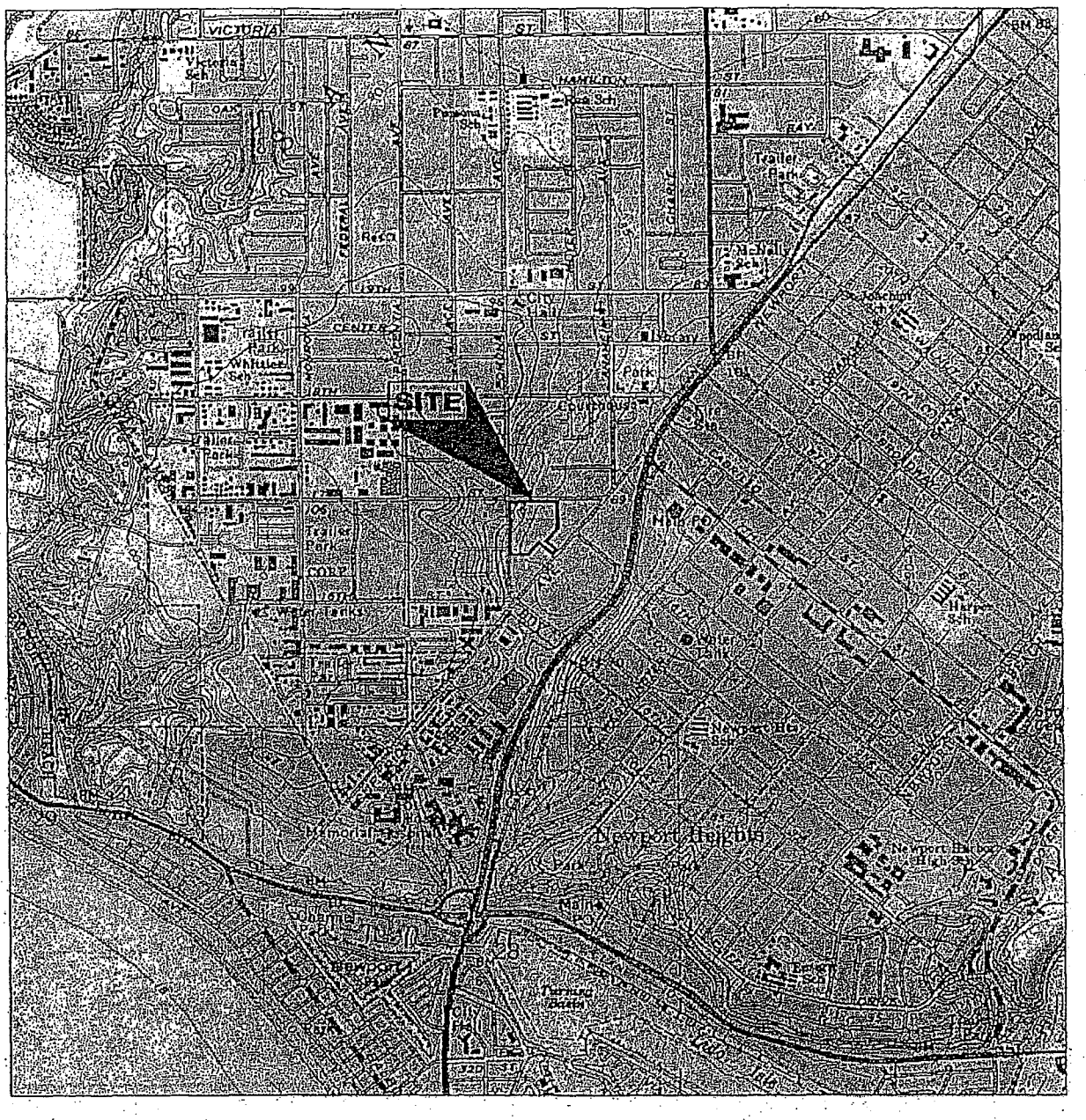
FIGURES

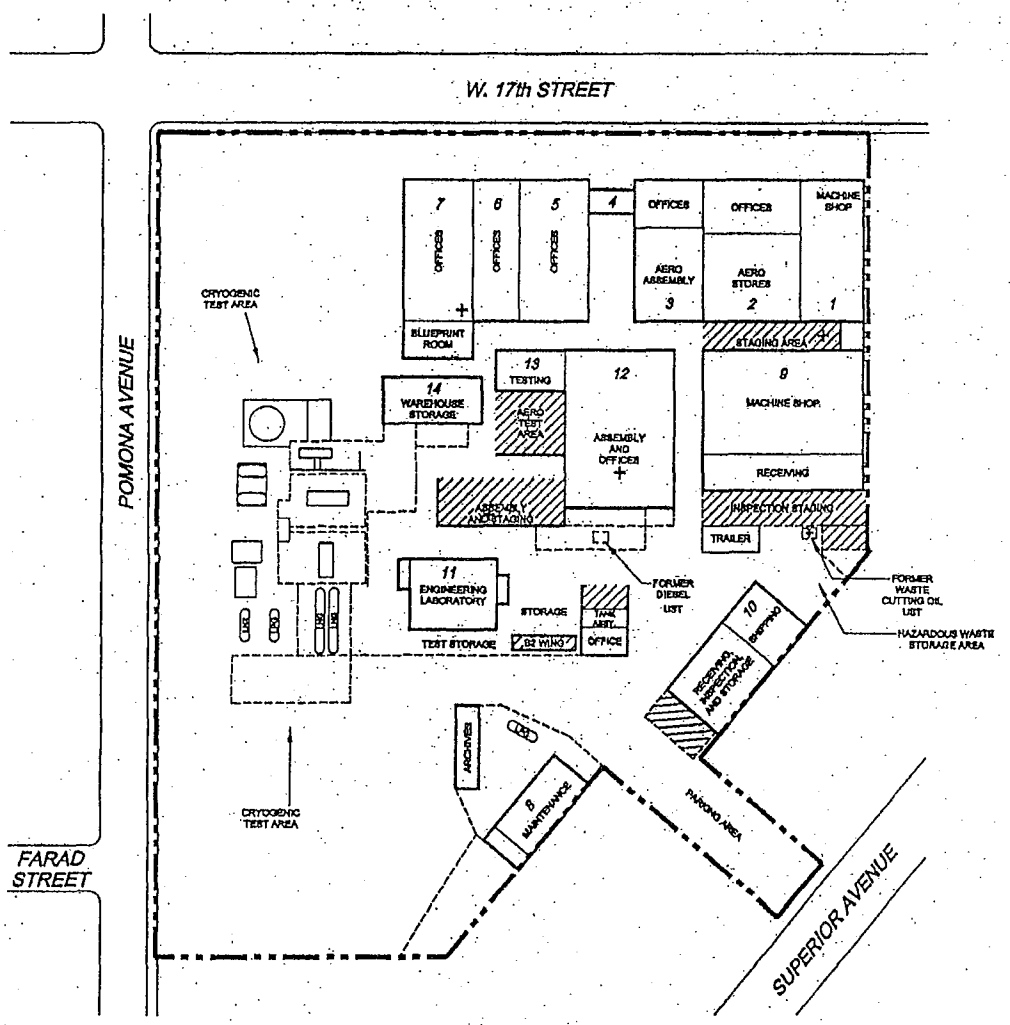


USGS TOPOGRAPHIC MAP
NEWPORT BEACH, CALIFORNIA
1965, PHOTOREVISED 1981
CONTOUR INTERVAL: 5 FEET

0 2,000 4,000
SCALE (FEET)

N

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	SITE LOCATION MAP FIGURE NO. 1



LEGEND

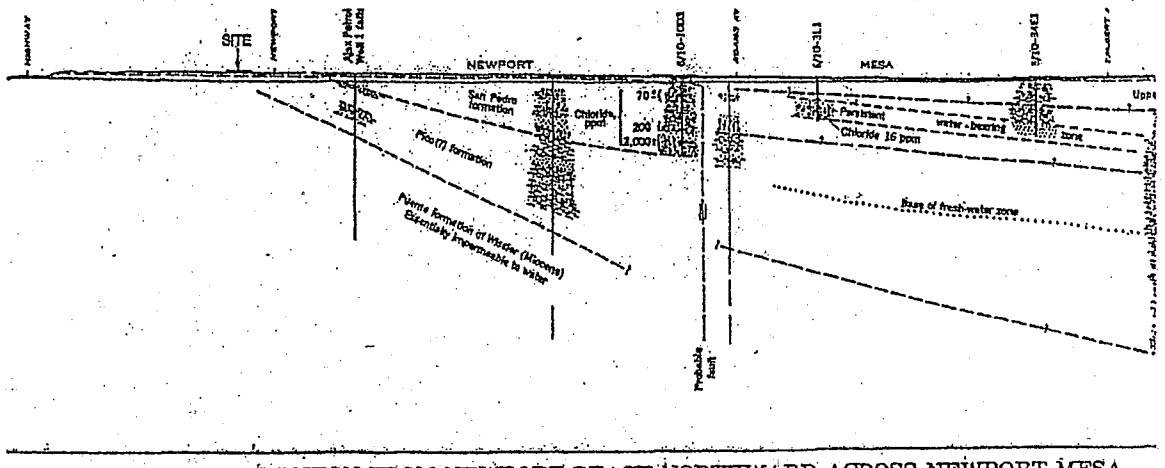
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- TCE — TRICHLOROETHENE
- + — HISTORIC TCE USE (DEGREASER AND / OR SUMP / UST)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

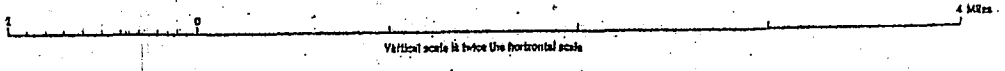
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990e).
4. HISTORIC TCE USE FROM BEARD (2000) AND PETROZZI (2000).

0 100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	SITE PLAN FIGURE NO. 2



SECTION FROM NEWPORT BEACH NORTHWARD ACROSS NEWPORT MESA



Vertical scale is twice the horizontal scale

NOTE:

BASE MAP FROM
: UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GEOLOGIC SECTIONS IN THE LONG BEACH-SANTA ANA AREA, CALIFORNIA

LEGEND:

APPROXIMATE CONTACT BETWEEN SOIL TYPES

Sand

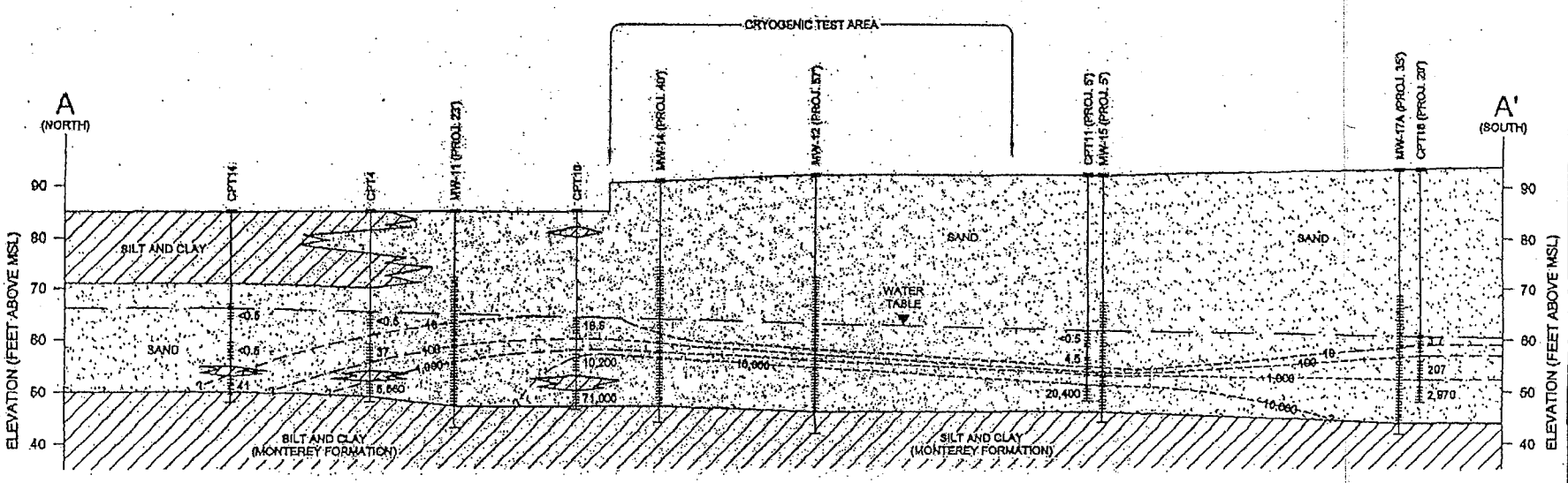
Clay

Gravel

Sandy clay

FIGURE REPRODUCED FROM DELTA ENVIRONMENTAL CONSULTANTS, INC. (DELTA, 1990c)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	REGIONAL GEOLOGIC SECTION FIGURE NO. 3



LEGEND

- MW-12 — GROUNDWATER MONITORING WELL OR CPT BORING LOCATION AND DESIGNATION.
- MONITORING WELL SCREENED INTERVAL OR DISCRETE-DEPTH GROUNDWATER SAMPLING INTERVAL
- GROUNDWATER DEPTH / WATER TABLE
- SAND (SP), SILTY SAND (SM), AND CLAYEY SAND (SC)
- SILT (ML) AND CLAY (CL)

MSL	MEAN SEA LEVEL
TCE	TRICHLOROETHENE
µg/L	MICROGRAMS PER LITER
41	TCE CONCENTRATION IN GROUNDWATER IN µg/L

INTERPRETED TCE ISOCONCENTRATION CONTOUR IN µg/L (SHORT DASHES WHERE CONTROL IS LIMITED)

NOTES

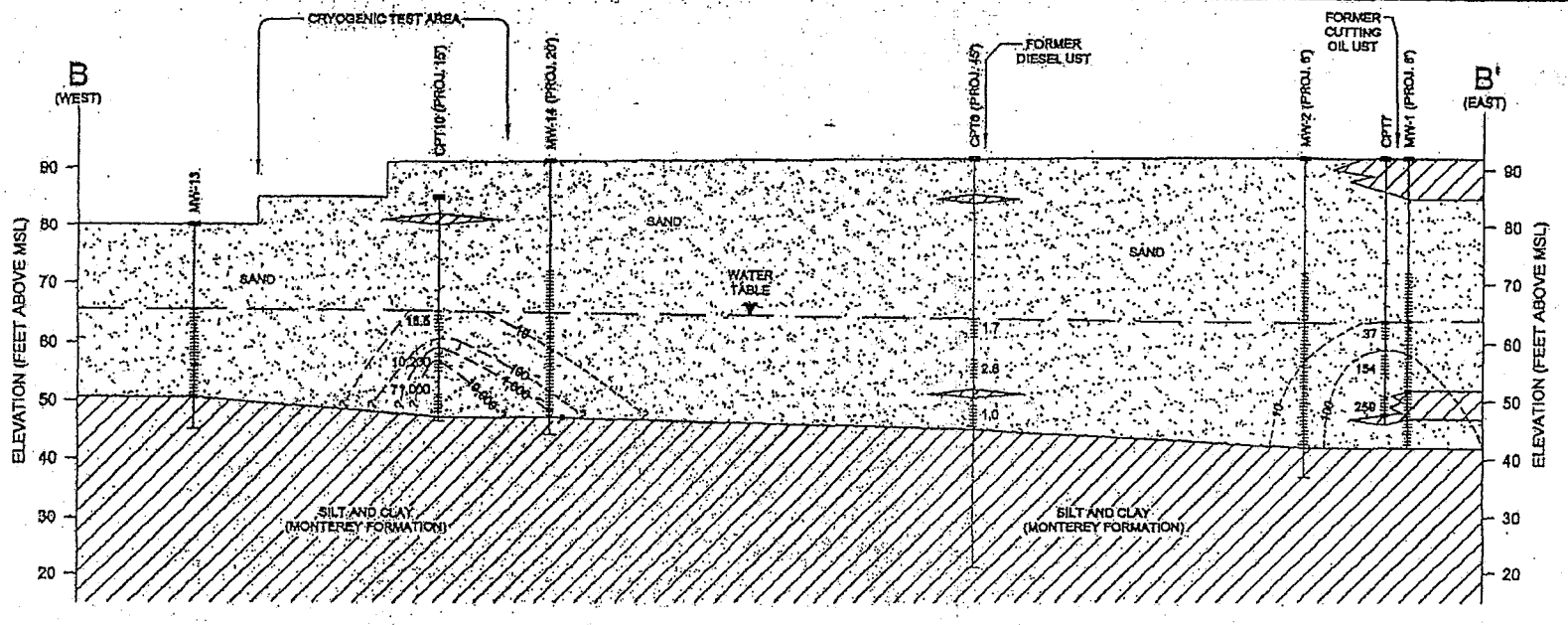
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. DISCRETE-DEPTH GROUNDWATER SAMPLES COLLECTED ON JUNE 4 - 7, 2007 (TETRA TECH, 2007).

DATA SOURCES

1. TETRA TECH (2007): CPT4, CPT10, CPT11, CPT14, CPT16, AND MW-17A.
2. ENVIRON (1997): MW-11, MW-12, MW-14, AND MW-15.

20
0
50
SCALE (FEET)
2.5X VERTICAL EXAGGERATION

FORMER J.C. CARTER COMPANY FACILITY 871 W. 17th STREET COSTA MESA, CALIFORNIA 92627	MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	GEOLOGIC SECTION A - A' FIGURE NO. 4



LEGEND

MW-12 — GROUNDWATER MONITORING WELL OR CPT BORING LOCATION AND DESIGNATION

MONITORING WELL SCREENED INTERVAL OR DISCRETE-DEPTH GROUNDWATER SAMPLING INTERVAL

GROUNDWATER DEPTH / WATER TABLE

SAND (SP), SILTY SAND (SM), AND CLAYEY SAND (SC)

SILT (ML) AND CLAY (CL)

MSL — MEAN SEA LEVEL

TCE — TRICHLOROETHENE

UST — UNDERGROUND STORAGE TANK

ug/L — MICROGRAMS PER LITER

41 — TCE CONCENTRATION IN GROUNDWATER IN ug/L

INTERPRETED TCE ISOCONCENTRATION CONTOUR IN ug/L (SHORT DASHES WHERE CONTROL IS LIMITED)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. DISCRETE-DEPTH GROUNDWATER SAMPLES COLLECTED ON JUNE 4 - 7, 2007 (TETRA TECH, 2007).

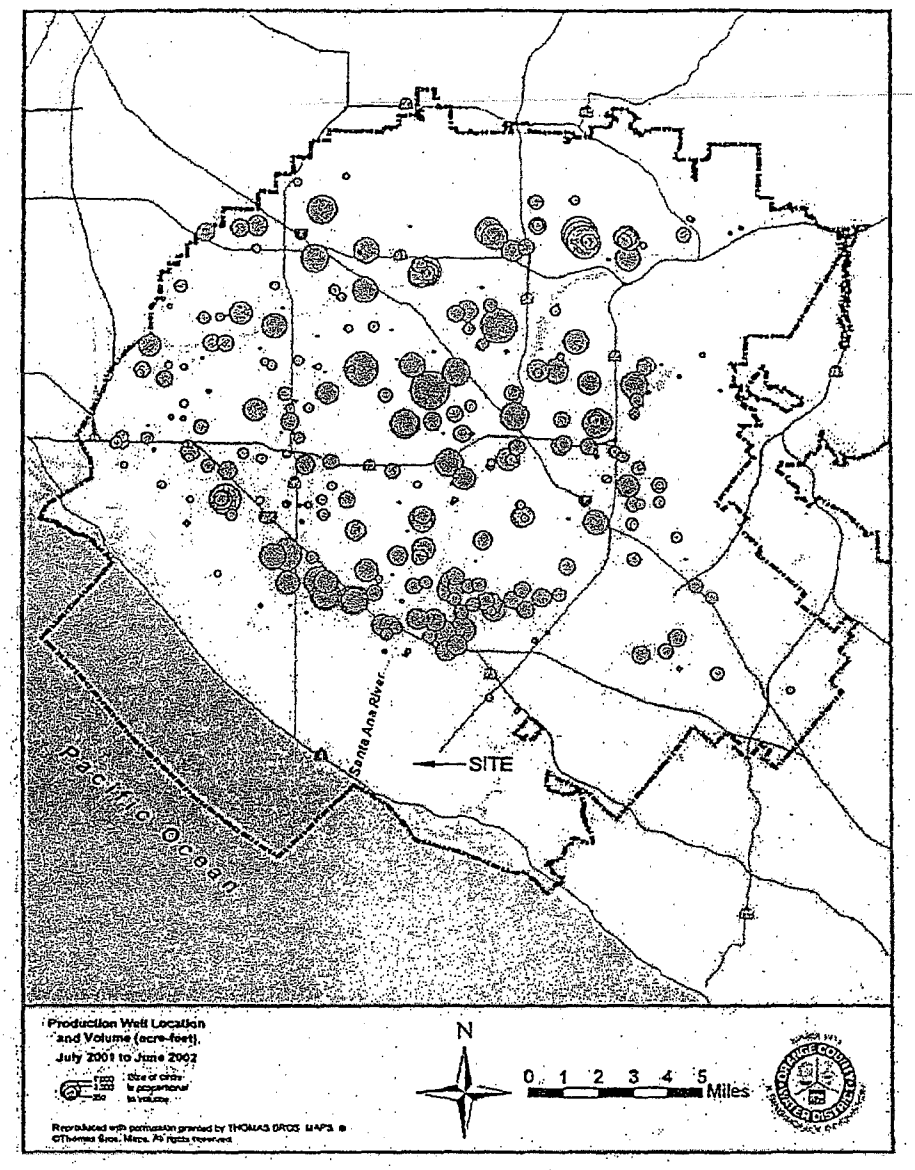
DATA SOURCES

1. TETRA TECH (2007): CPT6, CPT7, AND CPT10.
2. ENVIRON (1997): MW-1, MW-2, MW-13, AND MW-14.

20
0
50

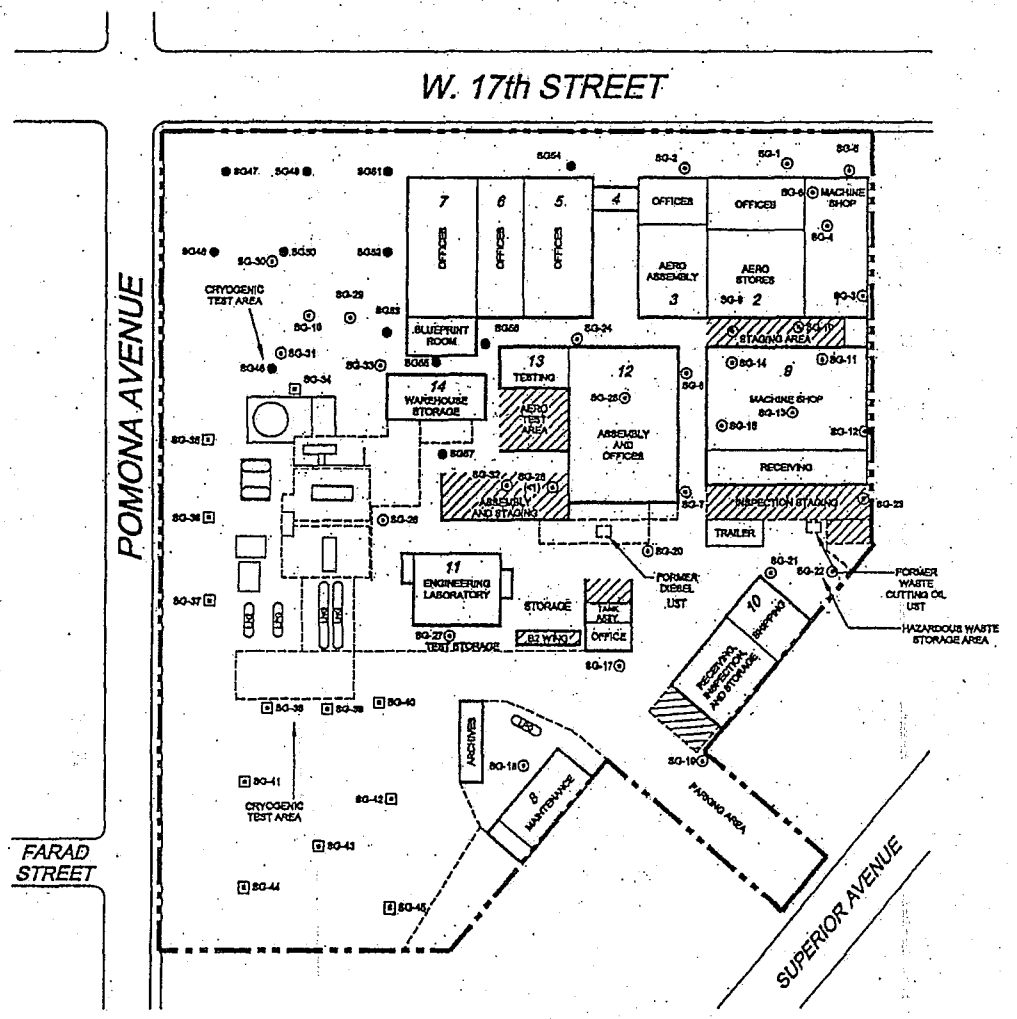
SCALE (FEET)
2.5X VERTICAL EXAGGERATION

FORMER J.C. CARTER COMPANY FACILITY 871 W. 17th STREET COSTA MESA, CALIFORNIA 92627	MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	GEOLOGIC SECTION B - B' FIGURE NO. 5



SOURCE: ORANGE COUNTY GROUNDWATER MANAGEMENT PLAN - FIGURE 2-3 (ORANGE COUNTY WATER DISTRICT [OCWD], 2004)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	OFF-SITE WATER WELLS FIGURE NO. 6



LEGEND

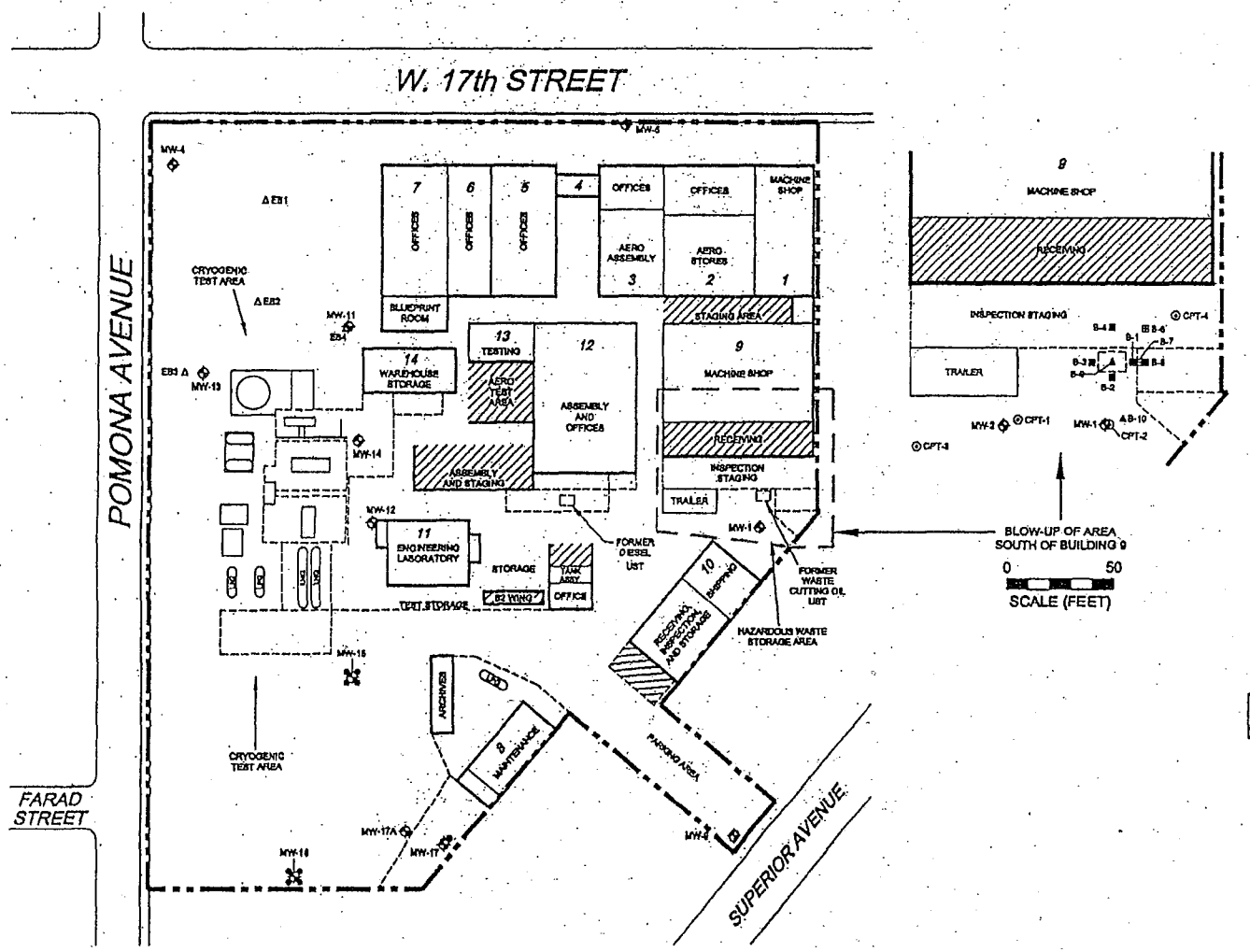
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- SG-13 — SOIL GAS SAMPLING LOCATION AND DESIGNATION (ENVIRON, 1996)
- SG-42 — SOIL GAS SAMPLING LOCATION AND DESIGNATION (ENVIRON, 1997)
- SG49 — SOIL GAS SAMPLING LOCATION AND DESIGNATION (TETRA TECH, 2007)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. (JCCC), 1998).
3. BUILDING NO. OBTAINED FROM DELTA (1980s).

0 100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	ON-SITE SOIL GAS SAMPLING LOCATION MAP FIGURE NO. 7a



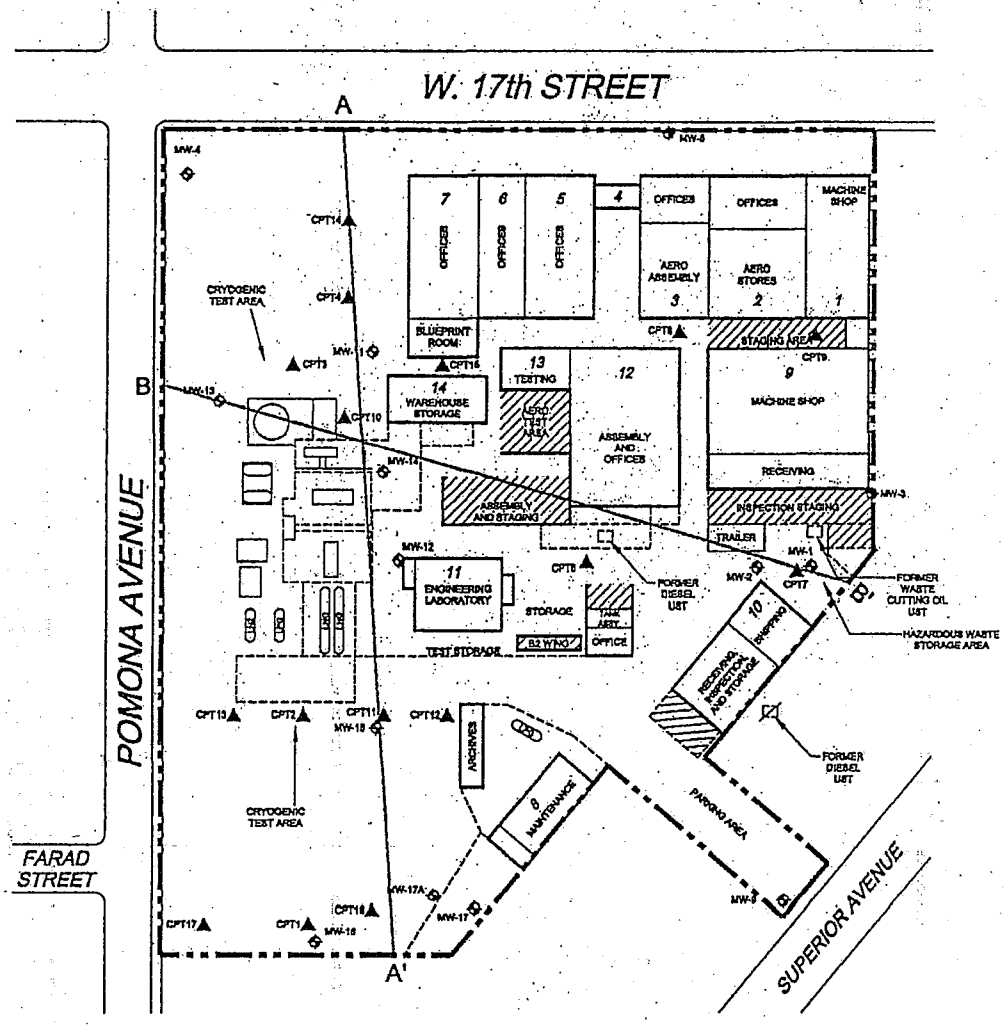
LEGEND

- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- B-4 — SOIL SAMPLING LOCATION AND DESIGNATION (HEKIMIAN & ASSOCIATES, 1987)
- B-8 — SOIL SAMPLING LOCATION AND DESIGNATION (CONVERSE ENVIROMENTAL CONSULTANTS (1988)
- CPT-4 — CPT SAMPLING LOCATION AND DESIGNATION (SCHAEFER DIXON ASSOCIATES (1988)
- B-9 A — SOIL SAMPLING LOCATION AND DESIGNATION (DELTA, 1991)
- EB1 — SOIL SAMPLING LOCATION AND DESIGNATION (ENVIRON, 1996)
- • — SOIL SAMPLING LOCATION (SECOR, 2000c) (SEE NOTE 4 BELOW)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. (JCCC), 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990e).
4. THE SPECIFIC LOCATIONS OF FORMER SOIL BORINGS WELL 15 B1 TO B4, WELL 16 B1 TO B4, AND WELL 17 B2 WERE NOT SHOWN IN THE SECOR (2000c) REPORT AND ARE NOT KNOWN.

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	ON-SITE SOIL SAMPLING LOCATION MAP FIGURE NO. 7b



LEGEND

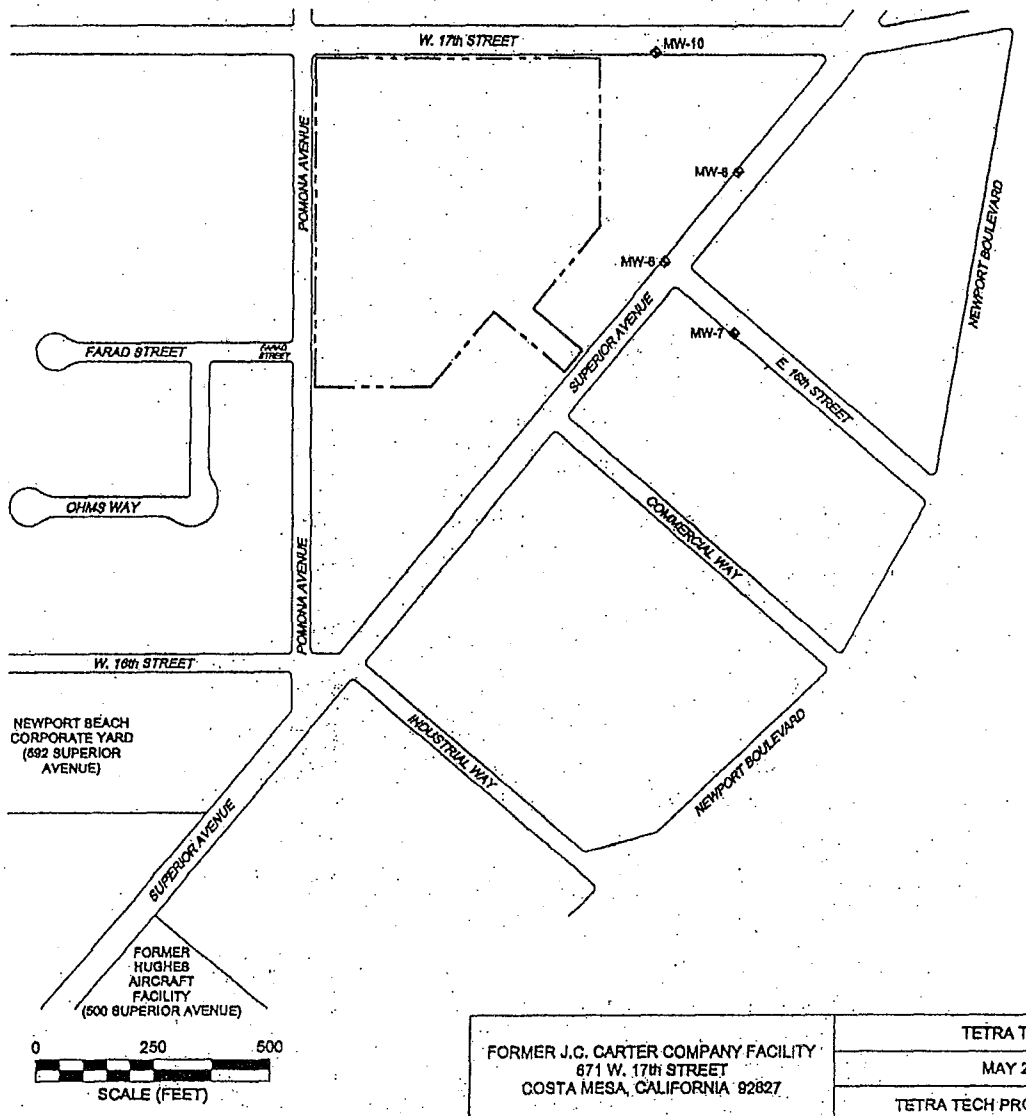
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- CPT3 — CPT AND GROUNDWATER SAMPLING LOCATION AND DESIGNATION (TETRA TECH, 2007)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE
- A — A' GEOLOGIC SECTION REFERENCE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. (JCCC), 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990s).
4. REFER TO FIGURE 4 FOR GEOLOGIC SECTION A - A'; REFER TO FIGURE 5 FOR GEOLOGIC SECTION B - B'.

0 100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	ON-SITE GROUNDWATER SAMPLING LOCATION MAP FIGURE NO. 7c



N

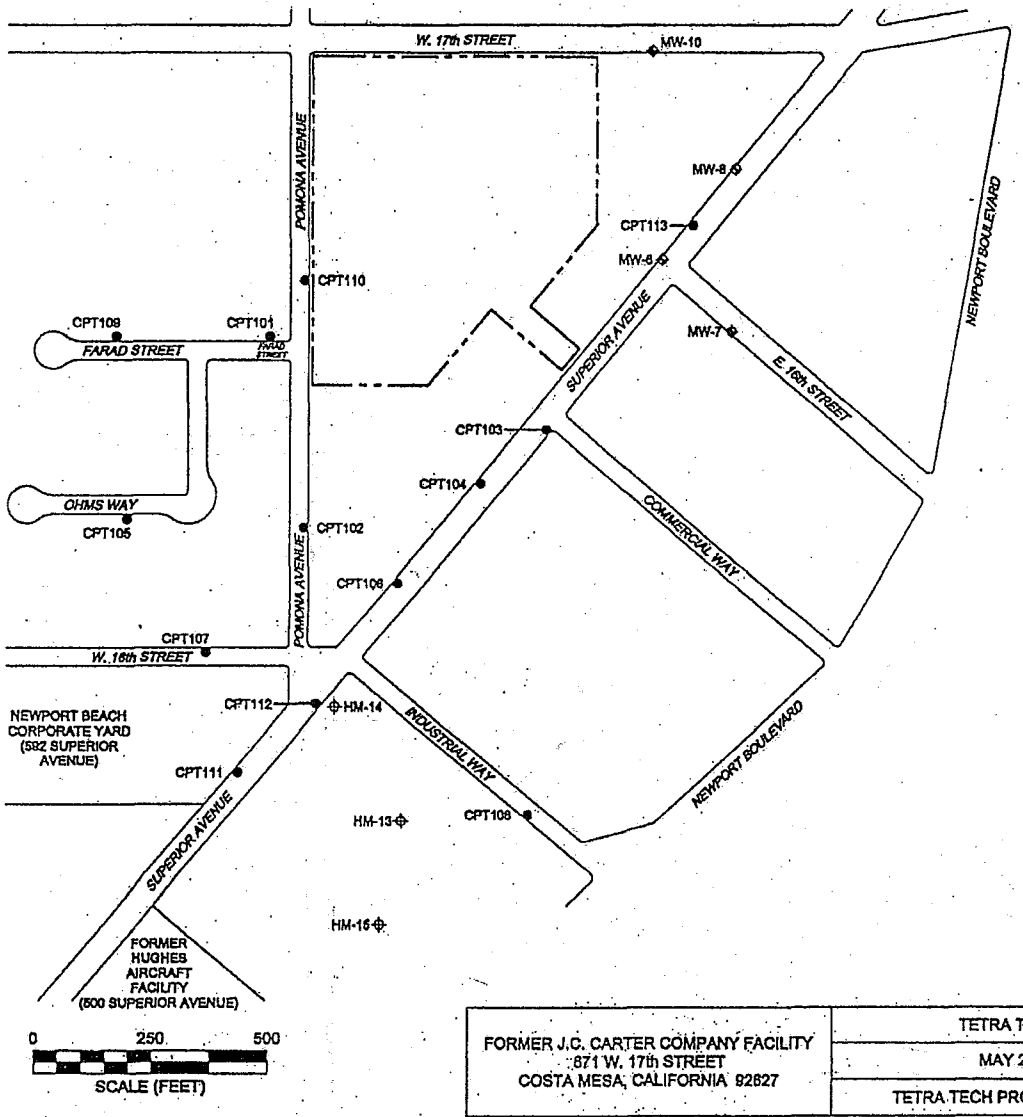
LEGEND

- SITE BOUNDARY
- MW-8 — FORMER GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION (SOIL SAMPLING LOCATION)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	OFF-SITE SOIL SAMPLING LOCATION MAP FIGURE NO. 7d



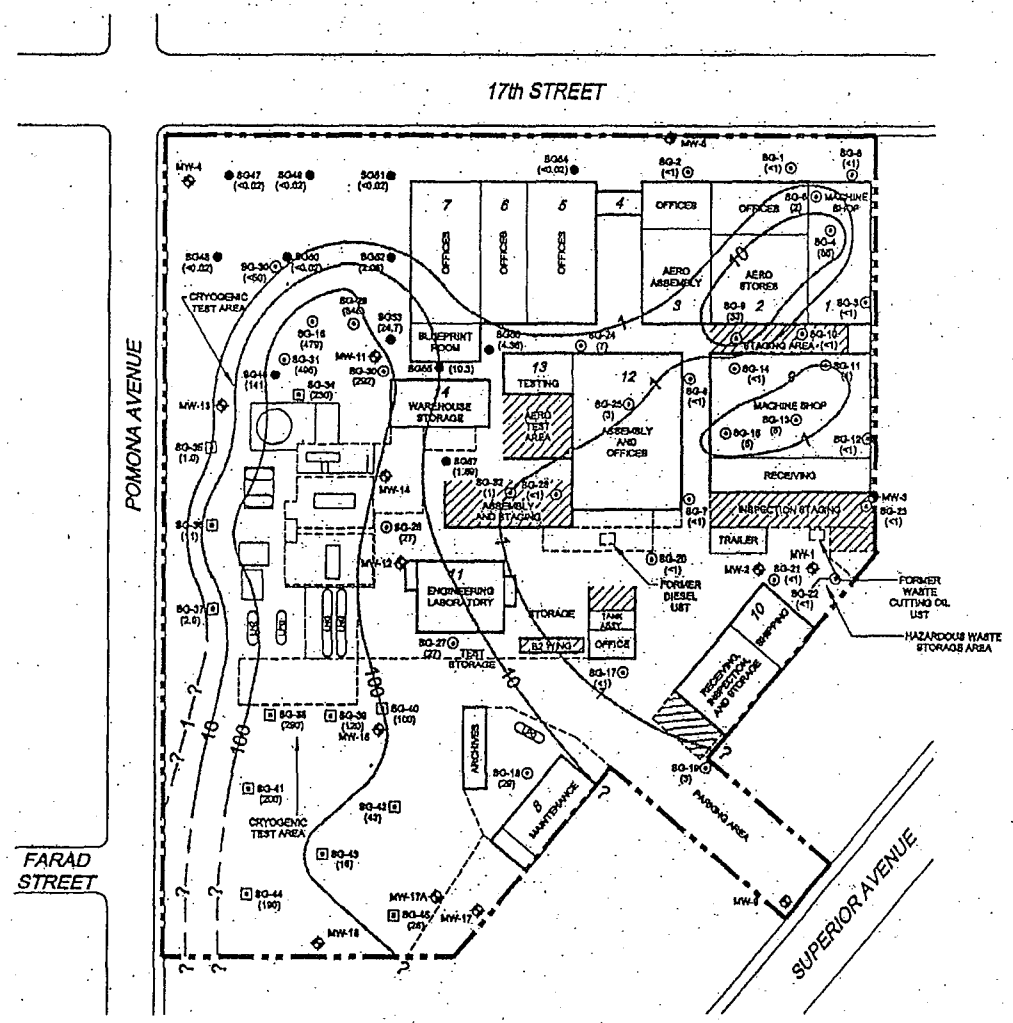
LEGEND

- SITE BOUNDARY
- MW-6 — FORMER GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- CPT101 — OFF-SITE GROUNDWATER SAMPLE LOCATION AND DESIGNATION
- HM-13 — OFF-SITE GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION (HARGIS + ASSOCIATES, INC., 2007)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).

FORMER J.C. CARTER COMPANY FACILITY 871 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	OFF-SITE GROUNDWATER SAMPLING LOCATION MAP FIGURE NO. 7e



LEGEND

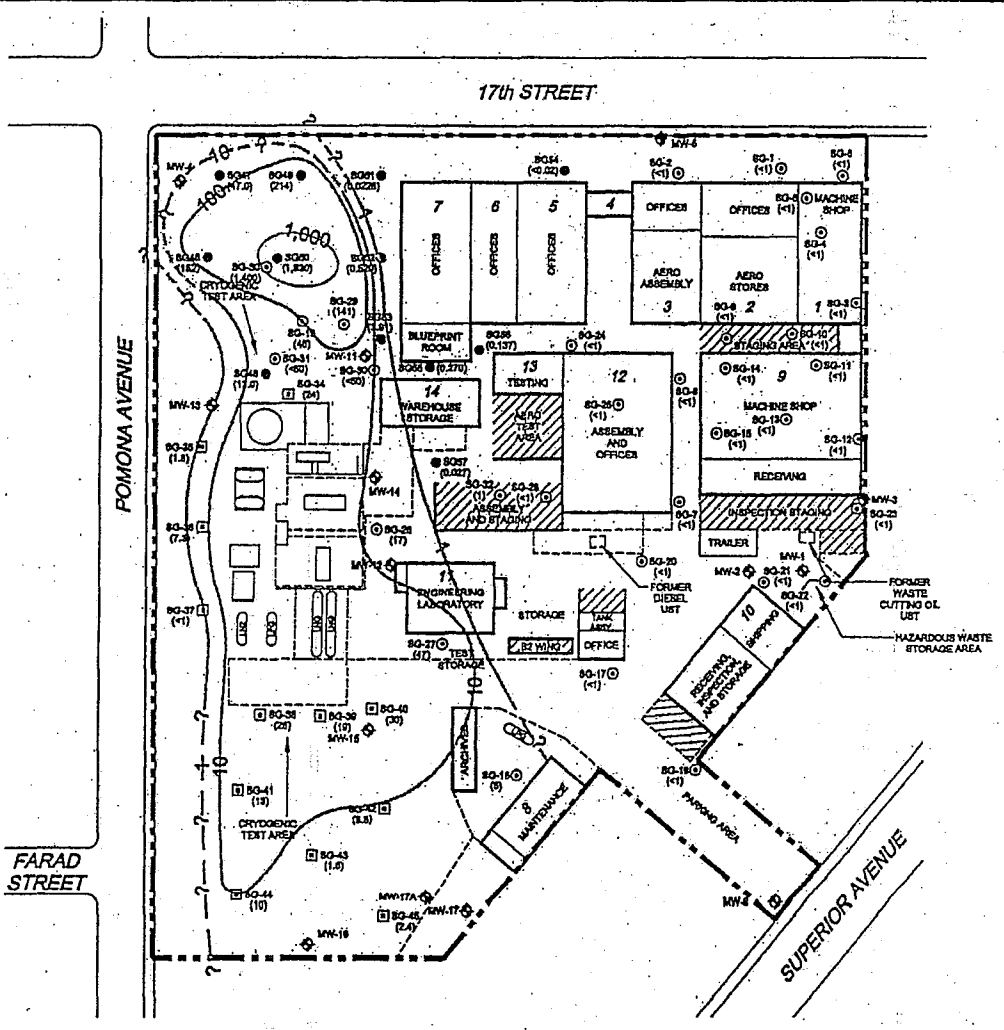
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- SG-13 (8) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND TCE CONCENTRATION IN ug / l (ENVIRON, 1996)
- SG-42 (43) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND TCE CONCENTRATION IN ug / l (ENVIRON, 1997)
- SG49 (<0.02) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND TCE CONCENTRATION IN ug / l (TETRA TECH, 2007)
- 10 — ISOCONTOURS OF TCE CONCENTRATION IN SOIL GAS (ug / l)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. (JCCC), 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990s).
4. TCE = TRICHLOROETHENE.
5. ug / l = MICROGRAMS PER LITER.
6. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.

0 100 200
SCALE (FEET)

FORMER C.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATION IN SOIL GAS FIGURE NO. 8



LEGEND

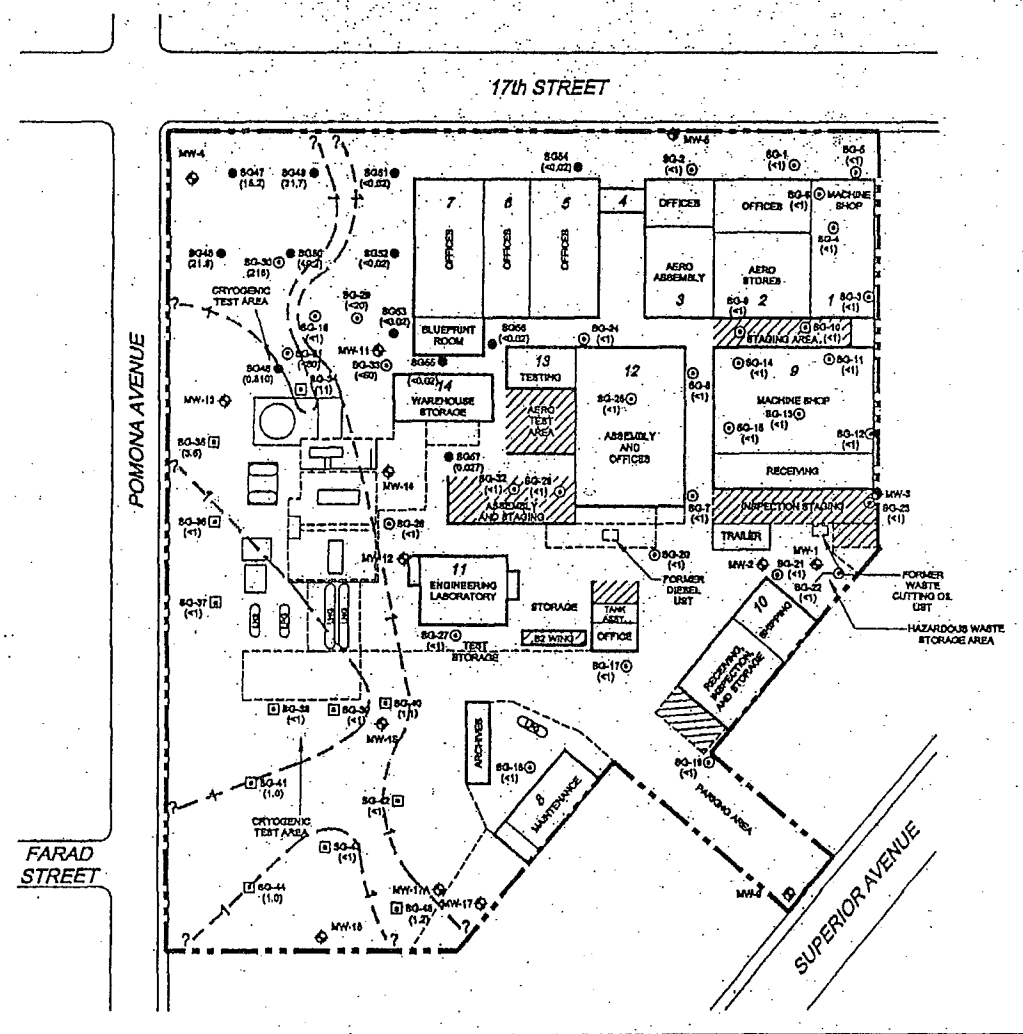
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- SG-13 (<1) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND cis-1,2-DCE CONCENTRATION IN ug / l (ENVIRON, 1996)
- SG-42 (3.8) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND cis-1,2-DCE CONCENTRATION IN ug / l (ENVIRON, 1997)
- SG-48 (214) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND cis-1,2-DCE CONCENTRATION IN ug / l (TETRA TECH, 2007)
- 10 — ISOCONTOURS OF CIS-1,2-DCE CONCENTRATIONS IN SOIL GAS (ug / l)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990a).
4. CIS-1,2-DCE = CIS-1,2-DICHLOROETHENE.
5. ug / l = MICROGRAMS PER LITER.
6. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.

0 100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	CIS-1,2-DCE CONCENTRATION IN SOIL GAS FIGURE NO. 9



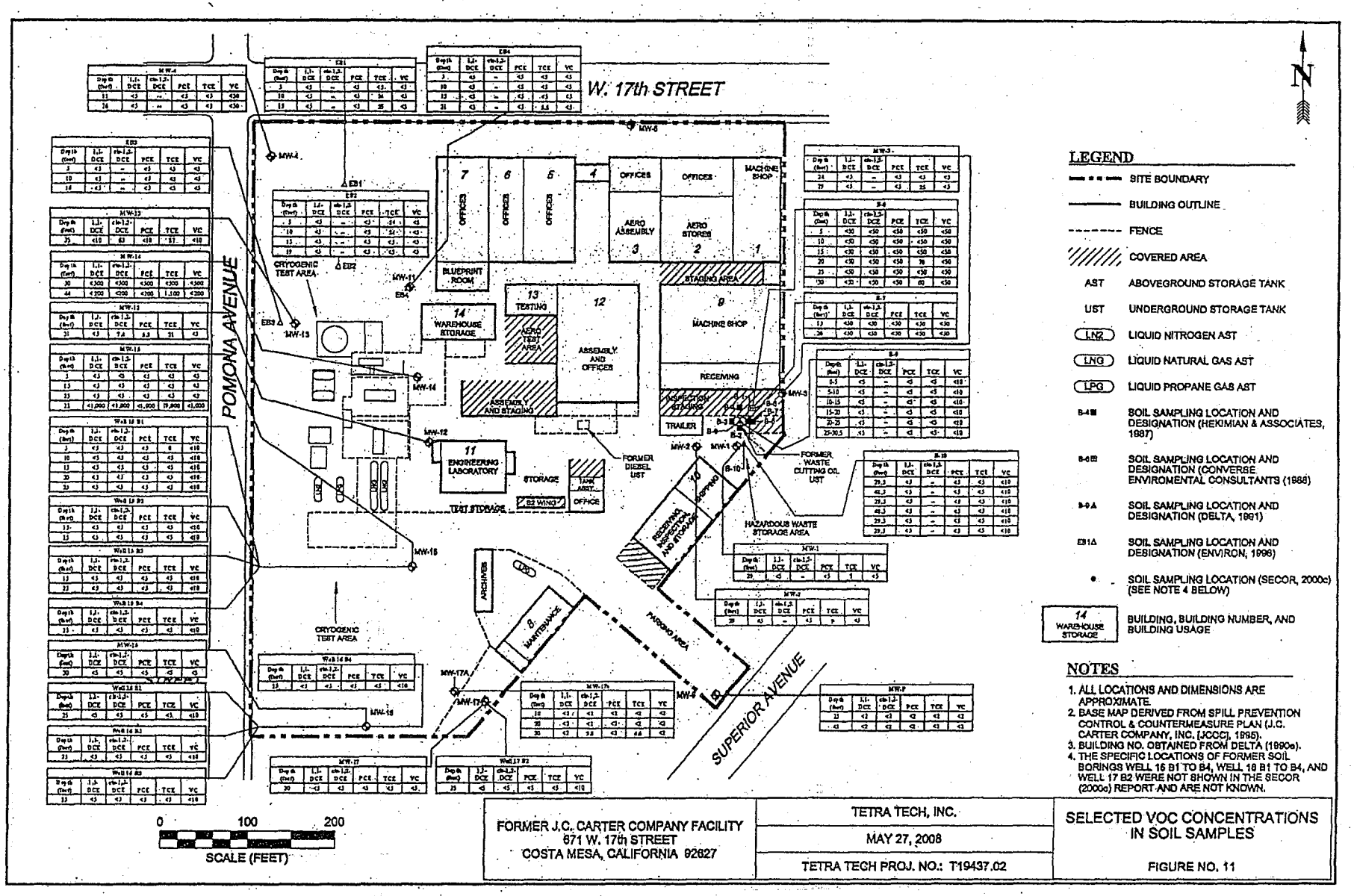
LEGEND

- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS
- LPG — LIQUID PROPANE GAS AST
- SG-13 (<1) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND VINYL CHLORIDE CONCENTRATION IN ug / l (ENVIRON, 1996)
- SG-42 (<1) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND VINYL CHLORIDE CONCENTRATION IN ug / l (ENVIRON, 1997)
- SG-48 (31.7) — SOIL GAS SAMPLING LOCATION, DESIGNATION, AND VINYL CHLORIDE CONCENTRATION IN ug / l (TETRA TECH, 2007)
- 1 — ISOCONTOURS OF VINYL CHLORIDE CONCENTRATIONS IN SOIL GAS (ug / l)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990s).
4. ug / l = MICROGRAMS PER LITER.
5. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	VINYL CHLORIDE CONCENTRATION IN SOIL GAS FIGURE NO. 10



FORMER J.C. CARTER COMPANY FACILITY
871 W. 17th STREET
COSTA MESA, CALIFORNIA 92627

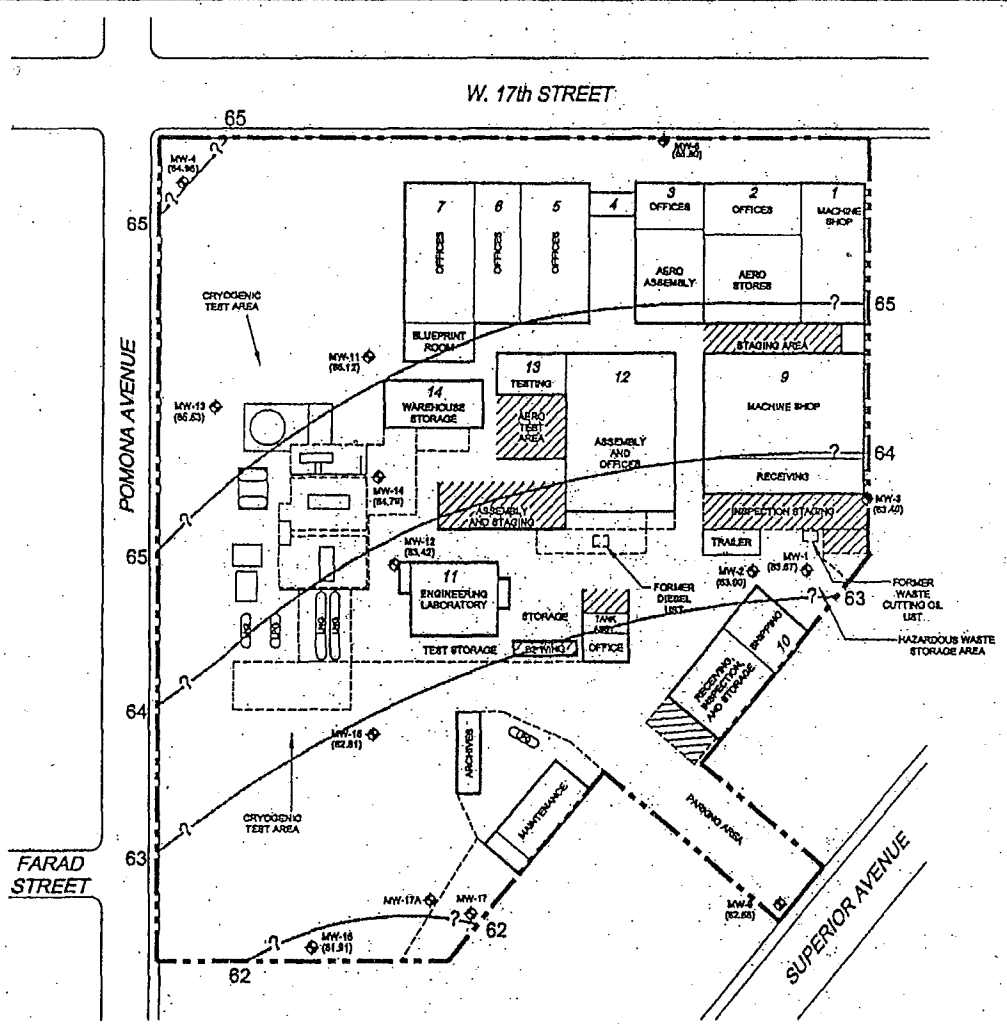
TETRA TECH, INC.

MAY 27, 2008

TETRA TECH PROJ. NO.: T19437.02

SELECTED VOC CONCENTRATIONS IN SOIL SAMPLES

FIGURE NO. 11



LEGEND

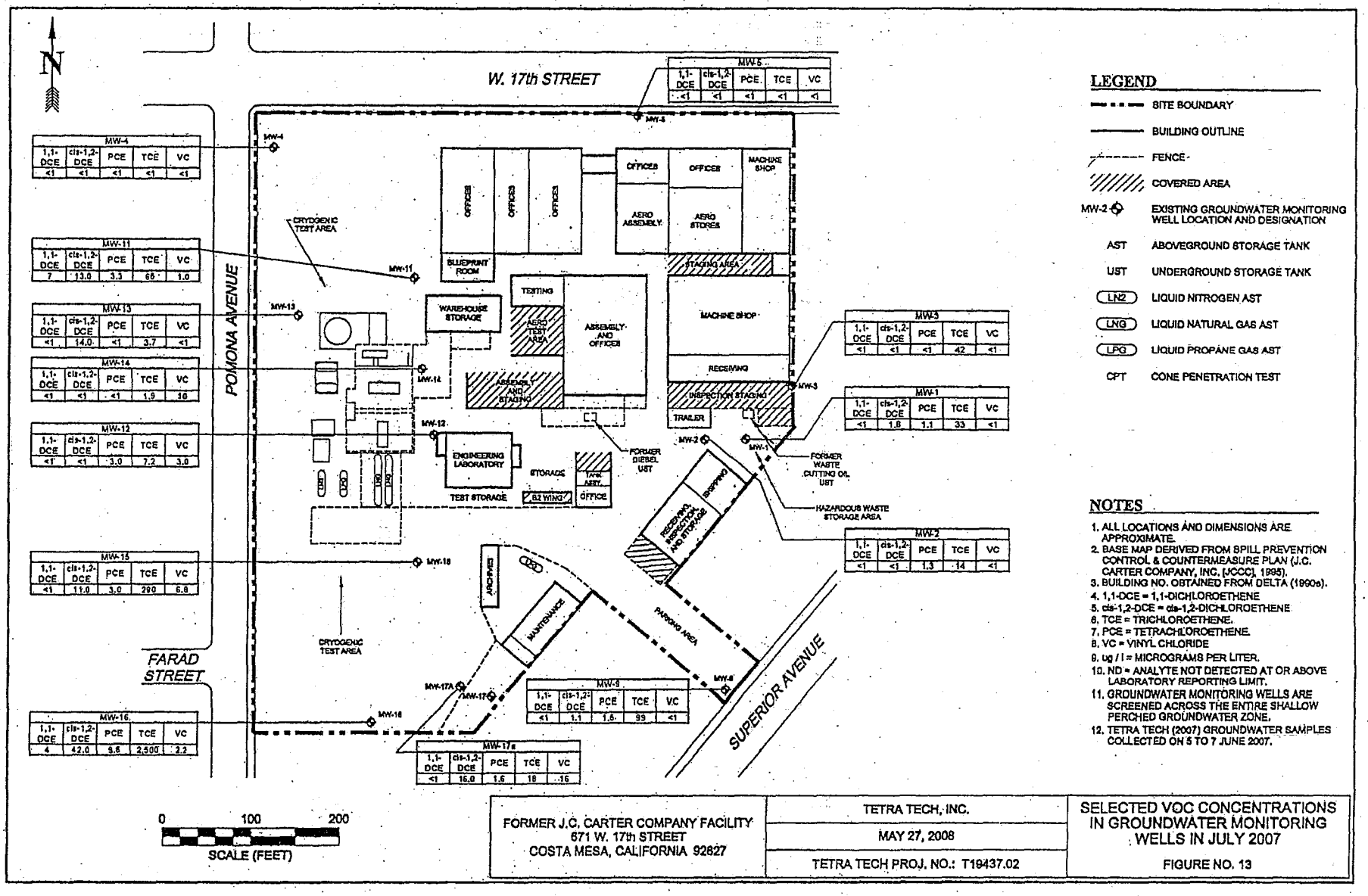
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 (63.00) — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION WITH GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE
- 64 — GROUNDWATER ELEVATION CONTOUR WITH GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (QUERIED WHERE UNCERTAIN)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990s).
4. GROUNDWATER MONITORING WELL MW-17A WAS INSTALLED TO REPLACE WELL MW-17 WHICH HAD AN OBSTRUCTION. SURVEYED ELEVATION DATA REMAIN TO BE OBTAINED FOR THIS WELL.

100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437-.02	GROUNDWATER ELEVATIONS IN JULY 2007 FIGURE NO. 12



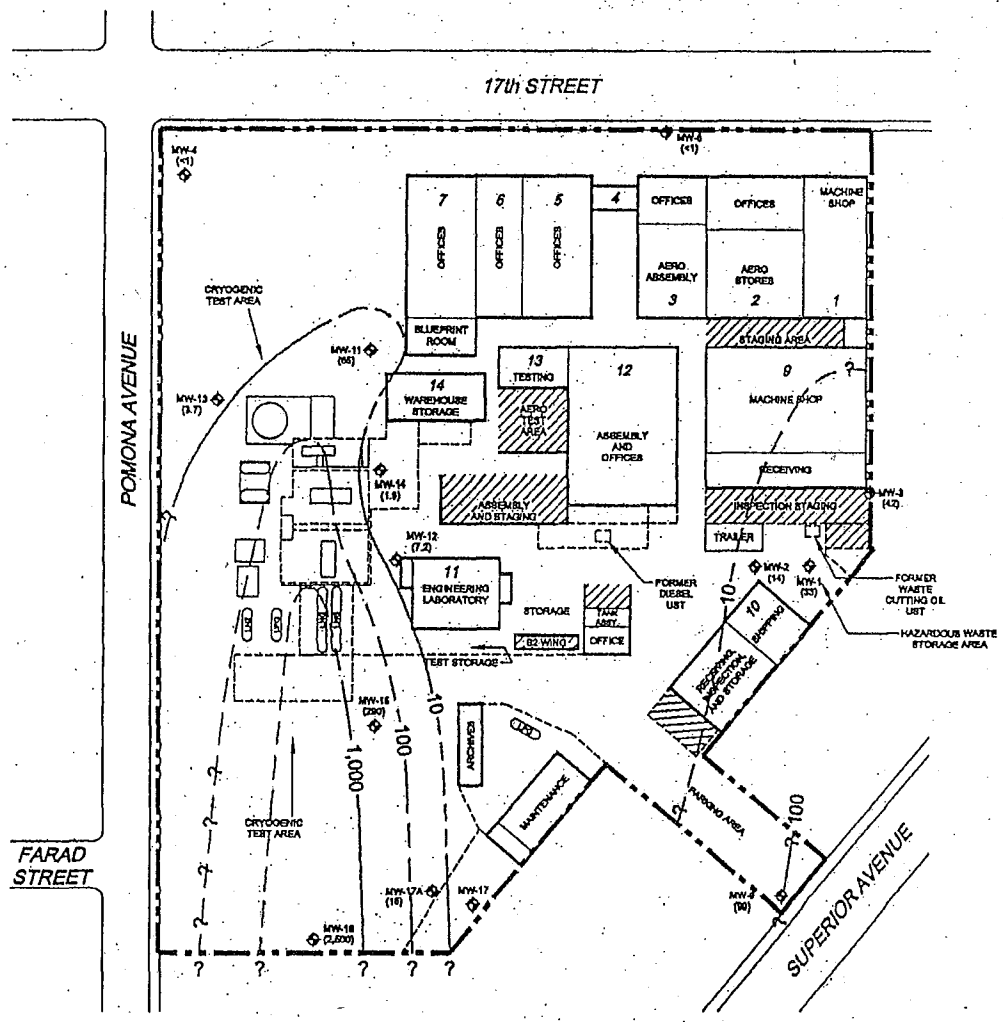
LEGEND

- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- LN2 LIQUID NITROGEN AST
- LNG LIQUID NATURAL GAS AST
- LPG LIQUID PROPANE GAS AST
- CPT CONE PENETRATION TEST

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. (JCCC), 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990s).
4. 1,1-DCE = 1,1-DICHLOROETHENE
5. cis-1,2-DCE = cis-1,2-DICHLOROETHENE
6. TCE = TRICHLOROETHENE.
7. PCE = TETRACHLOROETHENE.
8. VC = VINYL CHLORIDE
9. ug / l = MICROGRAMS PER LITER.
10. ND = ANALYTE NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT.
11. GROUNDWATER MONITORING WELLS ARE SCREENED ACROSS THE ENTIRE SHALLOW PERCHED GROUNDWATER ZONE.
12. TETRA TECH (2007) GROUNDWATER SAMPLES COLLECTED ON 5 TO 7 JUNE 2007.

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	SELECTED VOC CONCENTRATIONS IN GROUNDWATER MONITORING WELLS IN JULY 2007 FIGURE NO. 13



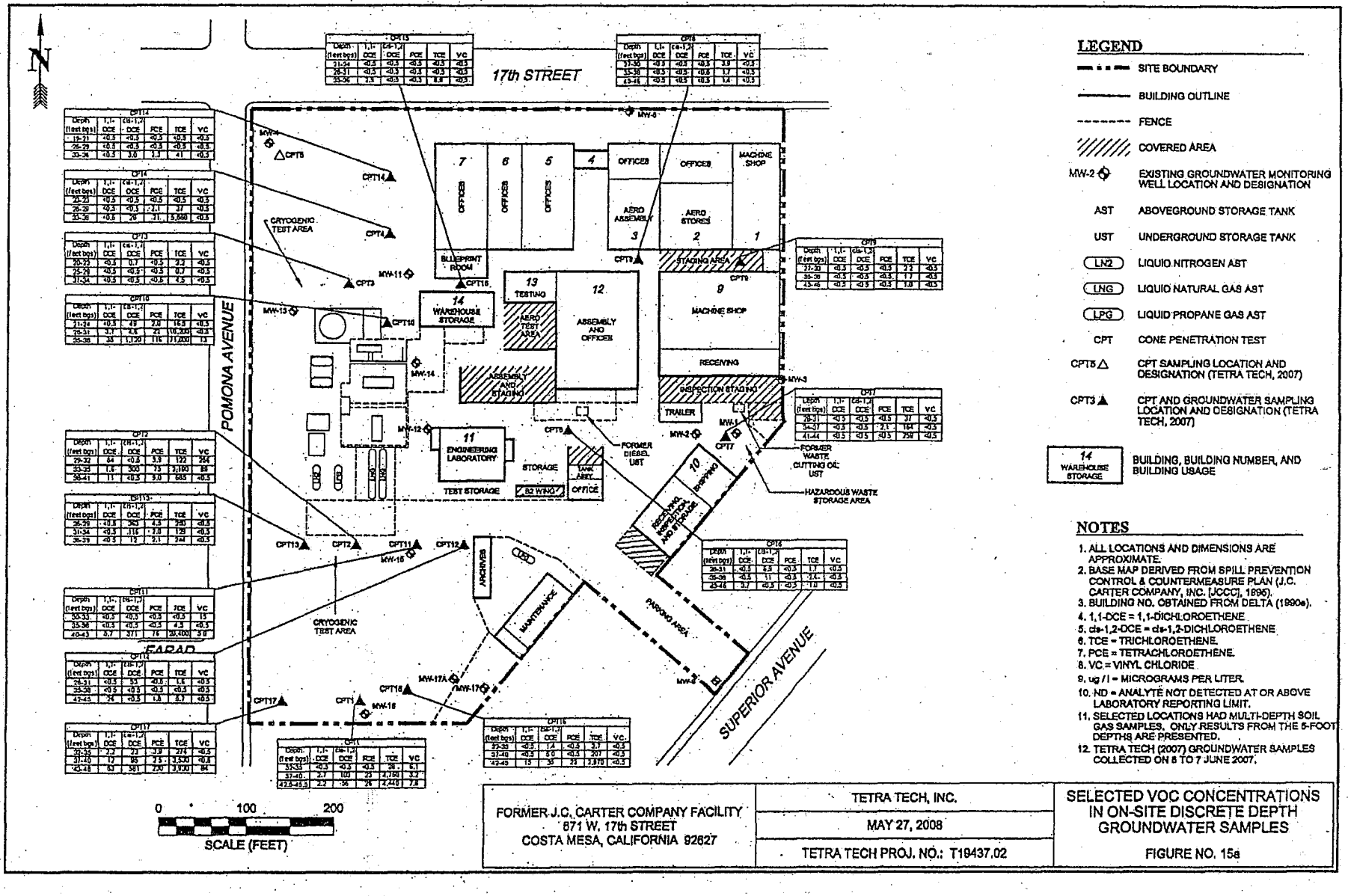
LEGEND

- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 (14) — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION, AND TCE CONCENTRATION IN ug / l
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE
- 10 — ISOCONTOURS OF TCE CONCENTRATION IN GROUNDWATER (ug / l)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990a).
4. TCE = TRICHLOROETHENE.
5. ug / l = MICROGRAMS PER LITER.
6. <1 = ANALYTE NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT.
7. GROUNDWATER MONITORING WELLS ARE SCREENED ACROSS THE ENTIRE SHALLOW PERCHED GROUNDWATER ZONE.
8. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATIONS IN GROUNDWATER MONITORING WELLS IN JULY 2007 FIGURE NO. 14



LEGEND

- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- CPT — CONE PENETRATION TEST
- CPT5 △ — CPT SAMPLING LOCATION AND DESIGNATION (TETRA TECH, 2007)
- CPT3 ▲ — CPT AND GROUNDWATER SAMPLING LOCATION AND DESIGNATION (TETRA TECH, 2007)
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990a).
4. 1,1-DCE = 1,1-DICHLOROETHENE
5. cis-1,2-DCE = cis-1,2-DICHLOROETHENE
6. TCE = TRICHLOROETHENE.
7. PCE = TETRACHLOROETHENE.
8. VC = VINYL CHLORIDE
9. ug / l = MICROGRAMS PER LITER.
10. ND = ANALYTE NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT.
11. SELECTED LOCATIONS HAD MULTI-DEPTH SOIL GAS SAMPLES. ONLY RESULTS FROM THE 5-FOOT DEPTHS ARE PRESENTED.
12. TETRA TECH (2007) GROUNDWATER SAMPLES COLLECTED ON 6 TO 7 JUNE 2007.

CPT14					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
19-21	<0.5	<0.5	<0.5	<0.5	<0.5
26-29	<0.5	<0.5	<0.5	<0.5	<0.5
35-36	<0.5	3.0	2.3	41	<0.5

CPT14					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
20-22	<0.5	<0.5	<0.5	<0.5	<0.5
26-29	<0.5	<0.5	2.1	37	<0.5
35-36	<0.5	26	31	5,550	<0.5

CPT13					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
20-22	<0.5	0.7	<0.5	9.2	<0.5
26-29	<0.5	<0.5	<0.5	0.7	<0.5
31-34	<0.5	<0.5	<0.5	4.5	<0.5

CPT10					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
21-24	<0.5	19	7.0	16.5	<0.5
26-31	3.7	4.6	21	10,300	<0.5
35-36	35	1,120	116	11,000	13

CPT12					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
29-32	64	<0.5	3.9	122	264
33-35	1.6	300	73	3,100	69
36-41	11	<0.5	9.0	645	<0.5

CPT13					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
26-29	<0.5	343	4.5	790	<0.5
31-34	<0.5	116	7.0	129	<0.5
36-39	<0.5	13	2.1	244	<0.5

CPT11					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
30-33	<0.5	<0.5	<0.5	<0.5	15
35-36	<0.5	<0.5	<0.5	4.3	<0.5
40-43	5.7	371	76	30,400	3.8

CPT14					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
26-31	<0.5	5.5	<0.5	1.6	<0.5
35-38	<0.5	<0.5	<0.5	<0.5	<0.5
42-45	24	<0.5	1.3	6.7	<0.5

CPT17					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
29-32	7.2	7.7	3.9	274	<0.5
31-40	17	85	7.5	3,530	0.8
43-48	53	581	2.0	3,900	84

CPT1					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
33-35	<0.5	<0.5	<0.5	28	6.1
37-40	2.7	100	23	4,190	3.3
42.5-45.5	2.7	36	26	4,240	7.8

CPT15					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
33-35	<0.5	1.4	<0.5	3.7	<0.5
37-40	<0.5	5.0	<0.5	207	<0.5
42-45	1.9	30	23	3,870	<0.5

CPT16					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
26-31	<0.5	4.8	<0.5	1.7	<0.5
35-36	<0.5	11	<0.5	1.4	<0.5
43-46	3.7	<0.5	<0.5	1.0	<0.5

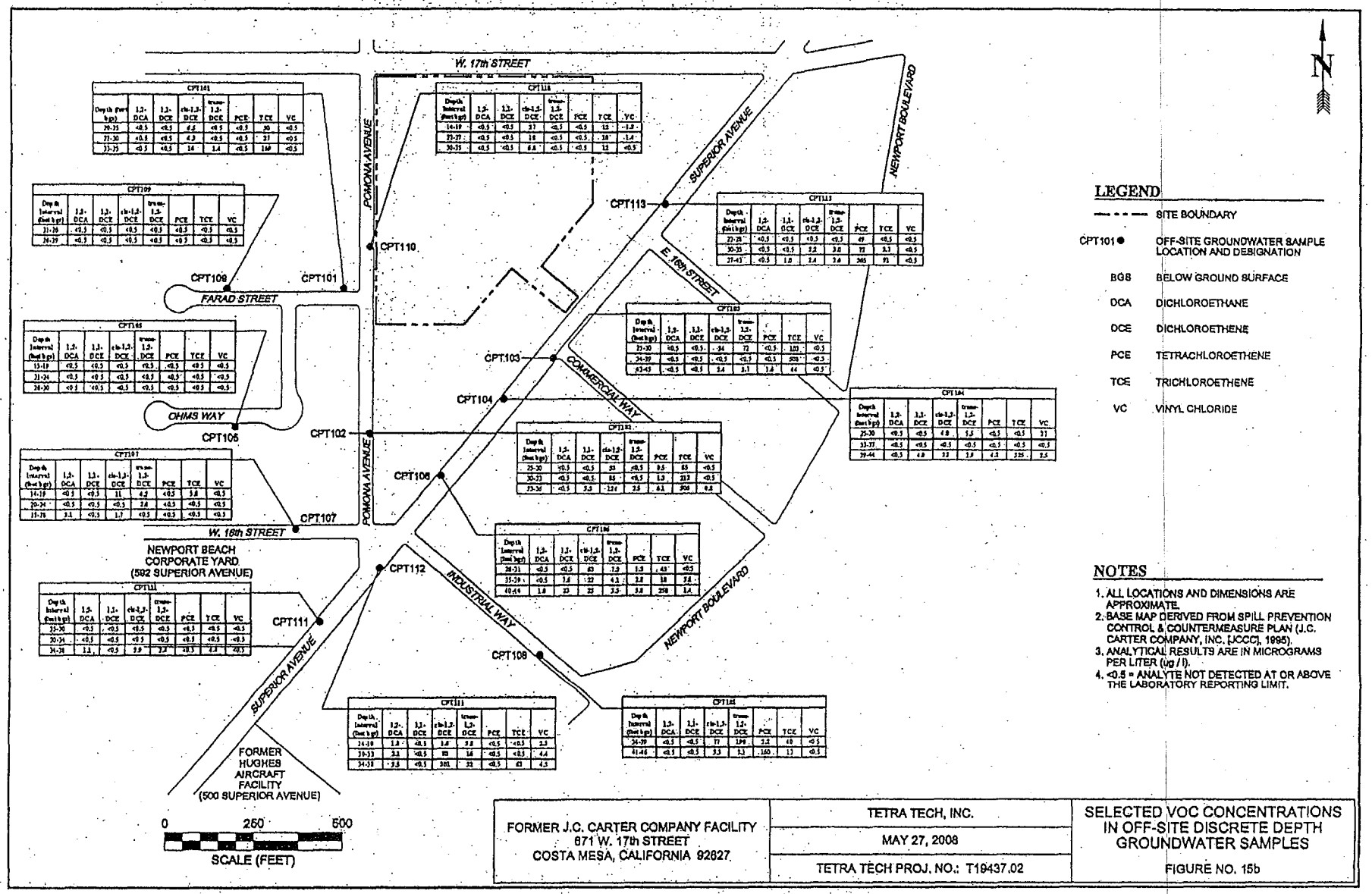
CPT17					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
26-31	<0.5	<0.5	<0.5	37	<0.5
34-37	<0.5	<0.5	2.1	164	<0.5
41-44	<0.5	<0.5	<0.5	754	<0.5

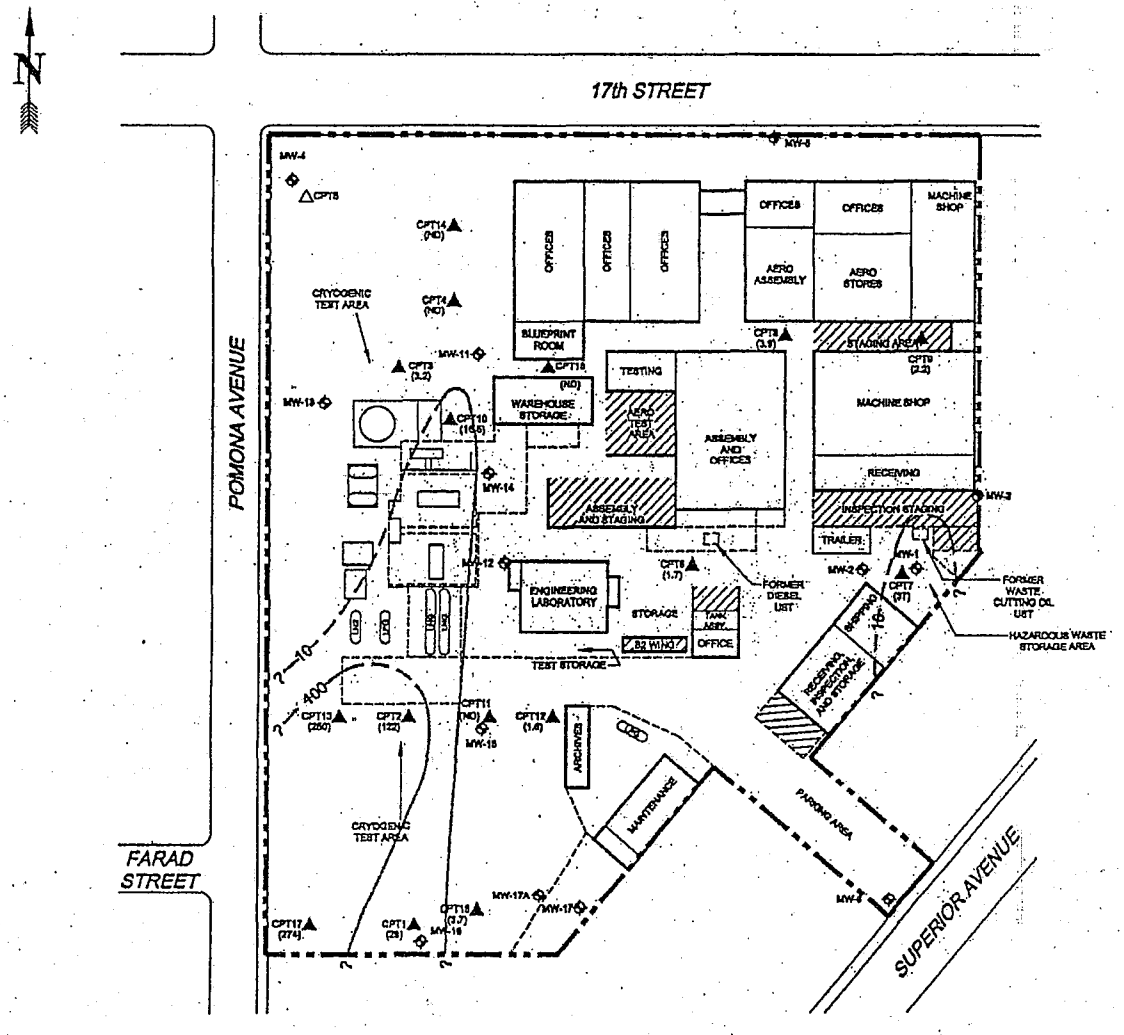
CPT19					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
27-30	<0.5	<0.5	<0.5	7.2	<0.5
35-36	<0.5	<0.5	<0.5	1.7	<0.5
43-46	<0.5	<0.5	<0.5	1.0	<0.5

CPT6					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
27-30	<0.5	<0.5	<0.5	3.9	<0.5
35-36	<0.5	<0.5	<0.5	1.7	<0.5
43-46	<0.5	<0.5	<0.5	1.4	<0.5

CPT15					
Depth (feet bgs)	1,1-DCE	cis-1,2-DCE	PCE	TCE	VC
31-34	<0.5	<0.5	<0.5	<0.5	<0.5
35-36	<0.5	2.3	<0.5	8.8	<0.5

FORMER J.C. CARTER COMPANY FACILITY 871 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	SELECTED VOC CONCENTRATIONS IN ON-SITE DISCRETE DEPTH GROUNDWATER SAMPLES FIGURE NO. 15a


W. 17th STREET
POMONA AVENUE
SUPERIOR AVENUE
NEWPORT BOULEVARD
E. 16th STREET
COMMERCIAL WAY
INDUSTRIAL WAY
FARAD STREET
OHMS WAY
W. 18th STREET
CPT101
CPT102
CPT103
CPT104
CPT105
CPT106
CPT107
CPT108
CPT109
CPT110
CPT111
CPT112
CPT113
NEWPORT BEACH CORPORATE YARD (502 SUPERIOR AVENUE)
FORMER HUGHES AIRCRAFT FACILITY (500 SUPERIOR AVENUE)
0 250 500
SCALE (FEET)
N
LEGEND
SITE BOUNDARY
CPT101 OFF-SITE GROUNDWATER SAMPLE LOCATION AND DESIGNATION
BGS BELOW GROUND SURFACE
DCA DICHLOROETHANE
DCE DICHLOROETHENE
PCE TETRACHLOROETHENE
TCE TRICHLOROETHENE
VC VINYL CHLORIDE
NOTES
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. ANALYTICAL RESULTS ARE IN MICROGRAMS PER LITER (ug / l).
4. <0.5 = ANALYTE NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT.
FORMER J.C. CARTER COMPANY FACILITY
871 W. 17th STREET
COSTA MESA, CALIFORNIA 92627
TETRA TECH, INC.
MAY 27, 2008
TETRA TECH PROJ. NO.: T19437.02
SELECTED VOC CONCENTRATIONS IN OFF-SITE DISCRETE DEPTH GROUNDWATER SAMPLES
FIGURE NO. 15b



LEGEND

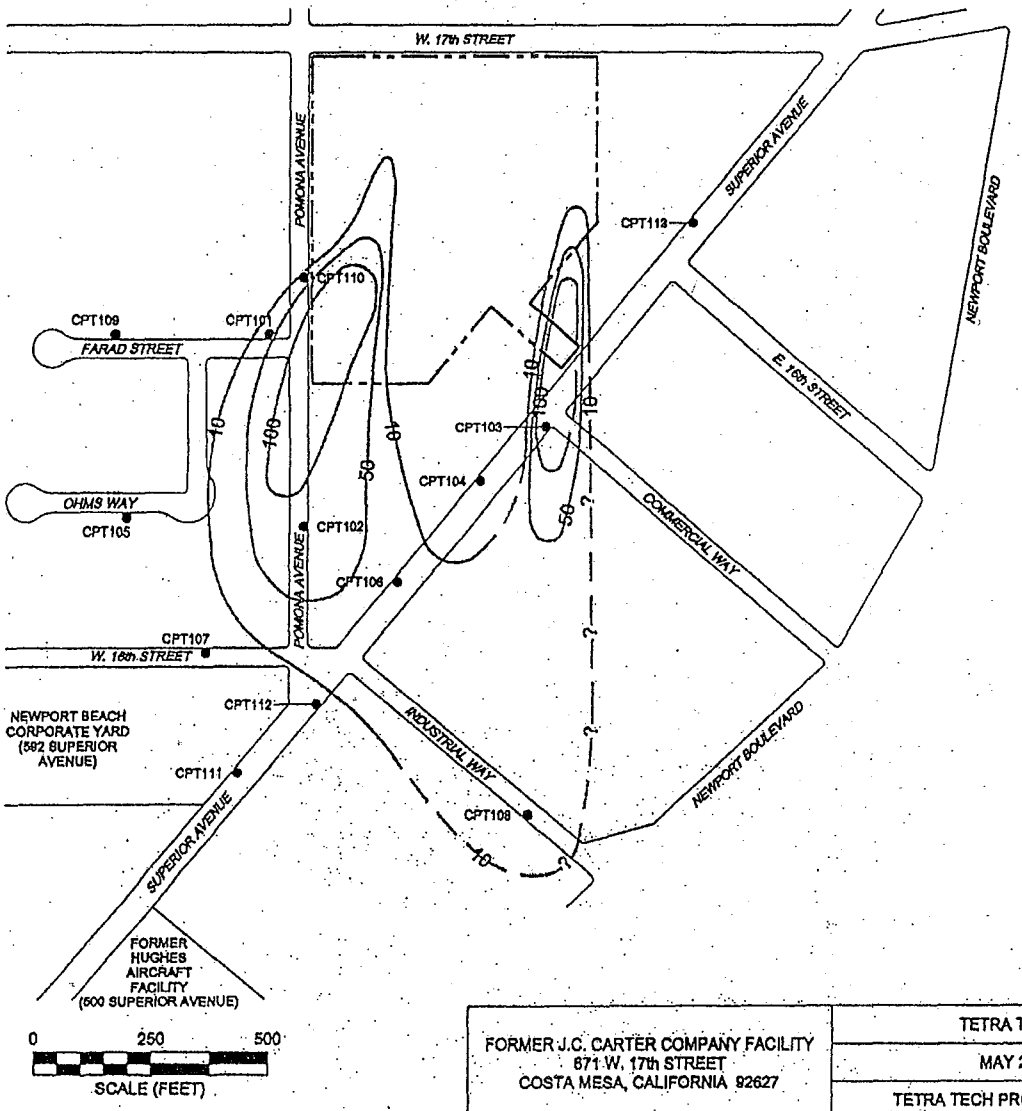
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- CPT3 (3.2) — CPT AND GROUNDWATER SAMPLING LOCATION, DESIGNATION, AND TCE CONCENTRATION IN ug / l (TETRA TECH, 2007)
- 10 — ISOCONTOURS OF TCE CONCENTRATION IN GROUNDWATER (ug / l) IN UPPER DISCRETE-DEPTH WATER SAMPLE ON 5 TO 7 JUNE 2007
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1996).
3. BUILDING NO. OBTAINED FROM DELTA (1990s).
4. CPT = CONE PENETRATION TEST
5. TCE = TRICHLOROETHENE.
6. ug / l = MICROGRAMS PER LITER.
7. ND = ANALYTE NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT.
8. TETRA TECH (2007) GROUNDWATER SAMPLES COLLECTED ON 5 TO 7 JUNE 2007.
9. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.

0 100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATIONS IN UPPER SHALLOW GROUNDWATER ZONE ON-SITE RESULTS FIGURE NO. 16a



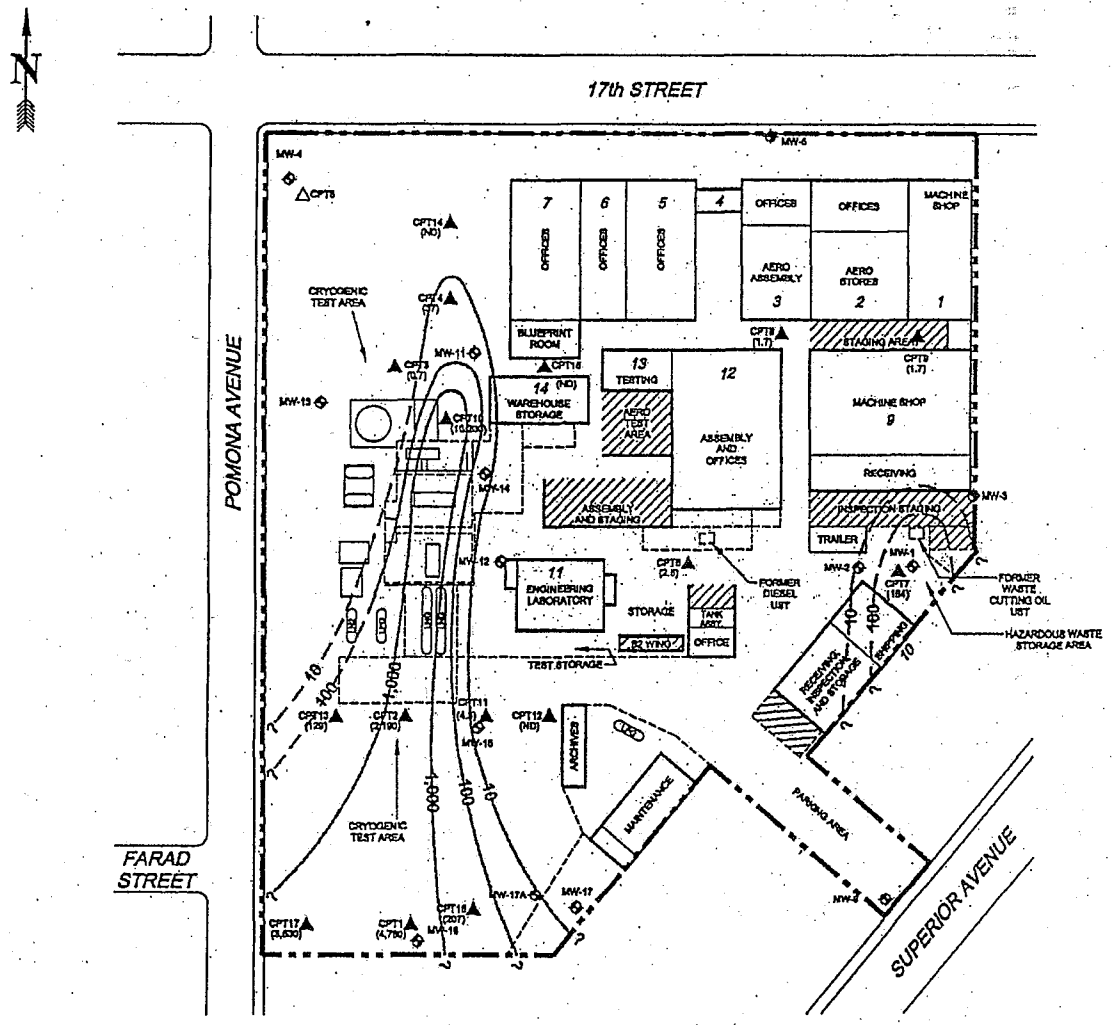
LEGEND

- SITE BOUNDARY
- CPT101 ● OFF-SITE GROUNDWATER SAMPLE LOCATION AND DESIGNATION
- —10— ISOCONTOURS OF TCE CONCENTRATION IN GROUNDWATER (ug / l)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. TCE = TRICHLOROETHENE.
4. ug / l = MICROGRAMS PER LITER.
5. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.
6. REFER TO FIGURE 13 FOR ON-SITE DATA.

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATIONS IN UPPER SHALLOW GROUNDWATER ZONE OFF-SITE RESULTS FIGURE NO. 16b



LEGEND

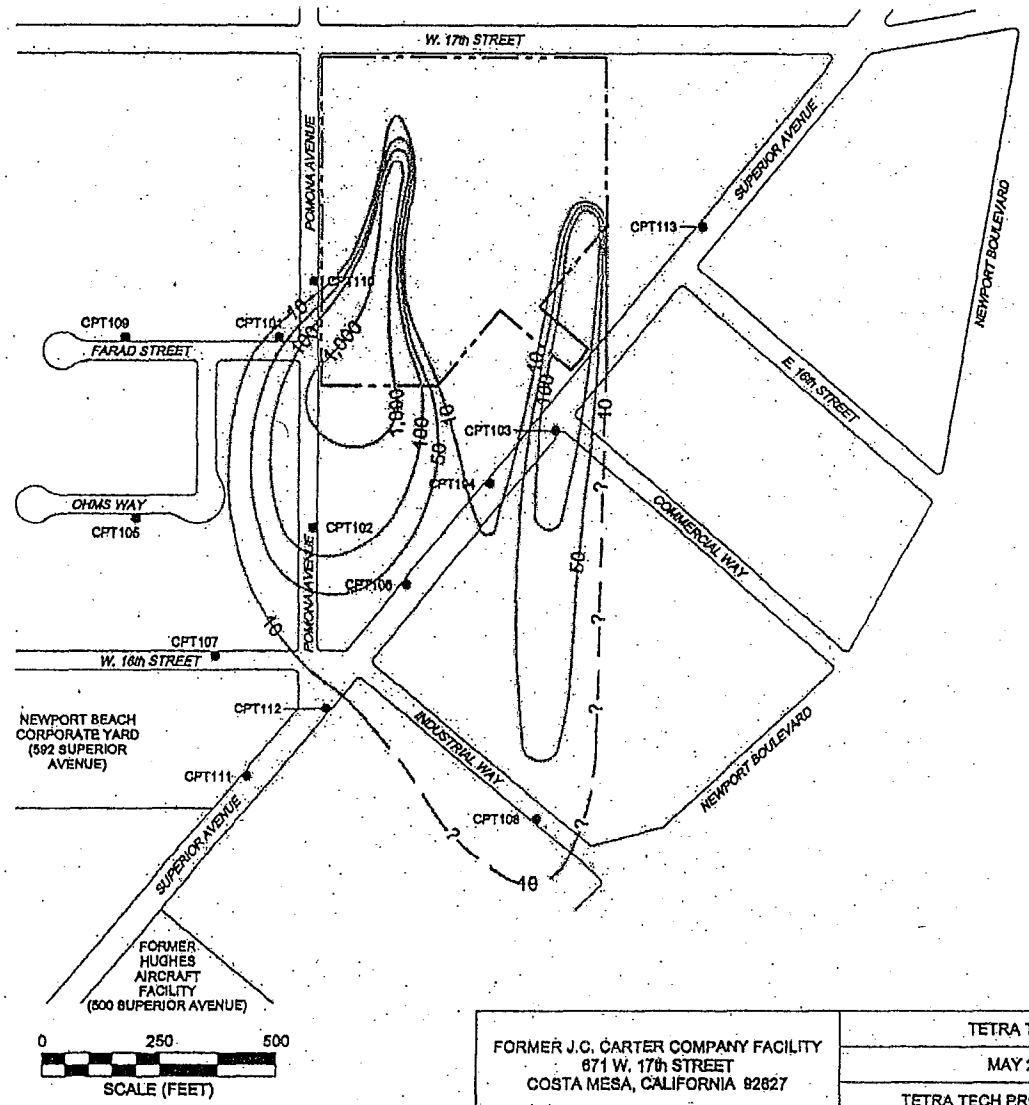
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- CPT3 (0.7) — CPT AND GROUNDWATER SAMPLING LOCATION, DESIGNATION, AND TCE CONCENTRATION IN ug / l (TETRA TECH, 2007)
- 10 — ISOCONTOURS OF TCE CONCENTRATION IN GROUNDWATER (ug / l) IN MIDDLE DISCRETE-DEPTH WATER SAMPLE ON 5 TO 7 JUNE 2007
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. BUILDING NO. OBTAINED FROM DELTA (1990s).
4. CPT = CONE PENETRATION TEST
5. TCE = TRICHLOROETHENE.
6. ug / l = MICROGRAMS PER LITER.
7. ND = ANALYTE NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT.
8. TETRA TECH (2007) GROUNDWATER SAMPLES COLLECTED ON 5 TO 7 JUNE 2007.
9. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.

0 100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATIONS IN MIDDLE SHALLOW GROUNDWATER ZONE ON-SITE RESULTS FIGURE NO. 17a



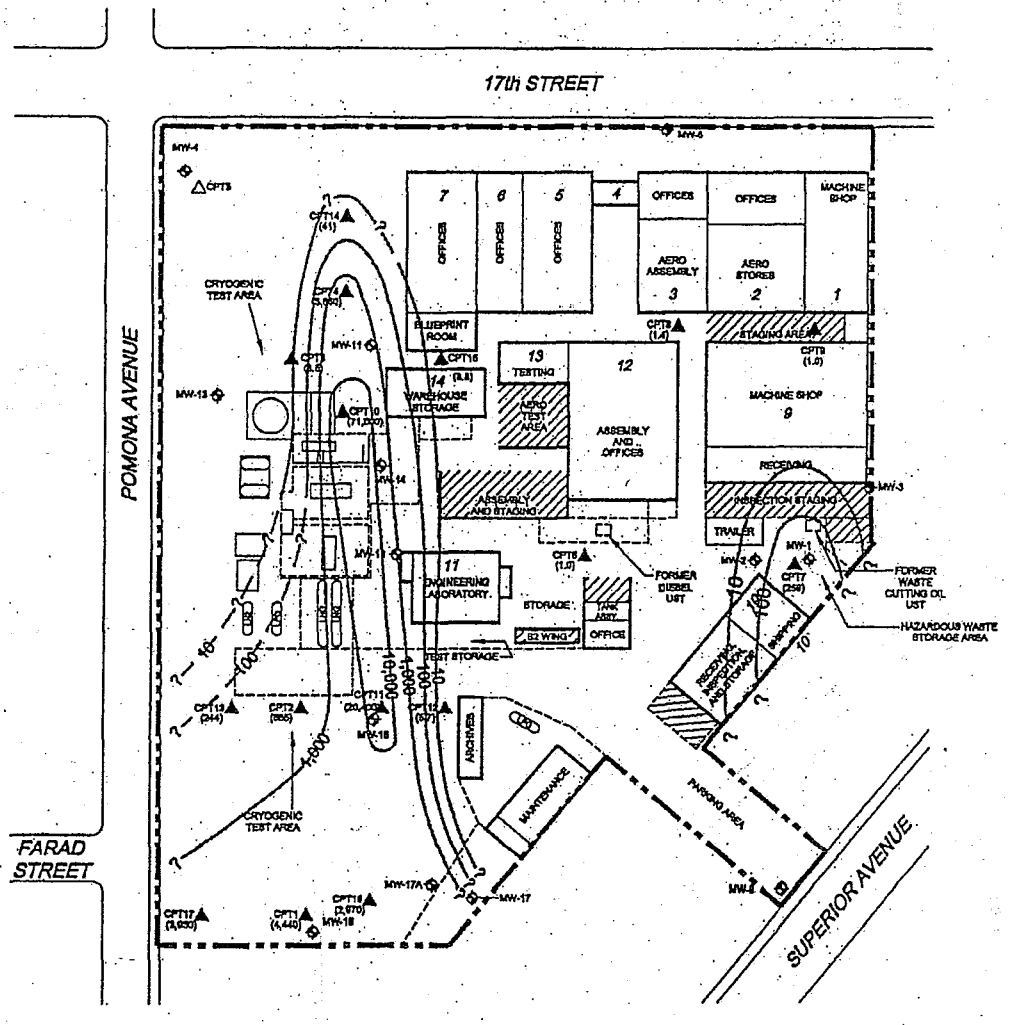
LEGEND

- SITE BOUNDARY
- CPT101 ● OFF-SITE GROUNDWATER SAMPLE LOCATION AND DESIGNATION
- —10— ISOCONTOURS OF TCE CONCENTRATION IN GROUNDWATER (ug / l)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. (JCCC), 1996).
3. TCE = TRICHLOROETHENE.
4. ug / l = MICROGRAMS PER LITER.
5. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.
6. REFER TO FIGURE 13 FOR ON-SITE DATA.

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATIONS IN MIDDLE SHALLOW GROUNDWATER ZONE OFF-SITE RESULTS FIGURE NO. 17b



LEGEND

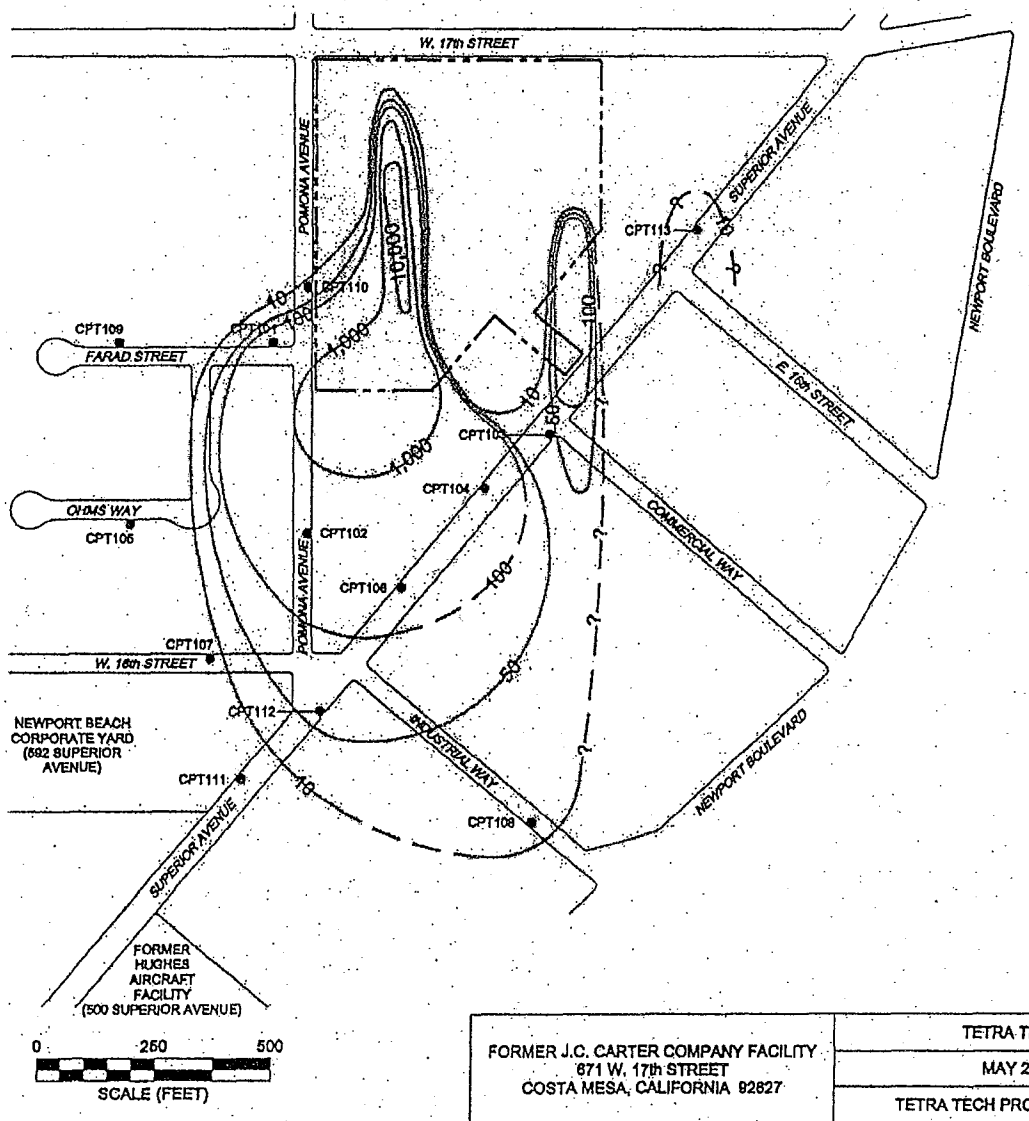
- SITE BOUNDARY
- BUILDING OUTLINE
- FENCE
- COVERED AREA
- MW-2 — EXISTING GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AST — ABOVEGROUND STORAGE TANK
- UST — UNDERGROUND STORAGE TANK
- LN2 — LIQUID NITROGEN AST
- LNG — LIQUID NATURAL GAS AST
- LPG — LIQUID PROPANE GAS AST
- CPT3 (4.5) — CPT AND GROUNDWATER SAMPLING LOCATION, DESIGNATION, AND TCE CONCENTRATION IN ug / l (TETRA TECH, 2007)
- 10 — ISOCONTOURS OF TCE CONCENTRATION IN GROUNDWATER (ug / l) IN LOWER DISCRETE-DEPTH WATER SAMPLE ON 5 TO 7 JUNE 2007
- 14 WAREHOUSE STORAGE — BUILDING, BUILDING NUMBER, AND BUILDING USAGE

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. (JCCC), 1985).
3. BUILDING NO. OBTAINED FROM DELTA (1990e).
4. CPT = CONE PENETRATION TEST
5. TCE = TRICHLOROETHENE.
6. ug / l = MICROGRAMS PER LITER.
7. ND = ANALYTE NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT.
8. TETRA TECH (2007) GROUNDWATER SAMPLES COLLECTED ON 5 TO 7 JUNE 2007.
9. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.

0 100 200
SCALE (FEET)

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATIONS IN LOWER SHALLOW GROUNDWATER ZONE ON-SITE RESULTS FIGURE NO. 18a



LEGEND

- SITE BOUNDARY
- CPT101 ● OFF-SITE GROUNDWATER SAMPLE LOCATION AND DESIGNATION
- —10— ISOCONTOURS OF TCE CONCENTRATION IN GROUNDWATER (ug / l)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN (J.C. CARTER COMPANY, INC. [JCCC], 1995).
3. TCE = TRICHLOROETHENE.
4. ug / l = MICROGRAMS PER LITER.
5. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA. OTHER INTERPRETATIONS ARE POSSIBLE.
6. REFER TO FIGURE 13 FOR ON-SITE DATA.

FORMER J.C. CARTER COMPANY FACILITY 671 W. 17th STREET COSTA MESA, CALIFORNIA 92627	TETRA TECH, INC. MAY 27, 2008 TETRA TECH PROJ. NO.: T19437.02	TCE CONCENTRATIONS IN LOWER SHALLOW GROUNDWATER ZONE OFF-SITE RESULTS FIGURE NO. 18b

APPENDIX B:
SCREENING LEVELS

Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties

January 2005

California Environmental Protection Agency

TABLE 2: California Human Health Screening Levels for Indoor Air and Soil Gas

Notes:
Always compare soil data for commercial/industrial sites to residential CHHSLs and evaluate need for formal land-use restrictions (see Section 2.10).

Table 2. California Human Health Screening Levels for Indoor Air and Soil Gas

Chemical	[1]Indoor Air Human Health Screening Levels ($\mu g/m^3$)		[2]Shallow Soil Gas Human Health Screening Levels (Vapor Intrusion) ($\mu g/m^3$)	
	Residential Land Use	Commercial/ Industrial Land Use Only	Residential Land Use	Commercial/ Industrial Land Use Only
Benzene	8.40 E-02	1.41 E-01	3.62 E+01	1.22 E+02
Carbon Tetrachloride	5.79 E-02	9.73 E-02	2.51 E+01	8.46 E+01
1,2-Dichloroethane	1.16 E-01	1.95 E-01	4.96 E+01	1.67 E+02
cis-1,2-Dichloroethylene	3.65 E+01	5.11 E+01	1.59 E+04	4.44 E+04
trans-1,2-Dichloroethylene	7.30 E+01	1.02 E+02	3.19 E+04	8.87 E+04
Ethylbenzene	Postponed[3]	Postponed[3]	Postponed[3]	Postponed[3]
Mercury, elemental	9.40 E-02	1.31 E-01	4.45 E+01	1.25 E+02
Methyl tert-Butyl Ether	9.35 E+00	1.57 E+01	4.00 E+03	1.34 E+04
Naphthalene	7.20 E-02	1.20 E-01	3.19 E+01	1.06 E+02
Tetrachloroethylene	4.12 E-01	6.93 E-01	1.80 E+02	6.03 E+02
Tetraethyl Lead	3.65 E-04	5.11 E-04	2.06 E-01	5.78 E-01
Toluene	3.13 E+02	4.38 E+02	1.35 E+05	3.78 E+05
1,1,1-Trichloroethane	2.29 E+03	3.21 E+03	9.91 E+05	2.79 E+06
Trichloroethylene	1.22 E+00	2.04 E+00	5.28 E+02	1.77 E+03
Vinyl Chloride	3.11 E-02	5.24 E-02	1.33 E+01	4.48 E+01
m-Xylene	7.30 E+02	1.02 E+03	3.19 E+05	8.87 E+05
o-Xylene	7.30 E+02	1.02 E+03	3.15 E+05[4]	8.79 E+05[4]
p-Xylene	7.30 E+02	1.02 E+03	3.17 E+05	8.87 E+05

Reference: Appendix 1, OEHHA Target Indoor Air Concentrations and Soil-Gas Screening Numbers for Existing Buildings under Residential and Industrial/Commercial land uses.

Notes:

1. "Residential Land Use" screening levels generally considered adequate for other sensitive uses (e.g., day-care centers, hospitals, etc.). Commercial/industrial properties should be evaluated using both residential and commercial/industrial CHHSLs. A deed restriction that prohibits use of the property for sensitive purposes may be required at sites that are evaluated and/or remediated under a commercial/industrial land use scenario only.
Calculation of cumulative risk may be required at sites where multiple contaminants with similar health effects are present.
Carcinogens: CHHSLS based on target cancer risk of 10-6. Cal/EPA cancer slope factors used when available.
Noncarcinogens: CHHSLS based on target hazard quotient of 1.0.
2. Soil Gas: Screening levels based on soil gas data collected <1.5 meters (five feet) below a building foundation or the ground surface. Intended for evaluation of potential vapor intrusion into buildings and subsequent impacts to indoor-air. Soil gas data should be collected and evaluated at all sites with significant areas of VOC-impacted soil. Screening levels also apply to sites that overlie plumes of VOC-impacted groundwater.
3. Calculation of a screening number for the chemical has been postponed (pp) until the toxicity criterion currently being developed by OEHHA is published as a final document.
4. Representative Screening Numbers for mixed xylenes. The representative value for mixed xylenes is based on the calculated lowest one amongst the three isomers.

Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater

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Table E-1. Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

			Residential Land Use	Commercial/Industrial Land Use
Chemical	Physical State		(µg/L)	(µg/L)
Acenaphthene	V	S	4.2E+03	4.2E+03
Acenaphthylene	V	S	(Use soil gas)	(Use soil gas)
Acetone	V	L	5.3E+07	1.5E+08
Aldrin	NV	S		
Anthracene	V	S	4.3E+01	4.3E+01
Antimony	NV	S		
Arsenic	NV	S		
Barium	NV	S		
Benzene	V	L	5.4E+02	1.8E+03
Benzo(a)anthracene	NV	S		
Benzo(b)fluoranthene	NV	S		
Benzo(k)fluoranthene	NV	S		
Benzo(g,h,i)perylene	NV	S		
Benzo(a)pyrene	NV	S		
Beryllium	NV	S		
1,1-Biphenyl	V	S	(Use soil gas)	(Use soil gas)
Bis(2-chloroethyl) ether	V	L	6.5E+01	2.2E+02
Bis(2-chloroisopropyl) ether	V	L	(Use soil gas)	(Use soil gas)
Bis(2-ethylhexyl) phthalate	NV	S		
Boron	NV	S		
Bromodichloromethane	V	L	1.7E+02	5.6E+02
Bromoform (Tribromomethane)	NV	S		
Bromomethane	V	G	5.8E+02	1.6E+03
Cadmium	NV	S		
Carbon tetrachloride	V	L	9.3E+00	3.1E+01
Chlordane	NV	S		
p-Chloroaniline	NV	S		
Chlorobenzene	V	L	1.3E+04	3.7E+04
Chloroethane	V	G	8.2E+02	2.7E+03
Chloroform	V	L	3.3E+02	1.1E+03
Chloromethane	V	G	4.1E+01	1.4E+02
2-Chlorophenol	V	L	5.3E+03	1.5E+04
Chromium (total)	NV	S		
Chromium III	NV	S		
Chromium VI	NV	S		
Chrysene	NV	S	(Use soil gas)	(Use soil gas)
Cobalt	NV	S		
Copper	NV	S		
Cyanide	NV	S	(Use soil gas)	(Use soil gas)
Dibenz(a,h)anthracene	NV	S		
Dibromochloromethane	V	S	1.7E+02	5.7E+02
1,2-dibromo-3-chloropropane	V	L	(Use soil gas)	(Use soil gas)
1,2-Dibromoethane	V	S	1.5E+02	5.1E+02
1,2-Dichlorobenzene	V	L	7.7E+04	1.6E+05
1,3-Dichlorobenzene	V	L	(Use soil gas)	(Use soil gas)
1,4-Dichlorobenzene	V	S	3.4E+02	1.1E+03
3,3-Dichlorobenzidine	NV	S		
Dichlorodiphenyldichloroethane (DDD)	NV	S		
Dichlorodiphenyldichloroethene (DDE)	NV	S		
Dichlorodiphenyltrichloroethane (DDT)	NV	S		
1,1-Dichloroethane	V	L	1.0E+03	3.4E+03
1,2-Dichloroethane	V	L	2.0E+02	6.9E+02

Table E-1. Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

			Residential Land Use	Commercial/Industrial Land Use
Chemical	Physical State		(µg/L)	(µg/L)
1,1-Dichloroethene	V	L	6.3E+03	1.8E+04
cis-1,2-Dichloroethene	V	L	6.2E+03	1.7E+04
trans-1,2-Dichloroethene	V	L	6.7E+03	1.9E+04
2,4-Dichlorophenol	NV	S		
1,2-Dichloropropane	V	L	2.8E+02	9.3E+02
1,3-Dichloropropene	V	L	5.3E+01	1.8E+02
Dieldrin	NV	S		
Diethyl phthalate	NV	S		
Dimethyl phthalate	NV	S		
2,4-Dimethylphenol	V	S	2.5E+06	7.1E+06
2,4-Dinitrophenol	NV	S		
2,4-Dinitrotoluene	NV	S		
1,4-Dioxane	NV	L		
Dioxin (2,3,7,8-TCDD)	NV	S		
Endosulfan	NV	S		
Endrin	NV	S		
Ethylbenzene	V	L	1.7E+05	1.7E+05
Fluoranthene	NV	S		
Fluorene	V	S	1.9E+03	1.9E+03
Heptachlor	NV	S		
Heptachlor epoxide	NV	S		
Hexachlorobenzene	NV	S		
Hexachlorobutadiene	NV	S		
γ-Hexachlorocyclohexane (Lindane)	NV	S		
Hexachloroethane	NV	S		
Indeno(1,2,3-c,d)pyrene	NV	S		
Lead	NV	S		
Mercury (elemental)	V	S	(Use soil gas)	(Use soil gas)
Methoxychlor	NV	S		
Methylene chloride	V	L	2.4E+03	8.1E+03
Methyl ethyl ketone	V	L	2.4E+07	6.8E+07
Methyl isobutyl ketone	V	L	3.0E+06	8.4E+06
Methyl mercury	NV	S		
2-Methylnaphthalene	V	S	2.6E+04	2.6E+04
tert-Butyl methyl ether	V	L	2.4E+04	8.0E+04
Molybdenum	NV	S		
Naphthalene	V	S	3.2E+03	1.1E+04
Nickel	NV	S		
Pentachlorophenol	NV	S		
Perchlorate	NV	S		
Phenanthrene	V	S	(Use soil gas)	(Use soil gas)
Phenol	NV	S		
Polychlorinated biphenyls (PCBs)	NV	S		
Pyrene	V	S	1.4E+02	1.4E+02
Selenium	NV	S		
Silver	NV	S		
Styrene	V	L	3.1E+05	3.1E+05
tert-Butyl alcohol			(Use soil gas)	(Use soil gas)
1,1,1,2-Tetrachloroethane	V	L	(Use soil gas)	(Use soil gas)
1,1,2,2-Tetrachloroethane	V	L	1.9E+02	6.4E+02
Tetrachloroethene	V	L	1.2E+02	4.2E+02
Thallium	NV	S		

Table E-1. Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemical	Physical State		Residential Land Use (µg/L)	Commercial/Industrial Land Use (µg/L)
Toluene	V	L	3.8E+05	5.3E+05
Toxaphene	NV	S		
TPH (gasolines)	V	L	(Use soil gas)	(Use soil gas)
TPH (middle distillates)	V	L	(Use soil gas)	(Use soil gas)
TPH (residual fuels)	NV	L/S		
1,2,4-Trichlorobenzene	V	L	2.5E+03	7.1E+03
1,1,1-Trichloroethane	V	L	1.3E+05	3.6E+05
1,1,2-Trichloroethane	V	L	3.5E+02	1.2E+03
Trichloroethene	V	L	5.3E+02	1.8E+03
2,4,5-Trichlorophenol	V	S	8.3E+05	1.2E+06
2,4,6-Trichlorophenol	NV	S		
Vanadium	NV	S		
Vinyl chloride	V	G	3.8E+00	1.3E+01
Xylenes	V	L	1.6E+05	1.6E+05
Zinc	NV	S		

Notes:

High permeability soil: One meter dry sandy soil (92% sand, 5% silt, 3% clay) over one meter moist clayey loam (33% sand, 34% silt, 33% clay).

Screening levels calculated using spreadhseet provided with *User's Guide for the Johnson and Ettinger Indoor Air model (1991) for Subsurface Vapor Intrusion Into Buildings (USEPA 2003).* Assumed vadose-zone thickness/depth to groundwater three meters.

Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S -id, L - liquid, G - gas).

Chemical considered to be volatile if Henry's Law constant (atm m3/mole) $>10^{-5}$ and molecular weight <200.

Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling (USEPA 2004).

Target cancer risk = 1E-06, Target Hazard Quotient = 0.2

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

			Residential Exposure			Commercial/Industrial Land Use		
Chemcial	Physical State		Lowest Residential (µg/m³)	Carcinogenic Effects (µg/m³)	Noncarcinogenic Effects (µg/m³)	Lowest C/I (µg/m³)	Carcinogenic Effects (µg/m³)	Noncarcinogenic Effects (µg/m³)
Acenaphthene	V	S	4.4E+04		4.4E+04	1.2E+05		1.2E+05
Acenaphthylene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Acetone	V	L	6.6E+05		6.6E+05	1.8E+06		1.8E+06
Aldrin	NV	S						
Anthracene	V	S	2.2E+05		2.2E+05	6.1E+05		6.1E+05
Antimony	NV	S						
Arsenic	NV	S						
Barium	NV	S						
Benzene	V	L	8.4E+01	8.4E+01	6.3E+03	2.8E+02	2.8E+02	1.8E+04
Benzo(a)anthracene	NV	S						
Benzo(b)fluoranthene	NV	S						
Benzo(k)fluoranthene	NV	S						
Benzo(g,h,i)perylene	NV	S						
Benzo(a)pyrene	NV	S						
Beryllium	NV	S						
1,1-Biphenyl	V	S						
Bis(2-chloroethyl) ether	V	L	7.4E+00	7.4E+00		2.5E+01	2.5E+01	
Bis(2-chloroisopropyl) ether	V	L	3.4E+00	3.4E+00	2.9E+04	1.2E+01	1.2E+01	8.2E+04
Bis(2-ethylhexyl) phthalate	NV	S						
Boron	NV	S						
Bromodichloromethane	V	L	1.4E+02	1.4E+02	1.5E+04	4.6E+02	4.6E+02	4.1E+04
Bromoform (Tribromomethane)	NV	S						
Bromomethane	V	G	1.0E+03		1.0E+03	2.9E+03		2.9E+03
Cadmium	NV	S						
Carbon tetrachloride	V	L	1.9E+01	1.9E+01	8.3E+03	6.3E+01	6.3E+01	2.3E+04
Chlordane	NV	S						
p-Chloroaniline	NV	S						
Chlorobenzene	V	L	2.1E+05		2.1E+05	5.8E+05		5.8E+05
Chloroethane	V	G	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Chloroform	V	L	4.6E+02	4.6E+02	6.3E+04	1.5E+03	1.5E+03	1.8E+05
Chloromethane	V	G	1.9E+04		1.9E+04	5.3E+04		5.3E+04
2-Chlorophenol	V	L	3.7E+03		3.7E+03	1.0E+04		1.0E+04
Chromium (total)	NV	S						
Chromium III	NV	S						
Chromium VI	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential (µg/m³)	Carcinogenic Effects (µg/m³)	Noncarcinogenic Effects (µg/m³)	Lowest C/I (µg/m³)	Carcinogenic Effects (µg/m³)	Noncarcinogenic Effects (µg/m³)
Chrysene	NV	S						
Cobalt	NV	S						
Copper	NV	S						
Cyanide	NV	S	1.5E+04		1.5E+04	4.1E+04		4.1E+04
Dibenz(a,h)anthracene	NV	S						
Dibromochloromethane	V	S						
1,2-dibromo-3-chloropropane	V	L	1.3E+00	1.3E+00	4.2E+01	4.3E+00	4.3E+00	1.2E+02
1,2-Dibromoethane	V	S	4.1E+00	4.1E+00	1.9E+03	1.4E+01	1.4E+01	5.3E+03
1,2-Dichlorobenzene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
1,3-Dichlorobenzene	V	L	2.2E+04		2.2E+04	6.1E+04		6.1E+04
1,4-Dichlorobenzene	V	S	2.2E+02	2.2E+02	1.7E+05	7.4E+02	7.4E+02	4.7E+05
3,3-Dichlorobenzidine	NV	S						
Dichlorodiphenyldichloroethane (DDD)	NV	S						
Dichlorodiphenyldichloroethene (DDE)	NV	S						
Dichlorodiphenyltrichloroethane (DDT)	NV	S						
1,1-Dichloroethane	V	L	1.5E+03	1.5E+03	1.0E+05	5.1E+03	5.1E+03	2.9E+05
1,2-Dichloroethane	V	L	9.4E+01	9.4E+01	1.0E+03	3.1E+02	3.1E+02	2.9E+03
1,1-Dichloroethene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
cis-1,2-Dichloroethene	V	L	7.3E+03		7.3E+03	2.0E+04		2.0E+04
trans-1,2-Dichloroethene	V	L	1.5E+04		1.5E+04	4.1E+04		4.1E+04
2,4-Dichlorophenol	NV	S						
1,2-Dichloropropane	V	L	2.4E+02	2.4E+02	8.3E+02	8.2E+02	8.2E+02	2.3E+03
1,3-Dichloropropene	V	L	1.5E+02	1.5E+02	4.2E+03	5.1E+02	5.1E+02	1.2E+04
Dieldrin	NV	S						
Diethyl phthalate	NV	S						
Dimethyl phthalate	NV	S						
2,4-Dimethylphenol	V	S						
2,4-Dinitrophenol	NV	S						
2,4-Dinitrotoluene	NV	S						
1,4-Dioxane	NV	L						
Dioxin (2,3,7,8-TCDD)	NV	S						
Endosulfan	NV	S						
Endrin	NV	S						
Ethylbenzene	V	L	9.8E+02	9.8E+02	2.1E+05	3.3E+03	3.3E+03	5.8E+05
Fluoranthene	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure: Lowest Residential (µg/m³)	Residential Exposure: Carcinogenic Effects (µg/m³)	Residential Exposure: Noncarcinogenic Effects (µg/m³)	Commercial/Industrial Land Use: Lowest C/I (µg/m³)	Commercial/Industrial Land Use: Carcinogenic Effects (µg/m³)	Commercial/Industrial Land Use: Noncarcinogenic Effects (µg/m³)
Fluorene	V	S	2.9E+04		2.9E+04	8.2E+04		8.2E+04
Heptachlor	NV	S						
Heptachlor epoxide	NV	S						
Hexachlorobenzene	NV	S						
Hexachlorobutadiene	NV	S						
γ-Hexachlorocyclohexane (Lindane)	NV	S						
Hexachloroethane	NV	S						
Indeno(1,2,3-c,d)pyrene	NV	S						
Lead	NV	S						
Mercury (elemental)	V	S	1.9E+01		1.9E+01	5.3E+01		5.3E+01
Methoxychlor	NV	S						
Methylene chloride	V	L	5.2E+03	5.2E+03	8.3E+04	1.7E+04	1.7E+04	2.3E+05
Methyl ethyl ketone	V	L	1.0E+06		1.0E+06	2.9E+06		2.9E+06
Methyl isobutyl ketone	V	L	6.3E+05		6.3E+05	1.8E+06		1.8E+06
Methyl mercury	NV	S						
2-Methylnaphthalene	V	S						
tert-Butyl methyl ether	V	L	9.4E+03	9.4E+03	6.3E+05	3.1E+04	3.1E+04	1.8E+06
Molybdenum	NV	S						
Naphthalene	V	S	7.2E+01	7.2E+01	6.3E+02	2.4E+02	2.4E+02	1.8E+03
Nickel	NV	S						
Pentachlorophenol	NV	S						
Perchlorate	NV	S						
Phenanthrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Phenol	NV	S						
Polychlorinated biphenyls (PCBs)	NV	S						
Pyrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Selenium	NV	S						
Silver	NV	S						
Styrene	V	L	1.9E+05		1.9E+05	5.3E+05		5.3E+05
tert-Butyl alcohol	V	L						
1,1,1,2-Tetrachloroethane	V	L	3.2E+02	3.2E+02		1.1E+03	1.1E+03	
1,1,2,2-Tetrachloroethane	V	L	4.2E+01	4.2E+01	4.4E+04	1.4E+02	1.4E+02	1.2E+05
Tetrachloroethene	V	L	4.1E+02	4.1E+02	8.3E+04	1.4E+03	1.4E+03	2.3E+05
Thallium	NV	S						
Toluene	V	L	6.3E+04		6.3E+04	1.8E+05		1.8E+05

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure: Lowest Residential ($\mu g/m^3$)	Residential Exposure: Carcinogenic Effects ($\mu g/m^3$)	Residential Exposure: Noncarcinogenic Effects ($\mu g/m^3$)	Commercial/Industrial Land Use: Lowest C/I ($\mu g/m^3$)	Commercial/Industrial Land Use: Carcinogenic Effects ($\mu g/m^3$)	Commercial/Industrial Land Use: Noncarcinogenic Effects ($\mu g/m^3$)
Toxaphene	NV	S						
TPH (gasolines)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (middle distillates)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (residual fuels)	NV	L/S						
1,2,4-Trichlorobenzene	V	L	8.3E+02		8.3E+02	2.3E+03		2.3E+03
1,1,1-Trichloroethane	V	L	4.6E+05		4.6E+05	1.3E+06		1.3E+06
1,1,2-Trichloroethane	V	L	1.5E+02	1.5E+02	2.9E+03	5.1E+02	5.1E+02	8.2E+03
Trichloroethene	V	L	1.2E+03	1.2E+03	1.3E+05	4.1E+03	4.1E+03	3.5E+05
2,4,5-Trichlorophenol	V	S	7.3E+04		7.3E+04	2.0E+05		2.0E+05
2,4,6-Trichlorophenol	NV	S						
Vanadium	NV	S						
Vinyl chloride	V	G	3.1E+01	3.1E+01	2.1E+04	1.0E+02	1.0E+02	5.8E+04
Xylenes	V	L	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Zinc	NV	S						

Notes:

Soil gas screening levels intended to be protective of indoor air quality, calculated for volatile chemicals only.
Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S - solid, L - liquid, G - gas).
Chemical considered to be volatile if Henry's Law constant (atm m^3/mole) $>10^{-5}$ and molecular weight <200 (see Table E-1).
Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling (USEPA 2004).
Target cancer risk = 1E-06, Target Hazard Quotient = 0.2 for all chemicals.
Residential soil gas:indoor air attenuation factor = 0.001 (1/1000). Commercial/industrial soil gas:indoor air attenuation factor = 0.0005 (1/2000).
Soil gas screening level for ethanol based on potential indoor air nuisance concerns (refer to Section 5.3.3 and Table H series).
soils or limited soil impacts and no groundwater source of VOCs.

Table G: Soil Screening Levels for Leaching Concerns

					Target Groundwater Concentrations		Soil Leaching Screening Levels	
Chemical	Organic Carbon Coefficient (Koc) (cm^3/g)	Henry's Law Constant (H) ($atm\text{-}m^3/mole\text{-}^oK$)	Dilution/ Atenuation Factor (DAF)	Saturation Limit (mg/kg)	Target Groundwater Concentration (Drinking Water Resource) (Table F-1a) (µg/L)	Target Groundwater Concentration (NON-Drinking Water Resource) (Table F-1b) (µg/L)	Soil Leaching Screening Level (Drinking Water Resource) (mg/kg)	Soil Leaching Screening Level (NON-Drinking Water Resource) (mg/kg)
Acenaphthene	4.90E+03	1.55E-04	8.14E+02	1.3E+02	2.0E+01	2.3E+01	1.6E+01	1.9E+01
Acenaphthylene	2.50E+03	1.45E-03	4.24E+02	5.9E+01	3.0E+01	3.0E+01	1.3E+01	1.3E+01
Acetone	5.75E-01	3.88E-05	3.36E-01	1.0E+05	1.5E+03	1.5E+03	5.0E-01	5.0E-01
Aldrin	4.90E+04	4.96E-05	8.13E+03	5.0E+00	2.0E-03	1.3E-01	5.0E+00	5.0E+00
Anthracene	2.35E+04	6.50E-05	3.90E+03	6.1E+00	7.3E-01	7.3E-01	2.8E+00	2.8E+00
Antimony					6.0E+00	3.0E+01		
Arsenic					3.6E+01	3.6E+01		
Barium					1.0E+03	1.0E+03		
Benzene	5.90E+01	5.56E-03	4.43E+01	8.7E+02	1.0E+00	4.6E+01	4.4E-02	2.0E+00
Benzo(a)anthracene	2.00E+05	1.00E-06	3.32E+04	1.2E+01	2.7E-02	2.7E-02	1.2E+01	1.2E+01
Benzo(b)fluoranthene	5.50E+05	1.22E-05	9.13E+04	4.6E+01	2.9E-02	2.9E-02	4.6E+01	4.6E+01
Benzo(k)fluoranthene	5.50E+05	3.87E-05	9.13E+04	2.6E+00	2.9E-02	4.0E-01	2.7E+00	3.7E+01
Benzo(g,h,i)perylene	1.60E+06	1.44E-07	2.66E+05	2.5E+00	1.0E-01	1.0E-01	2.7E+01	2.7E+01
Benzo(a)pyrene	5.50E+06	4.90E-07	9.13E+05	1.3E+02	1.4E-02	1.4E-02	1.3E+02	1.3E+02
Beryllium					5.3E-01	5.3E-01		
1,1-Biphenyl	7.76E+03	3.00E-04	1.29E+03	3.5E+02	5.0E-01	5.0E+00	6.5E-01	6.5E+00
Bis(2-chloroethyl) ether	7.60E+01	1.80E-05	1.27E+01	9.6E+03	3.2E-02	1.2E+01	4.0E-04	1.6E-01
Bis(2-chloroisopropyl) ether	6.10E+01	1.13E-04	1.08E+01	7.9E+02	1.4E-02	1.2E+01	1.5E-04	1.3E-01
Bis(2-ethylhexyl) phthalate	1.00E+05	3.00E-07	1.66E+04	7.8E+02	4.0E+00	3.2E+01	7.8E+02	7.8E+02
Boron					1.6E+00	1.6E+00		
Bromodichloromethane	5.50E+01	1.60E-03	1.91E+01	3.0E+03	1.0E+02	1.7E+02	1.9E+00	3.2E+00
Bromoform (Tribromomethane)	1.10E+02	5.32E-04	2.16E+01	2.4E+03	1.0E+02	1.1E+03	2.2E+00	2.4E+01
Bromomethane	9.00E+00	6.24E-03	4.02E+01	3.1E+03	9.8E+00	1.6E+02	3.9E-01	6.4E+00
Cadmium					2.5E-01	2.5E-01		
Carbon tetrachloride	1.74E+02	3.04E-02	2.18E+02	1.1E+03	5.0E-01	9.3E+00	1.1E-01	2.0E+00
Chlordane	4.40E+04	4.79E-05	7.30E+03	1.5E+01	4.0E-03	4.0E-03	1.5E+01	1.5E+01
p-Chloroaniline	6.40E+01	3.31E-07	1.06E+01	1.3E+03	5.0E+00	5.0E+00	5.3E-02	5.3E-02
Chlorobenzene	2.19E+02	3.70E-03	5.93E+01	6.8E+02	2.5E+01	2.5E+01	1.5E+00	1.5E+00
Chloroethane	1.47E+01	1.10E-02	7.07E+01	1.6E+03	1.2E+01	1.2E+01	8.5E-01	8.5E-01
Chloroform	3.98E+01	3.67E-03	2.94E+01	2.9E+03	7.0E+01	3.3E+02	2.1E+00	9.8E+00
Chloromethane	3.50E+01	2.40E-02	1.55E+02	4.1E+03	4.1E+01	4.1E+01	6.4E+00	6.4E+00
2-Chlorophenol	3.98E+02	3.91E-04	6.85E+01	5.5E+04	1.8E-01	1.8E+00	1.2E-02	1.2E-01
Chromium (total)					5.0E+01	1.8E+02		
Chromium III					1.8E+02	1.8E+02		
Chromium VI					1.1E+01	1.1E+01		
Chrysene	4.00E+05	9.46E-05	6.64E+04	3.8E+00	3.5E-01	3.5E-01	2.3E+01	2.3E+01
Cobalt					3.0E+00	3.0E+00		
Copper					3.1E+00	3.1E+00		
Cyanide	1.70E+01	1.30E-04	3.63E+00	2.0E+05	1.0E+00	1.0E+00	3.6E-03	3.6E-03
Dibenz(a,h)anthracene	3.30E+06	7.30E-08	5.48E+05	9.9E+00	4.8E-03	2.5E-01	9.9E+00	1.4E+02