW-219	UOV	4.3	11.3	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-220	NHP	31	45.2	03/24/08	08/20/12	11	405	108	60	1	0	825	0	0
GW-221	UNCS	146	158	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-222	NHP	18	25	04/30/09	04/30/09	1	13	2	5	0	0	0	0	0
GW-223	NHP	79	90.5	02/27/08	08/01/12	10	51	21	54	0	4	0	0	0
GW-225	OLF	150	200	01/28/08	08/22/12	6	0	253	2	3	0	3	0	3
GW-226	OLF	45	55	02/04/08	07/29/08	2	1	138	5	1	0	2	0	0
GW-227	OLF	30	40	02/05/08	02/05/08	1	0	23	3	0	0	0	0	0
GW-229	OLF	40	55	02/06/08	08/21/12	7	0	5	253	33	47	0	0	0
GW-236	S3	10	18.5	02/23/09	08/04/11	2	0	0	0	0	0	0	0	0
GW-240	NHP	21	29.5	08/19/08	01/31/12	5	0	0	0	0	0	3	0	3
GW-242	BG	9	17	03/05/09	08/24/11	2	3	1	45	0	18	0	0	0
GW-246	S3	34.2	76	03/12/08	01/23/12	8	121	1	0	3	0	0	0	0
GW-251	S2	35	51	05/15/08	07/31/12	5	187	82	8	0	0	0	0	0
GW-253	S2	36.2	50	02/26/08	02/09/12	5	695	572	247	5	92	28	0	0
GW-257	BG	19	33.7	09/23/08	09/23/08	1	180	0	0	0	0	0	0	0
GW-259	BG	21.1	33.5	03/10/08	09/23/08	2	380	10	5	0	0	0	0	0
GW-265	SY	15.5	23.1	05/07/08	11/27/12	3	15	4	4	0	0	0	0	0
GW-268	SY	26.5	35	04/27/11	11/26/12	2	0	0	8	4	1	0	0	0
GW-269	SY	21.9	30	05/12/08	11/26/12	5	20	4	53	143	1	0	0	0
GW-270	SY	11	18.5	04/28/09	04/25/11	2	0	0	0	0	0	0	0	0
GW-272	SY	8.8	16.2	04/21/09	04/19/11	2	0	0	0	0	0	0	0	0
GW-274	SY	25.8	35	05/08/08	11/26/12	5	1,400	10	37	0	4	0	0	0
GW-275	SY	53.3	65.5	05/08/08	11/26/12	5	0	0	0	0	0	0	0	0
GW-276	S3	11.3	18.5	01/03/08	07/16/12	10	5	0	0	0	0	0	0	0

Table A.1. Data summary of mapped organic contaminants

Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)							
		Top	Bottom	First	Last		PCE	TCE	c12DCE	11DCE	VC	CTET		
GW-281	FF	4	15	05/08/08	05/23/12	5	0	0	0	0	0	0	0	0
GW-289	BG	28.9	40.8	09/24/08	01/24/12	5	454	17	5	1	0	0	0	0
GW-291	BG	6.7	14.2	08/24/10	08/24/10	1	220	23	62	0	0	0	0	0
GW-294	ECRWP	113	128	01/08/08	07/10/12	10	0	0	0	0	0	0	0	0
GW-296	ECRWP	134.4	147	01/08/08	07/09/12	10	0	0	0	0	0	0	0	0
GW-298	CRBAWP	171.1	190	01/08/08	07/17/12	11	0	0	0	0	0	0	0	0
GW-301	CRBAWP	148.5	163.5	01/09/08	07/17/12	10	0	0	0	0	0	0	0	0
GW-305	LIV	165.3	179.6	01/28/08	10/10/12	18	0	0	0	7	0	0	0	0
GW-306	RS	46.2	58.5	03/06/08	07/31/08	2	1	29	2	0	0	0	0	0
GW-307	RS	28.7	41.6	02/10/09	08/20/12	4	0	12	3	0	0	0	0	0
GW-309	RS	25	38	03/05/08	07/30/08	2	0	0	0	0	0	0	0	0
GW-310	RS	19.5	27.1	02/14/08	01/25/12	3	1	11	0	0	0	0	0	0
GW-312	RS	29.6	41	02/19/08	01/26/12	3	0	28	0	0	0	0	0	0
GW-314	SPI	101	115	03/24/08	08/04/08	2	8	2	0	0	0	0	0	0
GW-315	SPI	90	104	02/19/08	08/27/12	5	3	1	0	0	0	0	0	0
GW-322	CRSP	128	193	11/12/08	04/19/12	6	4	0	0	48	0	0	0	0
GW-332	WCPA	16.8	24.1	05/12/08	07/23/12	5	664	162	676	21	11	0	0	0
GW-336	WCPA	13.2	21.4	05/13/08	05/13/08	1	250	210	990	60	23	2	0	0
GW-337	WCPA	15	22.1	05/13/08	07/24/12	5	432	420	1,480	58	18	0	0	0
GW-363	OLF	50	75	02/21/08	11/15/12	16	0	0	0	0	0	0	0	0
GW-365	OLF	126.7	150	01/28/08	08/23/12	5	0	6	33	12	4	0	0	0
GW-367	OLF	125	151.4	02/25/08	07/30/08	2	0	13	0	0	0	0	0	0
GW-369	OLF	115.8	150.2	03/05/08	03/05/08	1	0	33	0	0	0	0	0	0
GW-380	NHP	2.8	15.5	02/28/08	07/31/12	10	0	0	0	0	0	0	0	0
GW-381	NHP	49.3	60.4	08/21/08	02/01/12	5	4	0	4	0	0	0	1,391	0
GW-382	NHP	125	173	02/28/08	08/06/12	10	25	4	5	0	0	0	451	0
GW-383	NHP	16.6	23.6	08/18/08	02/01/12	6	265	147	262	4	4	0	0	0
GW-505	RG	1.5	13.5	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-508	RG	1.3	15	05/13/08	10/18/11	4	0	0	0	0	0	0	0	0
GW-514	FCAP	174	195	11/18/08	04/23/12	3	0	0	0	0	0	0	0	0
GW-521	LIV	123.2	136	01/28/08	07/24/12	10	0	0	0	0	0	0	0	0

Table A.1. Data summary of mapped organic contaminants

Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)							
		Top	Bottom	First	Last		PCE	TCE	c12DCE	11DCE	VC	CTET		
GW-522	LIV	183	195.3	01/23/08	07/25/12	10	0	0	0	0	0	0	0	0
GW-526	S3	101	123	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
GW-531	LD	22	38.5	08/05/08	08/05/08	1	0	0	0	0	0	0	0	0
GW-537	OLF	4.8	23.3	08/05/08	08/05/08	1	0	0	0	0	0	0	0	0
GW-540	LII	158.5	171.5	01/29/08	07/26/12	10	0	0	0	0	0	0	0	0
GW-601	OLF	318.5	356	03/02/09	09/10/12	4	2	68	0	0	0	0	0	0
GW-605	EXP-I	28.2	39.9	01/07/08	07/17/12	10	94	95	143	1	1	66		
GW-606	EXP-I	155	171	01/07/08	07/17/12	10	5	0	0	0	0	0	36	
GW-608	CRSP	148	220	11/17/08	04/23/12	3	0	0	0	1	0	0	0	
GW-609	CRSP	256.4	269	11/17/08	04/23/12	3	0	0	0	0	0	0	0	
GW-612	CRSP	230.6	254	11/12/08	11/12/08	1	2	0	0	26	0	0	0	
GW-615	S3	222.5	245	08/11/08	09/12/12	5	0	0	0	0	0	0	0	
GW-616	S3	219.1	269	08/11/08	01/10/12	3	0	0	0	0	0	0	0	
GW-617	EXP-E	6.8	18	10/20/08	10/20/08	1	0	0	0	0	0	0	0	
GW-618	EXP-E	26	37	03/04/08	02/09/12	5	2	5	10	0	0	0	0	
GW-619	FTF	26.8	40.8	12/01/08	11/05/12	3	21	8	6	0	0	0	0	
GW-620	FTF	61.7	75	12/10/08	11/05/12	3	1	0	0	0	0	0	0	
GW-623	BG	238.1	274.2	03/18/08	09/12/12	6	6,423	4,937	262	126	69	0	0	
GW-626	BG	63	78	02/26/08	09/13/12	6	373	353	5,273	72	1,254	0	0	
GW-627	BG	254	270	03/18/08	09/13/12	10	862	278	43	46	60	0	0	
GW-629	BG	262.3	312	03/18/08	09/09/09	5	88,800	14,120	123	1,344	80	0	0	
GW-633	RG	3.5	15	06/11/08	08/08/12	5	206	5	10	1	0	0	0	
GW-639	BG	95.5	125.5	02/21/08	11/15/12	16	0	0	0	0	0	0	0	
GW-648	RS	65	80.1	02/09/09	02/16/12	5	0	0	0	0	0	0	0	
GW-653	BG	26.3	39	09/25/08	08/21/12	5	9	12	91	3	0	0	0	
GW-656	T0134	8.3	21.5	10/28/08	02/15/12	5	33	1,880	133	138	3	0	0	
GW-658	FF	6.9	19.1	05/06/08	05/21/12	5	0	0	0	0	0	0	0	
GW-683	EXP-A	133.9	196.8	02/25/08	07/26/12	10	0	0	0	0	0	0	0	
GW-684	EXP-A	106.4	129.6	02/25/08	07/23/12	10	0	0	0	0	0	0	0	
GW-686	CPT	4	16	10/22/08	07/25/12	4	0	1	14	0	0	0	0	
GW-690	CPT	40.8	52.8	10/23/08	07/25/12	5	90	3	4	0	0	0	0	

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		Top	Bottom	First	Last		PCE	TCE	c12DCE	11DCE	VC	CTET
GW-691	CPT	8	20	10/23/08	07/26/12	9	186	1	1	0	0	0
GW-692	CPT	41	53	10/21/08	07/26/12	5	4	4	30	0	1	0
GW-694	EXP-B	153	204.5	01/23/08	01/23/08	1	0	3	0	0	0	0
GW-698	B8110	63	75	06/24/08	07/30/12	10	102	339	42	0	0	2
GW-700	B8110	19	31	10/20/08	02/06/12	5	39	10	67	0	0	0
GW-703	EXP-B	133.8	182	01/23/08	09/17/12	5	0	10	8	0	0	0
GW-704	EXP-B	244.5	256	02/25/08	07/30/12	10	0	25	5	2	0	0
GW-706	EXP-B	156.1	182.5	02/26/08	07/30/12	10	0	12	23	3	0	0
GW-724	EXP-C	289.6	301.6	02/28/08	07/17/12	10	3	77	1	0	0	0
GW-725	EXP-C	132.5	142.5	02/28/08	07/16/12	10	1	9	0	0	0	0
GW-731	CRSDB	164	178.7	07/15/08	07/17/12	5	NA	NA	NA	NA	NA	NA
GW-732	CRSDB	178.3	190	07/14/08	07/17/12	5	NA	NA	NA	NA	NA	NA
GW-733	EXP-J	240.1	256.5	01/03/08	07/16/12	10	0	0	0	0	0	5
GW-735	EXP-J	67.5	79.2	08/26/09	08/01/11	2	0	0	0	0	0	0
GW-738	EXP-C	63.5	88	02/12/08	09/19/12	5	0	16	0	0	0	0
GW-740	EXP-C	165.6	190	02/12/08	09/19/12	7	0	40	1	0	0	0
GW-744	GRIDK1	55	69.5	08/13/08	02/16/12	5	0	0	0	0	0	0
GW-747	GRIDK2	67.4	79.6	08/14/08	02/20/12	5	0	0	0	0	0	0
GW-748	GRIDK2	14.8	27.2	08/14/08	02/21/12	3	0	0	0	0	0	0
GW-750	EXP-J	61.2	72.7	04/29/09	08/01/11	2	0	0	0	0	0	0
GW-762	GRIDJ3	46.4	58.7	02/27/08	08/02/12	10	2,345	194	58	48	5	0
GW-763	GRIDJ3	4	16	08/18/08	02/20/12	5	0	0	4	0	1	0
GW-765	GRIDE1	19.9	32.4	05/07/09	10/25/11	2	0	0	0	0	0	0
GW-769	GRIDG3	48.2	60.3	06/04/08	11/20/12	10	18	4	4	1	0	144
GW-770	GRIDG3	7.5	19	06/04/08	04/17/12	6	0	0	0	0	0	34
GW-775	GRIDH3	45	56.4	08/27/09	02/10/11	2	0	4	0	0	0	0
GW-776	GRIDH3	10.6	23	09/01/09	02/23/11	2	0	1	0	0	0	0
GW-779	GRIDE2	50.7	62.9	08/31/09	05/17/11	2	0	0	0	0	0	0
GW-781	GRIDE3	56	69.3	12/18/08	02/22/12	5	0	0	0	0	0	0
GW-782	GRIDE3	23.8	35.9	12/10/08	02/22/12	5	34	16	11	9	0	3
GW-783	GRIDE3	3.6	16.3	12/15/08	02/22/12	5	5	2	3	0	0	0

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Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)						
		Top	Bottom	First	Last		PCE	TCE	c12DCE	11DCE	VC	CTET	
GW-791	GRIDD2	57.5	70.6	10/27/08	02/23/12	5	105	3	1	0	0	0	0
GW-792	GRIDD2	17	29	10/28/08	02/23/12	3	4	1	0	0	0	0	0
GW-796	LV	122.9	136.5	01/23/08	07/23/12	10	0	0	0	0	0	0	0
GW-797	LV	118	134.1	01/24/08	07/23/12	10	0	0	0	0	0	0	0
GW-798	CDLVII	122	135.4	01/30/08	07/23/12	10	9	0	8	4	0	0	0
GW-802	FF	13.3	26.5	05/07/08	05/23/12	5	0	0	0	0	0	0	0
GW-816	EXP-SR	2.9	15.8	08/13/08	02/21/12	5	0	0	0	0	0	0	0
GW-820	B9201-2	.	17.3	05/21/08	11/21/12	6	2,610	608	1,083	5	63	0	0
GW-829	OLF	102.9	114.6	08/04/08	08/04/08	1	0	0	0	0	0	0	0
GW-832	NHP	4	11.8	02/28/08	07/31/12	10	6	1	1	0	0	0	9
GW-845 (EEVOC)	NHP	156.9	438.3	01/29/08	12/10/12	53	26	4	3	0	0	0	173
GW-916	EMW/MF	13	36	02/13/08	11/19/12	16	0	0	0	0	0	0	0
GW-917	EMW/MF	18	51	02/11/08	11/13/12	16	0	0	0	0	0	0	0
GW-918	EMW/MF	18	33	02/14/08	11/26/12	16	0	0	0	0	0	0	0
GW-920	EMW/MF	22	55	02/12/08	11/13/12	16	0	0	0	0	0	0	0
GW-921	EMW/MF	16	50	02/12/08	11/13/12	16	0	0	0	0	0	0	0
GW-922	EMW/MF	23	46	02/12/08	11/13/12	16	0	0	0	0	0	0	0
GW-923	EMW/MF	36	75	02/19/08	08/08/12	14	0	0	0	0	0	0	0
GW-924	EMW/MF	21	54	02/19/08	11/27/12	16	0	0	0	0	0	0	0
GW-925	EMW/MF	92	148	02/14/08	11/14/12	16	0	0	0	0	0	0	0
GW-926	EMW/MF	103	145	02/19/08	11/15/12	16	0	0	0	0	0	0	0
GW-927	EMW/MF	57	92	02/11/08	11/15/12	16	0	0	0	0	0	0	0
GW-928	GRIDC1	31.2	44	03/08/10	04/18/12	5	0	0	0	0	0	0	0
GW-929	GRIDC1	15	28.6	03/08/10	04/18/12	5	0	0	0	0	0	0	0
GW-930	GRIDD1	28	41.5	03/09/10	04/24/12	6	1	0	0	0	0	0	1
GW-931	GRIDD1	6	19.8	03/09/10	04/24/12	5	0	0	0	0	0	0	0
GW-959	B9201-2	2.4	9.0	05/06/09	10/31/11	2	0	0	6	0	0	0	0
GW-960	GRIDF2	12.2	25.4	05/15/08	05/17/11	4	0	0	0	0	0	0	0
GW-961	EMW/MF	3.4	25.5	02/17/10	11/14/12	12	0	0	0	0	0	0	0
GW-964	EMW/MF	7.9	31.9	08/25/11	11/27/12	6	0	0	0	0	0	0	0
GW-965	EMW/MF	47.5	72.0	08/25/11	11/28/12	6	0	0	0	0	0	0	0

Table A.1. Data summary of mapped organic contaminants

Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)					
		Top	Bottom	First	Last		PCE	TCE	e12DCE	11DCE	VC	CTET
Westbay™ Wells												
GW-134 (WB)	S3	41	740	05/25/11	06/08/11	1	14	7	4	0	0	0
GW-134-36	S3	41	.	05/25/11	05/25/11	1	0	0	0	0	0	0
GW-134-35	S3	81	.	06/02/11	06/02/11	1	14	7	4	0	0	0
GW-134-33	S3	106	.	05/26/11	05/26/11	1	7	3	0	0	0	0
GW-134-21	S3	371	.	06/02/11	06/02/11	1	0	0	0	0	0	0
GW-134-18	S3	426	.	06/08/11	06/08/11	1	0	0	0	0	0	0
GW-134-15	S3	486	.	06/07/11	06/07/11	1	0	0	0	0	0	0
GW-134-11	S3	578	.	06/07/11	06/07/11	1	0	0	0	0	0	0
GW-134-05	S3	740	.	06/02/11	06/02/11	1	0	0	0	0	0	0
GW-722 (WB)	EXP-J	87	425	02/28/08	07/18/12	10	7	2	0	0	0	38
GW-722-33	EXP-J	87	.	02/07/08	09/20/12	5	0	0	0	0	0	0
GW-722-22	EXP-J	313	.	03/06/08	09/19/12	5	3	2	0	0	0	18
GW-722-20	EXP-J	333	.	02/28/08	07/16/12	10	7	1	0	0	0	38
GW-722-17	EXP-J	385	.	02/28/08	07/16/12	10	4	1	0	0	0	29
GW-722-14	EXP-J	425	.	02/28/08	07/18/12	10	2	1	0	0	0	18
GW-726 (WB)		130	546	05/04/09	05/06/09	1	0	0	0	0	0	0
GW-726-23	BG	130	.	05/06/09	05/06/09	1	0	0	0	0	0	0
GW-726-20	BG	200	.	05/06/09	05/06/09	1	0	0	0	0	0	0
GW-726-16	BG	291	.	05/06/09	05/06/09	1	0	0	0	0	0	0
GW-726-12	BG	376	.	05/05/09	05/05/09	1	0	0	0	0	0	0
GW-726-09	BG	441	.	05/05/09	05/05/09	1	0	0	0	0	0	0
GW-726-06	BG	511	.	05/04/09	05/04/09	1	0	0	0	0	0	0
GW-726-04	BG	546	.	05/04/09	05/04/09	1	0	0	0	0	0	0
GW-729 (WB)		320	1016	06/13/11	06/29/11	1	0	13	0	0	0	0
GW-729-44	BG	320	.	06/29/11	06/29/11	1	0	13	0	0	0	0
GW-729-39	BG	481	.	06/27/11	06/27/11	1	0	4	0	0	0	0
GW-729-34	BG	603	.	06/28/11	06/28/11	1	0	0	0	0	0	0
GW-729-30	BG	710	.	06/27/11	06/27/11	1	0	0	0	0	0	0
GW-729-26	BG	802	.	06/23/11	06/23/11	1	0	0	0	0	0	0
GW-729-22	BG	921	.	06/23/11	06/23/11	1	0	0	0	0	0	0
GW-729-18	BG	1016	.	06/13/11	06/13/11	1	0	0	0	0	0	0

Table A.1. Data summary of mapped organic contaminants

Sampling Point	Location	Monitored Interval		Date Range		No. of Samples	Average CY 08-12 Concentration (ug/L)					
		Top	Bottom	First	Last		PCE	TCE	e12DCE	11DCE	VC	CTET
Westbay™ Wells												
GW-934 (WB)	NHP	72	379	08/10/10	04/16/12	2	1,565	78	64	15	0	3,300
GW-934-12	NHP	72	.	08/16/10	04/11/12	2	2	1	3	0	0	303
GW-934-11	NHP	194	.	08/17/10	04/11/12	2	39	8	10	3	0	565
GW-934-09	NHP	229	.	08/12/10	04/12/12	2	300	45	36	8	0	2,750
GW-934-07	NHP	259	.	08/11/10	04/12/12	2	460	56	41	11	0	3,250
GW-934-05	NHP	294	.	08/11/10	04/11/12	2	40	10	12	3	0	465
GW-934-04	NHP	319	.	08/11/10	04/11/12	2	22	8	7	1	0	600
GW-934-02	NHP	359	.	08/11/10	04/12/12	2	90	14	15	4	0	745
GW-934-01	NHP	379	.	08/10/10	04/16/12	2	1,565	78	64	15	0	3,300
Sumps												
Sump A	B9201-5	.	.	11/08/12	11/08/12	1	0	0	0	0	0	0
Sump E	B9201-5	.	.	11/08/12	11/08/12	1	0	0	0	0	0	0
LRS	NHP	.	.	08/27/12	08/27/12	1	0	0	0	0	0	0
Springs												
SP-17	EXP-SW	.	.	08/03/09	01/24/11	2	0	0	0	0	0	0
SS-4	EXP-SW	.	.	01/14/08	01/12/12	5	0	3	4	1	0	0
SS-5	EXP-SW	.	.	01/14/08	01/12/12	8	0	0	1	0	0	0

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Location	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)					
		Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99	
1090	UNCS	.	96.7	03/03/08	07/30/12	10	10	NS	1	0	0	0	0	NA
55-1A	GRIDB2	11.3	19.3	04/14/08	04/14/08	1	1	NS	7	0	0	0	0	NA
55-2A	GRIDB3	6.1	14.1	04/17/08	04/27/11	3	2	1	214	0.0028	0	5	12	
55-2B	GRIDB3	19.6	27.6	04/16/08	10/22/12	5	4	1	297	0	0	23	47	
55-2C	GRIDB3	67.9	75.9	04/16/08	10/23/12	5	3	1	267	0.0002	0	11	0	
55-3A	B9201-5	6.3	14.3	04/21/08	11/08/12	8	8	3	2	0.0006	1	3	0	
55-3B	B9201-5	30.1	38.1	04/21/08	10/17/11	7	7	2	0	0	0	13	0	
55-3C	B9201-5	69.5	77.5	04/21/08	10/18/11	7	7	2	0	0	1	4	0	
55-6A	B9103	4.9	12.9	04/21/08	04/21/08	1	1	NS	2	0.0010	0	0	NA	
56-1A	Y12	11	19	04/24/08	11/01/12	5	5	NS	0	0.0023	2	3	NA	
56-1C	Y12	67.3	75.3	04/28/08	11/01/12	5	5	NS	0	0	4	2	NA	
56-2A	GRIDC3	7.1	15.1	04/23/08	11/08/12	4	4	1	0	0	3	0	0	
56-2B	GRIDC3	30.8	38.8	04/23/08	10/24/12	3	3	NS	1	0	3	0	NA	
56-2C	GRIDC3	69.3	77.3	04/23/08	05/05/11	2	2	NS	0	0	0	0	NA	
56-3A	Y12	9.8	17.8	05/01/08	03/03/10	3	3	NS	0	0.0005	0	0	NA	
56-3B	Y12	25.4	33.4	05/01/08	10/30/12	5	5	NS	1	0.0005	2	0	NA	
56-3C	Y12	47.5	55.5	05/01/08	03/03/10	3	3	NS	1	0.0002	0	0	NA	
56-4A	Y12	4.1	12.1	04/30/08	04/28/11	4	4	NS	1	0	0	0	NA	
56-6A	Y12	13	21	04/29/08	05/02/12	3	3	NS	0	0	2	3	NA	
60-1A	Y12	15.2	23.2	12/15/08	04/10/12	3	3	NS	0	0	0	0	NA	
GW-006	OLF	15.3	46.8	03/12/08	07/29/08	2	2	NS	3	0	4	0	NA	
GW-008	OLF	13	25.5	01/02/08	07/11/12	10	10	NS	0	0	0	0	NA	
GW-014	BG	5	13.2	09/17/08	08/01/12	3	3	NS	0	0.0013	1	3	NA	
GW-046	BG	5	20.3	01/03/08	07/11/12	10	10	10	0	0	0	2	0	
GW-053	BG	11.4	32.8	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	
GW-058	BG	38.8	44.2	01/23/08	01/26/11	5	5	1	9	0.0384	22	35	17	
GW-065	OLF	24.5	34	03/03/08	01/19/12	7	7	NS	0	0.0092	7	4	NA	
GW-068	BG	70	83.6	09/16/08	08/23/10	3	3	NS	0	0	5	13	NA	
GW-071	BG	195.1	219	03/25/08	08/22/11	8	2	NS	0	0	5	0	NA	
GW-077	BG	87.4	100.3	02/26/08	08/16/12	10	NS	NS	0	0	NA	NA	NA	
GW-078	BG	11.7	21.1	02/21/08	08/16/12	10	NS	NS	0	0	NA	NA	NA	

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)				
	Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99
GW-079	49.9	64.9	02/21/08	07/23/12	10	NS	NS	0	0	NA	NA	NA
GW-080	20.8	29.7	02/21/08	07/23/12	10	NS	NS	0	0	NA	NA	NA
GW-082	24.1	34.4	09/25/08	09/25/08	1	1	NS	0	0	0	0	NA
GW-085	48.4	58.8	03/13/08	08/06/12	6	6	2	57	0	1	26	79
GW-089	20	25	09/24/08	09/24/08	1	1	NS	0	0	0	0	NA
GW-098	76.6	104	03/11/08	08/06/12	3	3	NS	0	0.0018	4	5	NA
GW-100	3.8	20.7	02/19/09	08/07/12	4	4	1	22	0.0016	1	3	0
GW-101	10.1	17.5	02/19/09	08/07/12	4	4	1	9	0.0033	1	2	0
GW-105	9.5	17	05/14/08	05/14/08	1	1	NS	635	0.0010	0	0	NA
GW-106	53.3	75	05/14/08	10/31/12	3	2	1	661	0.0017	0	12	0
GW-108	41	58.6	01/07/08	07/19/12	10	10	10	6,451	0.0133	138	13,872	34,660
GW-109	96.6	128.5	06/10/08	10/31/12	4	4	3	8,980	0.0156	0	1,483	4,583
GW-122	92	142	03/11/08	08/08/11	3	3	1	243	0.0021	0	19	0
GW-127	14	24	02/17/09	08/08/11	2	2	1	0	0.0362	18	8	0
GW-141	141	156	01/24/08	07/30/12	10	10	NS	0	0	0	1	NA
GW-148	4.6	11.1	08/19/08	03/08/10	2	2	NS	0	0.0010	2	0	NA
GW-151	85	96.5	02/26/08	07/31/12	10	10	NS	1	0	0	1	NA
GW-153	45	60	08/20/08	01/31/12	3	3	NS	1	0.0012	0	2	NA
GW-154	4.7	11.2	02/27/08	08/01/12	10	10	NS	0	0.4120	342	82	NA
GW-156	145	157.6	07/14/08	07/18/12	5	NS	NS	0	0	NA	NA	NA
GW-159	145	157	07/14/08	07/18/12	5	NS	NS	0	0	NA	NA	NA
GW-161	350	400	01/07/08	07/10/12	10	10	NS	0	0	0	NA	NA
GW-173	154	165	04/14/08	11/13/08	2	2	NS	1	0	0	0	NA
GW-174	134	145	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-175	148.3	166.7	11/11/08	11/11/08	1	1	NS	0	0	0	0	NA
GW-176	134	145	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-177	130	145	01/09/08	07/18/12	10	10	NS	0	0	1	2	NA
GW-178	117.5	133	11/11/08	11/11/08	1	1	NS	0	0	0	0	NA
GW-179	106	117	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-180	126	144	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-190	8	26.2	05/07/08	05/07/08	1	1	NS	0	0	6	7	NA

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Location	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)				
		Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99
GW-192	B4	6.5	17.5	05/05/08	05/05/08	1	1	NS	0	0	0	8	NA
GW-193	T2331	5.5	18.45	01/03/08	07/19/12	NS	NS	10	NA	NA	NA	NA	0
GW-203	UNCS	144	156	02/28/08	08/16/12	10	10	NS	1	0	0	0	NA
GW-204	T0134	6.5	17.3	10/27/08	07/31/12	5	5	NS	0	0.0411	34	3	NA
GW-205	UNCS	152	164	03/03/08	08/16/12	10	10	10	0	0	0	37	0
GW-217	LIV	165.2	180	01/22/08	07/25/12	10	10	NS	0	0	0	1	NA
GW-219	UOV	4.3	11.3	05/11/09	11/20/12	3	3	NS	0	0.556	180	84	NA
GW-220	NHP	31	45.2	03/24/08	12/02/08	4	4	NS	1	0	2	2	NA
GW-221	UNCS	146	158	02/28/08	08/16/12	10	10	NS	0	0	0	0	NA
GW-222	NHP	18	25	04/30/09	04/30/09	1	1	NS	0	0.228	70	21	NA
GW-223	NHP	79	90.5	02/27/08	08/01/12	10	10	NS	0	0.0417	12	9	NA
GW-225	OLF	150	200	01/28/08	08/22/12	5	4	1	40	0.0017	3	19	58
GW-226	OLF	45	55	02/04/08	07/29/08	2	2	NS	24	0.0104	8	15	NA
GW-227	OLF	30	40	02/05/08	02/05/08	1	1	NS	5	0.0549	33	28	NA
GW-229	OLF	40	55	02/06/08	08/21/12	7	7	1	0	0.1372	41	46	0
GW-236	S3	10	18.5	02/23/09	08/04/11	2	2	1	23	0.0068	2	26	23
GW-240	NHP	21	29.5	08/19/08	01/31/12	3	3	NS	1	0.0038	1	0	NA
GW-242	BG	9	17	03/05/09	03/05/09	1	1	NS	0	0.0007	5	12	NA
GW-246	S3	34.2	76	03/12/08	01/23/12	8	9	5	2,920	0.4984	239	10,789	30,000
GW-251	S2	35	51	05/15/08	07/31/12	5	3	NS	38	0.0015	8	3	NA
GW-253	S2	36.2	50	02/26/08	02/09/12	5	5	NS	588	0.0028	19	17	NA
GW-257	BG	19	33.7	09/23/08	09/23/08	1	1	NS	0	0	6	13	NA
GW-259	BG	21.1	33.5	03/10/08	09/23/08	2	2	NS	1	0	0	0	NA
GW-265	SY	15.5	23.1	05/07/08	04/25/11	2	2	1	0	0	0	4	0
GW-268	SY	26.5	35	04/27/11	11/26/12	2	2	1	0	0	0	0	0
GW-269	SY	21.9	30	05/12/08	04/19/11	2	2	1	1	0	2	5	0
GW-270	SY	11	18.5	04/28/09	04/25/11	2	2	1	104	0.0012	4	0	0
GW-272	SY	8.8	16.2	04/21/09	04/19/11	2	2	1	730	0.0061	0	7	0
GW-274	SY	25.8	35	05/08/08	11/26/12	5	5	4	1,467	0.0087	0	2,575	5,675
GW-275	SY	53.3	65.5	05/08/08	11/26/12	5	5	3	8,928	0.0003	42	70	4
GW-276	S3	11.3	18.5	01/03/08	07/16/12	11	10	10	11	0.3709	131	167	152

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)				
	Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99
GW-281	4	15	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-289	28.9	40.8	09/24/08	01/24/12	3	3	NS	0	0	2	6	NA
GW-291	6.7	14.2	08/24/10	08/24/10	1	1	NS	0	0	11	12	NA
GW-294	113	128	01/08/08	07/10/12	10	10	NS	2	0	0	NA	NA
GW-296	134.4	147	01/08/08	07/09/12	10	10	NS	0	0	0	NA	NA
GW-298	171.1	190	01/08/08	07/17/12	10	10	NS	0	0	0	NA	NA
GW-301	148.5	163.5	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-305	165.3	179.6	01/28/08	07/26/12	10	10	NS	0	0	0	1	NA
GW-306	46.2	58.5	03/06/08	07/31/08	2	2	2	3	0.0011	0	0	26
GW-307	28.7	41.6	02/10/09	09/20/10	2	2	NS	1	0.0018	0	4	NA
GW-309	25	38	03/05/08	07/30/08	2	2	2	0	0.0010	0	0	0
GW-310	19.5	27.1	02/14/08	01/25/12	3	2	1	4	0.0032	0	6	0
GW-312	29.6	41	02/19/08	09/21/10	2	2	NS	1	0.0013	3	0	NA
GW-314	101	115	03/24/08	08/04/08	2	2	NS	2	0.0013	0	10	NA
GW-315	90	104	02/19/08	08/27/12	3	3	1	5	0.0028	0	16	0
GW-322	128	193	11/12/08	11/12/08	1	1	NS	0	0	0	0	NA
GW-332	16.8	24.1	05/12/08	07/23/12	3	3	1	2	0	1	0	14
GW-336	13.2	21.4	05/13/08	05/13/08	1	1	NS	2	0	0	0	NA
GW-337	15	22.1	05/13/08	07/24/12	3	2	1	4	0.0004	0	4	0
GW-363	50	75	02/21/08	11/15/12	16	NS	16	0	0.0003	NA	NA	0
GW-365	126.7	150	01/28/08	08/23/12	3	3	NS	0	0.0009	0	0	NA
GW-367	125	151.4	02/25/08	07/30/08	2	2	NS	2	0.0019	4	3	NA
GW-369	115.8	150.2	03/05/08	03/05/08	1	1	NS	8	0	0	18	NA
GW-380	2.8	15.5	02/28/08	07/31/12	10	10	NS	2	0.0005	3	4	NA
GW-381	49.3	60.4	08/21/08	02/01/12	2	2	NS	0	0	0	0	NA
GW-382	125	173	02/28/08	08/06/12	10	10	NS	0	0	0	2	NA
GW-383	16.6	23.6	08/18/08	02/01/12	2	2	NS	0	0	0	0	NA
GW-505	1.5	13.5	04/20/09	10/18/11	2	2	1	0	0.0265	48	9	0
GW-508	1.3	15	05/13/08	12/22/08	2	2	NS	0	0	0	0	NA
GW-514	174	195	11/18/08	04/07/10	2	2	NS	0	0	0	0	NA
GW-521	123.2	136	01/28/08	07/24/12	10	10	NS	0	0	0	0	NA

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Location	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)				
		Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99
GW-522	LIV	183	195.3	01/23/08	07/25/12	10	10	NS	0	0	0	1	NA
GW-526	S3	101	123	02/24/09	09/11/12	4	4	4	1,365	0	0	15	0
GW-531	LD	22	38.5	08/05/08	08/05/08	1	1	NS	0	0	3	5	NA
GW-537	OLF	4.8	23.3	08/05/08	01/30/12	5	5	5	352	0.0002	0	152	310
GW-540	LII	158.5	171.5	01/29/08	07/26/12	10	10	NS	0	0	1	1	NA
GW-601	OLF	318.5	356	03/02/09	09/10/12	4	NS	NS	15	0	NA	NA	NA
GW-605	EXP-I	28.2	39.9	01/07/08	07/17/12	10	10	10	0	0.13	55	35	0
GW-606	EXP-I	155	171	01/07/08	07/17/12	10	10	10	10	0.0052	7	6	0
GW-608	CRSP	148	220	11/17/08	04/12/10	2	2	NS	0	0.0012	0	4	NA
GW-609	CRSP	256.4	269	11/17/08	04/12/10	2	2	NS	1	0	1	4	NA
GW-612	CRSP	230.6	254	11/12/08	11/12/08	1	1	NS	0	0	0	0	NA
GW-615	S3	222.5	245	08/11/08	09/12/12	5	5	1	10,979	1.22	504	458	44
GW-616	S3	219.1	269	08/11/08	01/10/12	5	3	NS	246	0	0	10	NA
GW-617	EXP-E	6.8	18	10/20/08	10/20/08	1	1	NS	0	0	0	0	NA
GW-618	EXP-E	26	37	03/04/08	02/09/12	5	5	NS	0	0	0	5	NA
GW-619	FTF	26.8	40.8	12/01/08	12/01/08	1	1	1	1	0.0006	5	12	0
GW-620	FTF	61.7	75	12/10/08	12/10/08	1	1	NS	1	0	0	0	NA
GW-623	BG	238.1	274.2	03/18/08	03/03/09	3	3	NS	0	0.0017	5	11	NA
GW-626	BG	63	78	02/26/08	09/13/12	6	5	NS	0	0	1	0	NA
GW-627	BG	254	270	03/18/08	09/22/08	2	2	NS	0	0	0	17	NA
GW-629	BG	262.3	312	03/18/08	09/02/08	2	2	NS	0	0	0	7	NA
GW-633	RG	3.5	15	06/11/08	08/08/12	5	5	2	766	0.0006	13	1,400	3,900
GW-639	BG	95.5	125.5	02/21/08	11/15/12	16	NS	16	0	0.0003	NA	NA	0
GW-648	RS	65	80.1	02/13/08	08/05/09	3	3	NS	0	0	1	3	NA
GW-653	BG	26.3	39	09/25/08	01/18/11	2	2	NS	0	0	0	0	NA
GW-656	T0134	8.3	21.5	10/28/08	10/28/10	2	2	NS	0	0	0	0	NA
GW-658	FF	6.9	19.1	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-683	EXP-A	133.9	196.8	02/25/08	07/26/12	10	10	10	1	0.0057	4	9	6
GW-684	EXP-A	106.4	129.6	02/25/08	07/23/12	10	10	10	2	0.0112	6	16	9
GW-686	CPT	4	16	10/22/08	07/25/12	5	4	1	1	0.0007	2	4	79
GW-690	CPT	40.8	52.8	10/23/08	07/25/12	5	4	1	4	0.0001	0	0	0

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)				
	Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99
GW-691	8	20	10/23/08	07/26/12	9	6	1	2	0.0001	1	1	0
GW-692	41	53	10/21/08	07/26/12	5	4	1	0	0.0005	2	2	0
GW-694	153	204.5	01/23/08	01/23/08	1	1	NS	8	0.0425	17	9	NA
GW-698	63	75	06/24/08	07/30/12	10	7	1	92	0.0007	0	3	0
GW-700	19	31	10/20/08	02/06/12	3	3	NS	0	0.0005	1	3	NA
GW-703	133.8	182	01/23/08	09/17/12	5	5	NS	13	0.0142	11	42	NA
GW-704	244.5	256	02/25/08	07/30/12	10	10	10	7	0.0075	3	20	14
GW-706	156.1	182.5	02/26/08	07/30/12	10	10	10	13	0.0521	16	32	47
GW-724	289.6	301.6	03/06/08	09/19/12	5	1	NS	11	0.0001	0	20	NA
GW-725	132.5	142.5	02/07/08	09/20/12	4	4	NS	9	0.0139	7	18	NA
GW-731	164	178.7	07/15/08	07/17/12	5	NS	NS	0	0	NA	NA	NA
GW-732	178.3	190	07/14/08	07/17/12	5	NS	NS	0	0	NA	NA	NA
GW-733	240.1	256.5	01/03/08	07/16/12	NS	10	10	NA	NA	1	1	0
GW-735	67.5	79.2	08/26/09	08/01/11	2	2	NS	0	0	0	0	NA
GW-738	63.5	88	02/12/08	09/19/12	5	5	NS	11	0.0033	1	49	NA
GW-740	165.6	190	02/12/08	12/17/08	3	3	NS	2	0	2	4	NA
GW-744	55	69.5	08/13/08	02/16/12	5	5	NS	0	0	2	1	NA
GW-747	67.4	79.6	08/14/08	02/20/12	5	5	NS	0	0	0	0	NA
GW-748	14.8	27.2	08/14/08	02/21/12	3	3	NS	0	0.0002	0	0	NA
GW-750	61.2	72.7	04/29/09	08/01/11	2	2	NS	0	0	5	10	NA
GW-762	46.4	58.7	02/27/08	08/02/12	10	10	NS	0	0	0	7	NA
GW-763	4	16	08/18/08	02/20/12	2	2	NS	0	0	0	0	NA
GW-765	19.9	32.4	05/07/09	10/25/11	2	2	NS	0	0	0	0	NA
GW-769	48.2	60.3	06/04/08	11/20/12	6	6	NS	0	0	1	5	NA
GW-770	7.5	19	06/04/08	04/17/12	4	4	NS	1	0.0012	1	2	NA
GW-775	45	56.4	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA
GW-776	10.6	23	09/01/09	02/23/11	2	2	NS	1	0	0	0	NA
GW-779	50.7	62.9	08/31/09	05/17/11	2	2	NS	0	0	0	0	NA
GW-781	56	69.3	12/18/08	02/22/12	5	5	NS	0	0	0	2	NA
GW-782	23.8	35.9	12/10/08	02/22/12	5	5	NS	0	0.0003	11	1	NA
GW-783	3.6	16.3	12/15/08	02/22/12	3	3	NS	1	0.0010	0	0	NA

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Location	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)					
		Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99	
GW-791	GRIDD2	57.5	70.6	10/27/08	02/23/12	3	3	NS	0	0	0	0	0	NA
GW-792	GRIDD2	17	29	10/28/08	02/17/10	2	2	NS	4	0	1	0	0	NA
GW-796	LV	122.9	136.5	01/23/08	07/23/12	10	10	NS	0	0	0	0	1	NA
GW-797	LV	118	134.1	01/24/08	07/23/12	10	10	NS	2	0	0	0	1	NA
GW-798	CDLVII	122	135.4	01/30/08	07/23/12	10	10	NS	1	0	1	1	1	NA
GW-802	FF	13.3	26.5	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA
GW-816	EXP-SR	2.9	15.8	08/13/08	02/21/12	5	5	NS	0	0	1	2	2	NA
GW-820	B9201-2	.	17.3	05/21/08	11/21/12	4	4	NS	0	0	2	2	2	NA
GW-829	OLF	102.9	114.6	08/04/08	09/26/12	3	1	1	9	0.0005	0	0	0	0
GW-832	NHP	4	11.8	02/28/08	07/31/12	10	10	NS	1	0.007	2	6	6	NA
GW-845 (EEVOC)	NHP	156.9	438.3	01/29/08	10/22/12	28	NS	NS	1	0.0028	NA	NA	NA	NA
GW-916	EMWMF	13	36	02/13/08	11/19/12	16	NS	16	0	0	NA	NA	1	1
GW-917	EMWMF	18	51	02/11/08	11/13/12	16	NS	16	0	0	NA	NA	0	0
GW-918	EMWMF	18	33	02/14/08	11/26/12	16	NS	16	0	0	NA	NA	1	1
GW-920	EMWMF	22	55	02/12/08	11/13/12	16	NS	16	0	0	NA	NA	0	0
GW-921	EMWMF	16	50	02/12/08	11/13/12	16	NS	16	0	0	NA	NA	0	0
GW-922	EMWMF	23	46	02/12/08	11/13/12	16	NS	16	0	0	NA	NA	0	0
GW-923	EMWMF	36	75	02/19/08	08/09/12	13	NS	13	0	0	NA	NA	2	2
GW-924	EMWMF	21	54	02/19/08	11/27/12	16	NS	16	0	0	NA	NA	0	0
GW-925	EMWMF	92	148	02/14/08	11/14/12	16	NS	16	0	0	NA	NA	0	0
GW-926	EMWMF	103	145	02/19/08	11/15/12	16	NS	16	0	0	NA	NA	1	1
GW-927	EMWMF	57	92	02/11/08	11/15/12	16	NS	16	0	0	NA	NA	0	0
GW-928	GRIDC1	31.2	44	03/08/10	04/18/12	5	5	NS	0	0	0	0	0	NA
GW-929	GRIDC1	15	28.6	03/08/10	04/18/12	5	5	NS	0	0	0	0	0	NA
GW-930	GRIDD1	28	41.5	03/09/10	04/24/12	5	5	NS	0	0	0	2	2	NA
GW-931	GRIDD1	6	19.8	03/09/10	04/24/12	5	5	NS	0	0	0	0	0	NA
GW-959	B9201-2	2.4	9.0	05/06/09	10/31/11	2	2	NS	0	0.0010	0	0	0	NA
GW-960	GRIDF2	12.2	25.4	05/15/08	05/17/11	4	4	NS	0	0	0	1	1	NA
GW-961	EMWMF	3.4	25.5	02/17/10	11/14/12	12	NS	12	0	0	NA	NA	0	0
GW-964	EMWMF	7.9	31.9	08/25/11	11/27/12	6	NS	6	0	0	NA	NA	1	1
GW-965	EMWMF	47.5	72.0	08/25/11	11/28/12	6	NS	6	0	0	NA	NA	1	1

Table A.2. Data summary of mapped inorganic and radiological contaminants

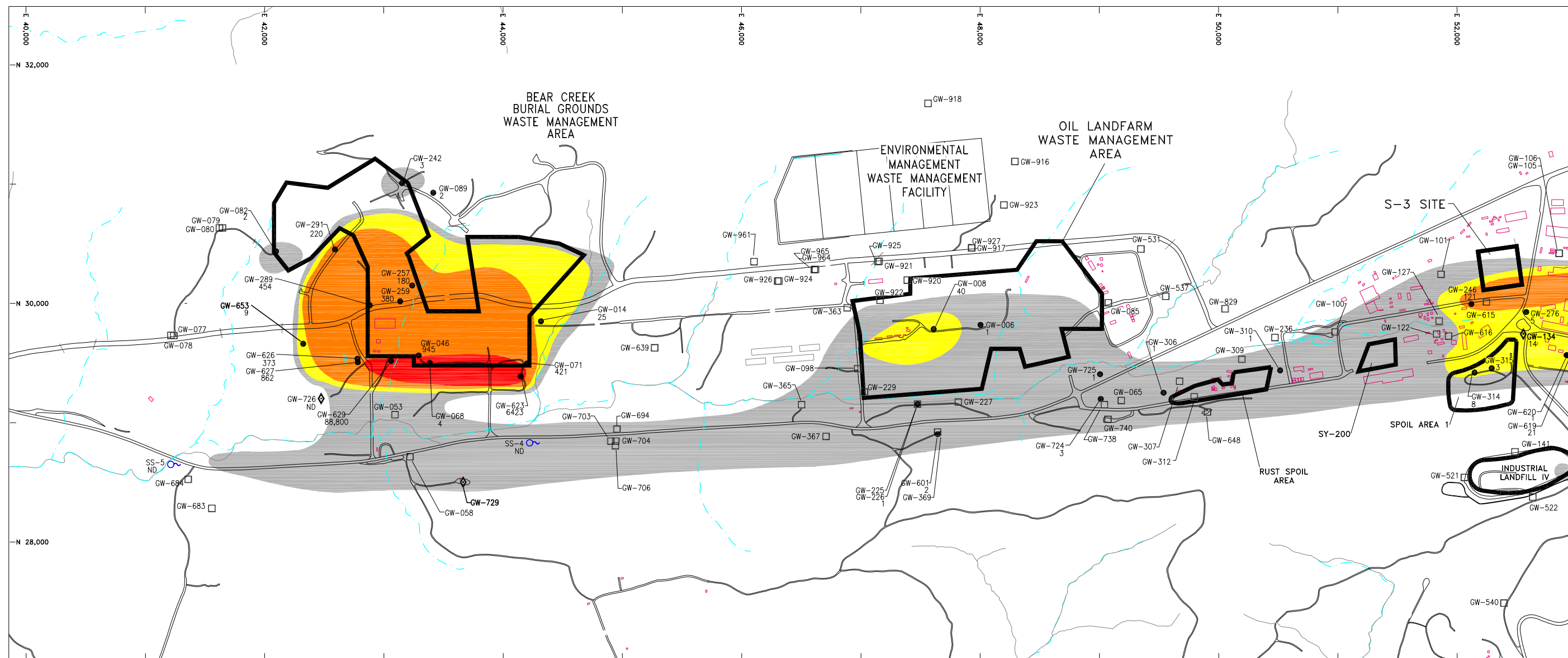
Sampling Point	Location	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)				
		Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99
Westbay™ Wells													
GW-134 (WB)	S3	41	740	05/25/11	06/08/11	1	1	1	1,480	0	4	82	180
GW-134-36	S3	41		05/25/11	05/25/11	1	1	1	24	0	4	36	82
GW-134-35	S3	81		06/02/11	06/02/11	1	1	1	41	0	0	82	180
GW-134-33	S3	106		05/26/11	05/26/11	1	1	1	33	0	0	64	110
GW-134-21	S3	371		06/02/11	06/02/11	1	1	1	474	0.0040	0	0	0
GW-134-18	S3	426		06/08/11	06/08/11	1	1	1	1,240	0.0035	0	0	0
GW-134-15	S3	486		06/07/11	06/07/11	1	1	1	1,480	0.0029	0	0	0
GW-134-11	S3	578		06/07/11	06/07/11	1	1	1	728	0.0023	0	0	0
GW-134-05	S3	740		06/02/11	06/02/11	1	1	1	1,420	0.0031	0	0	0
GW-722 (WB)	EXP-J	87	425	07/15/08	07/18/12	5	5	NS	1	0	2	2	NA
GW-722-33	EXP-J	87		07/15/08	07/16/12	5	5	NS	1	0	0	0	NA
GW-722-22	EXP-J	313		07/16/08	07/16/12	5	5	NS	0	0	2	2	NA
GW-722-20	EXP-J	333		07/16/08	07/18/12	5	5	NS	0	0	1	0	NA
GW-722-17	EXP-J	385		07/28/08	07/17/12	5	5	NS	0	0	1	0	NA
GW-722-14	EXP-J	425		07/28/08	07/16/12	5	5	NS	0	0	1	1	NA
GW-726 (WB)		130	546	05/04/09	05/06/09	1	1	NS	0	0	0	30	NA
GW-726-23	BG	130		05/06/09	05/06/09	1	1	NS	0	0	0	0	NA
GW-726-20	BG	200		05/06/09	05/06/09	1	1	NS	0	0	0	30	NA
GW-726-16	BG	291		05/06/09	05/06/09	1	1	NS	0	0.0006	0	0	NA
GW-726-12	BG	376		05/05/09	05/05/09	1	1	NS	0	0.0006	0	0	NA
GW-726-09	BG	441		05/05/09	05/05/09	1	1	NS	0	0	0	0	NA
GW-726-06	BG	511		05/04/09	05/04/09	1	NS	NS	0	0	NA	0	NA
GW-726-04	BG	546		05/04/09	05/04/09	1	1	NS	0	0	0	0	NA
GW-729 (WB)		320	1016	06/13/11	06/29/11	1	1	NS	4	0	0	83	NA
GW-729-44	BG	320		06/29/11	06/29/11	1	1	NS	4	0	0	0	NA
GW-729-39	BG	481		06/27/11	06/27/11	1	1	NS	0	0	0	0	NA
GW-729-34	BG	603		06/28/11	06/28/11	1	1	NS	0	0	0	0	NA
GW-729-30	BG	710		06/27/11	06/27/11	1	1	NS	0	0	0	83	NA
GW-729-26	BG	802		06/23/11	06/23/11	1	1	NS	0	0	0	0	NA
GW-729-22	BG	921		06/23/11	06/23/11	1	1	NS	0	0	0	0	NA
GW-729-18	BG	1016		06/13/11	06/13/11	1	1	NS	0	0	0	0	NA

Table A.2. Data summary of mapped inorganic and radiological contaminants

Sampling Point	Location	Monitored Interval		Date Range		Number of Samples			Average CY 08-12 Concentration (mg/L and pCi/L)					
		Top	Bottom	First	Last	N/U	A/B	Tc-99	Nitrate	Uranium	Alpha	Beta	Tc-99	
Westbay™ Wells (continued)														
GW-934 (WB)	NHP	72	379	08/10/10	04/16/12	2	2	NS	13	0.001	2	14	NA	
GW-934-12	NHP	72	.	08/16/10	04/11/12	2	2	NS	1	0.0003	0	0	NA	
GW-934-11	NHP	194	.	08/17/10	04/11/12	2	2	NS	0	0.0010	0	0	NA	
GW-934-09	NHP	229	.	08/12/10	04/12/12	2	2	NS	12	0.0007	2	0	NA	
GW-934-07	NHP	259	.	08/11/10	04/12/12	2	2	NS	12	0.0006	0	0	NA	
GW-934-05	NHP	294	.	08/11/10	04/11/12	2	2	NS	0	0.0006	0	14	NA	
GW-934-04	NHP	319	.	08/11/10	04/11/12	2	2	NS	3	0.0003	0	0	NA	
GW-934-02	NHP	359	.	08/11/10	04/12/12	2	2	NS	4	0.0005	0	0	NA	
GW-934-01	NHP	379	.	08/10/10	04/16/12	2	2	NS	13	0.0006	0	6	NA	
Sumps														
Sump A	B9201-5	.	.	11/08/12	11/08/12	1	1	1	0	0.0082	14	20	0	
Sump E	B9201-5	.	.	11/08/12	11/08/12	1	1	1	0	0.0099	0	10	0	
LRS	NHP	.	.	08/27/12	08/27/12	1	1	NS	2	0.0033	0	13	NA	
Springs														
SP-17	EXP-SW	.	.	08/03/09	01/24/11	2	2	NS	9	0.0011	0	0	NA	
SS-4	EXP-SW	.	.	01/14/08	01/12/12	5	5	NS	12	0.0627	38	34	NA	
SS-5	EXP-SW	.	.	01/14/08	11/12/12	13	4	4	4	0.0146	16	11	15	

APPENDIX B
CONTAMINANT PLUME MAPS

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EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- — MONITORING WELL WITH CONTAMINANT DETECTED
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- ◆ — WEST BAY WELL
ND - NOT DETECTED
- ⊕ — SPRING
ND - NOT DETECTED

AVERAGE CY 2008-2012 CONCENTRATION (ug/L)

- SUMMED VOCs > 5
- PCE: 5-99
- PCE: 100-999
- PCE: 1000+

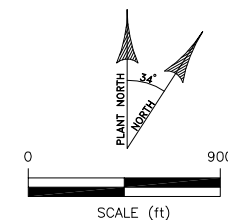


Fig. B.1. Lateral extent of tetrachloroethene in groundwater at the Y-12 National Security Complex, West.

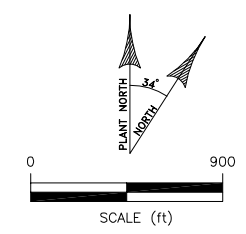
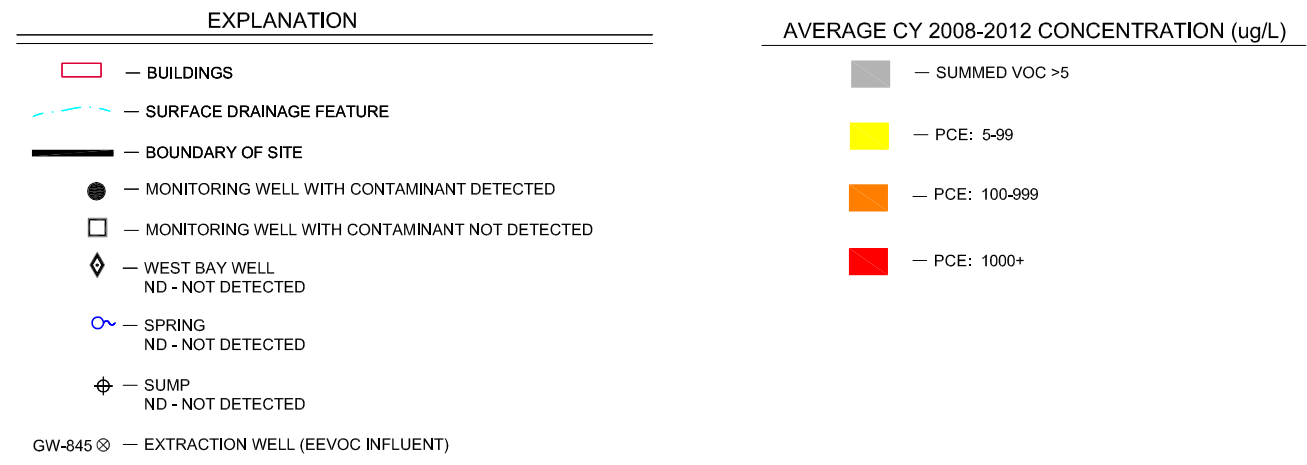
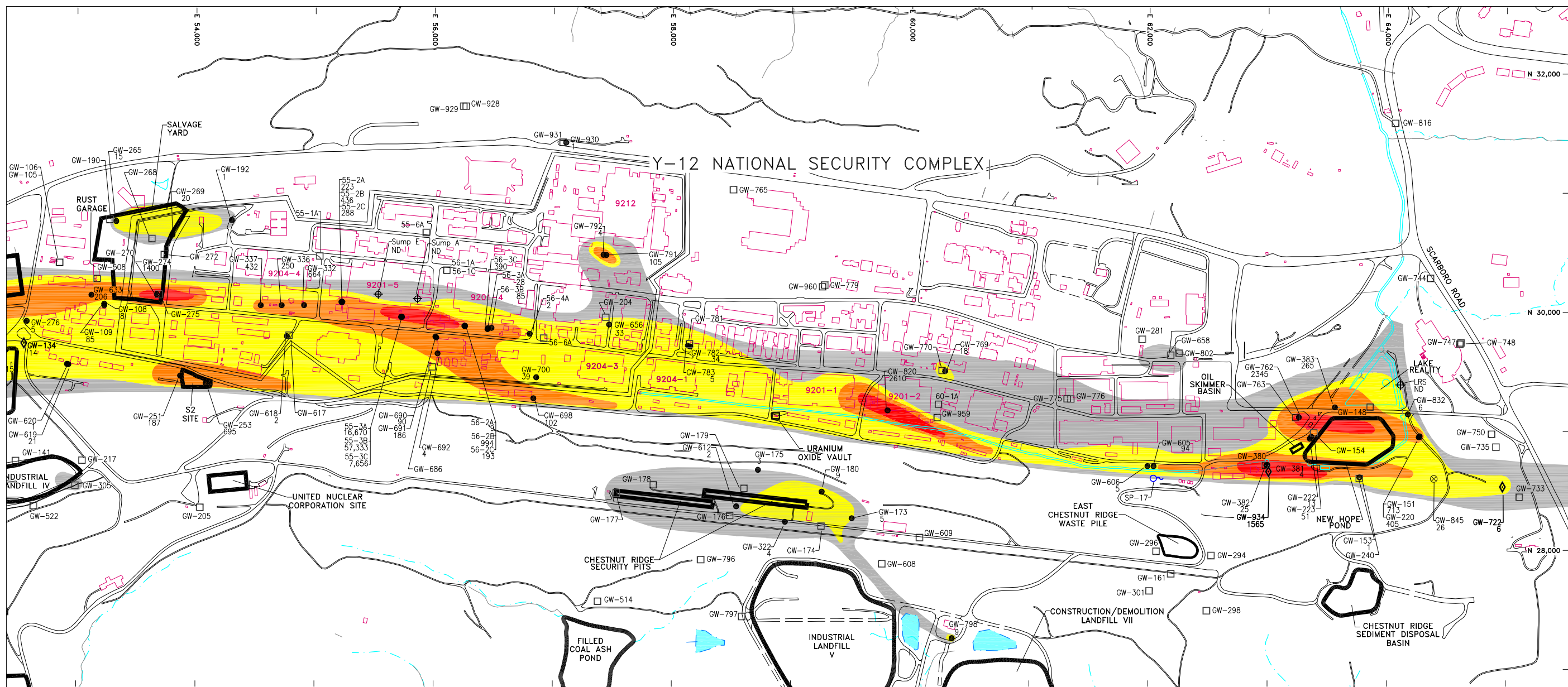
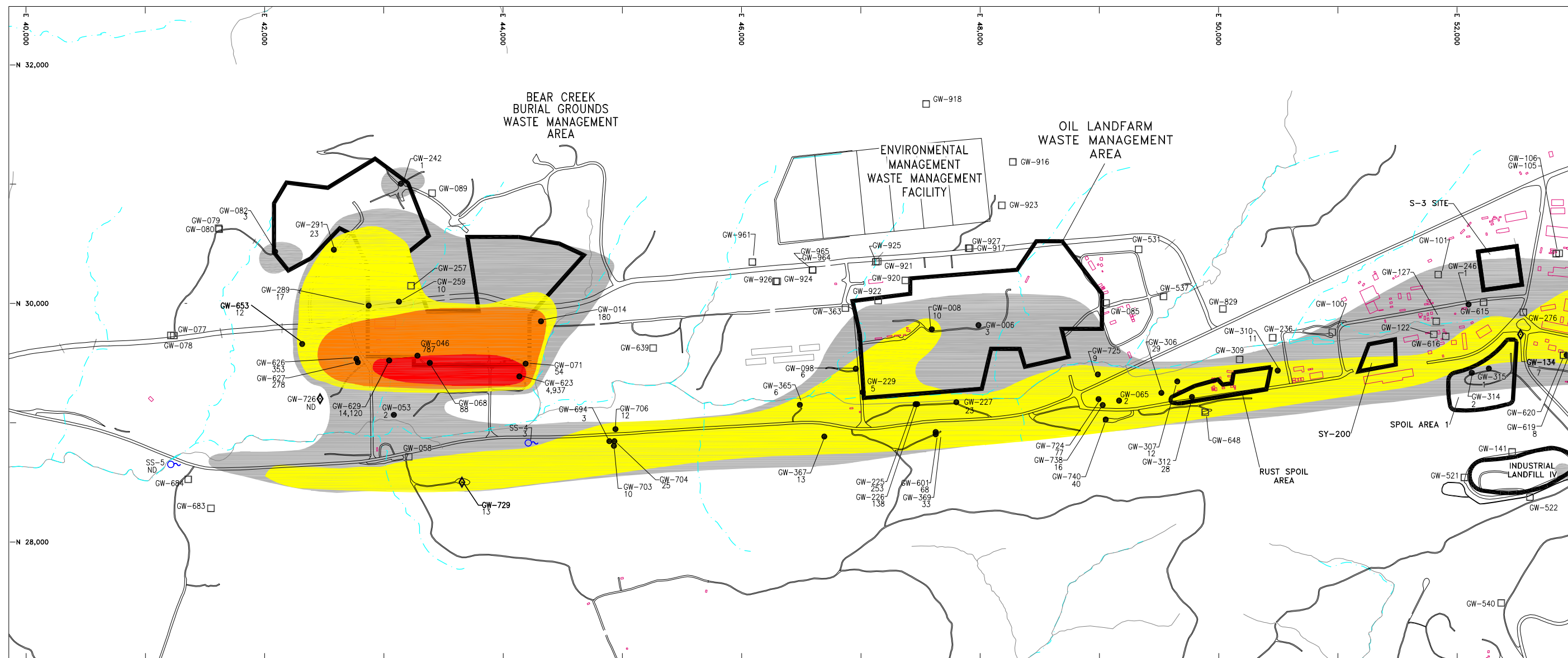


Fig. B.2. Lateral extent of tetrachloroethene in groundwater at the Y-12 National Security Complex, East.



EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- — MONITORING WELL WITH CONTAMINANT DETECTED
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- ◇ — WEST BAY WELL
ND - NOT DETECTED
- — SPRING
ND - NOT DETECTED

AVERAGE CY 2008-2012 CONCENTRATION (ug/L)

- SUMMED VOCs > 5
- TCE: 5-99
- TCE: 100-999
- TCE: 1000+

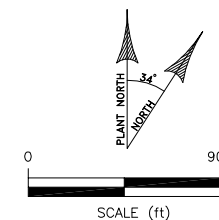


Fig. B.3. Lateral extent of trichloroethene in groundwater at the Y-12 National Security Complex, West.

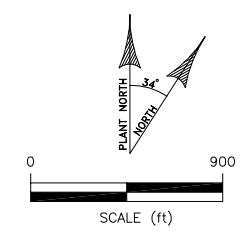
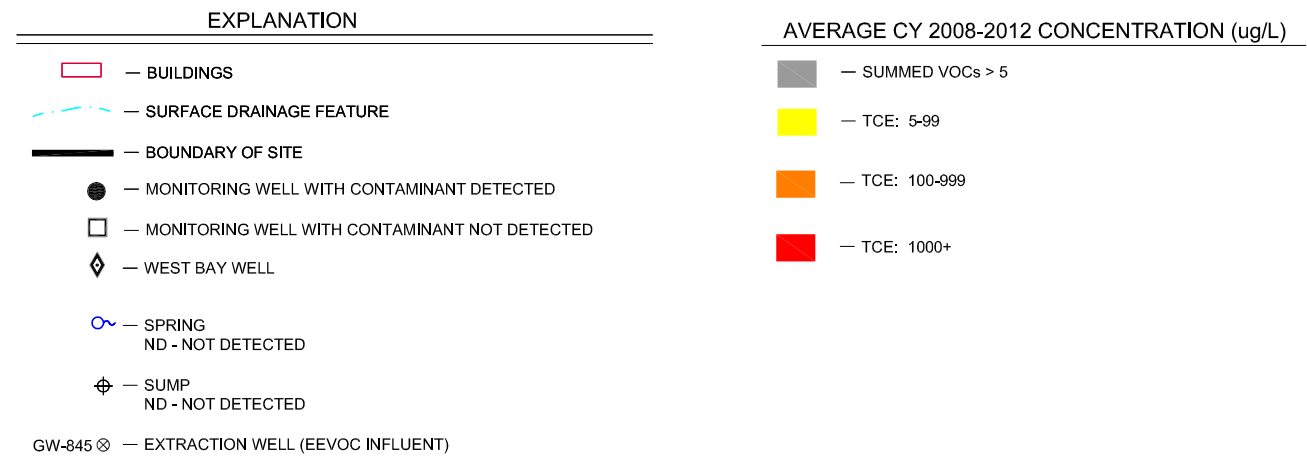
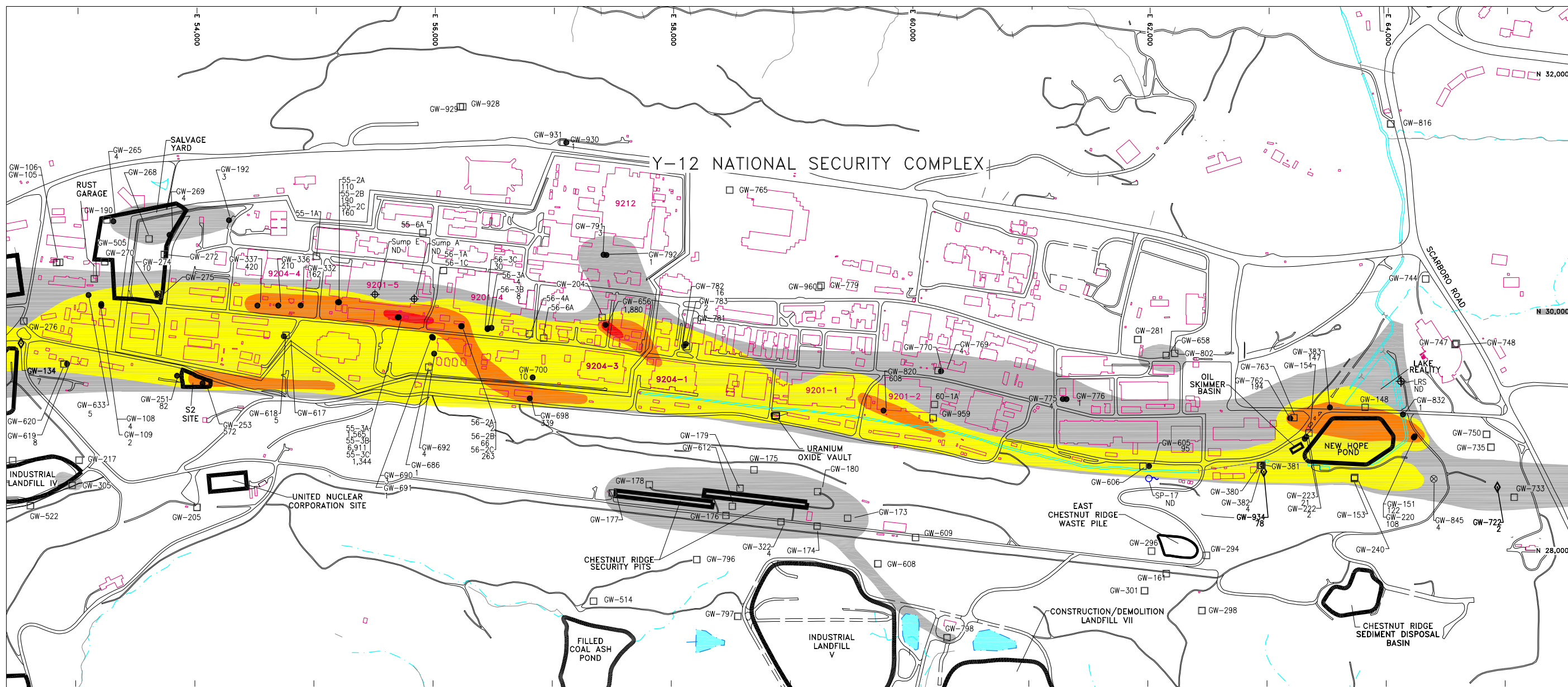
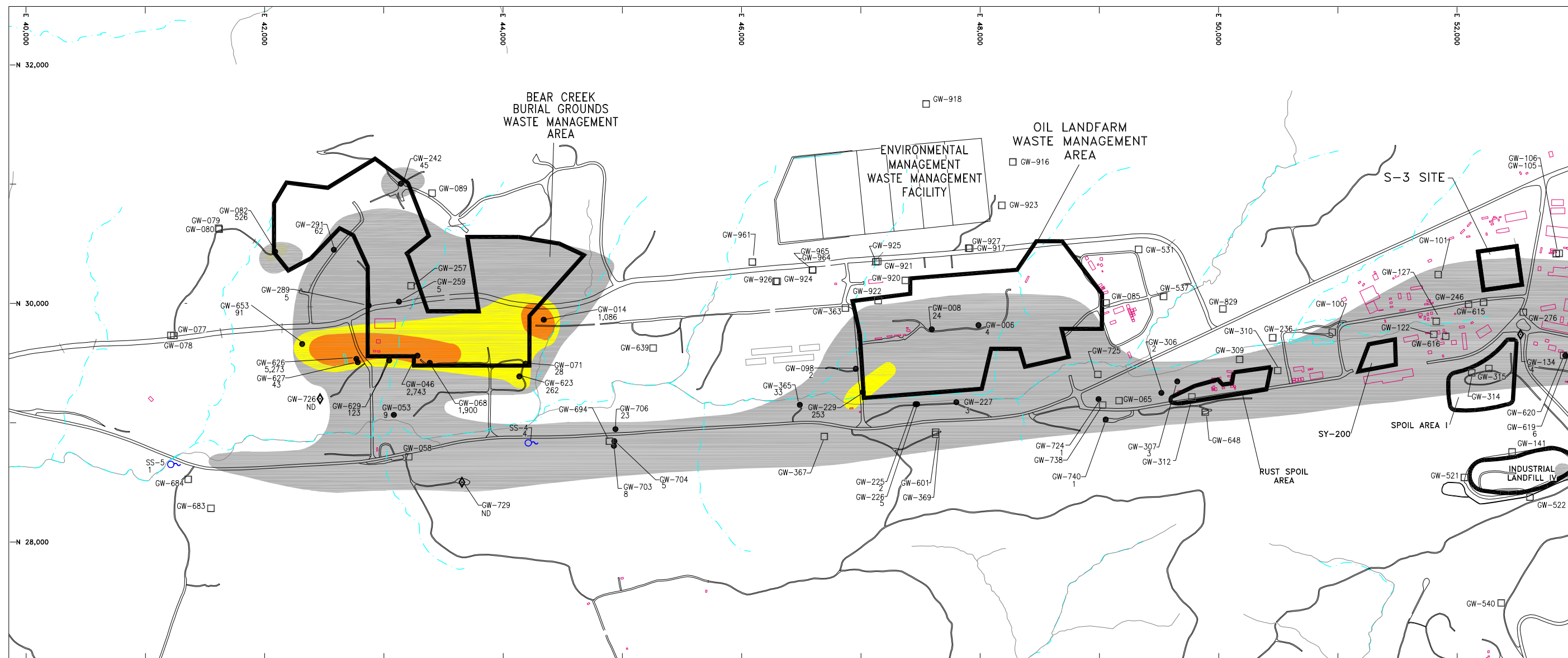


Fig. B.4. Lateral extent of trichloroethene in groundwater at the Y-12 National Security Complex, East.



EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- — MONITORING WELL WITH CONTAMINANT DETECTED
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- ◇ — WEST BAY WELL
ND - NOT DETECTED
- ⊕ — SPRING
ND - NOT DETECTED

AVERAGE CY 2008-2012 CONCENTRATION (ug/L)

- SUMMED VOCs > 5
- c12DCE: 70-699
- c12DCE: 700-6,999
- c12DCE: 7,000+

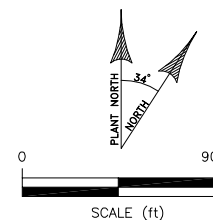


Fig. B.5. Lateral extent of cis-1,2-dichloroethene in groundwater at the Y-12 National Security Complex, West.

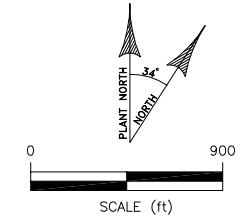
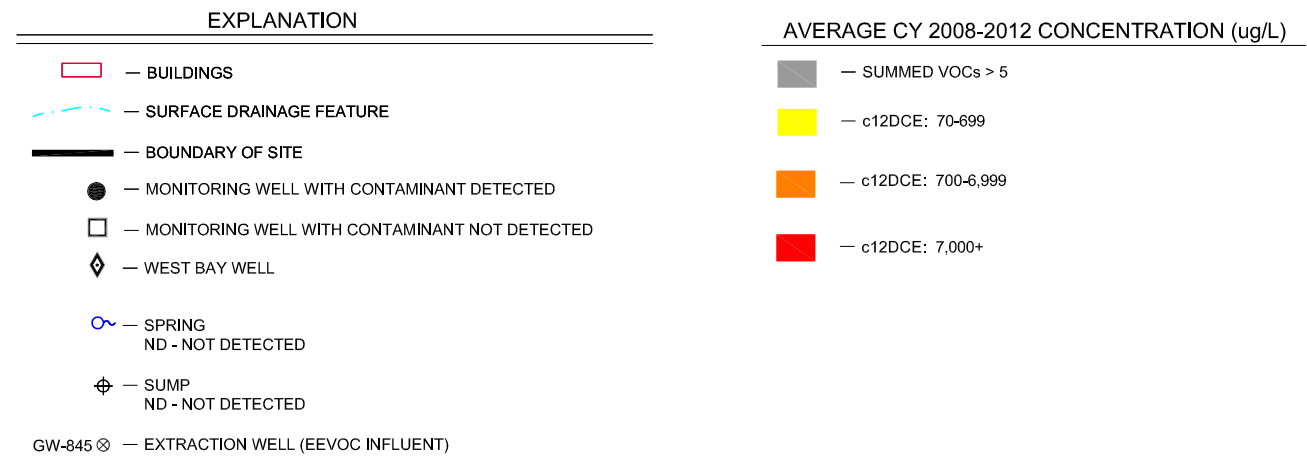
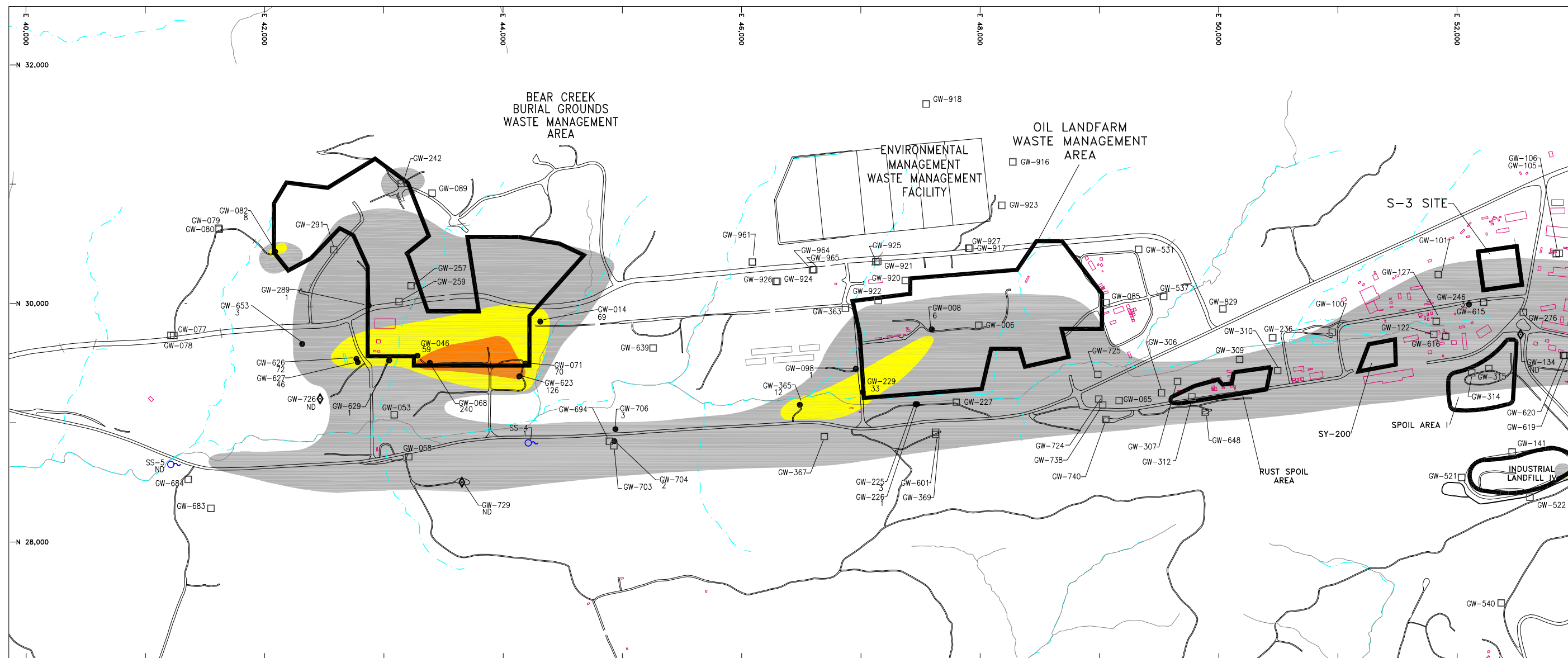


Fig. B.6. Lateral extent of cis-1,2-dichloroethene in groundwater at the Y-12 National Security Complex, East.



EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- MONITORING WELL WITH CONTAMINANT DETECTED
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- WEST BAY WELL
ND - NOT DETECTED
- SPRING
ND - NOT DETECTED
- SPRING
ND - NOT DETECTED

AVERAGE CY 2008-2012 CONCENTRATION (ug/L)

- SUMMED VOCs > 5
- 11DCE: 7-99
- 11DCE: 100-999
- 11DCE: 1000+

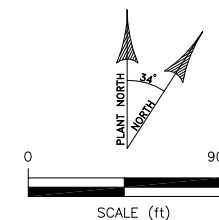
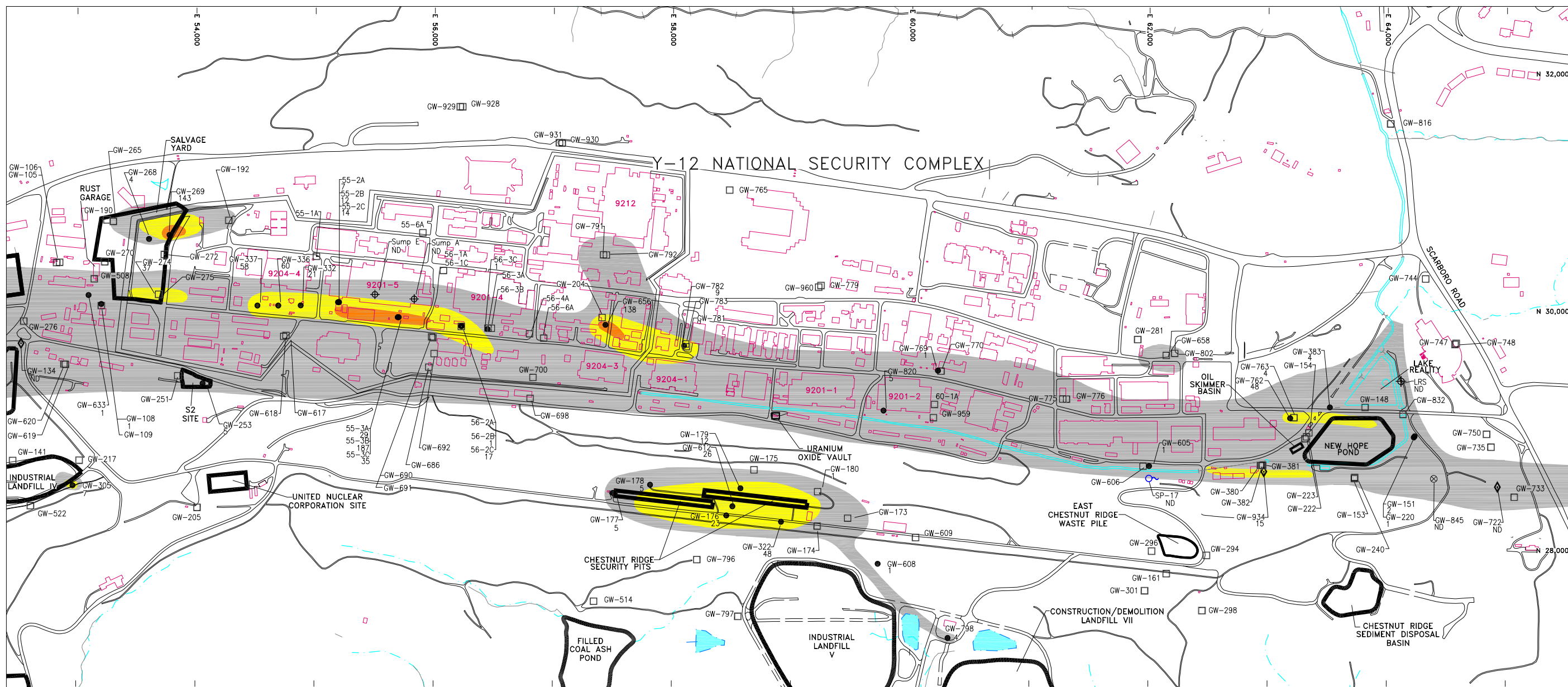
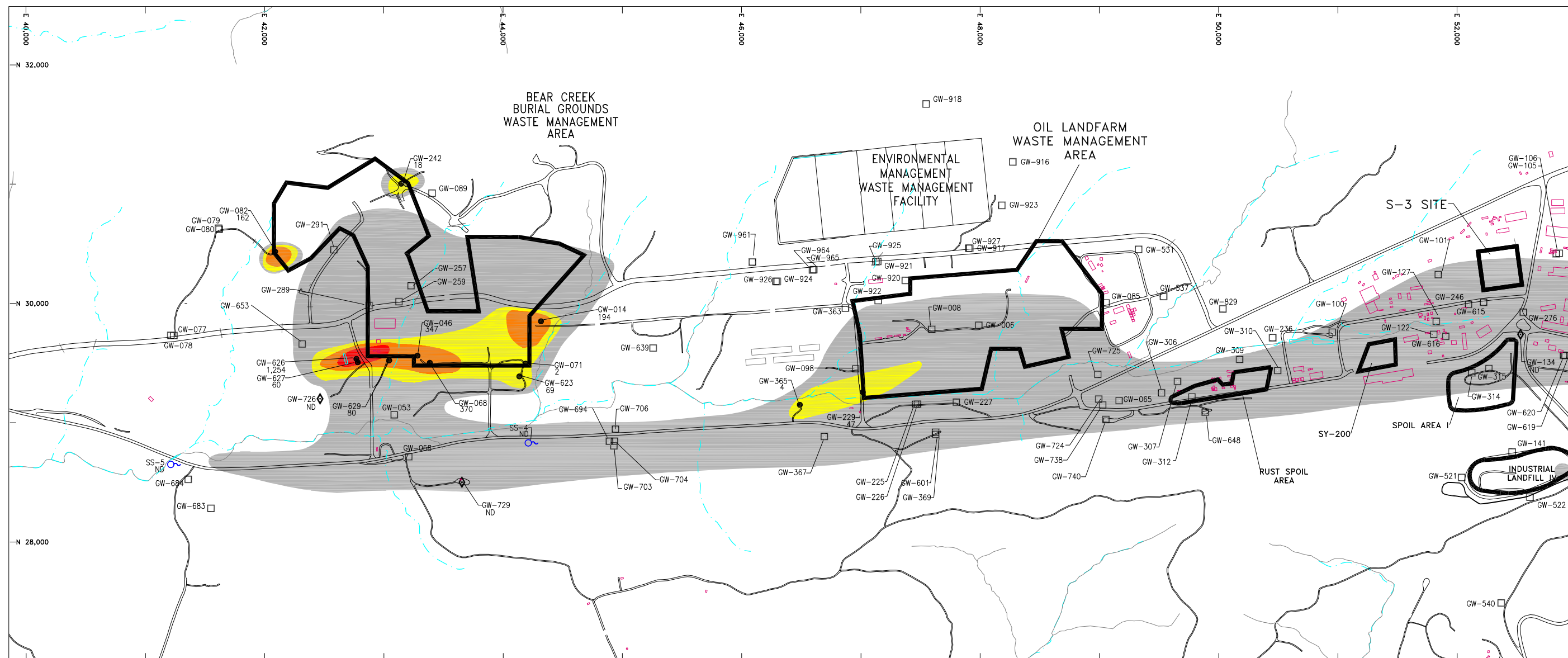


Fig. B.7. Lateral extent of 1,1-dichloroethene in groundwater at the Y-12 National Security Complex, West.



EXPLANATION		AVERAGE CY 2008-2012 CONCENTRATION (ug/L)	
	— BUILDINGS		— SUMMED VOCs > 5
	— SURFACE DRAINAGE FEATURE		— 11DCE: 7-99
	— BOUNDARY OF SITE		— 11DCE: 100-999
	— MONITORING WELL WITH CONTAMINANT DETECTED		— 11DCE: 1000+
	— MONITORING WELL WITH CONTAMINANT NOT DETECTED		
	— WEST BAY WELL ND - NOT DETECTED		
	— SPRING ND - NOT DETECTED		
	— SUMP ND - NOT DETECTED		
	— EXTRACTION WELL (EEVOC INFLUENT)		

Fig. B.8. Lateral extent of 1,1-dichloroethene in groundwater at the Y-12 National Security Complex, East.



EXPLANATION

	— BUILDINGS
	— SURFACE DRAINAGE FEATURE
	— BOUNDARY OF SITE
	— MONITORING WELL WITH CONTAMINANT DETECTED
	— MONITORING WELL WITH CONTAMINANT NOT DETECTED
	— WEST BAY WELL ND - NOT DETECTED
	— SPRING ND - NOT DETECTED

AVERAGE CY 2008-2012 CONCENTRATION (ug/L)

	— SUMMED VOCs > 5
	— VINYL CHLORIDE: 2-99
	— VINYL CHLORIDE: 100-999
	— VINYL CHLORIDE: 1000+

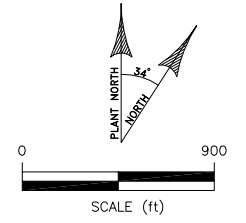


Fig. B.9. Lateral extent of vinyl chloride in groundwater at the Y-12 National Security Complex, West.



EXPLANATION		AVERAGE CY 2008-2012 CONCENTRATION (ug/L)	
	— BUILDINGS		— SUMMED VOCs > 5
	— SURFACE DRAINAGE FEATURE		— VINYL CHLORIDE: 2-99
	— BOUNDARY OF SITE		— VINYL CHLORIDE: 100-999
	— MONITORING WELL WITH CONTAMINANT DETECTED		— VINYL CHLORIDE: 1000+
	— MONITORING WELL WITH CONTAMINANT NOT DETECTED		
	— WEST BAY WELL ND - NOT DETECTED		
	— SPRING ND - NOT DETECTED		
	— SUMP ND - NOT DETECTED		
	— EXTRACTION WELL (EEVOC INFLUENT)		

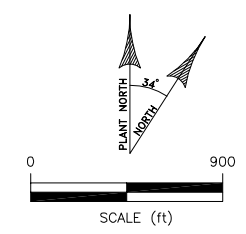
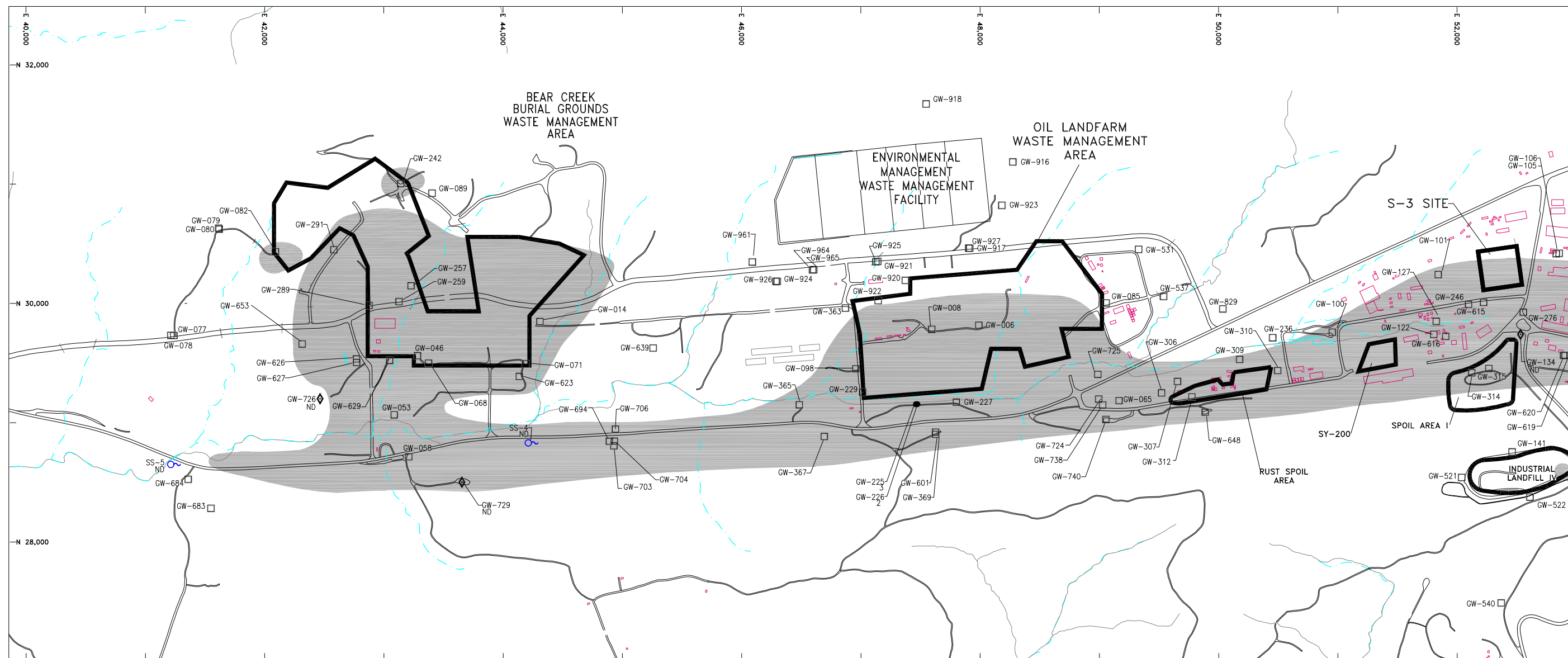


Fig. B.10. Lateral extent of vinyl chloride in groundwater at the Y-12 National Security Complex, East.



EXPLANATION

	— BUILDINGS
	— SURFACE DRAINAGE FEATURE
	— BOUNDARY OF SITE
	— MONITORING WELL WITH CONTAMINANT DETECTED
	— MONITORING WELL WITH CONTAMINANT NOT DETECTED
	— WEST BAY WELL ND - NOT DETECTED
	— SPRING ND - NOT DETECTED

AVERAGE CY 2008-2012 CONCENTRATION (ug/L)

	— SUMMED VOCs > 5
	— CTET: 5-99
	— CTET: 100-999
	— CTET: 1000+

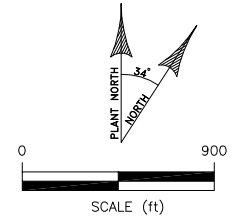
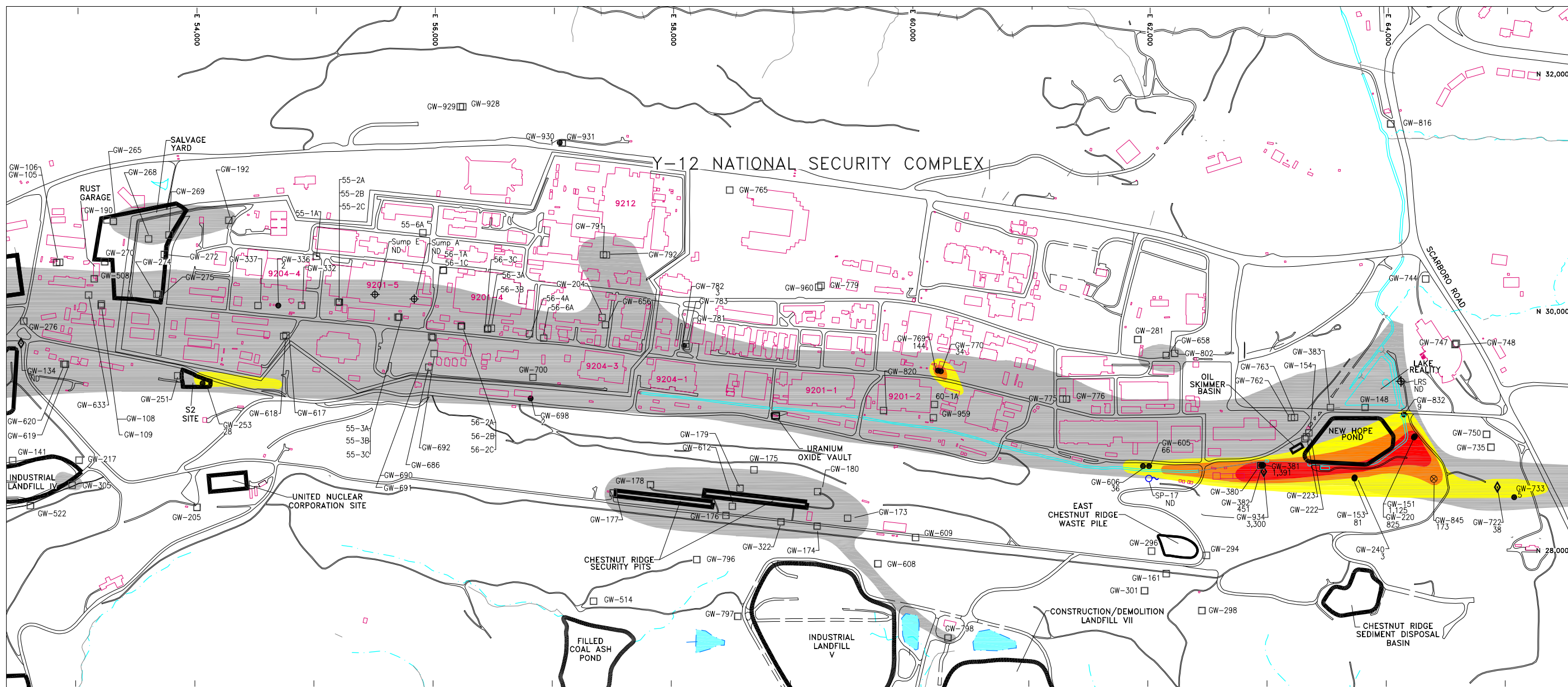


Fig. B.11. Lateral extent of carbon tetrachloride in groundwater at the Y-12 National Security Complex, West.



EXPLANATION

	— BUILDINGS
	— SURFACE DRAINAGE FEATURE
	— BOUNDARY OF SITE
	— MONITORING WELL WITH CONTAMINANT DETECTED
	— MONITORING WELL WITH CONTAMINANT NOT DETECTED
	— WEST BAY WELL
	— SPRING ND - NOT DETECTED
	— SUMP ND - NOT DETECTED
	— EXTRACTION WELL (EEVOC INFLUENT)

AVERAGE CY 2008-2012 CONCENTRATION (ug/L)

	— SUMMED VOCs > 5
	— CTET: 5-99
	— CTET: 100-999
	— CTET: 1000+

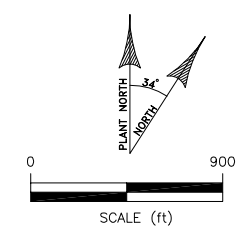
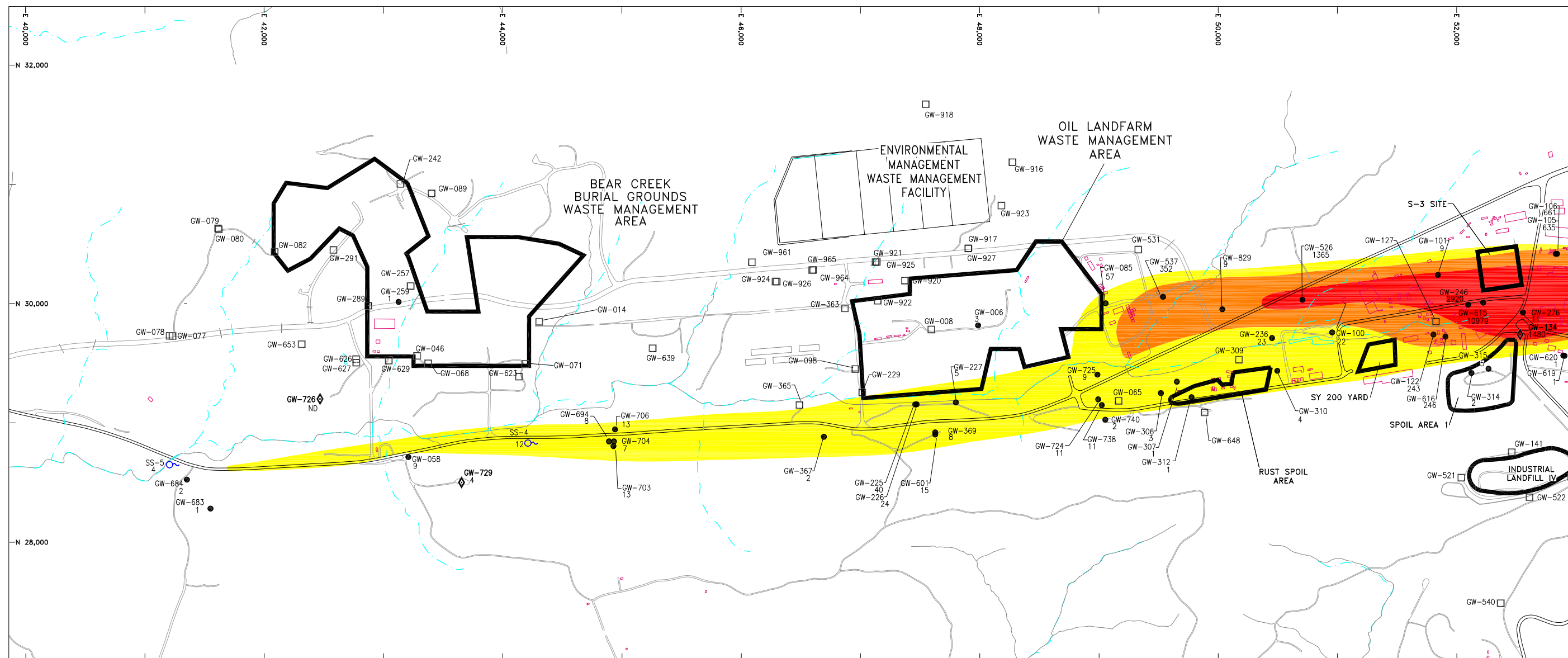


Fig. B.12. Lateral extent of carbon tetrachloride in groundwater at the Y-12 National Security Complex, East.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

- EXPLANATION**
- BUILDINGS
 - SURFACE DRAINAGE FEATURE
 - BOUNDARY OF SITE
 - — MONITORING WELL WITH NITRATE DETECTED
 - MONITORING WELL WITH NITRATE NOT DETECTED
 - ◇ — WESTBAY WELL
ND - NOT DETECTED
 - ~ — SPRING

AVERAGE CY 2008-2012 NITRATE CONCENTRATION (MG/L)

- NITRATE: 10-99
- NITRATE: 100-999
- NITRATE: 1,000+

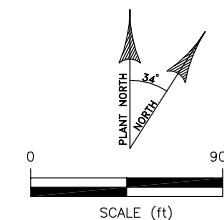
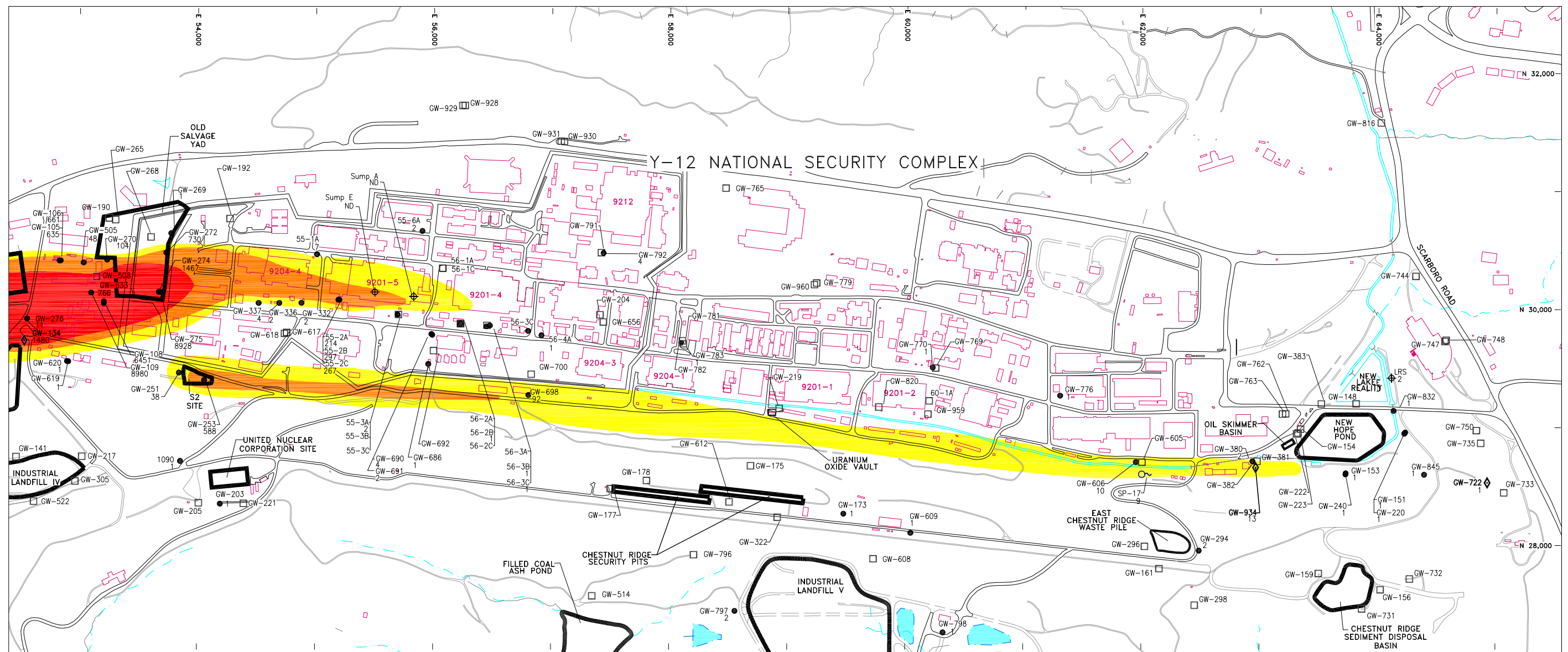


Fig. B.13. Lateral extent of nitrate in groundwater at the Y-12 National Security Complex, West.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- ~ - SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- - MONITORING WELL WITH CONTAMINANT DETECTED
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- ◆ - WESTBAY WELL
- ~ - SPRING
- ⊕ - SUMP
ND - NOT DETECTED

AVERAGE CY 2008-2012 NITRATE CONCENTRATION (MG/L)

- NITRATE: 10-99
- NITRATE: 100-999
- NITRATE: 1,000+

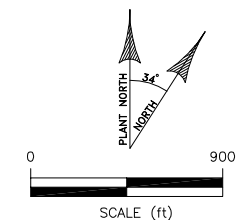
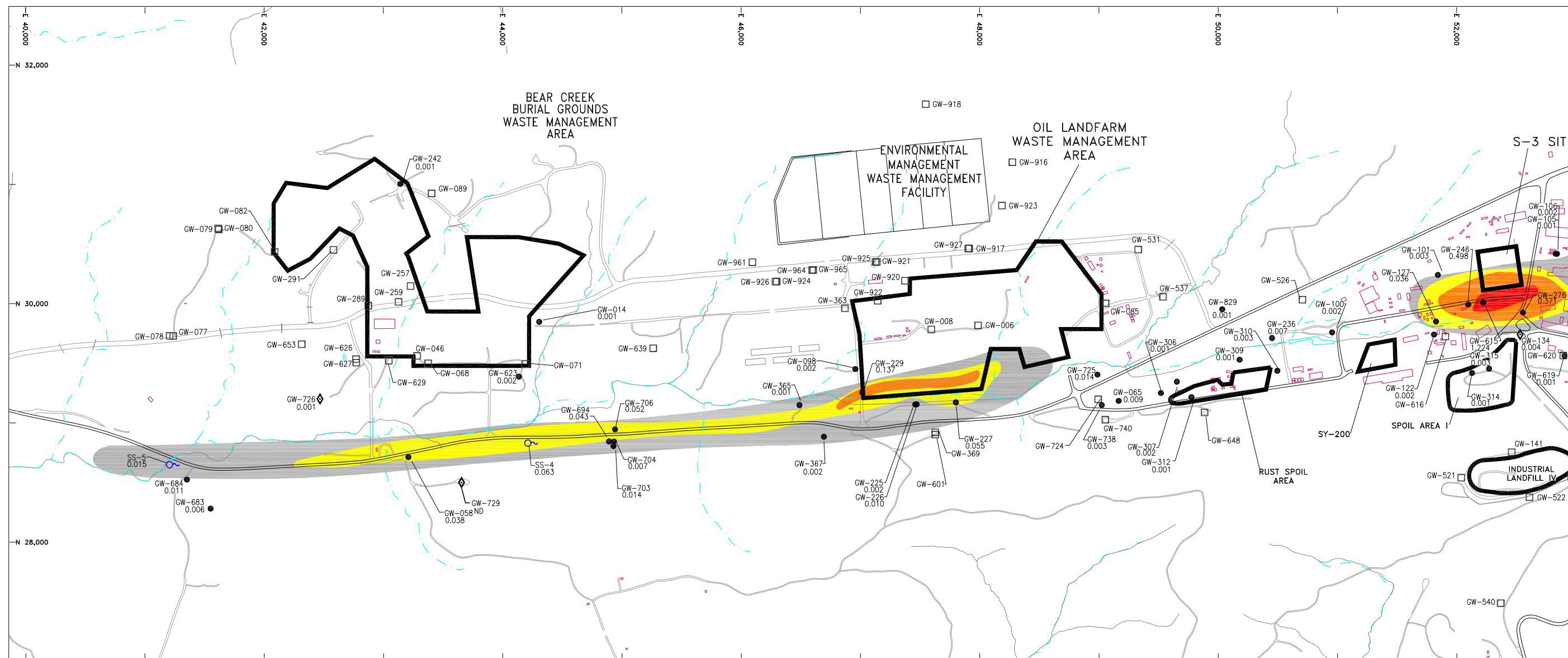


Fig. B.14. Lateral extent of nitrate in groundwater at the Y-12 National Security Complex, East.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- MONITORING WELL WITH CONTAMINANT DETECTED
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- WESTBAY WELL
ND - NOT DETECTED
- SPRING
- SUMP

AVERAGE CY 2008-2012 CONCENTRATION

- Alpha activity >15 pCi/L
- Uranium: 0.03-0.099 mg/L
- Uranium: 0.10-0.99 mg/L
- Uranium: 1+ mg/L

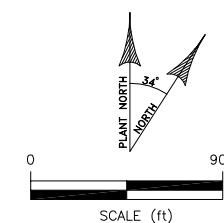
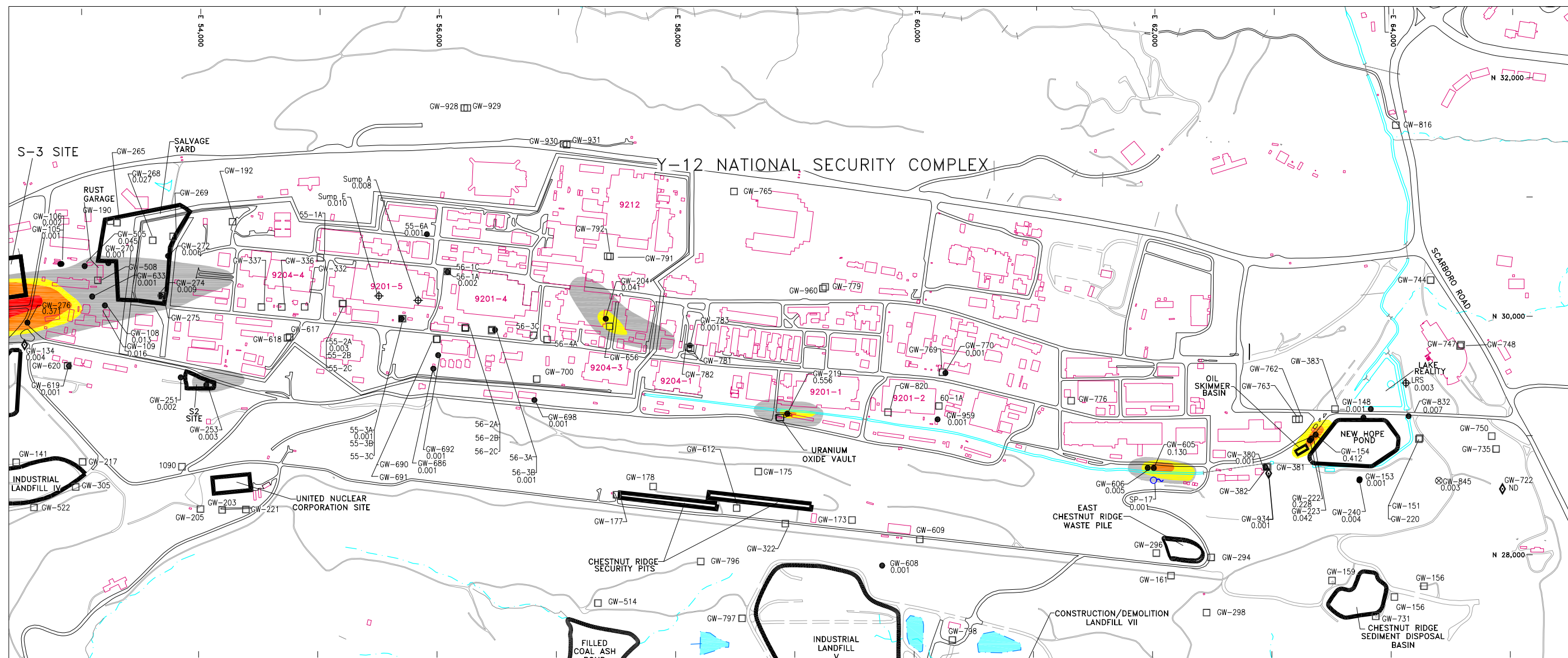


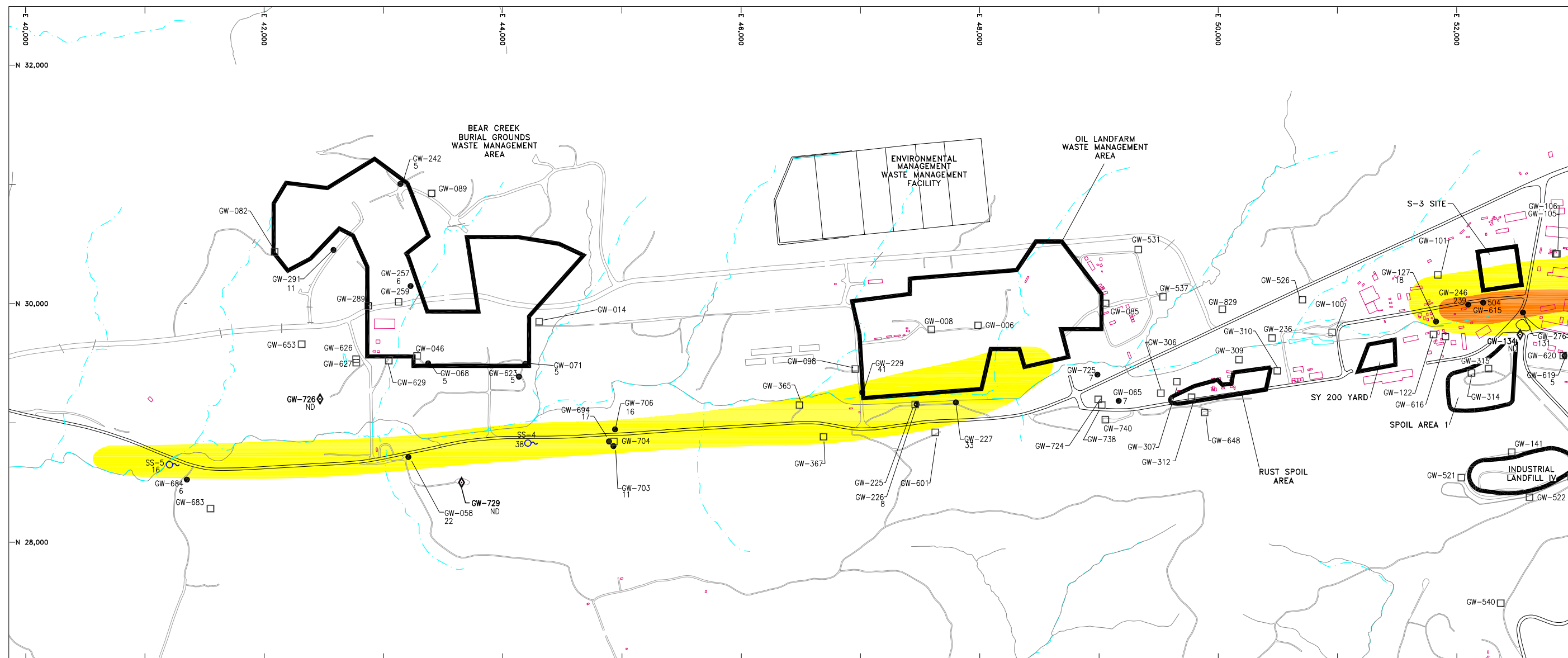
Fig. B.15. Lateral extent of uranium (total) in groundwater at the Y-12 National Security Complex, East.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION		AVERAGE CY 2008-2012 CONCENTRATION	
	— BUILDINGS		— Alpha activity >15 pCi/L
	— SURFACE DRAINAGE FEATURE		— Uranium: 0.03-0.099 mg/L
	— BOUNDARY OF SITE		— Uranium: 0.10-0.99 mg/L
	— MONITORING WELL WITH CONTAMINANT DETECTED		— Uranium: 1+ mg/L
	— MONITORING WELL WITH CONTAMINANT NOT DETECTED		
	— WESTBAY WELL ND - NOT DETECTED		
	— SPRING ND - NOT DETECTED		
	— SUMP		
	GW-845 — EXTRACTION WELL (EEVOC INFLUENT)		

Fig. B.16. Lateral extent of uranium (total) in groundwater at the Y-12 National Security Complex, East.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- — MONITORING WELL WITH CONTAMINANT DETECTED (>MDA and >5 pCi/L, per Y-12 GWPP sampling and analysis plan)
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- ◇ — WESTBAY WELL
ND - NOT DETECTED
- ~ — SPRING

AVERAGE CY 2008-2012 GROSS ALPHA ACTIVITY (pCi/L)

- ACTIVITY 15-99 pCi/L
- ACTIVITY 100-999 pCi/L

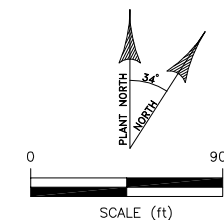


Fig. B.17. Lateral extent of gross alpha activity in groundwater at the Y-12 National Security Complex, West.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- MONITORING WELL WITH CONTAMINANT DETECTED (>MDA and >5 pCi/L, per Y-12 GWPP sampling and analysis plan)
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- WESTBAY WELL ND - NOT DETECTED
- SPRING
- SUMP

AVERAGE CY 2008-2012 GROSS ALPHA ACTIVITY (pCi/L)

- ACTIVITY 15-99 pCi/L
- ACTIVITY 100-999 pCi/L

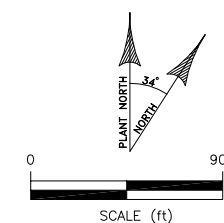
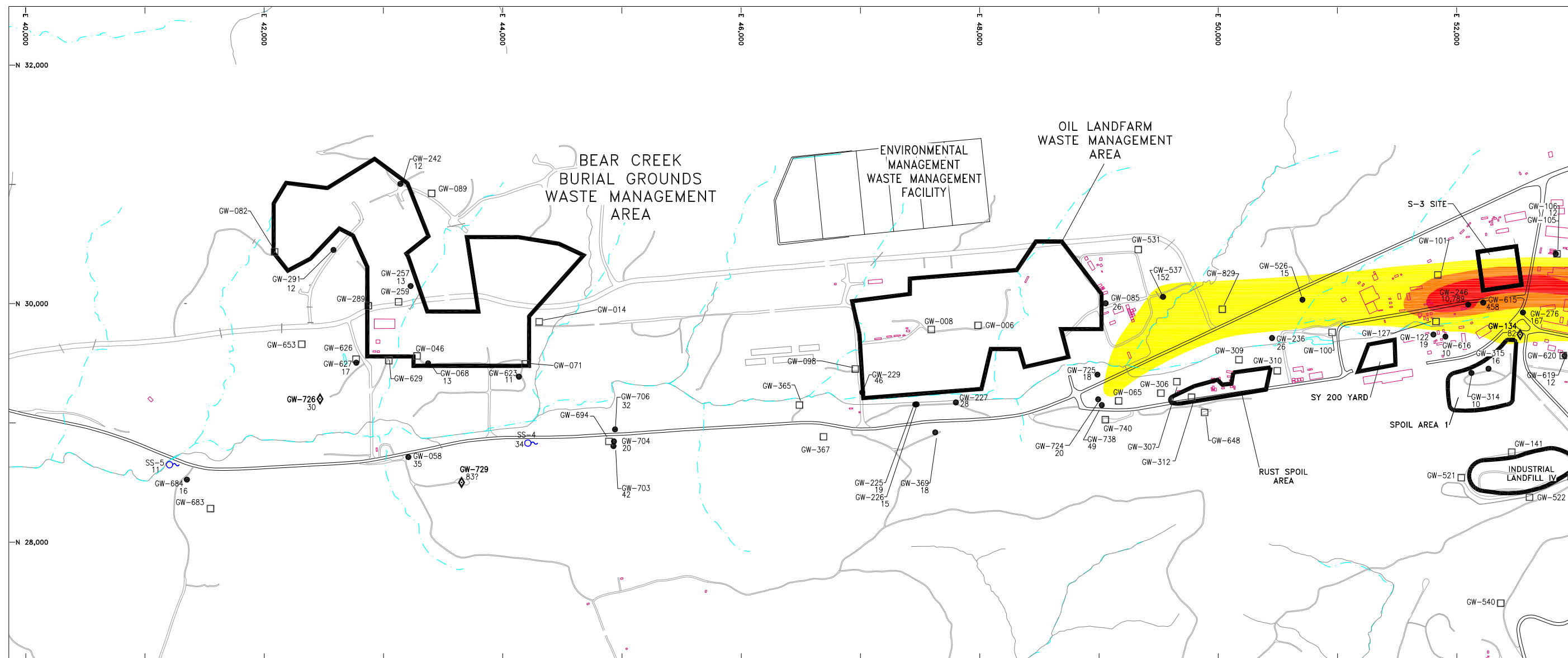


Fig. B.18. Lateral extent of gross alpha activity in groundwater at the Y-12 National Security Complex, East.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- ~ — SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- — MONITORING WELL WITH CONTAMINANT DETECTED (>MDA and >10 pCi/L, per Y-12 GWPP sampling and analysis plan)
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- ◇ — WESTBAY WELL
? - SUSPECTED ARTIFACT (Single Result)
- ~ — SPRING

AVERAGE CY 2008-2012 GROSS BETA ACTIVITY (pCi/L)

- ACTIVITY 50-499 pCi/L
- ACTIVITY 500-4,999 pCi/L
- ACTIVITY 5,000+ pCi/L

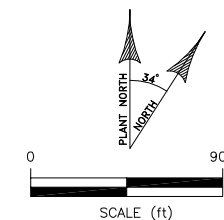
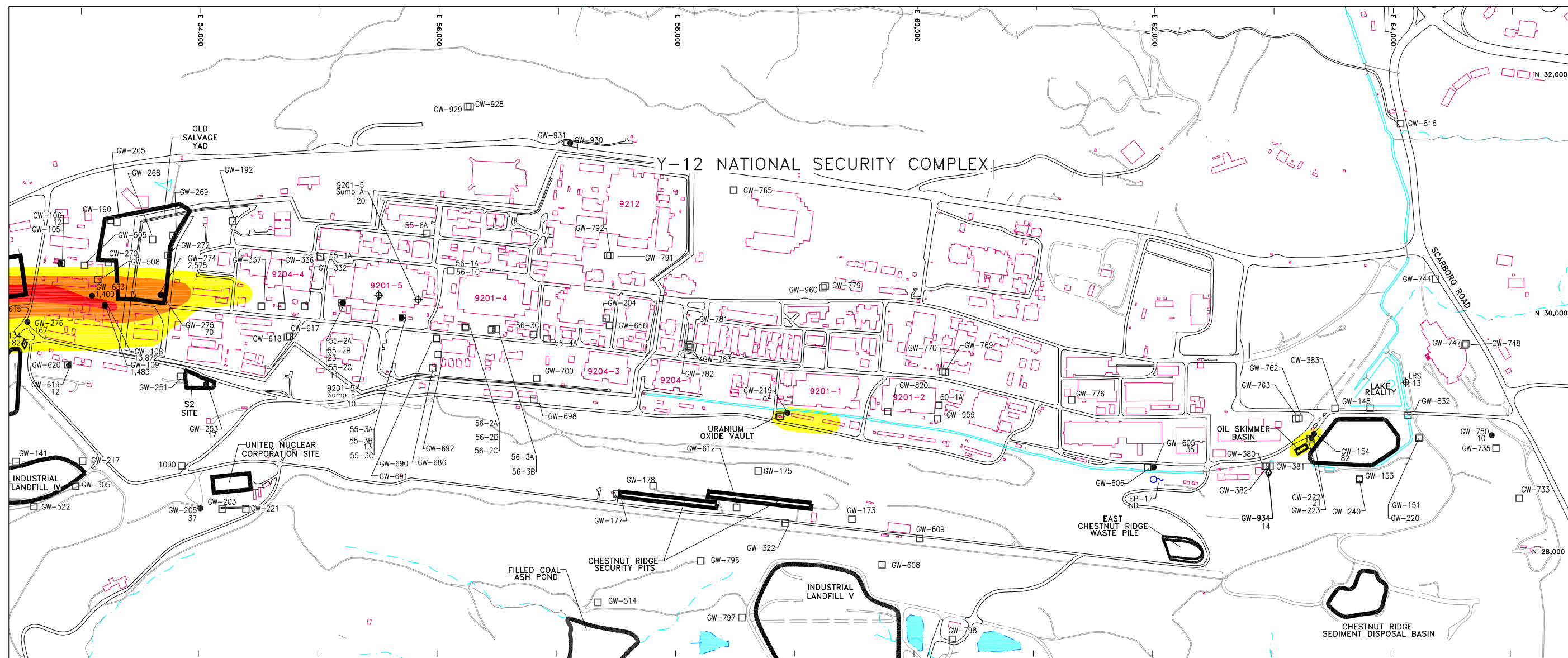


Fig. B.19. Lateral extent of gross beta activity in groundwater at the Y-12 National Security Complex, West.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- MONITORING WELL WITH CONTAMINANT DETECTED (>MDA and >10 pCi/L, per Y-12 GWPP sampling and analysis plan)
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- WESTBAY WELL ND - NOT DETECTED
- SPRING ND - NOT DETECTED
- SUMP ND - NOT DETECTED

AVERAGE CY 2008-2012 GROSS BETA ACTIVITY (pCi/L)

- ACTIVITY 50-499 pCi/L
- ACTIVITY 500-4,999 pCi/L
- ACTIVITY 5,000+ pCi/L

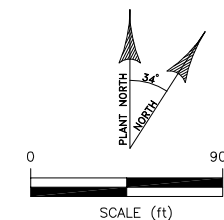
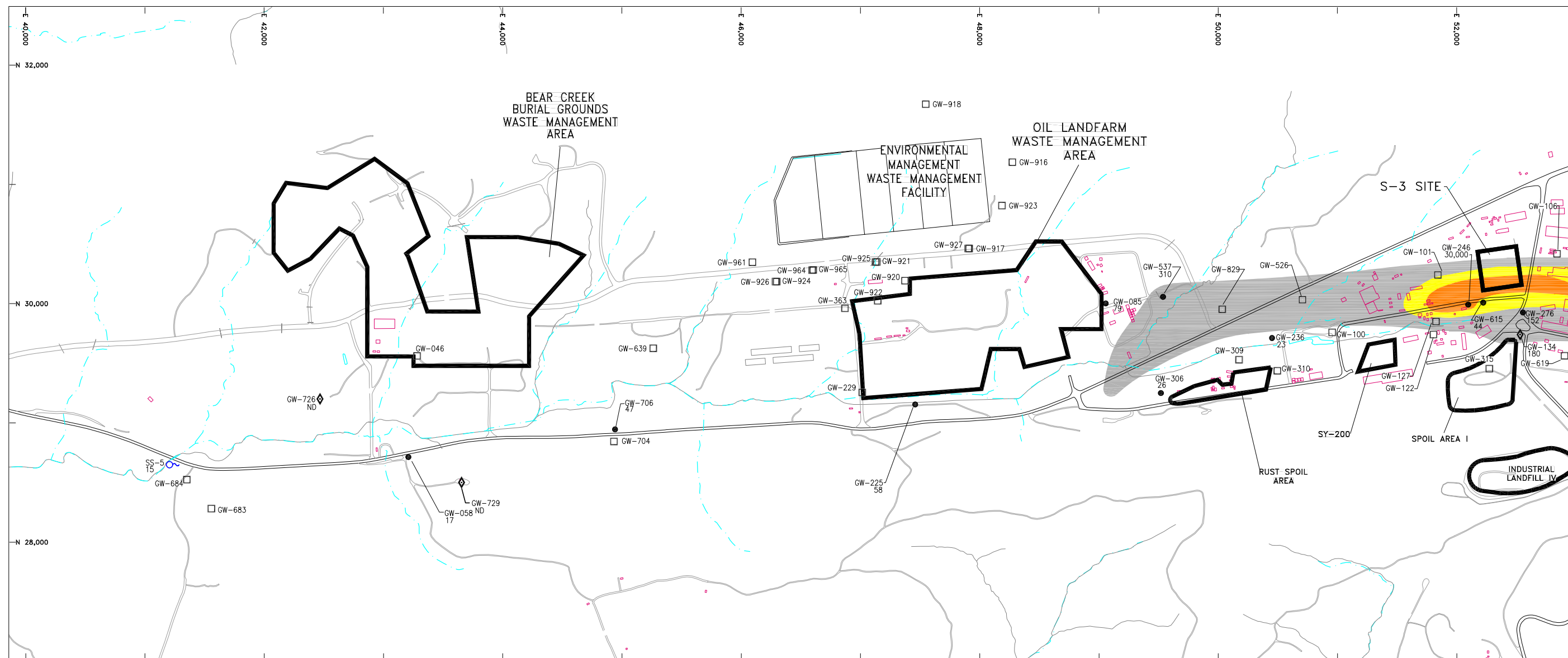


Fig. B.20. Lateral extent of gross beta activity in groundwater at the Y-12 National Security Complex, East.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- MONITORING WELL WITH CONTAMINANT DETECTED (>MDA and >15 pCi/L, per Y-12 GWPP sampling and analysis plan)
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- WESTBAY WELL ND - NOT DETECTED
- SPRING

AVERAGE CY 2008-2012 ACTIVITY (pCi/L)

- Beta Activity: >50
- Tc-99: 900-8,999
- Tc-99: 9,000-89,999
- Tc-99: 90,000+

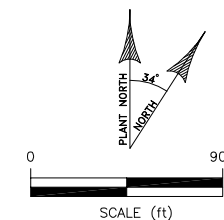
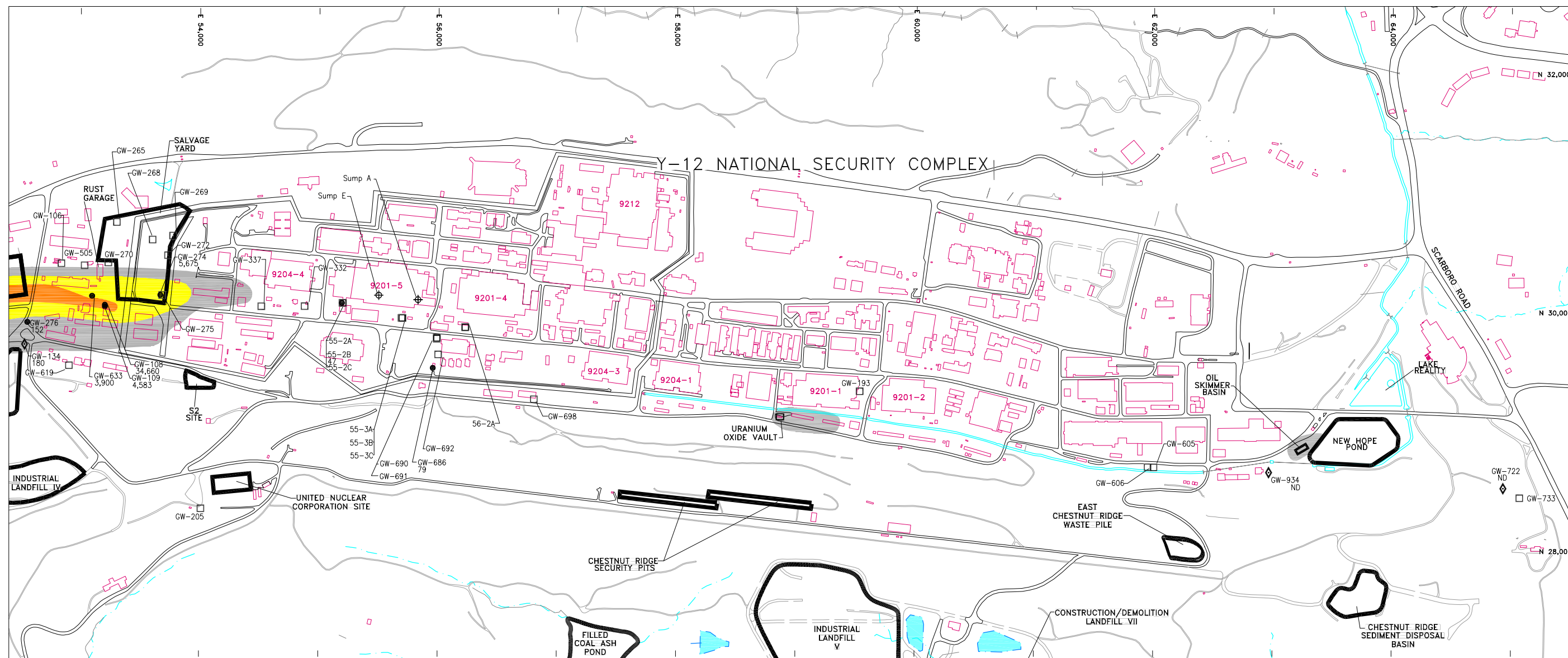


Fig. B.21. Lateral extent of technetium-99 activity in groundwater at the Y-12 National Security Complex, West.



SOURCES: U.S. Department of Energy 1997a
U.S. Department of Energy 1998

EXPLANATION

- BUILDINGS
- — SURFACE DRAINAGE FEATURE
- BOUNDARY OF SITE
- — MONITORING WELL WITH CONTAMINANT DETECTED (>MDA and >15 pCi/L, per Y-12 GWPP sampling and analysis plan)
- MONITORING WELL WITH CONTAMINANT NOT DETECTED
- ◇ — WESTBAY WELL ND - NOT DETECTED
- ⊕ — SUMP ND - NOT DETECTED

AVERAGE CY 2008-2012 ACTIVITY (pCi/L)

- Beta Activity: >50
- Tc-99: 900-8,999
- Tc-99: 9,000-89,999
- Tc-99: 90,000+

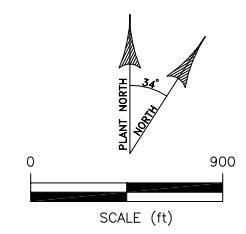


Fig. B.22. Lateral extent of technetium-99 activity in groundwater at the Y-12 National Security Complex, East.

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