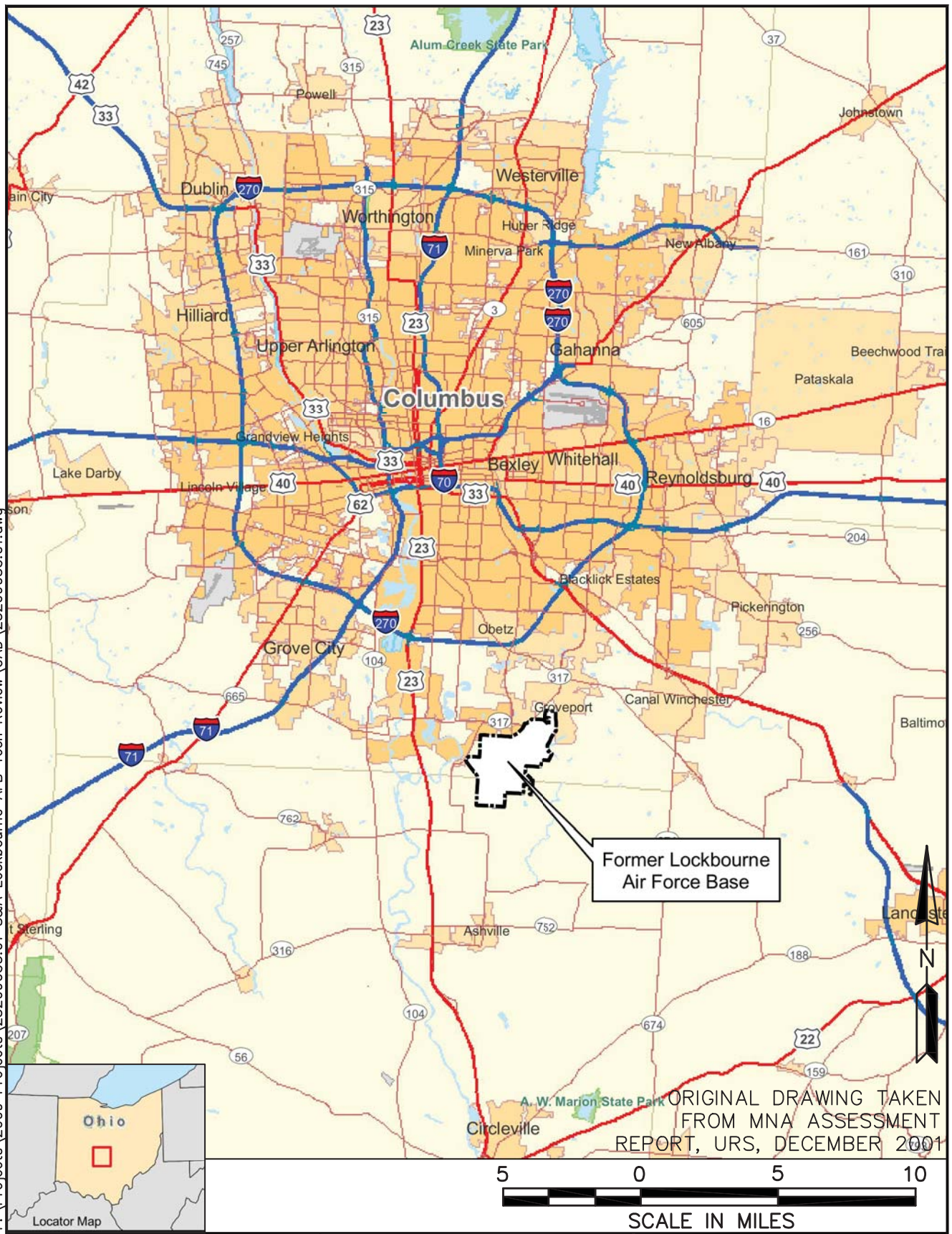
Figures



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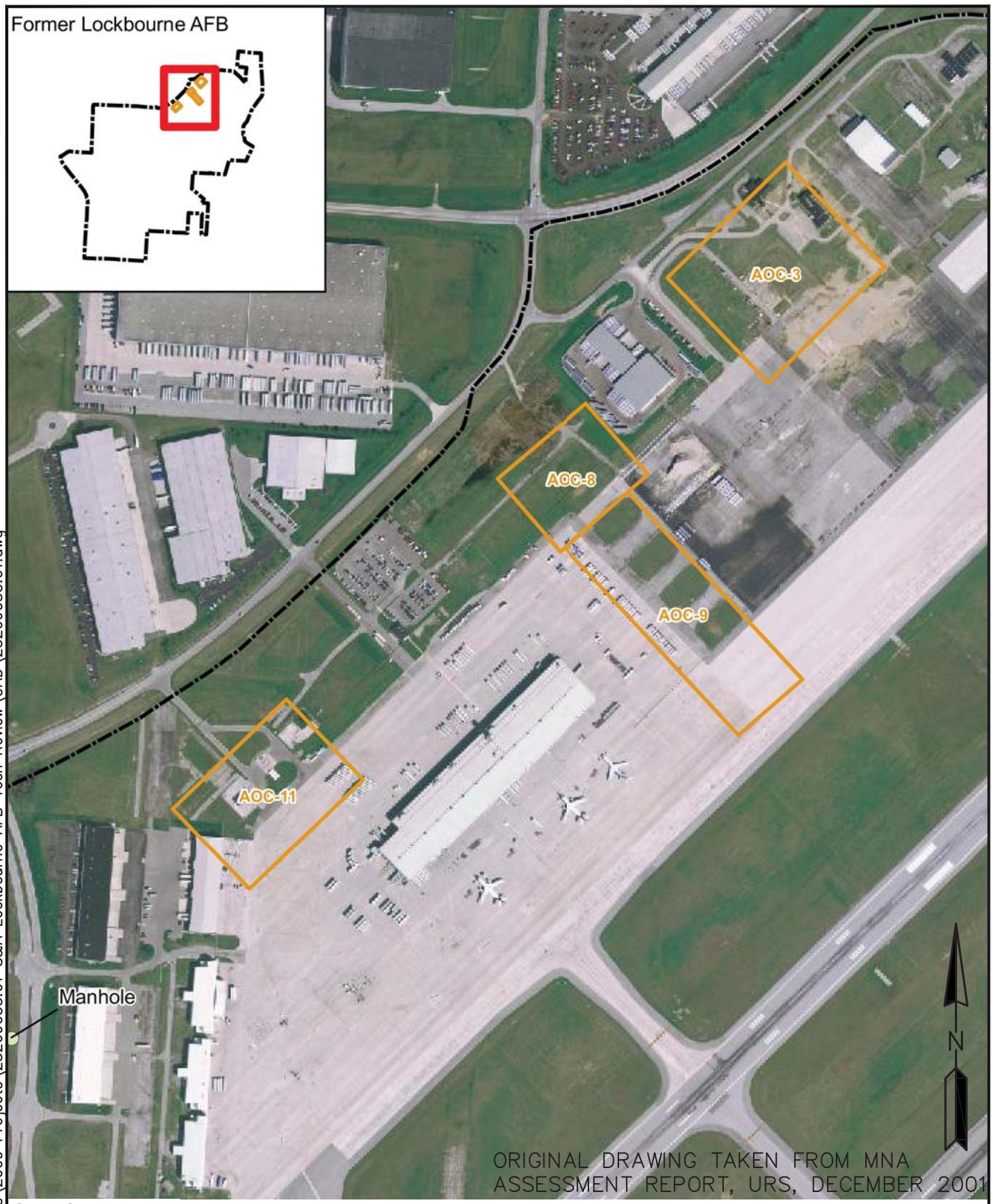
SCS ENGINEERS DSN. BY_____ CHK. BY D. ENGLISH DWN. BY B. CLEMENTS REV: _____	SITE LOCATION MAP FORMER LOCKBOURNE AIR FORCE BASE OHIO	FIGURE 1



Legend

- Area of Concern
- Installation Boundary
- Manhole

600 0 600 1200

SCALE IN FEET

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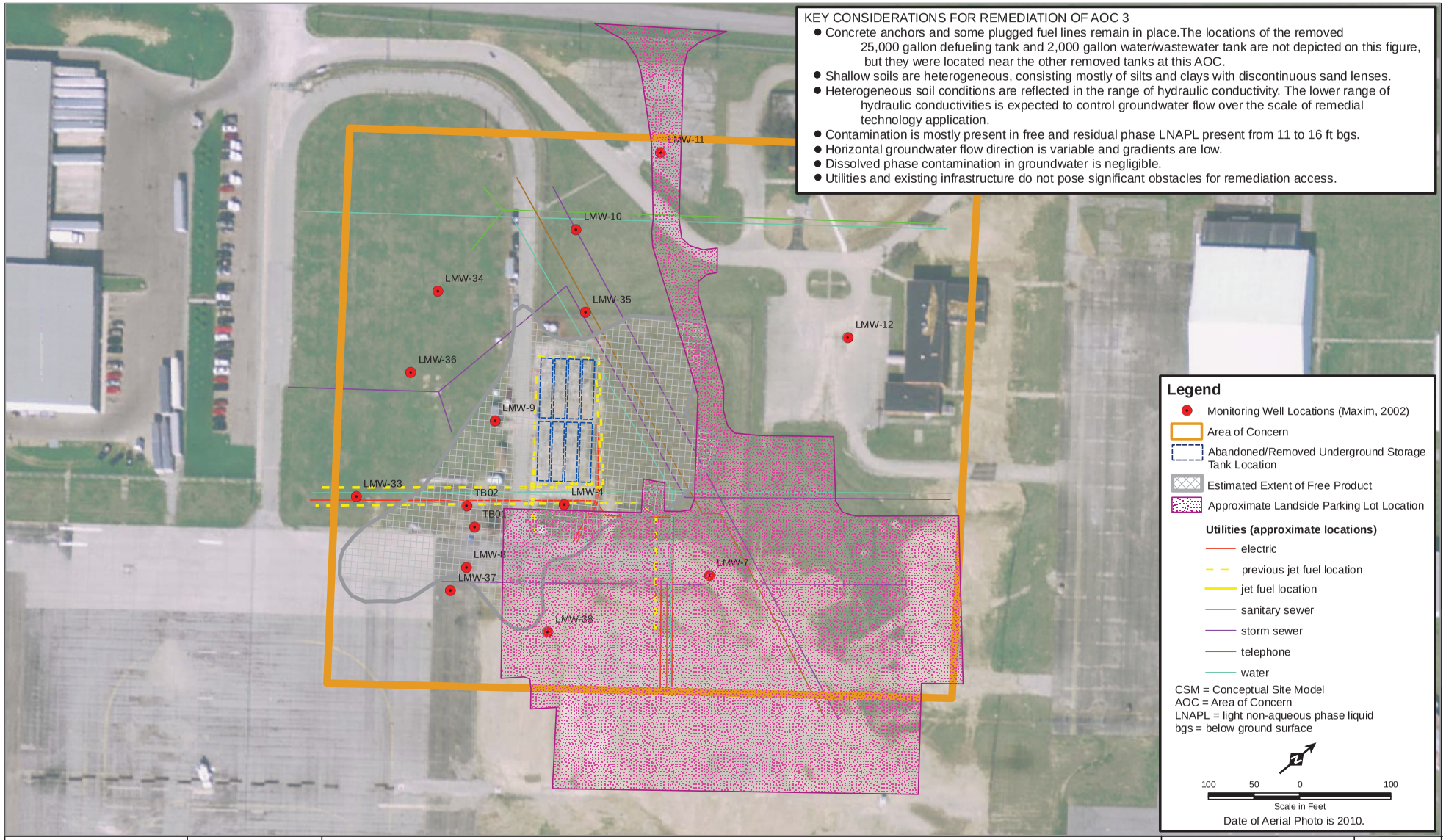
SCS ENGINEERS	AREAS OF CONCERN FORMER LOCKBOURNE AIR FORCE BASE OHIO	FIGURE 2
DSN. BY_____ CHK. BY D. ENGLISH DWN. BY B. CLEMENTS REV: _____		



KEY CONSIDERATIONS FOR REMEDIATION OF AOC 3

- Concrete anchors and some plugged fuel lines remain in place.The locations of the removed 25,000 gallon defueling tank and 2,000 gallon water/wastewater tank are not depicted on this figure, but they were located near the other removed tanks at this AOC.
- Shallow soils are heterogeneous, consisting mostly of silts and clays with discontinuous sand lenses.
- Heterogeneous soil conditions are reflected in the range of hydraulic conductivity. The lower range of hydraulic conductivities is expected to control groundwater flow over the scale of remedial technology application.
- Contamination is mostly present in free and residual phase LNAPL present from 11 to 16 ft bgs.
- Horizontal groundwater flow direction is variable and gradients are low.
- Dissolved phase contamination in groundwater is negligible.
- Utilities and existing infrastructure do not pose significant obstacles for remediation access.

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PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Planar View AOC 3

Figure 3

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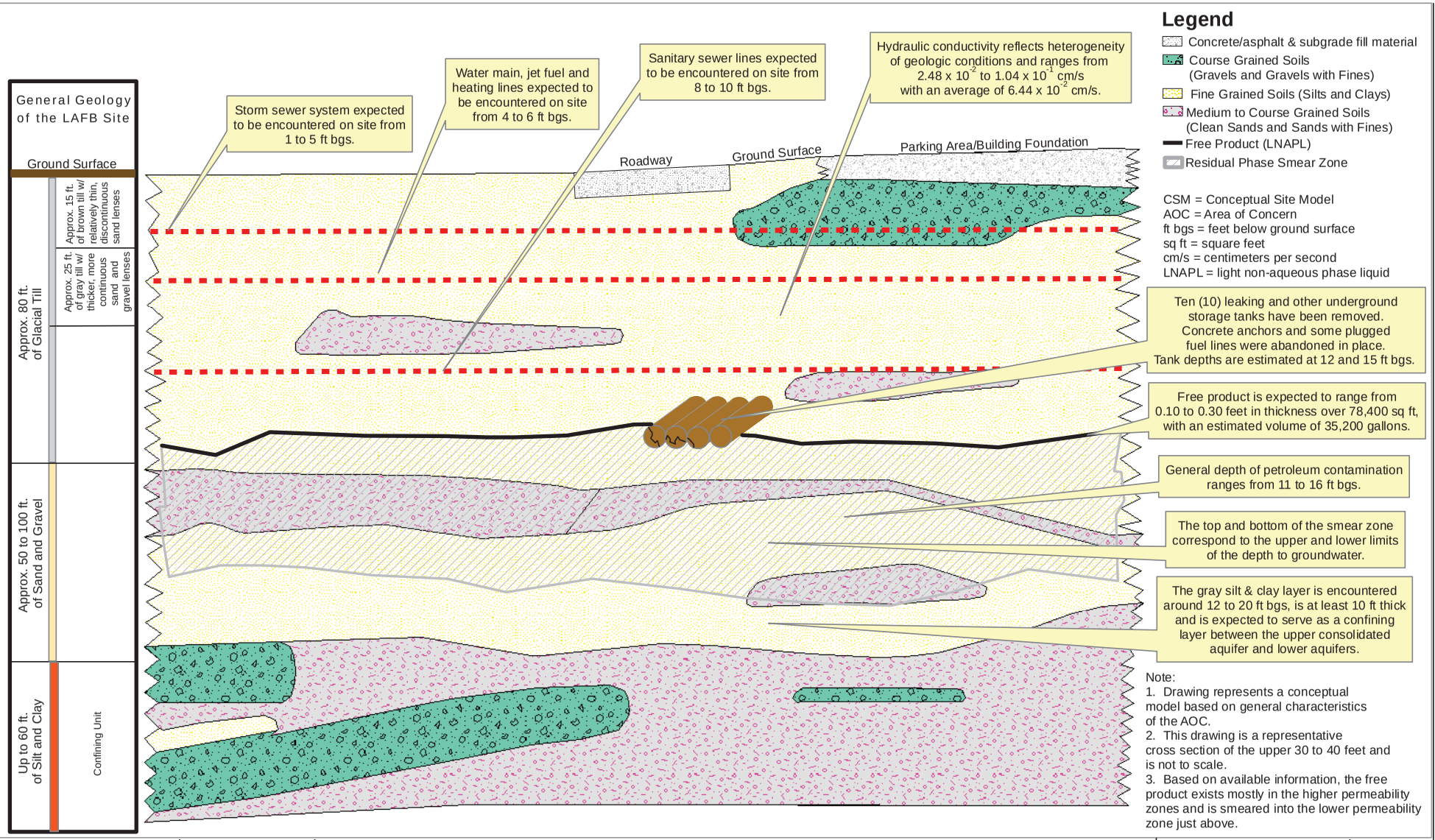

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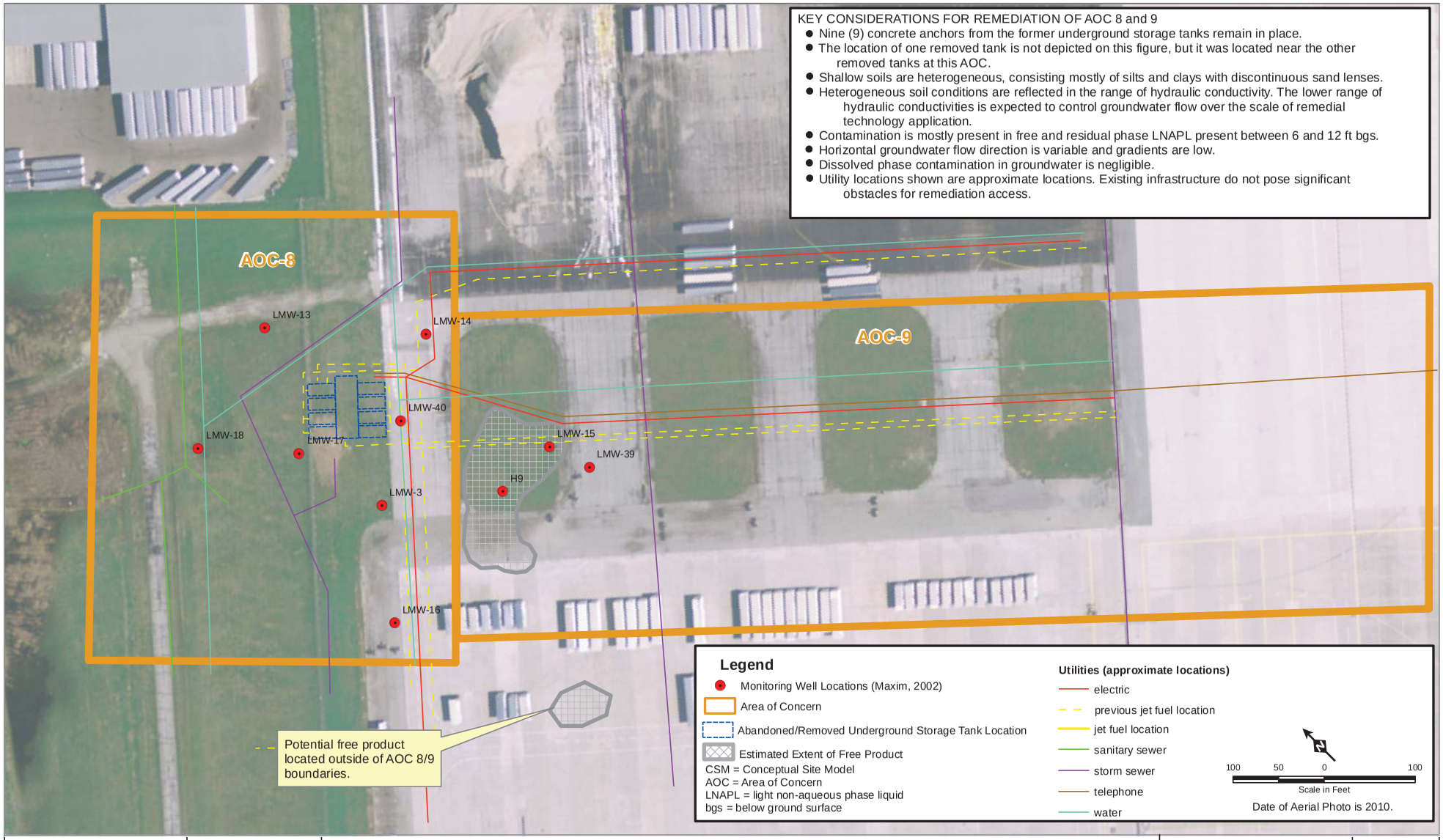
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Cross Section AOC 3

Figure 4



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AT FORMER UNDERGROUND STORAGE TANK FARMS
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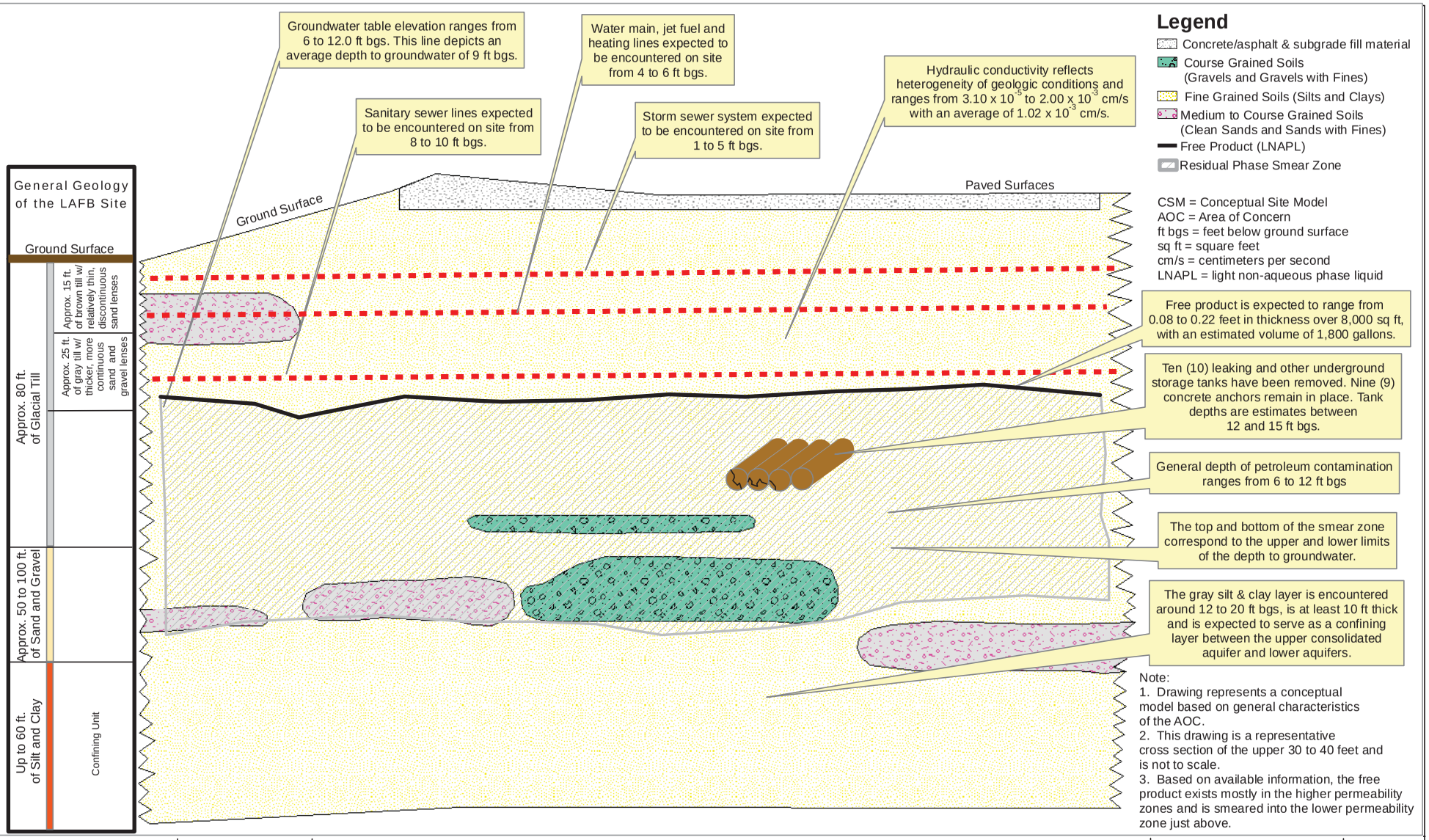
COLUMBUS, OHIO

CSM Planar View AOC 8 & 9

Figure 5



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AT FORMER UNDERGROUND STORAGE TANK FARMS
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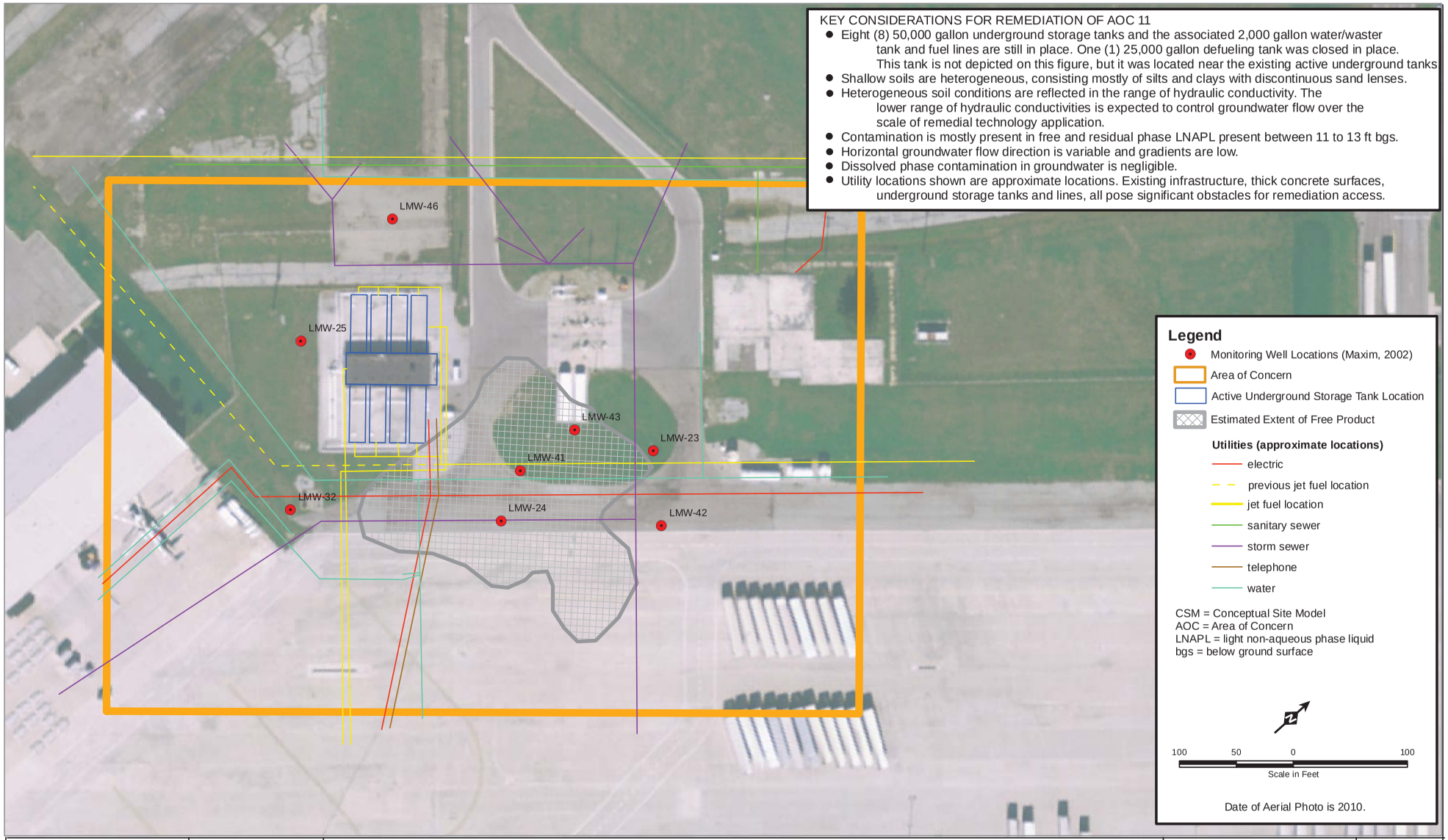
COLUMBUS, OHIO

CSM Cross Section AOC 8 & 9

Figure 6



KEY CONSIDERATIONS FOR REMEDIATION OF AOC 11

- Eight (8) 50,000 gallon underground storage tanks and the associated 2,000 gallon water/waster tank and fuel lines are still in place. One (1) 25,000 gallon defueling tank was closed in place. This tank is not depicted on this figure, but it was located near the existing active underground tanks
- Shallow soils are heterogeneous, consisting mostly of silts and clays with discontinuous sand lenses.
- Heterogeneous soil conditions are reflected in the range of hydraulic conductivity. The lower range of hydraulic conductivities is expected to control groundwater flow over the scale of remedial technology application.
- Contamination is mostly present in free and residual phase LNAPL present between 11 to 13 ft bgs.
- Horizontal groundwater flow direction is variable and gradients are low.
- Dissolved phase contamination in groundwater is negligible.
- Utility locations shown are approximate locations. Existing infrastructure, thick concrete surfaces, underground storage tanks and lines, all pose significant obstacles for remediation access.

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AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Planar View AOC 11

Figure 7

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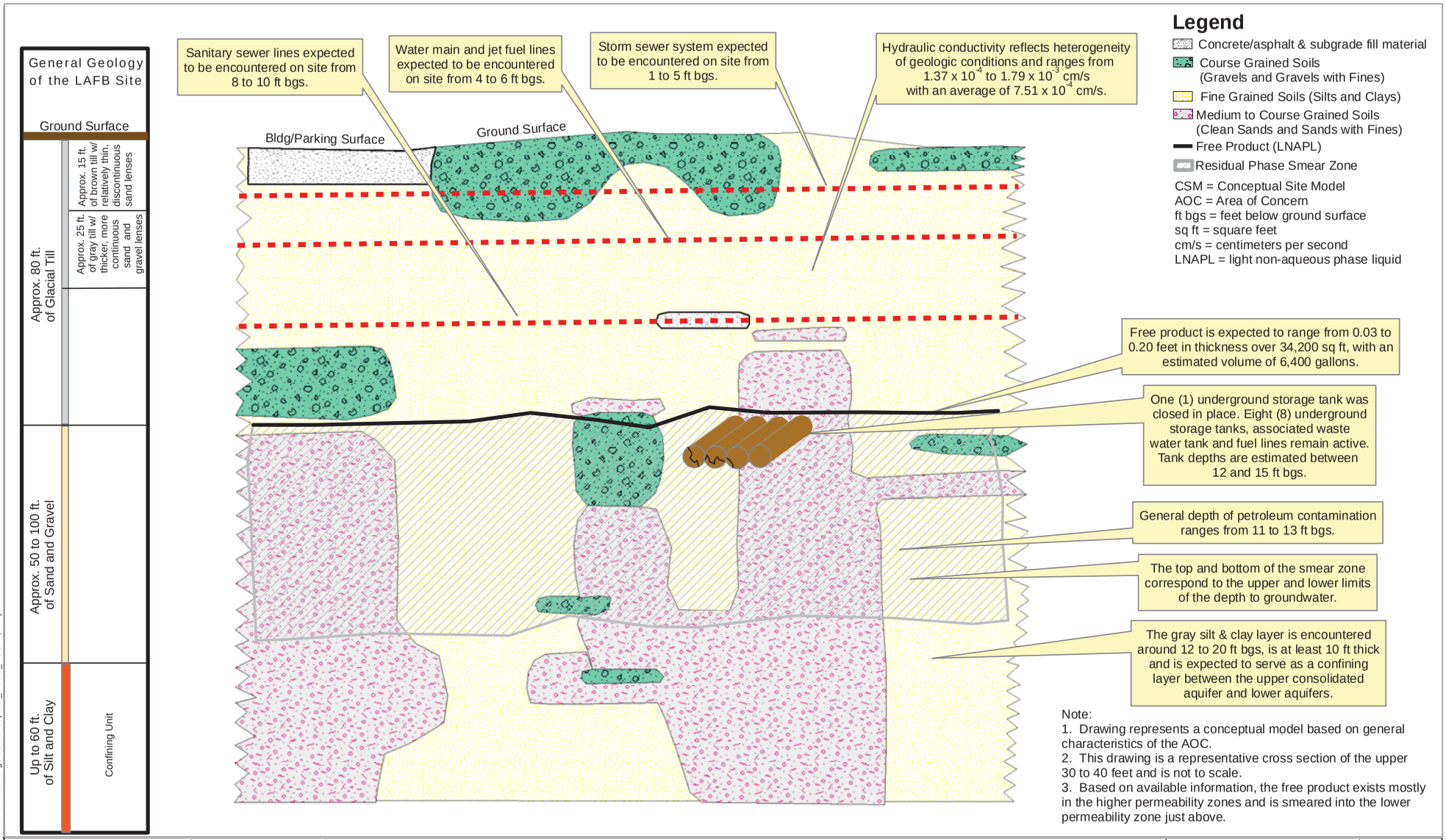

Map Document: (P:\AEC\CERCL\116662\Figures\Conceptual_Model_AOC11.mxd)

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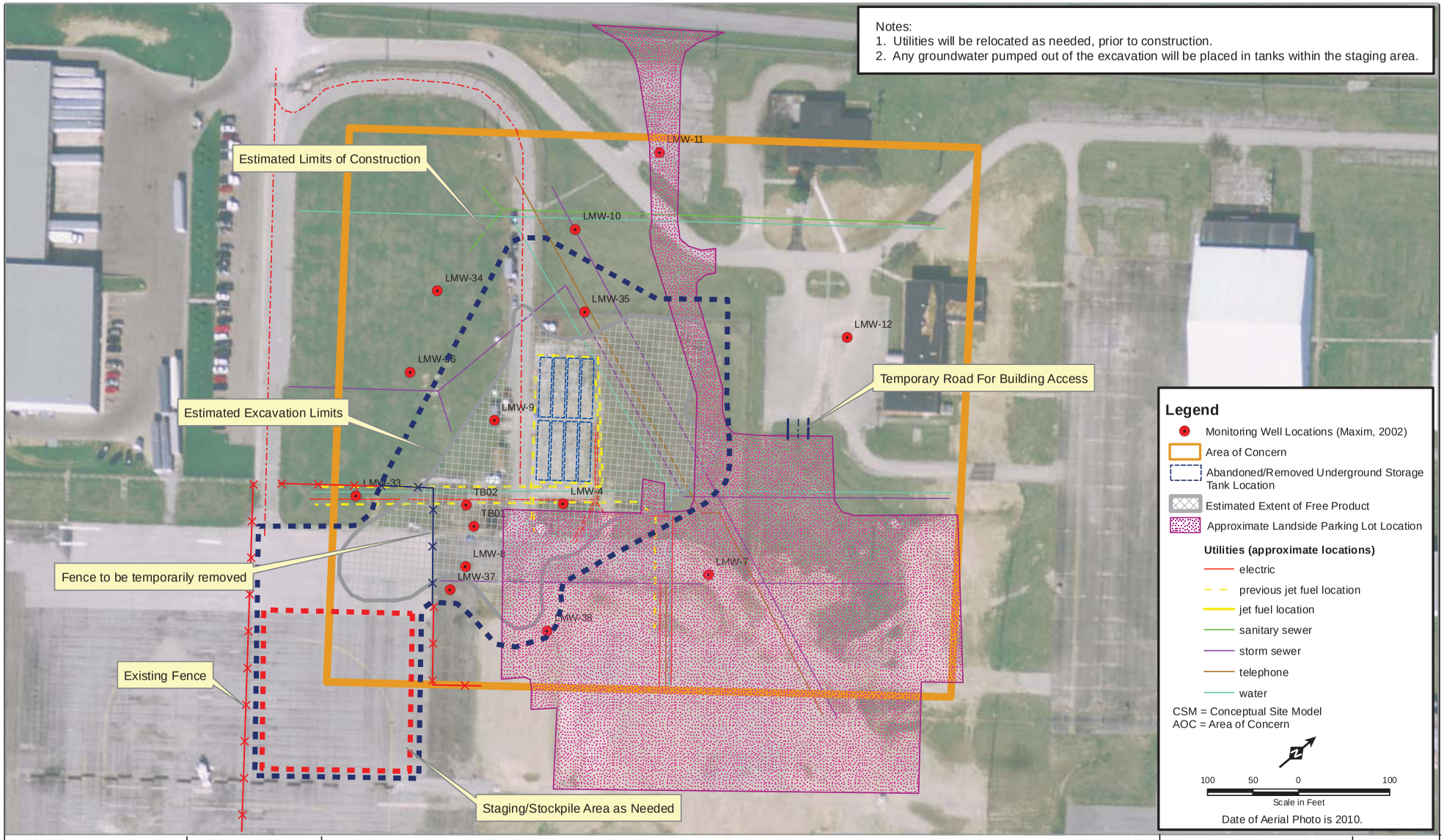
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Cross Section AOC 11

Figure 8



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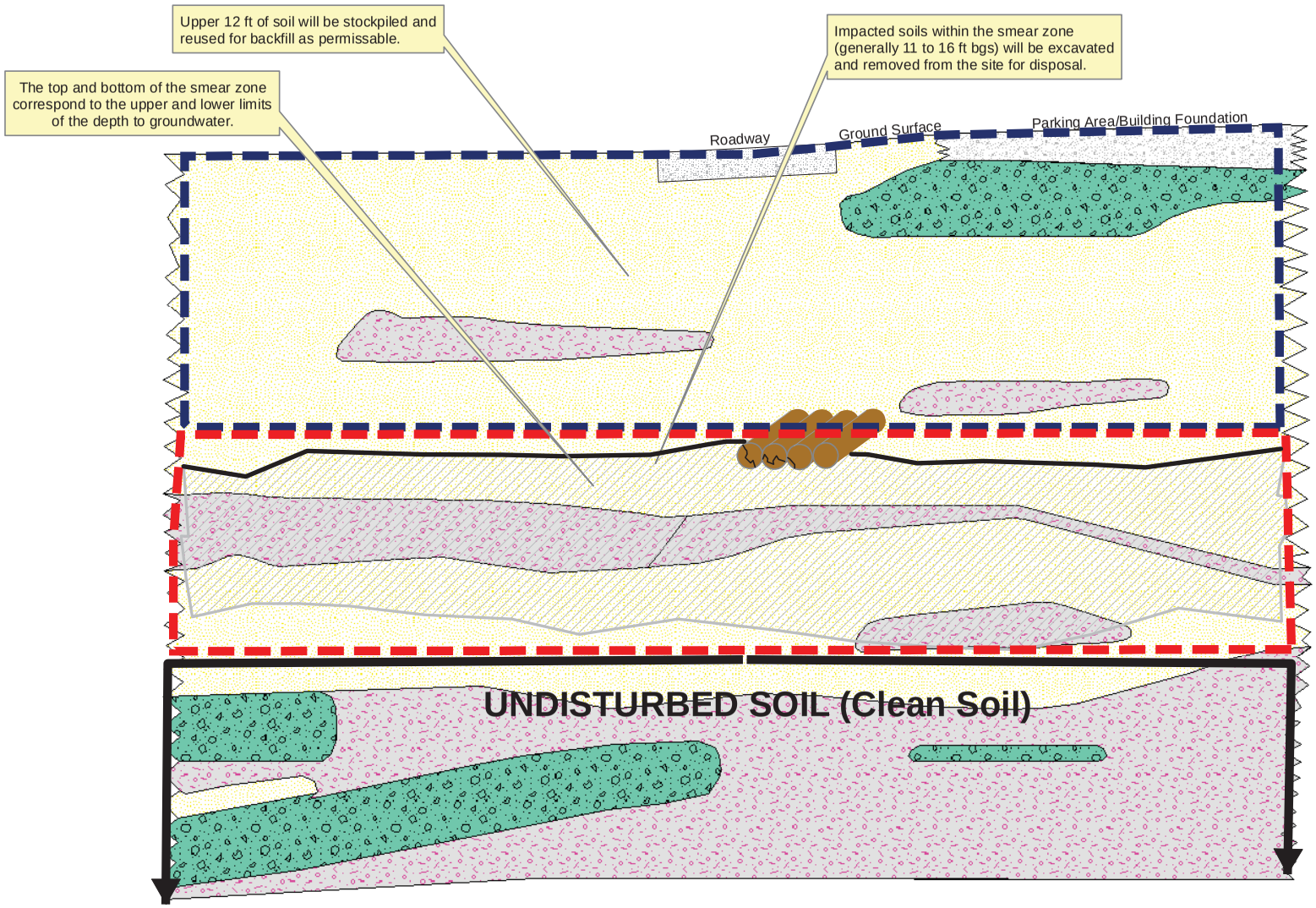
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Excavation Planar View AOC 3

Figure 9



Legend

- Concrete/asphalt & subgrade fill material
- Course Grained Soils (Gravels and Gravels with Fines)
- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone
- Boundary of soil to be stockpiled and reused for backfill as permissible
- Boundary of soil to be excavated and removed from site for disposal

CSM = Conceptual Site Model
AOC = Area of Concern
ft bgs = feet below ground surface
ft = feet
LNAPL = light non-aqueous phase liquid

Note:
1. Stockpiled soil may be mixed with general backfill delivered to site.
2. Utilities will be relocated as needed, prior to construction.
3. Structural backfill will be placed underneath buildings and/or parking areas. General backfill will be used for all other areas.
4. Drawing represents a conceptual model based on general characteristics of the AOC.
5. This drawing is a representative cross section of the upper 30 to 40 feet and is not to scale.
6. Based on available information, the free product exists mostly in the higher permeability zones and is smeared into the lower permeability zone just above.
7. Actual excavation walls will be sloped for safety purposes beyond the limits shown.

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AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Excavation Cross Section AOC 3

Figure 10

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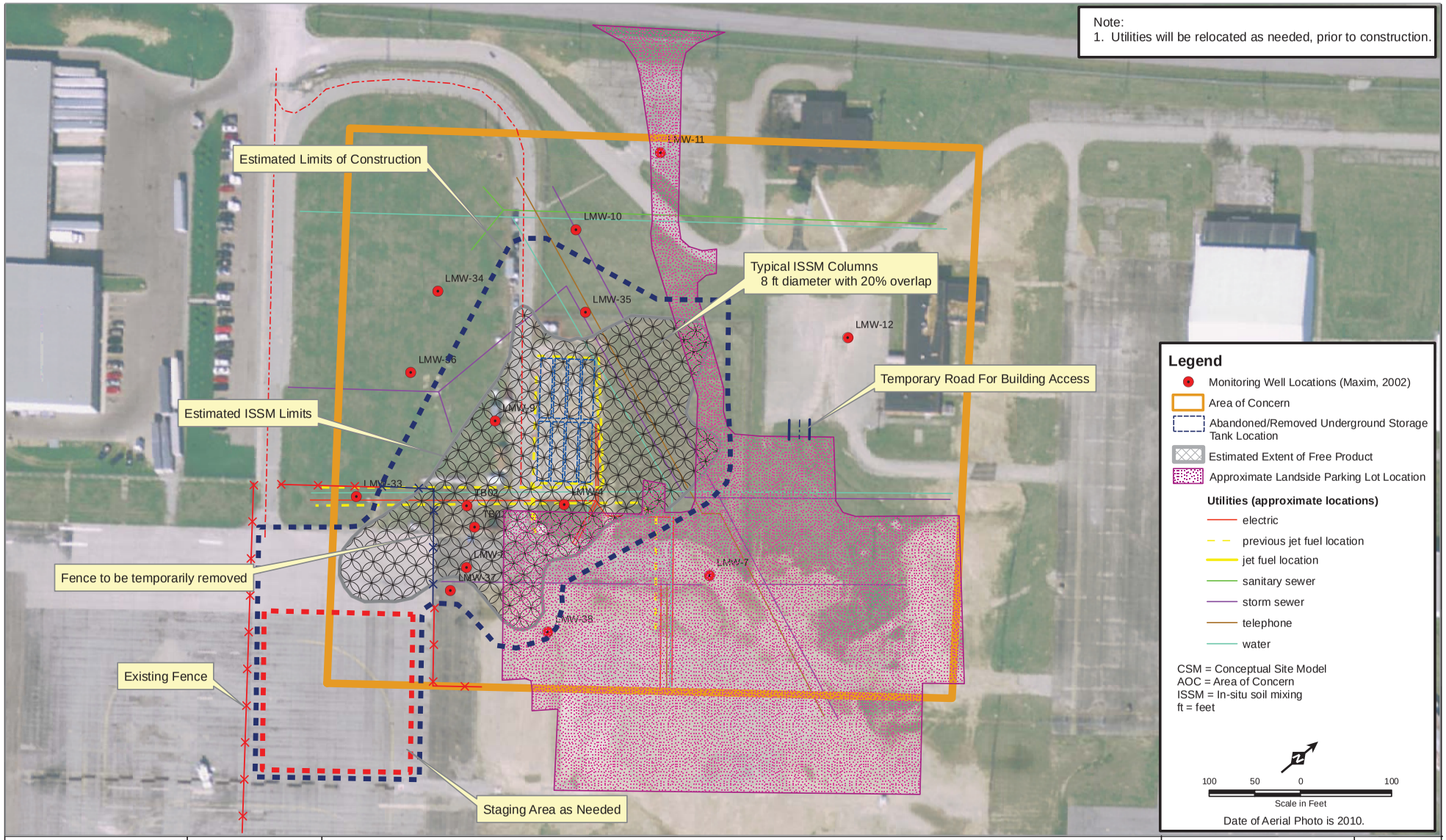

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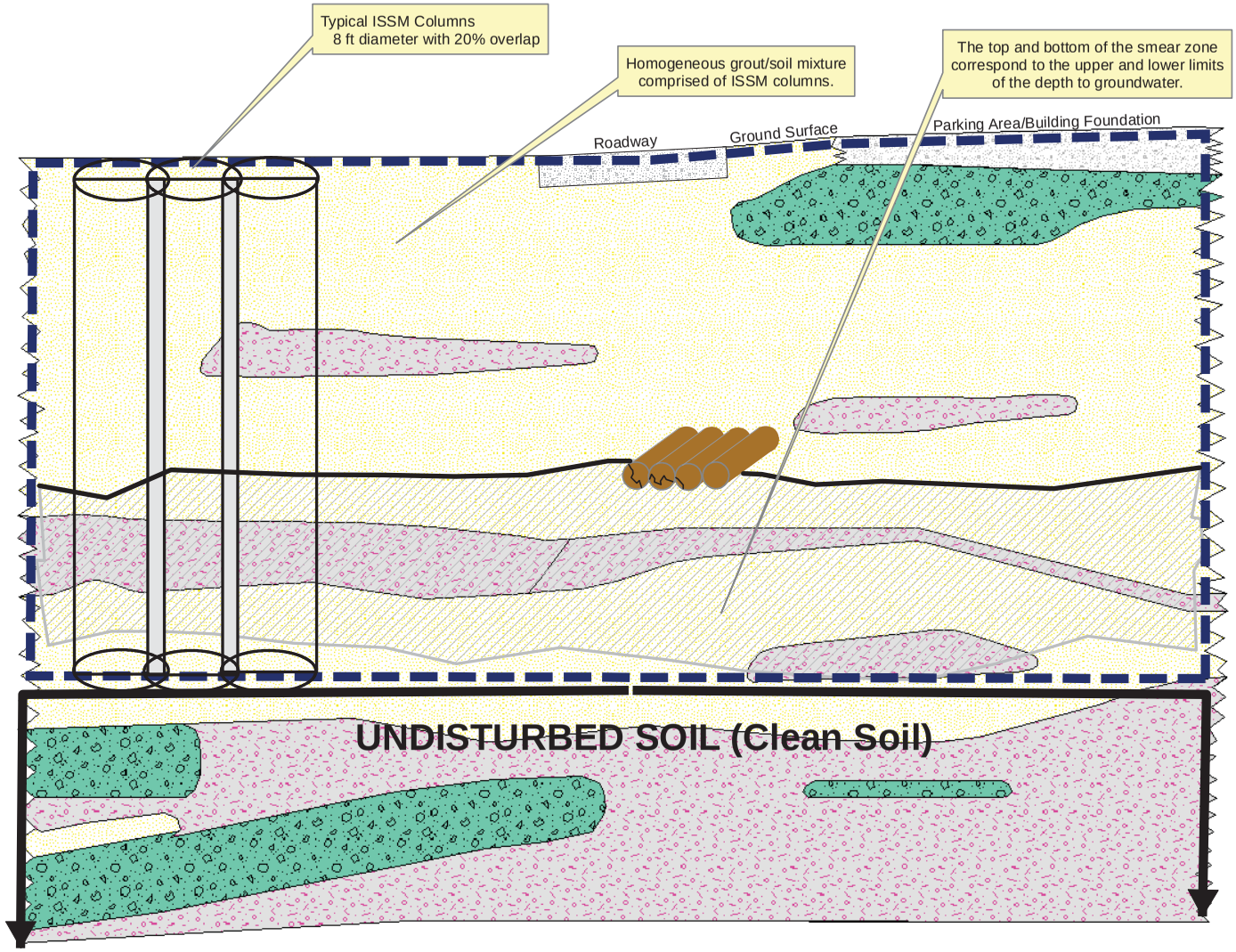
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
ISSM
Planar View
AOC 3

Figure
11



Legend

- Concrete/asphalt & subgrade fill material
- Course Grained Soils (Gravels and Gravels with Fines)
- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone
- Boundary of ISSM treated area.

CSM = Conceptual Site Model
AOC = Area of Concern
ft = feet
LNAPL = light non-aqueous phase liquid
ISSM = In-situ soil mixing

Note:
1. Utilities will be relocated as needed, prior to construction.
2. Drawing represents a conceptual model based on general characteristics of the AOC.
3. This drawing is a representative cross section of the upper 30 to 40 feet and is not to scale.
4. Based on available information, the free product exists mostly in the higher permeability zones and is smeared into the lower permeability zone just above.

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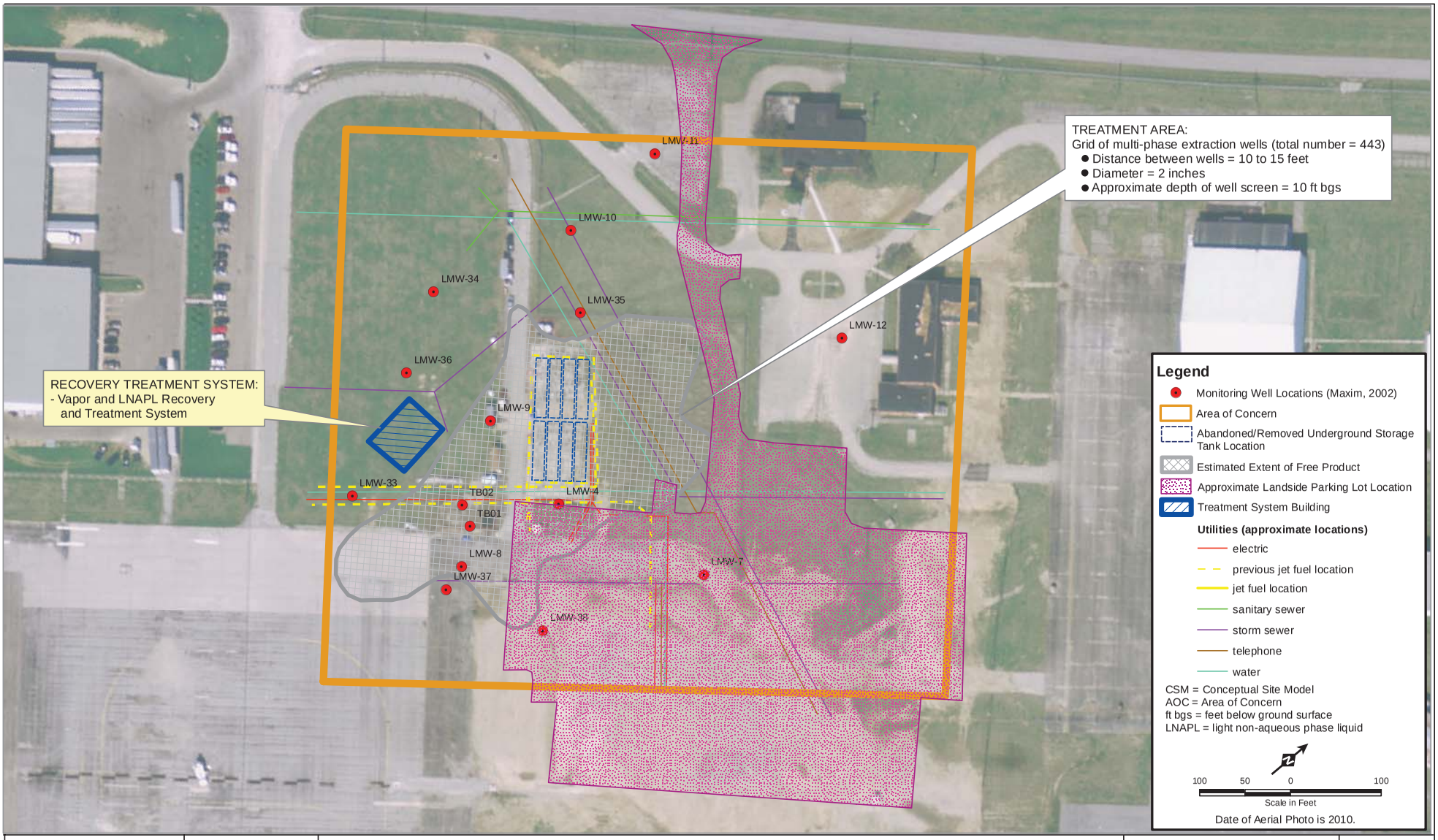
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM ISSM Cross Section AOC 3

Figure 12



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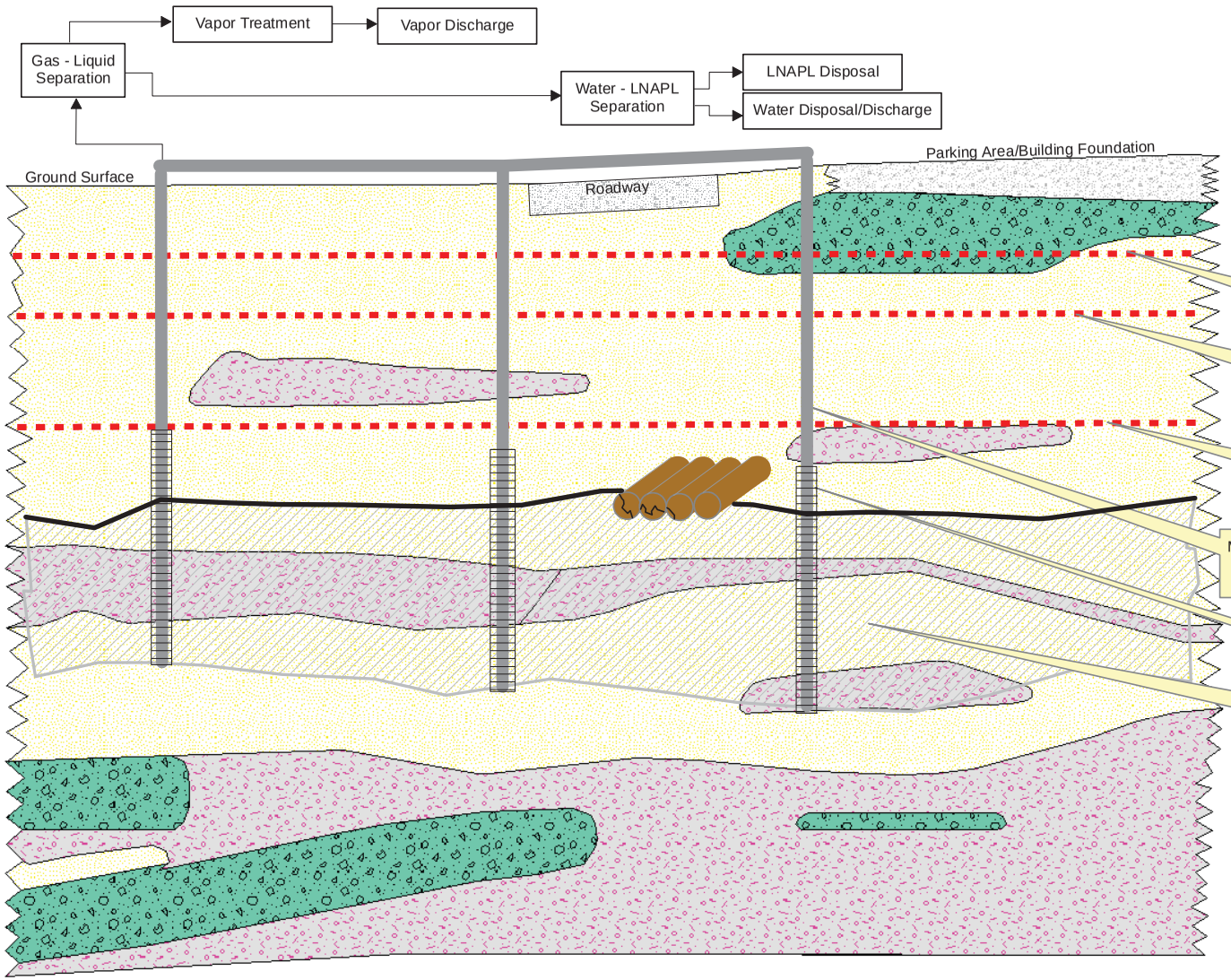
REMEDIAL TECHNOLOGIES EVALUATION REPORT
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
Multi-Phase Extraction
Planar View
AOC 3

Figure
13



Legend

- Concrete/asphalt & subgrade fill material
- Course Grained Soils (Gravels and Gravels with Fines)
- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone

CSM = Conceptual Site Model
AOC = Area of Concern
ft bgs = feet below ground surface
LNAPL = light non-aqueous phase liquid

Storm sewer system expected to be encountered on site from 1 to 5 ft bgs.

Water main, jet fuel and heating lines expected to be encountered on site from 4 to 6 ft bgs.

Sanitary sewer lines expected to be encountered on site from 8 to 10 ft bgs.

Multi-phase extraction wells (total number = 443)
Distance between wells = 10 to 15 feet
Diameter = 2 inches

Well screen interval = 10 ft

The top and bottom of the smear zone correspond to the upper and lower limits of the depth to groundwater.

Note:
1. Drawing represents a conceptual model based on general characteristics of the AOC and the remediation technology.
2. This drawing is a representative cross section of the upper 30 to 40 feet and is not to scale.
3. Based on available information, the free product exists mostly in the higher permeability zones and is smeared into the lower permeability zone just above.

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AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
Multi-Phase Extraction
Cross Section
AOC 3

Figure
14

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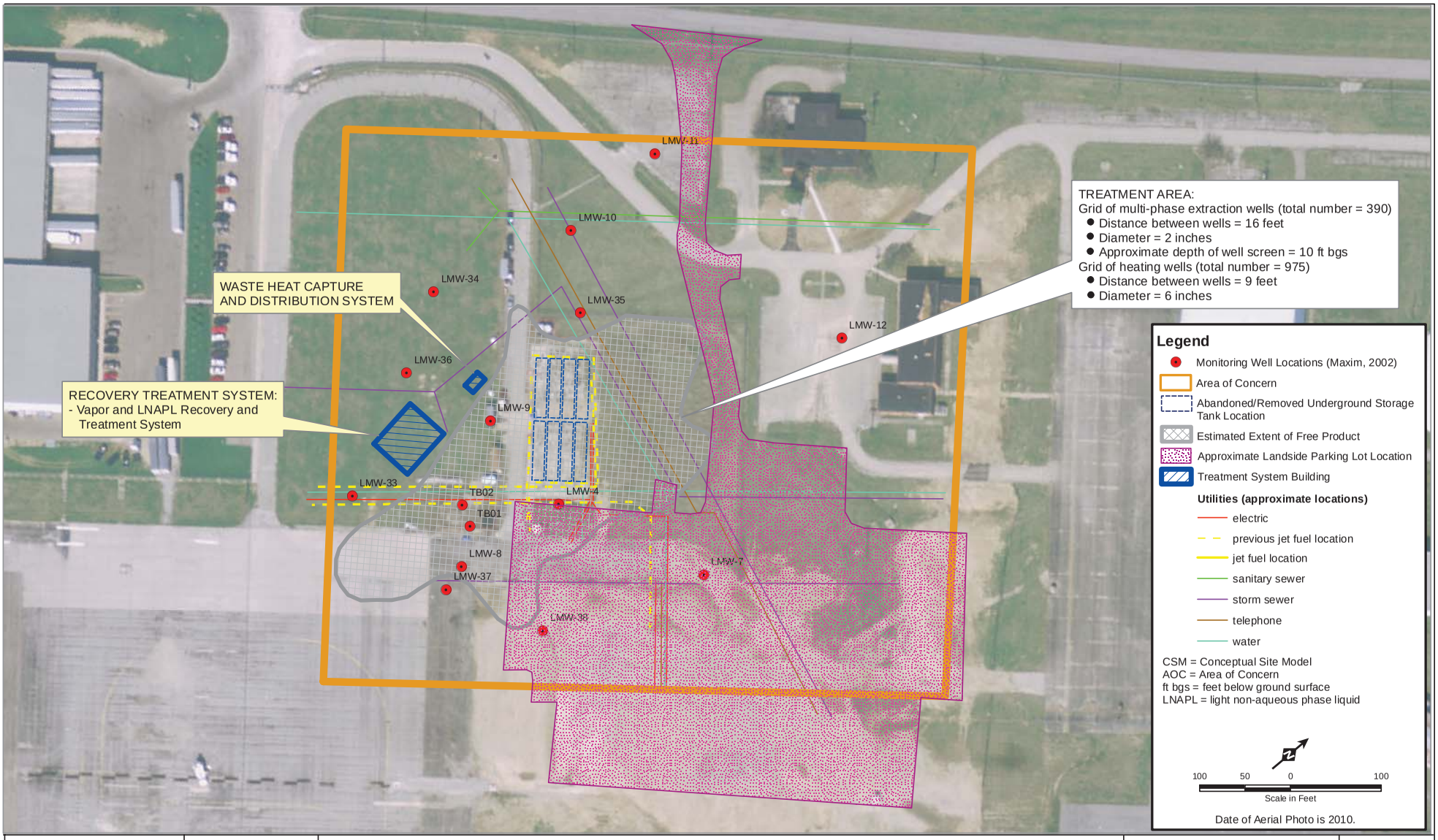

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PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
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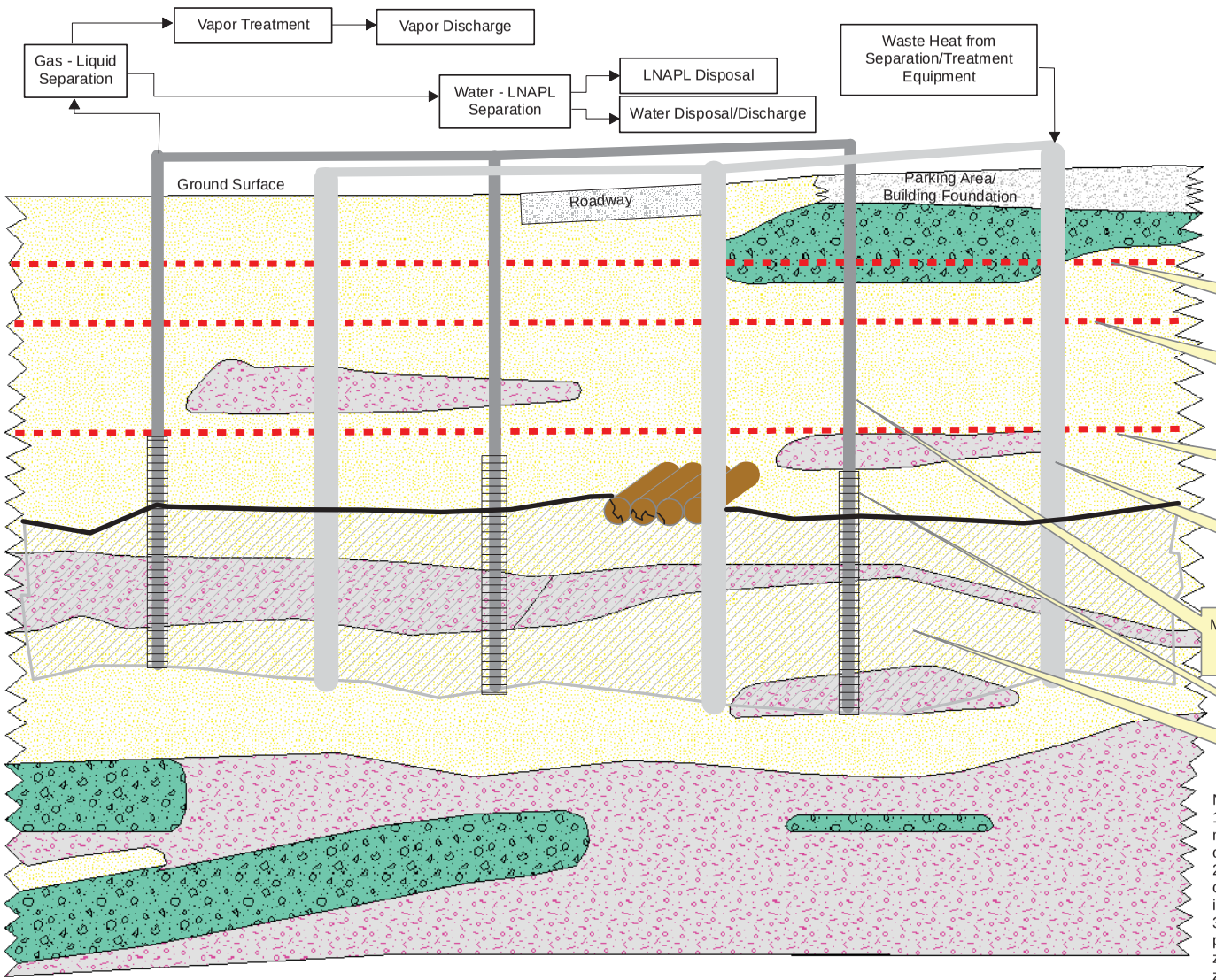
COLUMBUS, OHIO

CSM - Multi-Phase Extraction with Heating Planar View AOC 3

Figure 15



Legend

- Concrete/asphalt & subgrade fill material
- Course Grained Soils (Gravels and Gravels with Fines)
- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone

CSM = Conceptual Site Model
AOC = Area of Concern
ft bgs = feet below ground surface
LNAPL = light non-aqueous phase liquid

Storm sewer system expected to be encountered on site from 1 to 5 ft bgs.

Water main, jet fuel and heating lines expected to be encountered on site from 4 to 6 ft bgs.

Sanitary sewer lines expected to be encountered on site from 8 to 10 ft bgs.

Heating wells (total number = 975)
Distance between wells = 9 feet
Diameter = 6 inches

Multi-phase extraction wells (total number = 340)
Distance between wells = 16 feet
Diameter = 2 inches

Well screen interval = 10 ft

The top and bottom of the smear zone correspond to the upper and lower limits of the depth to groundwater.

Note:
1. Drawing represents a conceptual model based on general characteristics of the AOC.
2. This drawing is a representative cross section of the upper 30 to 40 feet and is not to scale.
3. Based on available information, the free product exists mostly in the higher permeability zones and is smeared into the lower permeability zone just above.

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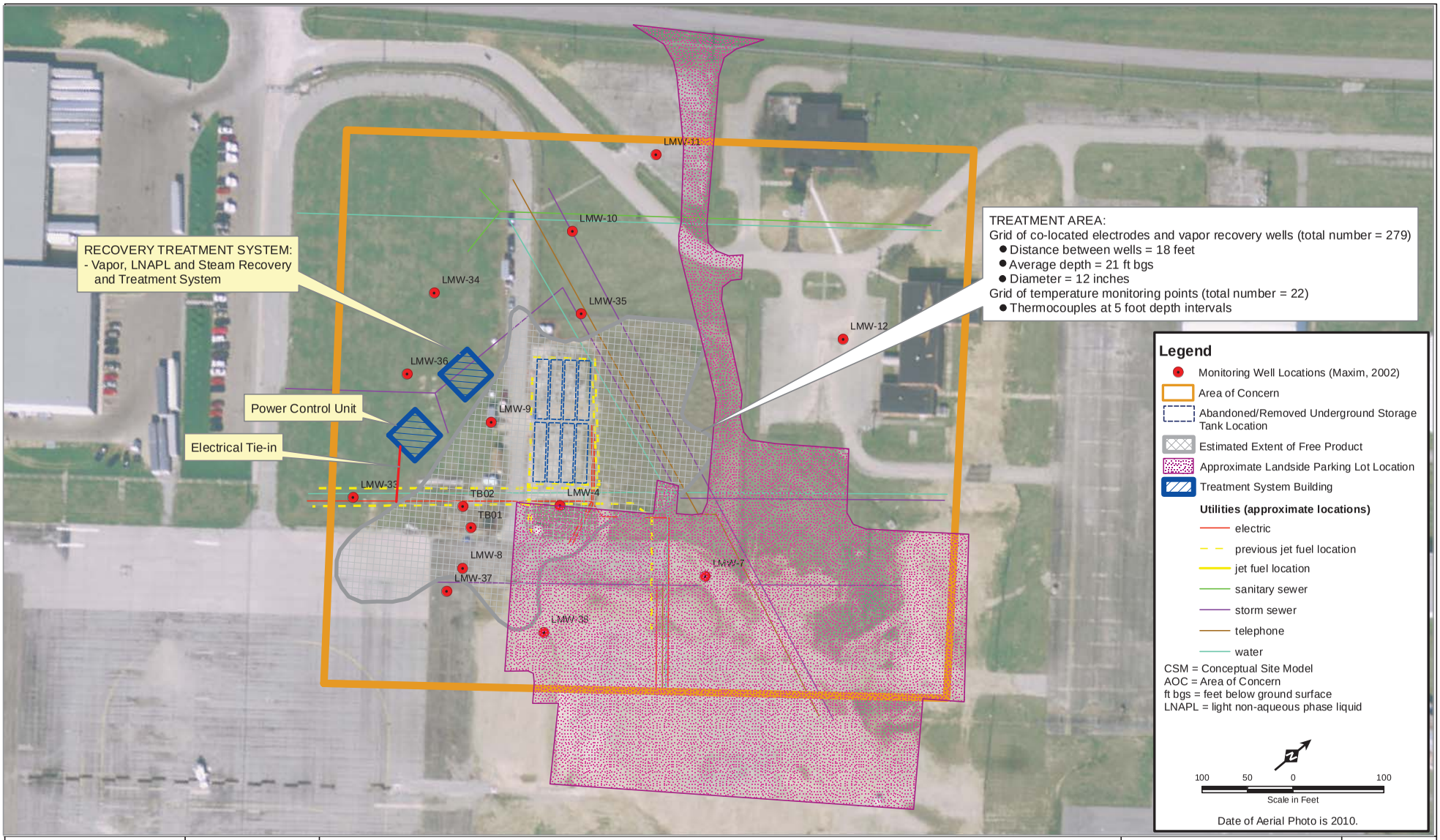
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Multi-Phase Extraction with Heating Cross Section AOC 3

Figure 16



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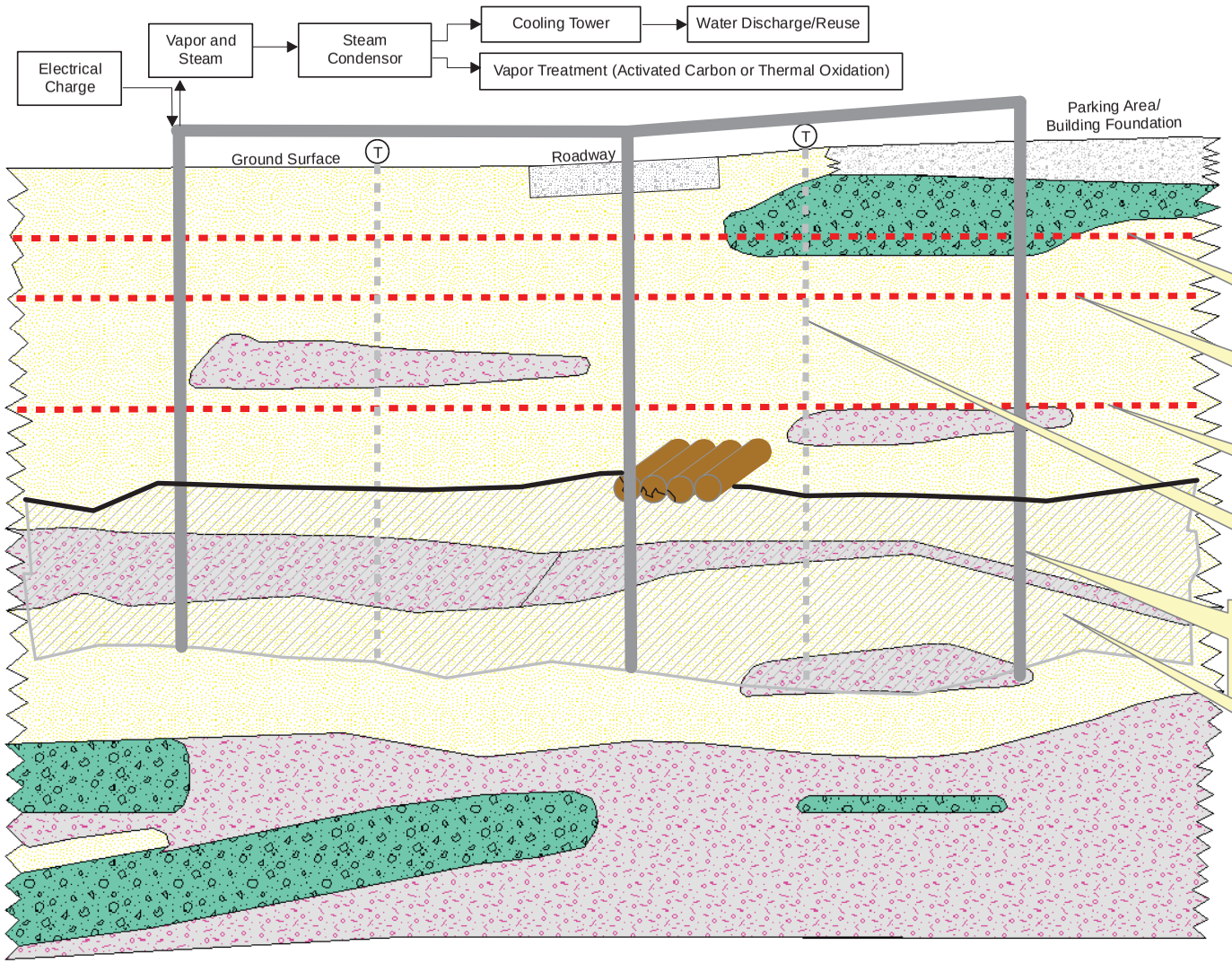
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Electrical Resistance Heating Planar View AOC 3

Figure 17



Legend

- Concrete/asphalt & subgrade fill material
- Course Grained Soils (Gravels and Gravels with Fines)
- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone

CSM = Conceptual Site Model
AOC = Area of Concern
ft bgs = feet below ground surface
LNAPL = light non-aqueous phase liquid

(T) = Temperature monitoring point

Storm sewer system expected to be encountered on site from 1 to 5 ft bgs.

Water main, jet fuel and heating lines expected to be encountered on site from 4 to 6 ft bgs.

Sanitary sewer lines expected to be encountered on site from 8 to 10 ft bgs.

Temperature monitoring points (total number = 22) Thermocouples at 5 foot intervals

Co-located electrodes and vapor recovery wells (total number = 279) Distance between wells = 18 feet Average depth = 21 ft bgs Diameter = 12 inches

The top and bottom of the smear zone correspond to the upper and lower limits of the depth to groundwater.

Note:
1. Drawing represents a conceptual model based on general characteristics of the AOC and the remediation technology.
2. This drawing is a representative cross section of the upper 30 to 40 feet and is not to scale.
3. Based on available information, the free product exists mostly in the higher permeability zones and is smeared into the lower permeability zone just above.

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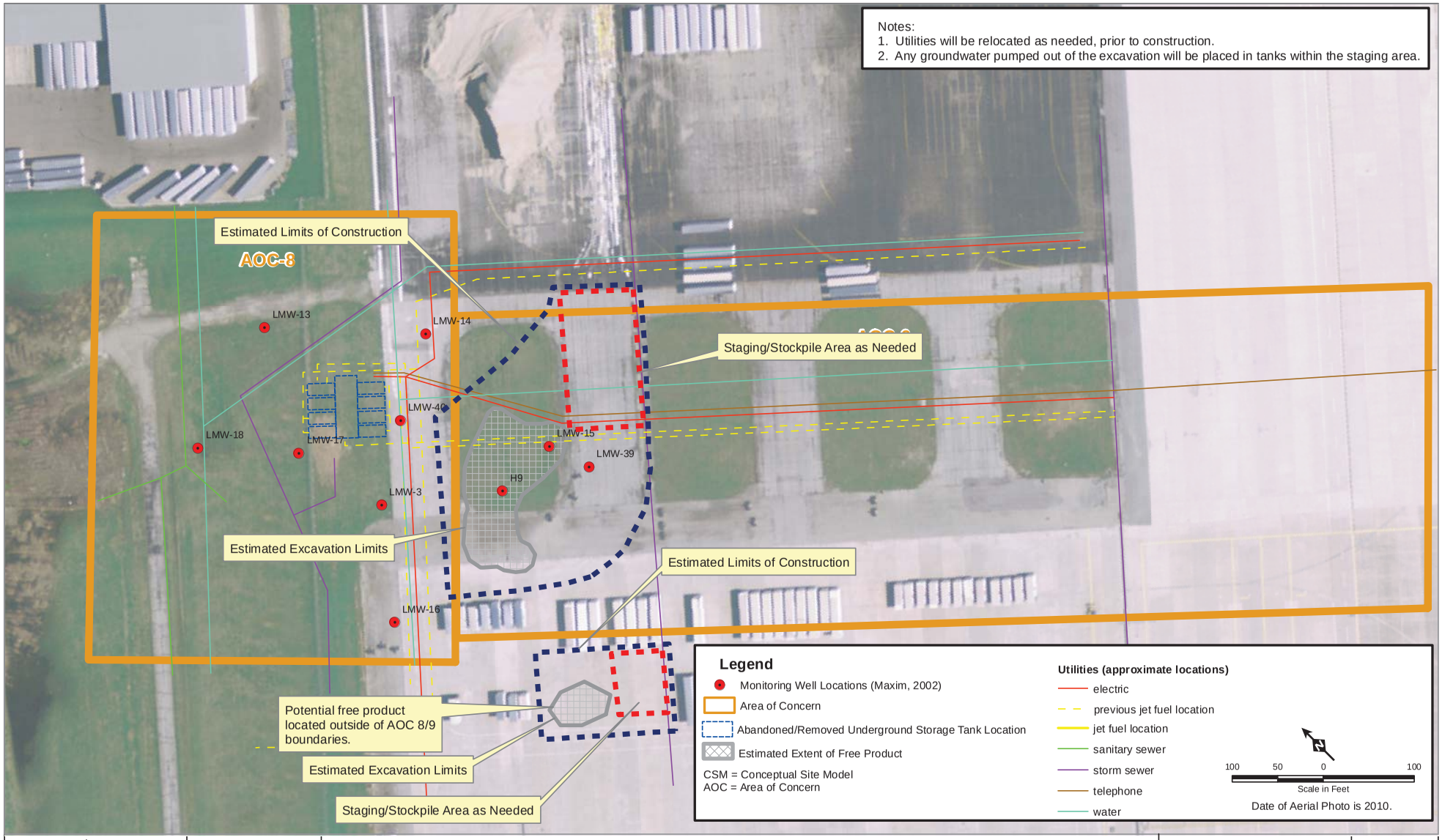
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Electrical Resistance Heating Cross Section AOC 3

Figure 18

Path: S:\AE\C\Celrb\116662\99_GIS\LAFB\18_Conceptual_Model_AOC3.mxd



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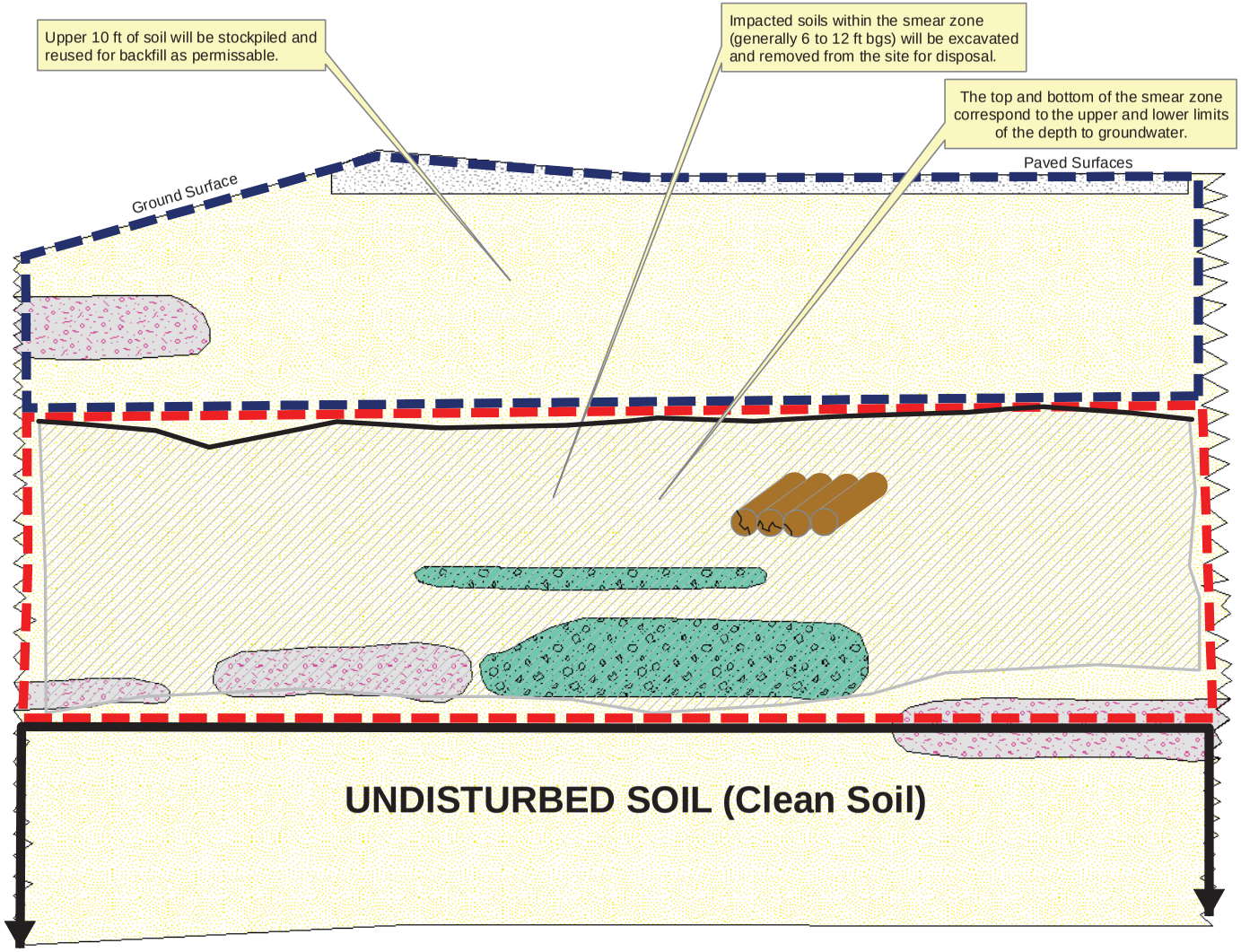
REMEDIAL TECHNOLOGIES EVALUATION REPORT
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Excavation Planar View AOC 8 & 9

Figure 19



Legend

- Concrete/asphalt & subgrade fill material
- Course Grained Soils (Gravels and Gravels with Fines)
- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone
- Boundary of soil to be stockpiled and reused for backfill as permissible
- Boundary of soil to be excavated and removed from site for disposal

CSM = Conceptual Site Model
AOC = Area of Concern
ft bgs = feet below ground surface
ft = feet
LNAPL = light non-aqueous phase liquid

Note:
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4. Drawing represents a conceptual model based on general characteristics of the AOC.
5. This drawing is a representative cross section of the upper 30 to 40 feet and is not to scale.
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LOCKBOURNE AIR FORCE BASE
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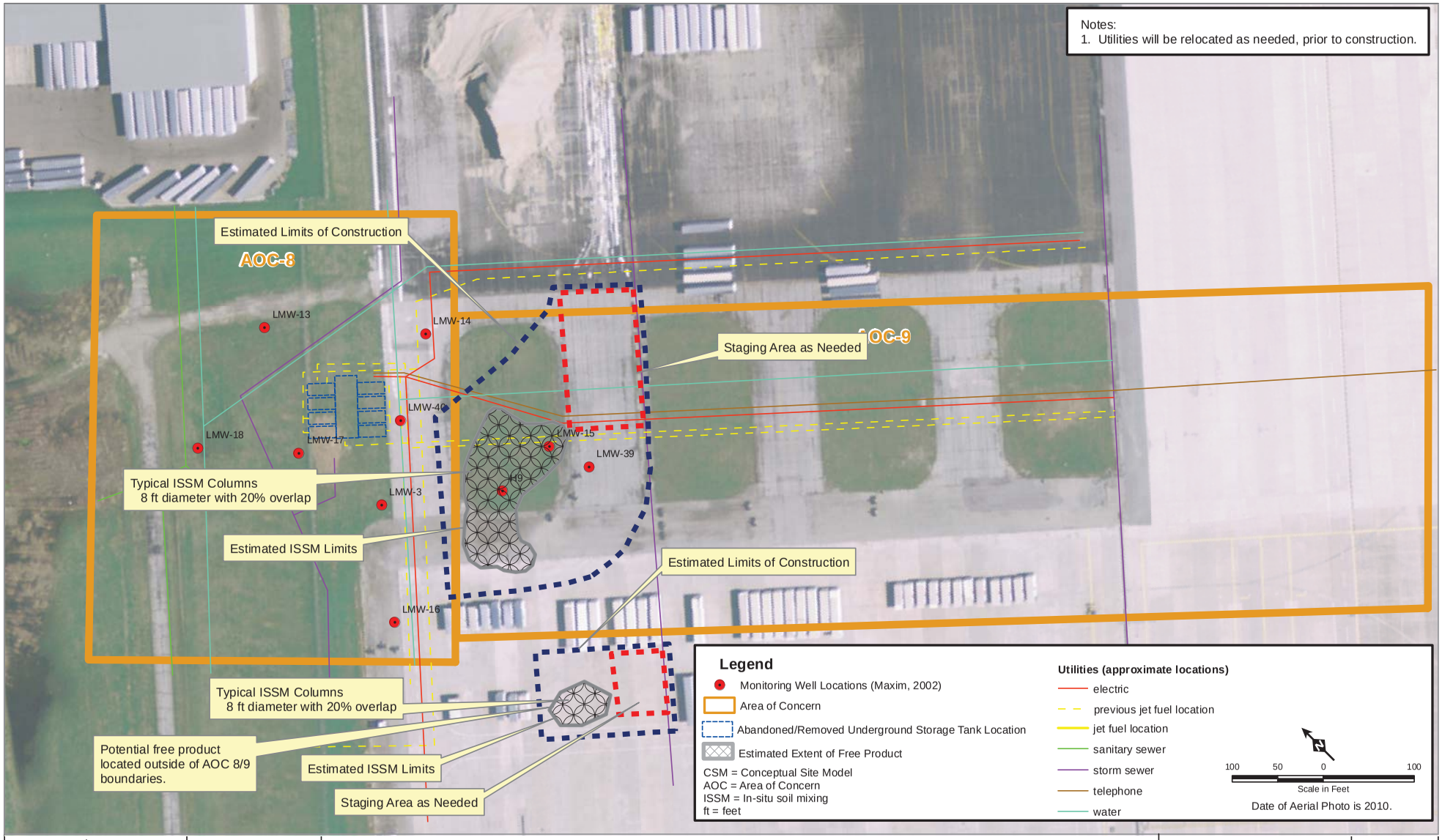
CSM Excavation Cross Section AOC 8 & 9

Figure 20

Path: S:\AE\C\Celrb\116662\99_GIS\LAFB\20_ExcavationCrossSection_AOC8-9_1.mxd



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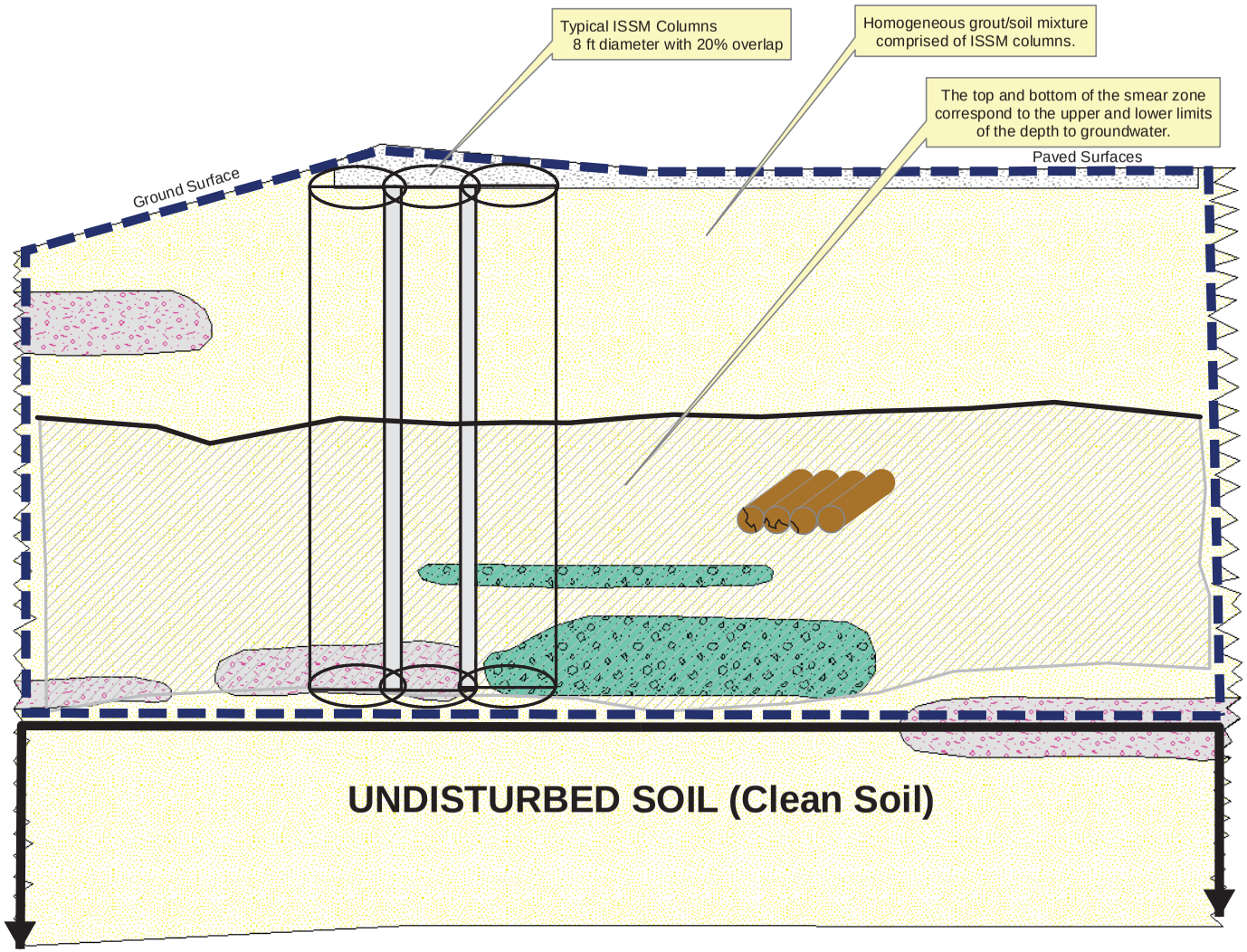
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
ISSM
Planar View
AOC 8 & 9

Figure

21



Legend

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- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone
- Boundary of ISSM treated area.

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AOC = Area of Concern
ft = feet
LNAPL = light non-aqueous phase liquid
ISSM = In-situ soil mixing

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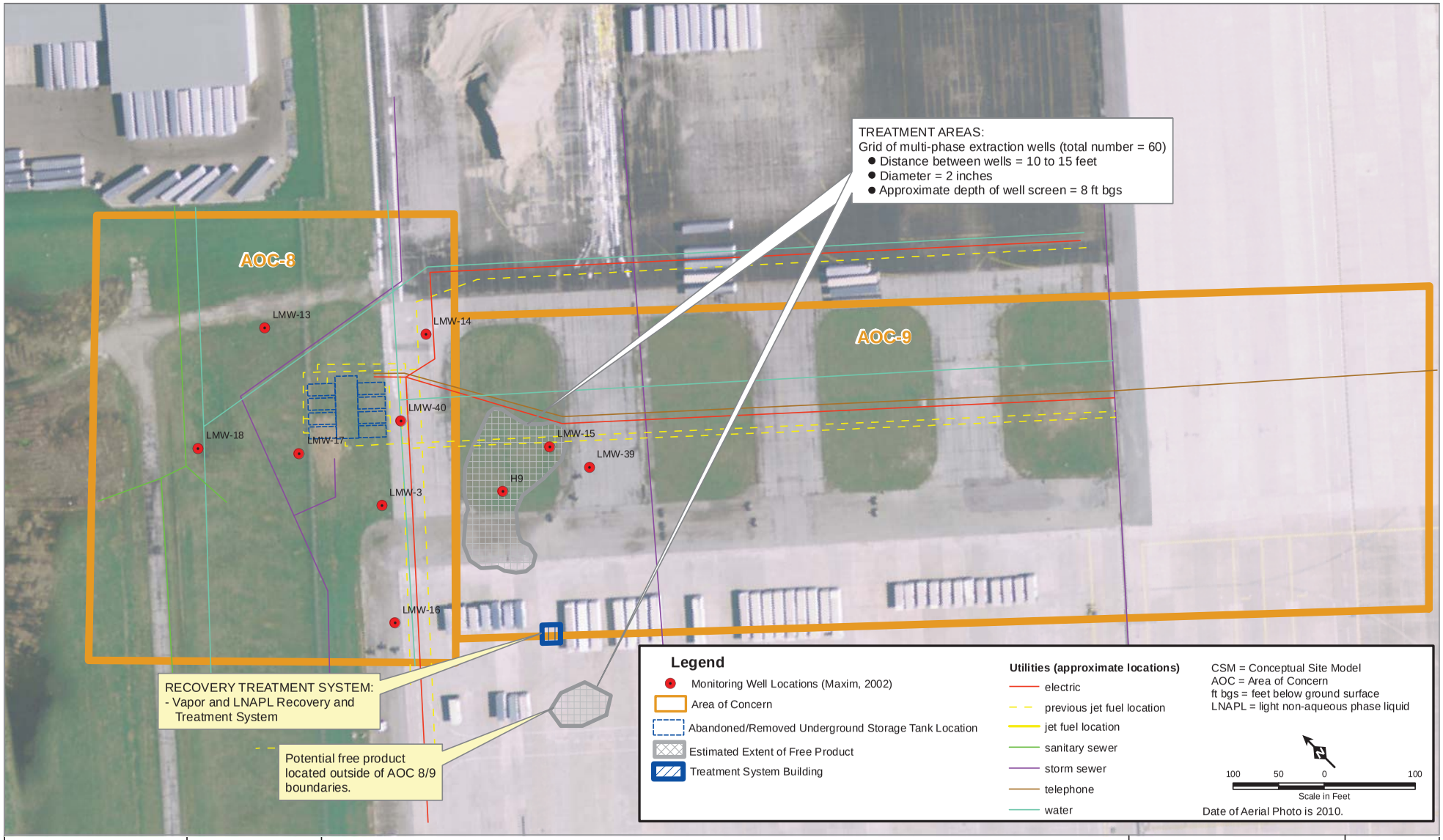
COLUMBUS, OHIO

CSM ISSM Cross Section AOC 8 & 9

Figure 22

Path: S:\AE\C\Celrb\116662\99_GIS\LAFB\22_ISSMCrossSection_AOC8-9_1.mxd



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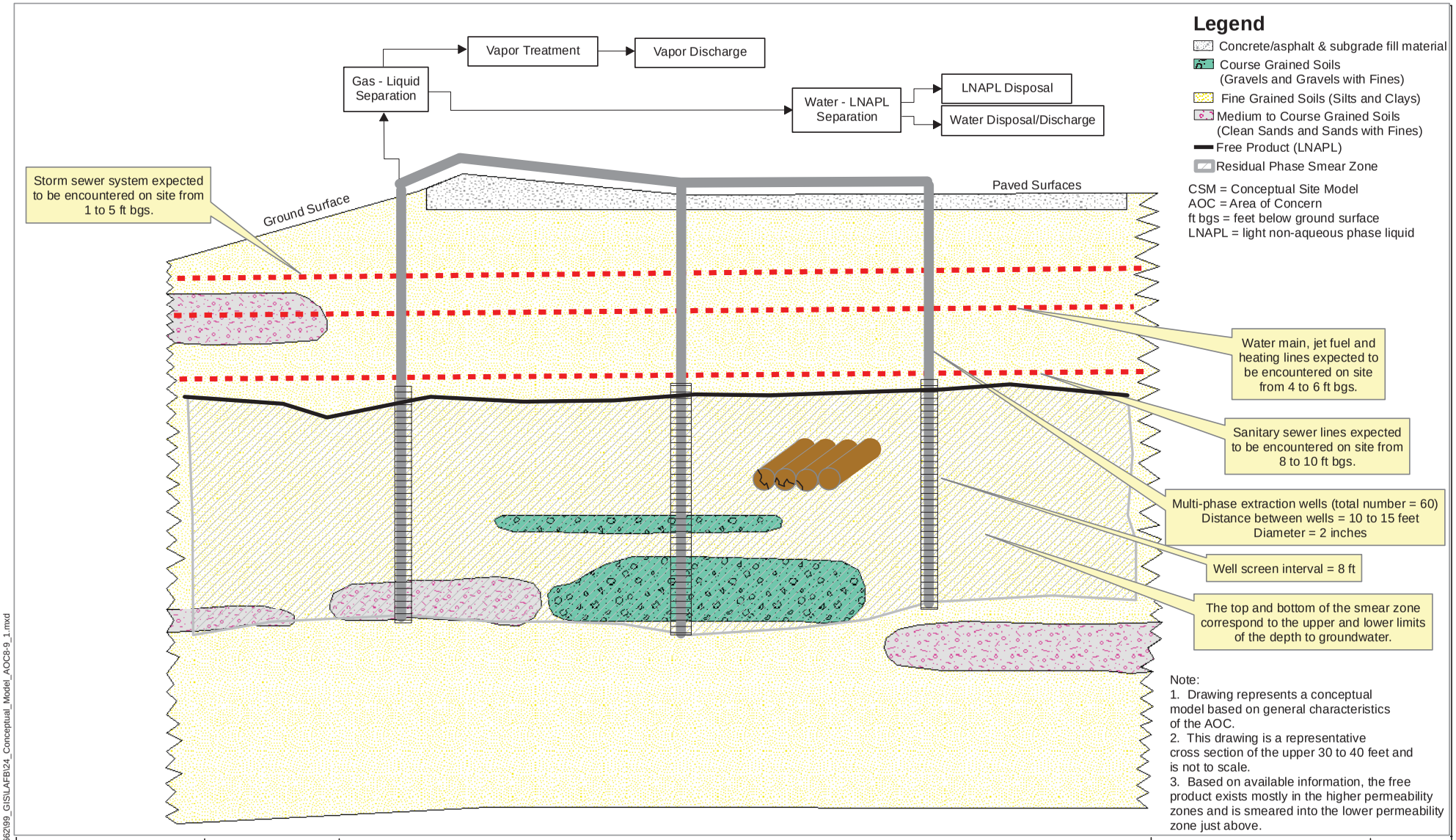
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
Multi-Phase Extraction
Planar View
AOC 8 & 9

Figure
23



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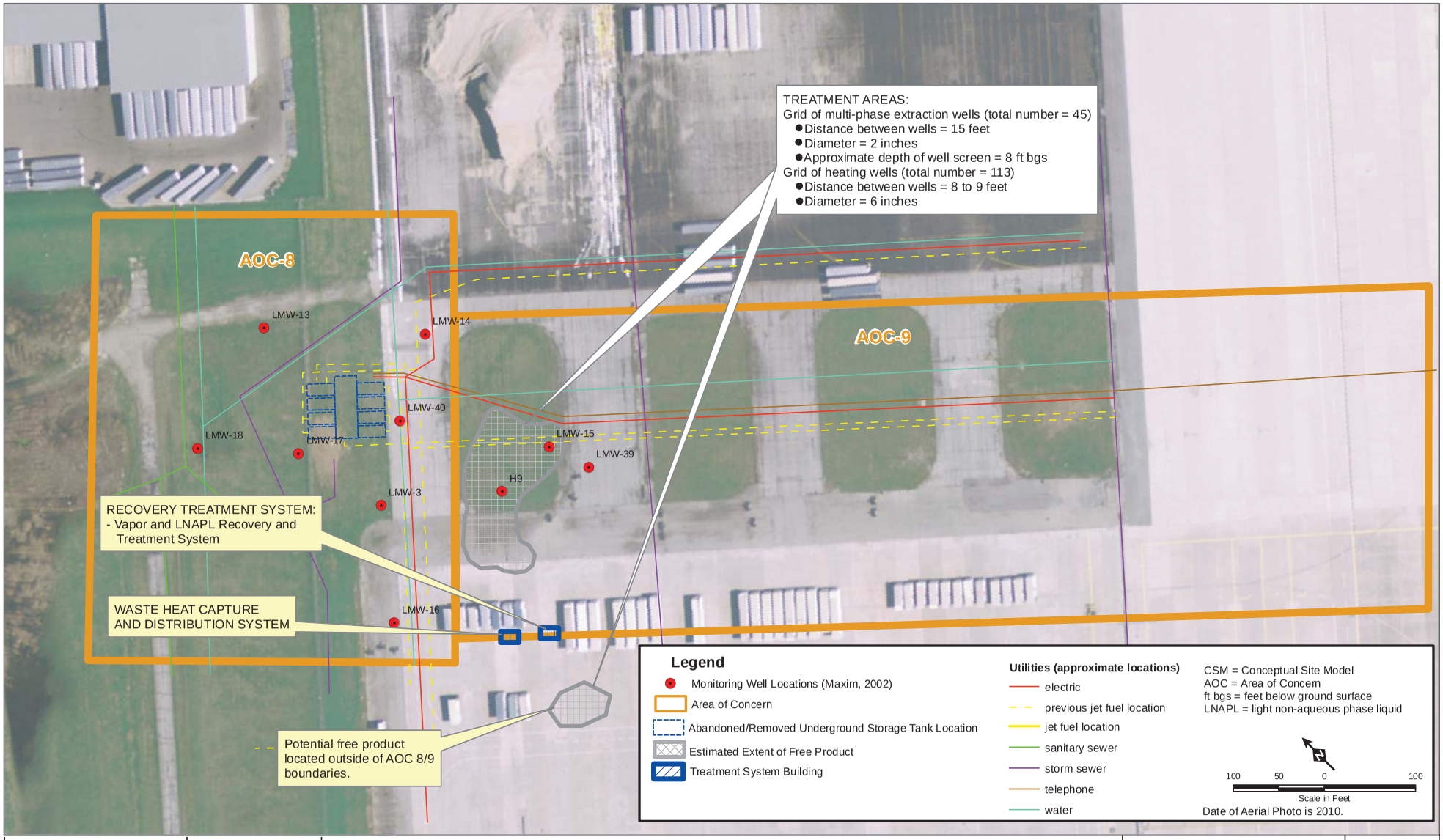
CSM
Multi-Phase Extraction
Cross Section
AOC 8 & 9

Figure
24



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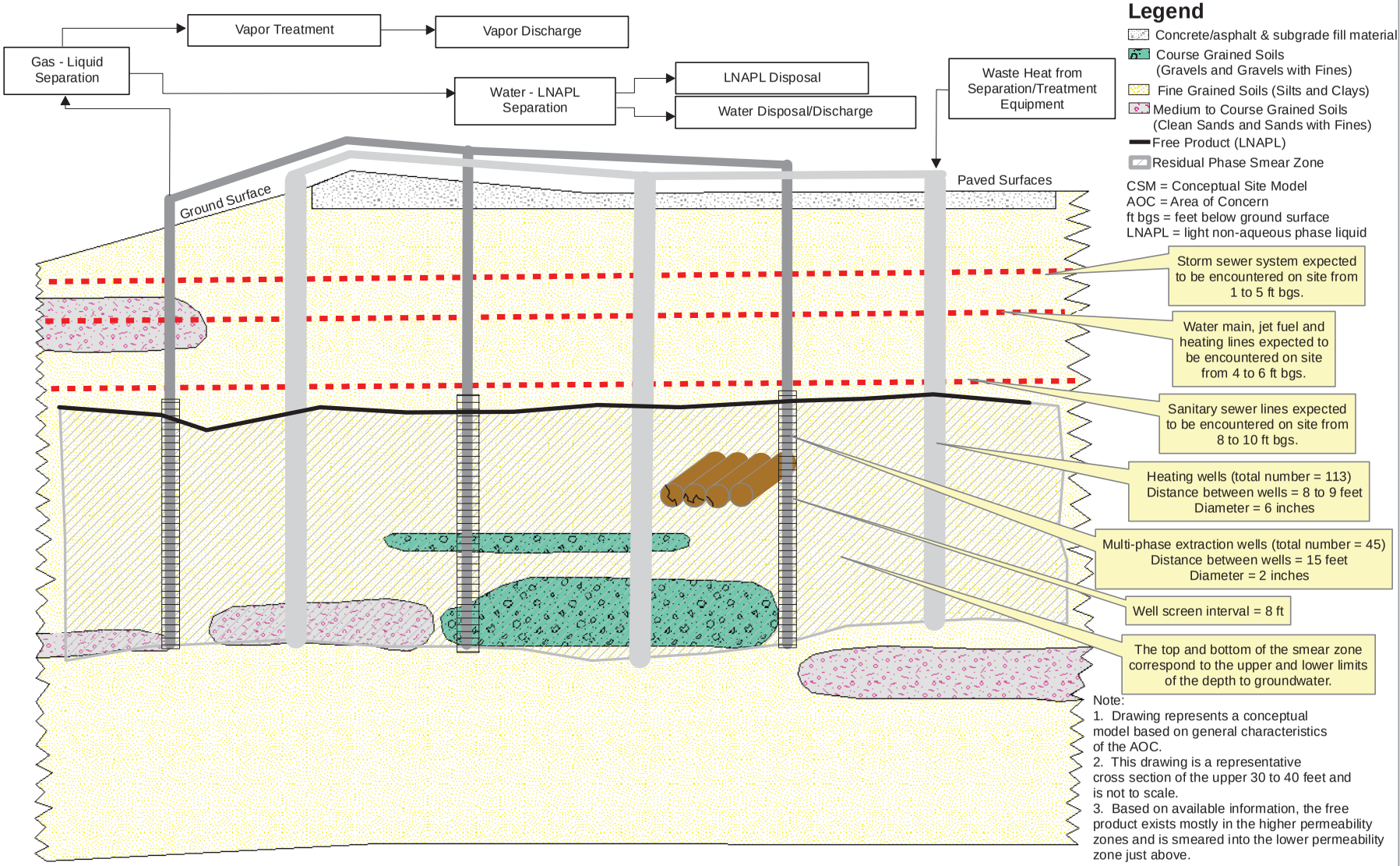
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Multi-Phase Extraction with Heating Planar View AOC 8 & 9

Figure 25



Legend

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- Course Grained Soils (Gravels and Gravels with Fines)
- Fine Grained Soils (Silts and Clays)
- Medium to Course Grained Soils (Clean Sands and Sands with Fines)
- Free Product (LNAPL)
- Residual Phase Smear Zone

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LNAPL = light non-aqueous phase liquid

Note:
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Path: S:\AE\C\Celrb\116662\99_GIS\LAFB\26_Conceptual_Model_AOC8-9_1.mxd

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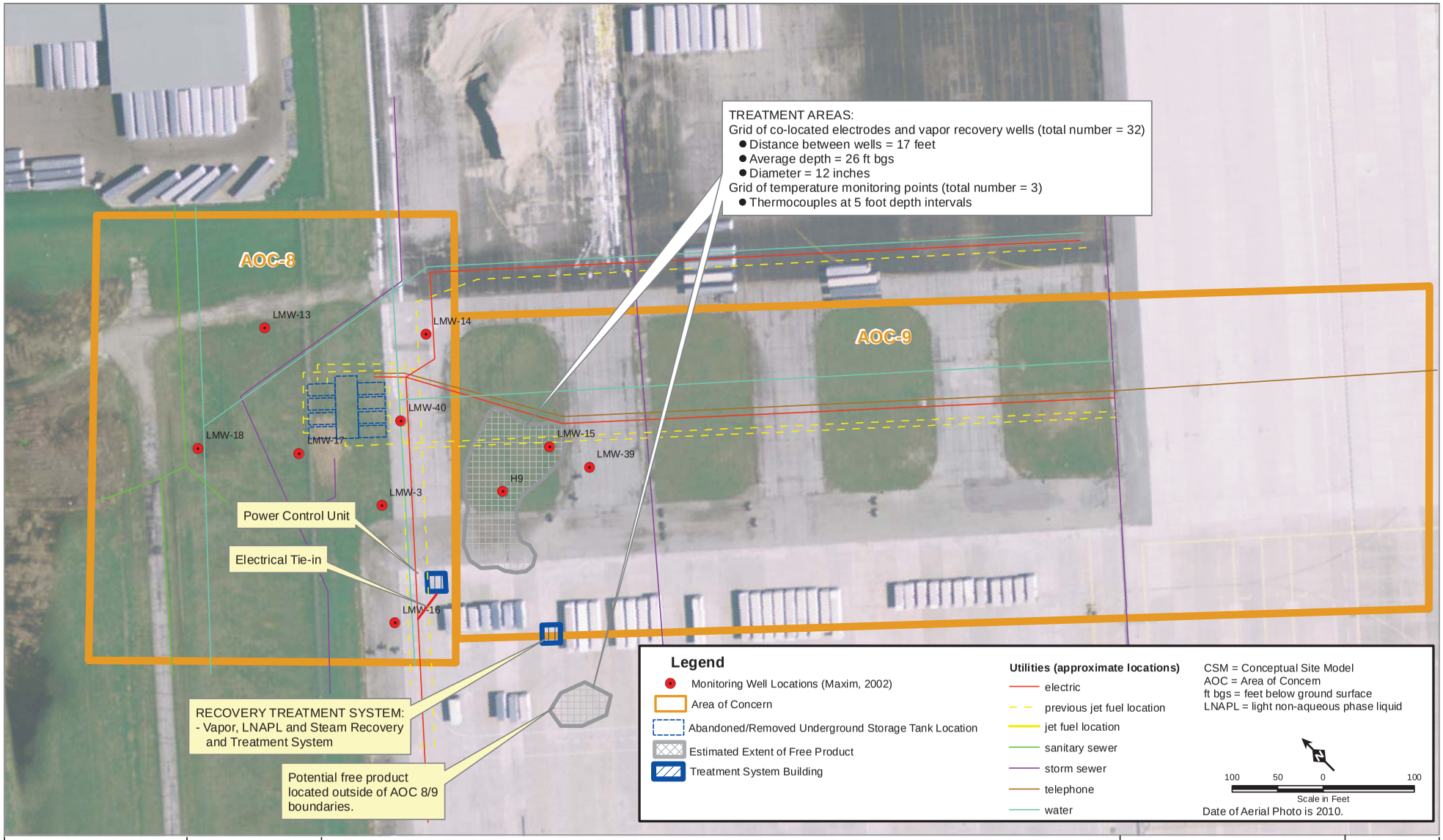
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Multi-Phase Extraction with Heating Cross Section AOC 8 & 9

Figure 26



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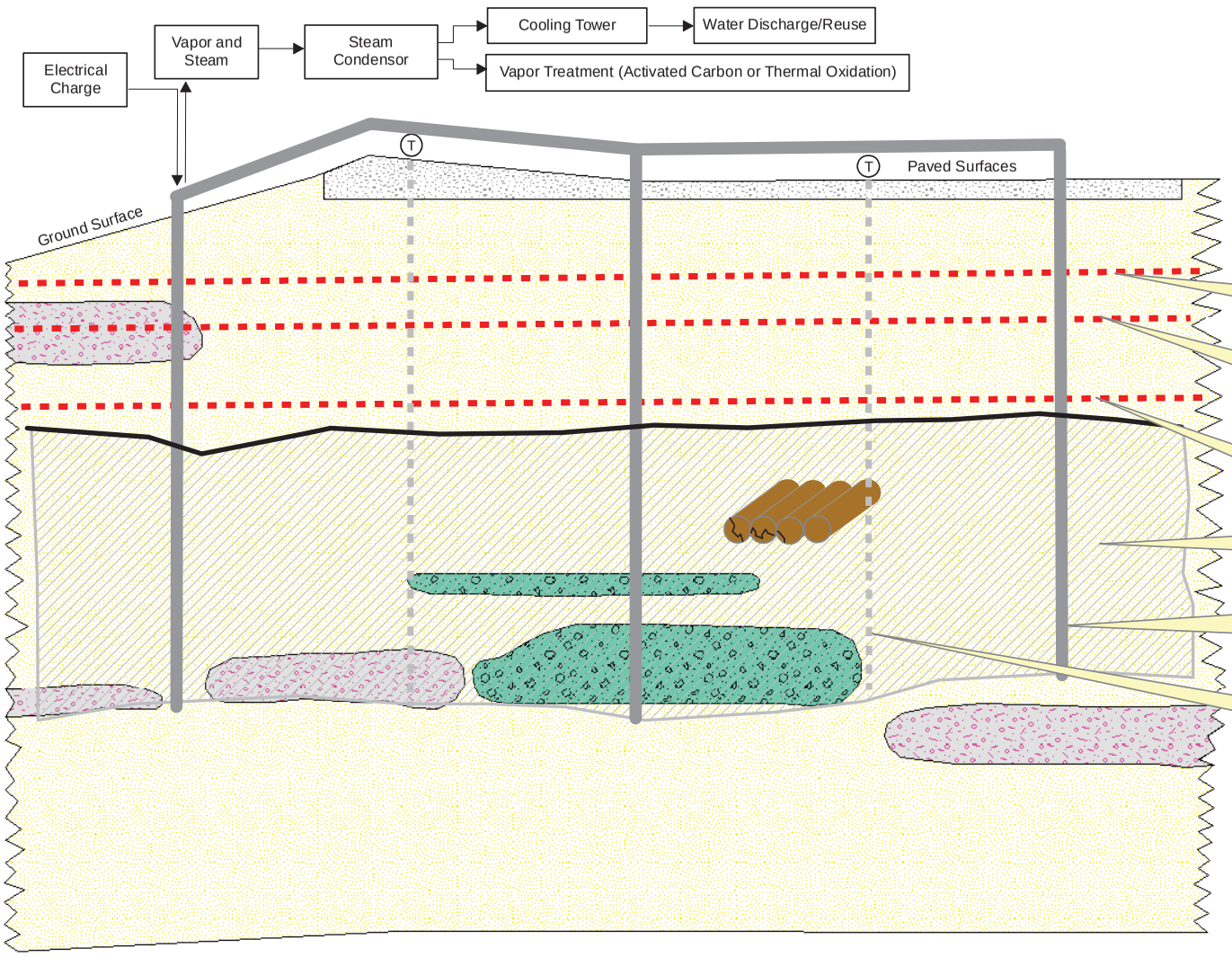
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Electrical Resistance Heating Planar View AOC 8 & 9

Figure 27



Legend

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T = Temperature monitoring point

Storm sewer system expected to be encountered on site from 1 to 5 ft bgs.

Water main, jet fuel and heating lines expected to be encountered on site from 4 to 6 ft bgs.

Sanitary sewer lines expected to be encountered on site from 8 to 10 ft bgs.

The top and bottom of the smear zone correspond to the upper and lower limits of the depth to groundwater.

Co-located electrodes and vapor recovery wells (total number = 32)
Distance between wells = 17 feet
Average depth = 26 ft bgs

Temperature monitoring points (total number = 3)
Thermocouples at 5 foot intervals

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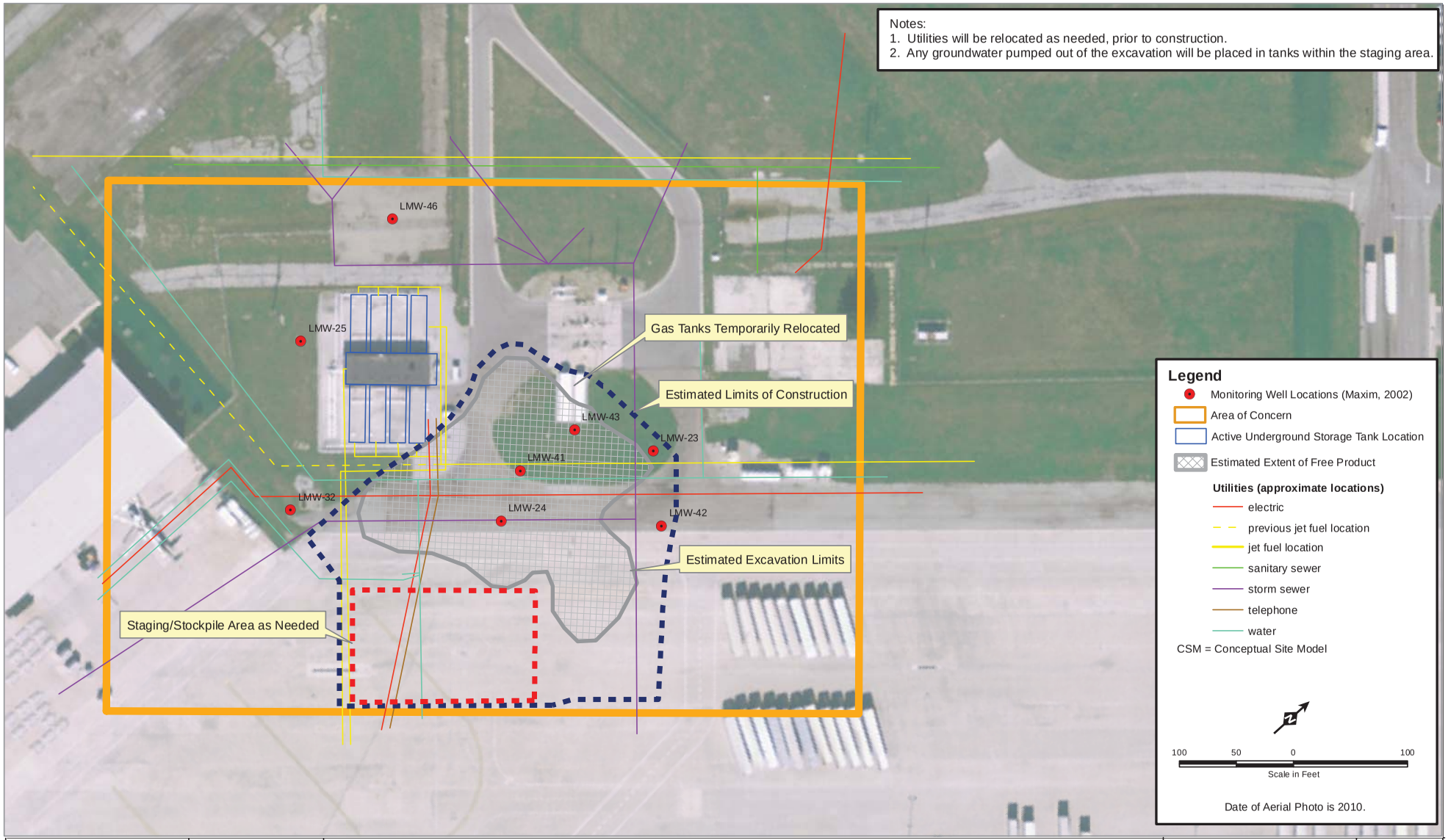
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Electrical Resistance Heating Cross Section AOC 8 & 9

Figure 28

Path: S:\AE\C\Celrb\116662\99_GIS\LAFB\28_Conceptual_Model_AOC8-9_1.mxd



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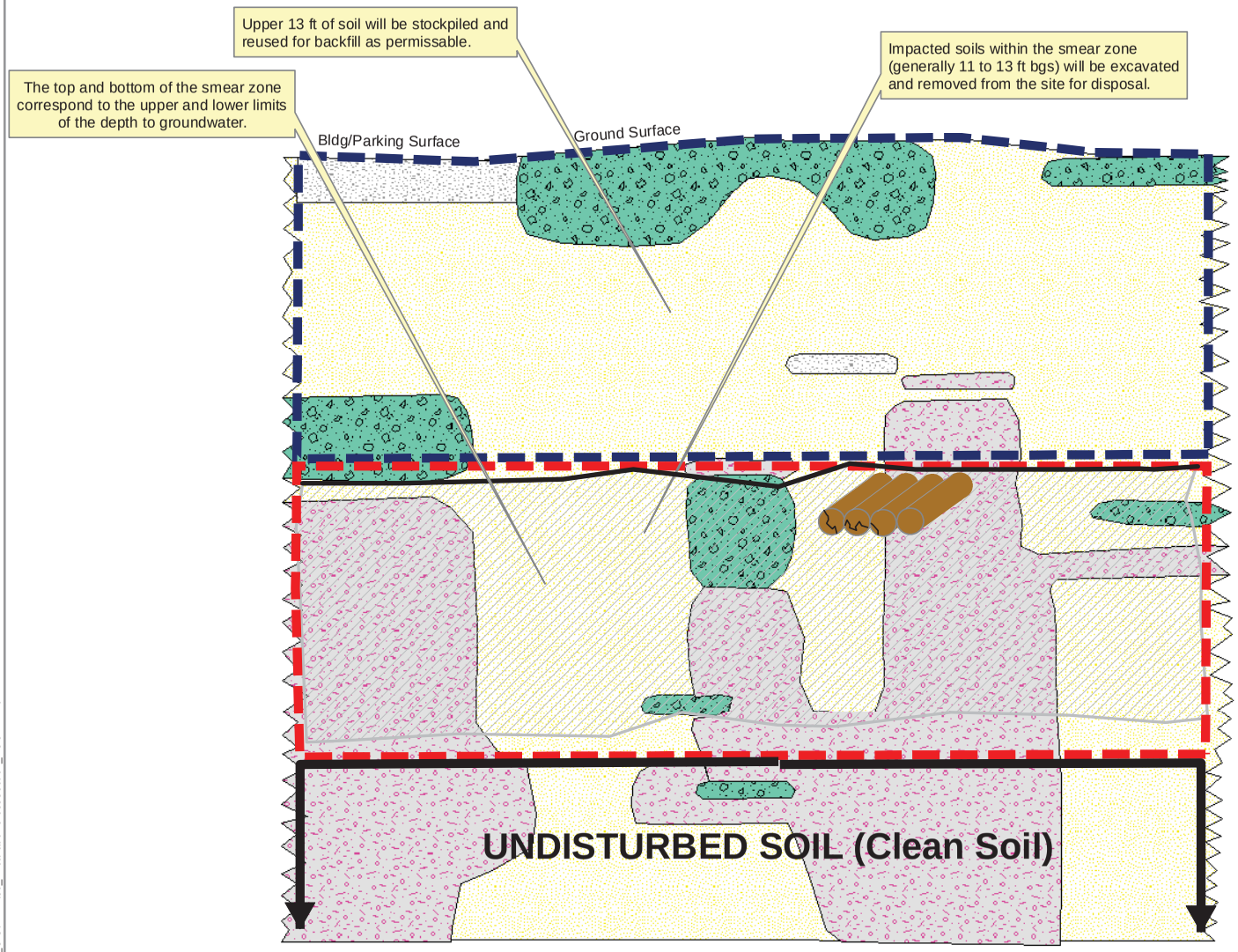
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Excavation Planar View AOC 11

Figure 29



Legend

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AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM Excavation Cross Section AOC 11

Figure 30

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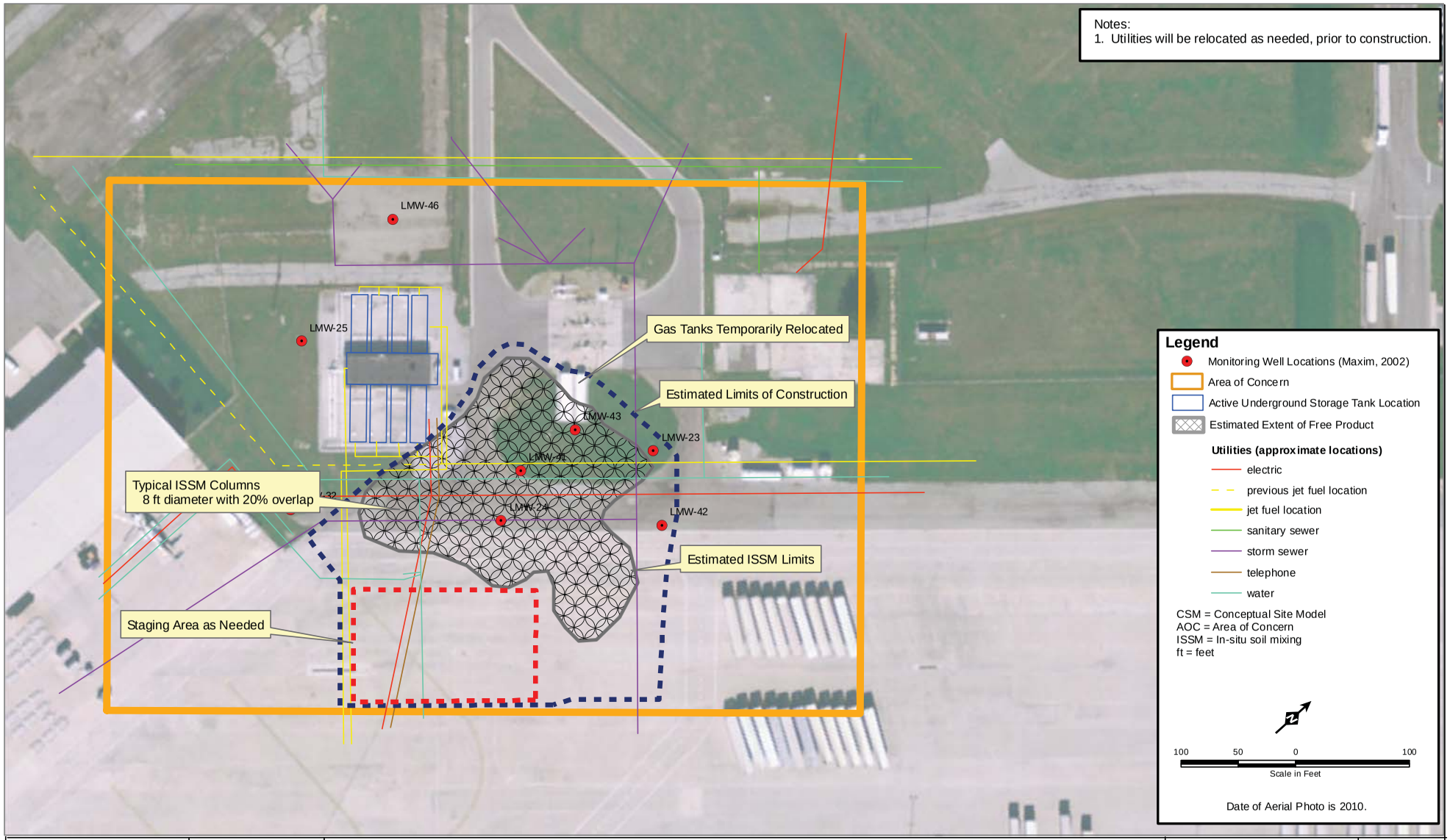

Map Document: (P:\AE\C\CERC\116662\Figures\LAFB\AOC11_Planar_View.mxd)

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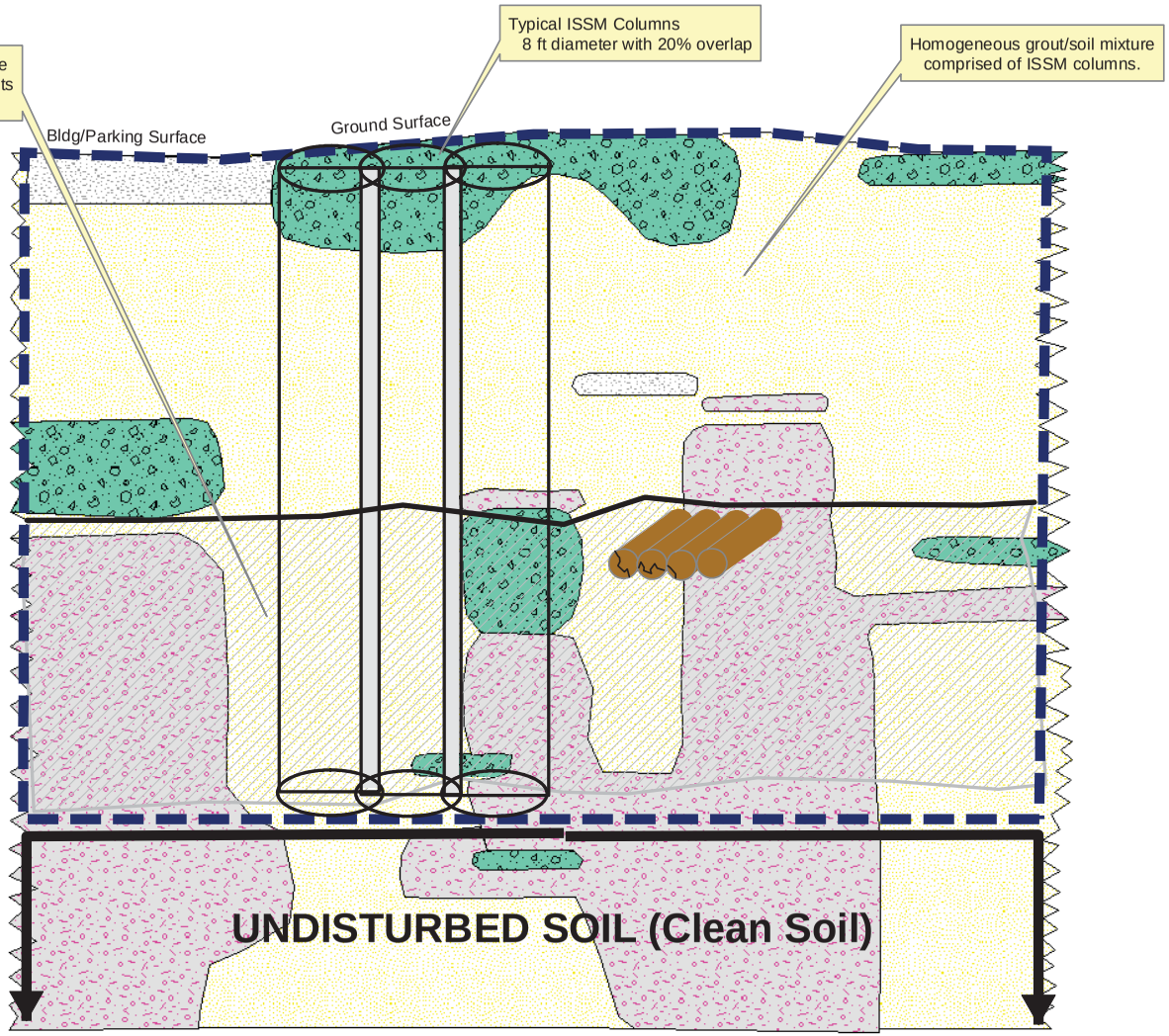
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
ISSM
Planar View
AOC 11

Figure
31



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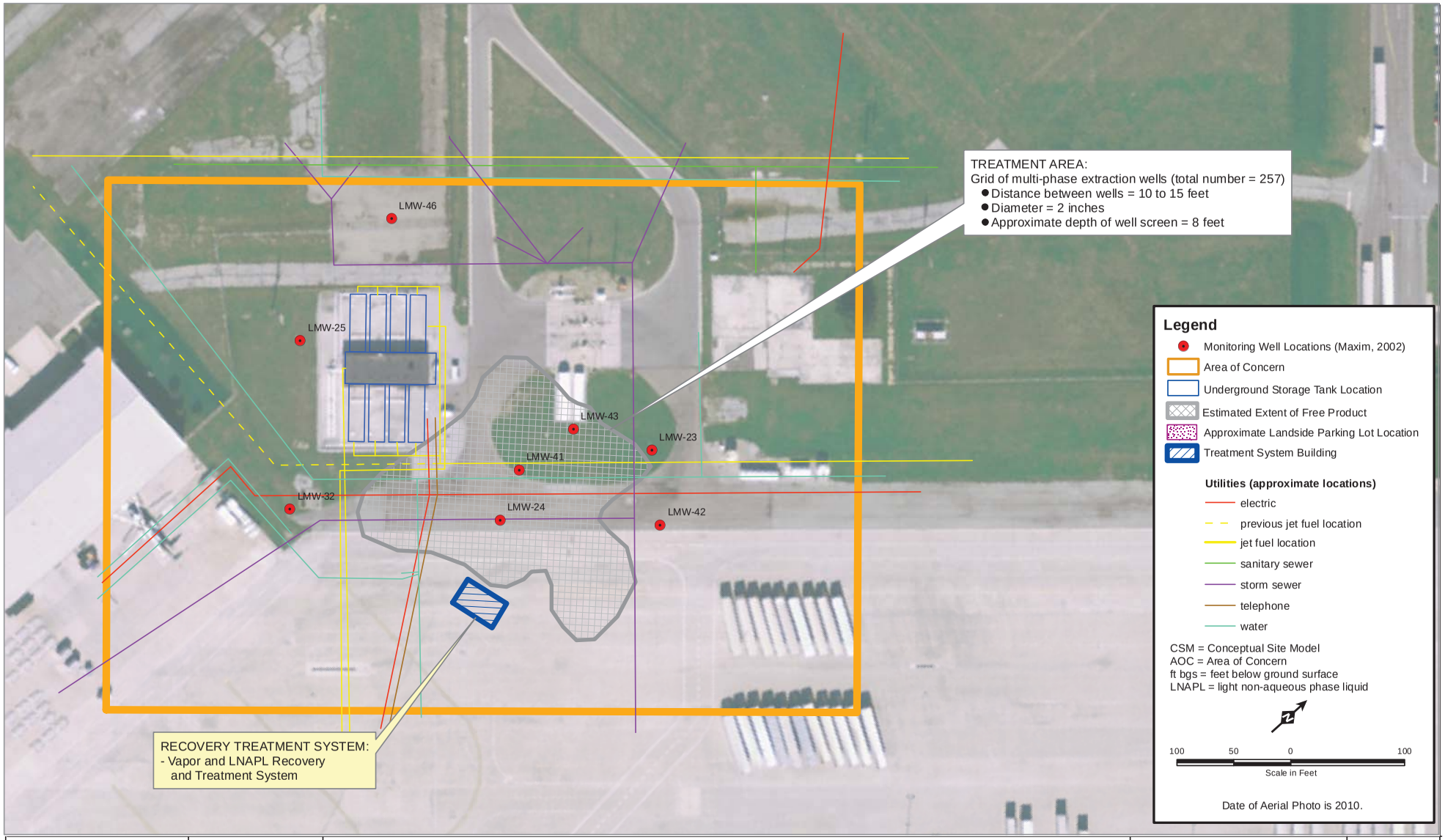
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM ISSM Cross Section AOC 11

Figure 32

Path: S:\AE\C\Celrb\116662\99_GIS\LAFB\32_ISSMCrossSection_AOC11.mxd



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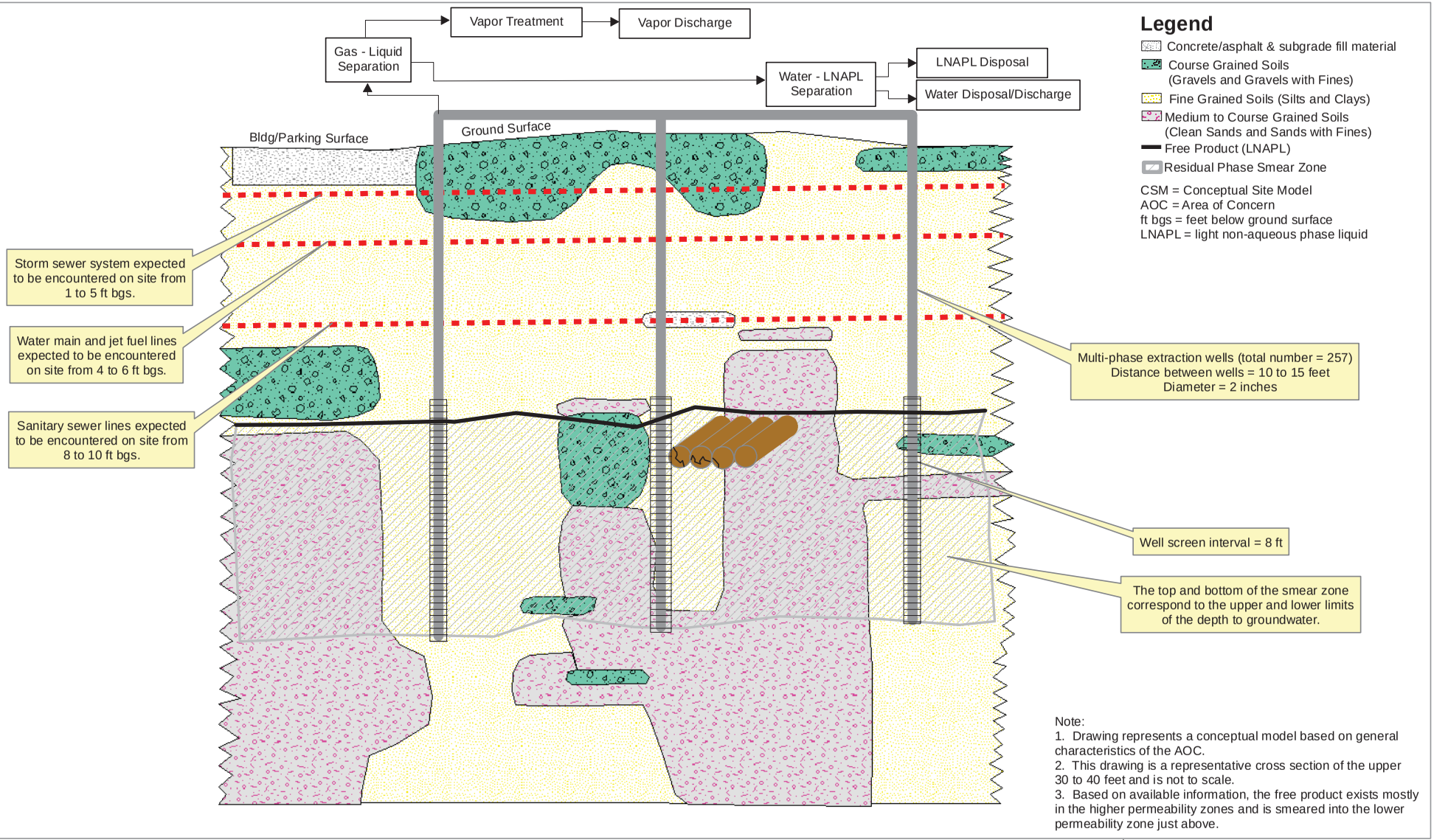
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
Multi-Phase Extraction
Planar View
AOC 11

Figure
33



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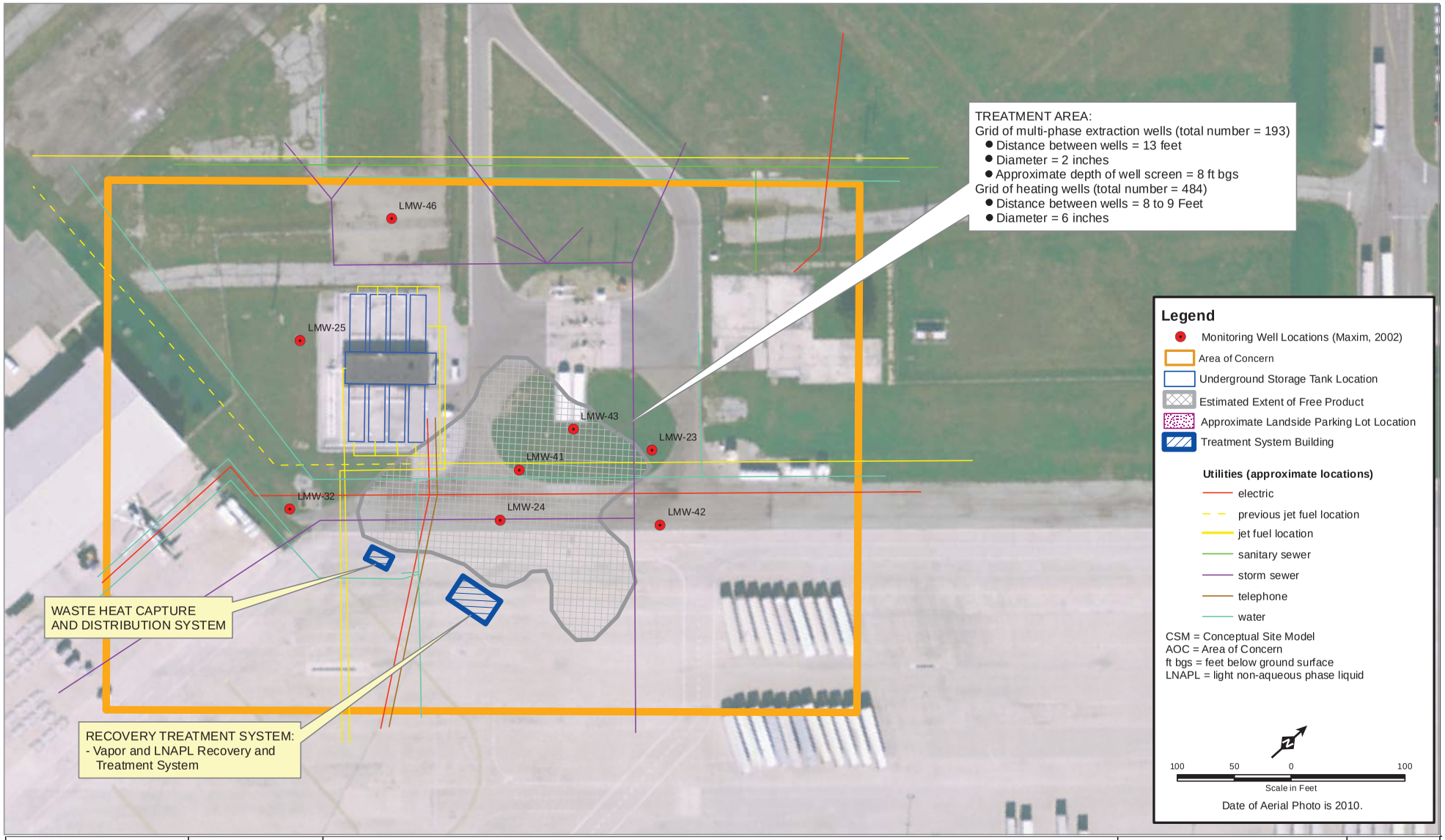
CSM
Multi-Phase Extraction
Cross Section
AOC 11

Figure
34

Path: S:\AE\C\Celrb\116662\99_GIS\LAFB\34_Conceptual_Model_AOC11.mxd



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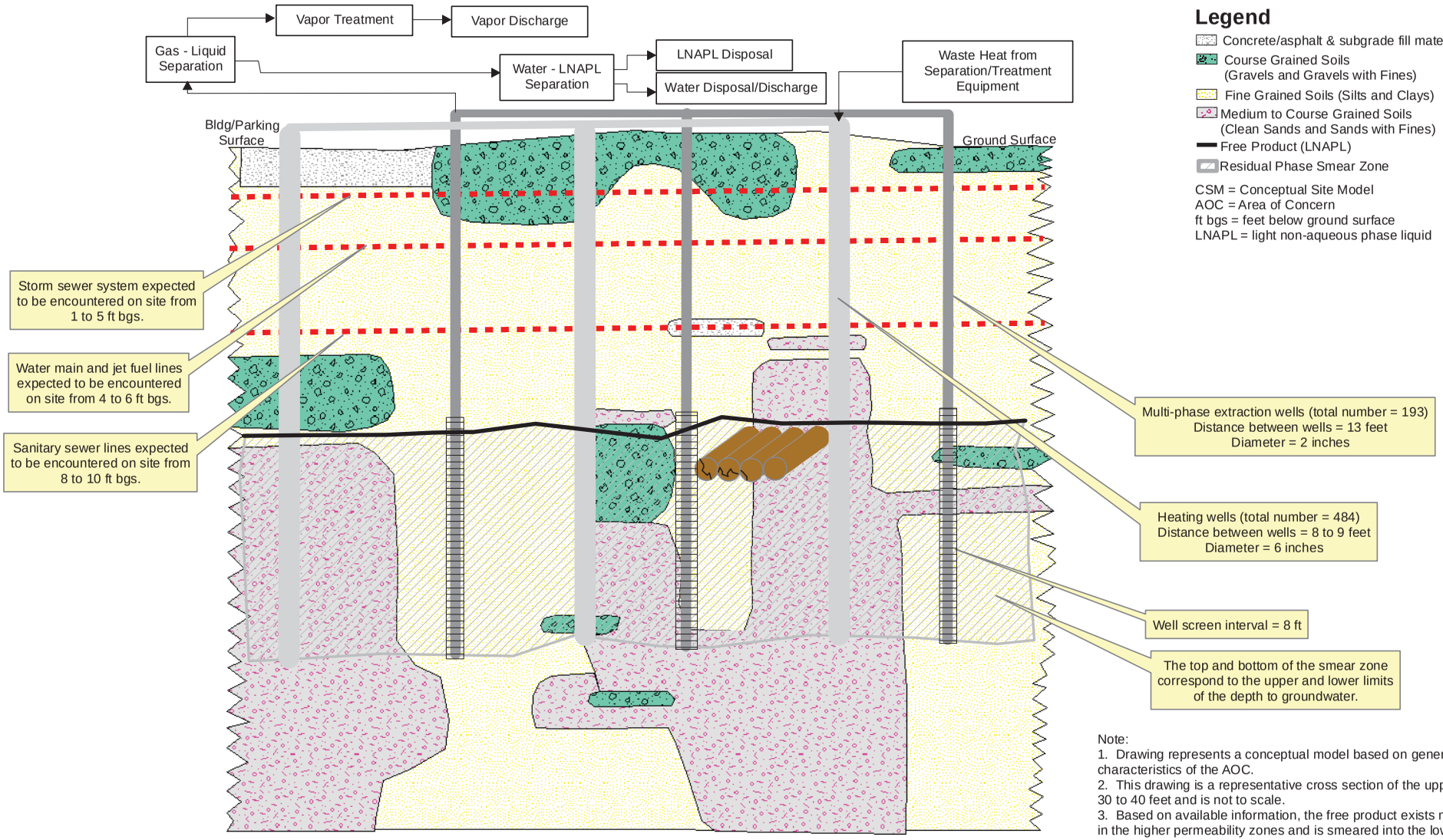
COLUMBUS, OHIO

CSM - Multi-Phase Extraction with Heating Planar View AOC 11

Figure 35



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AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM
Multi-Phase Extraction
Cross Section
AOC 11

Figure
36

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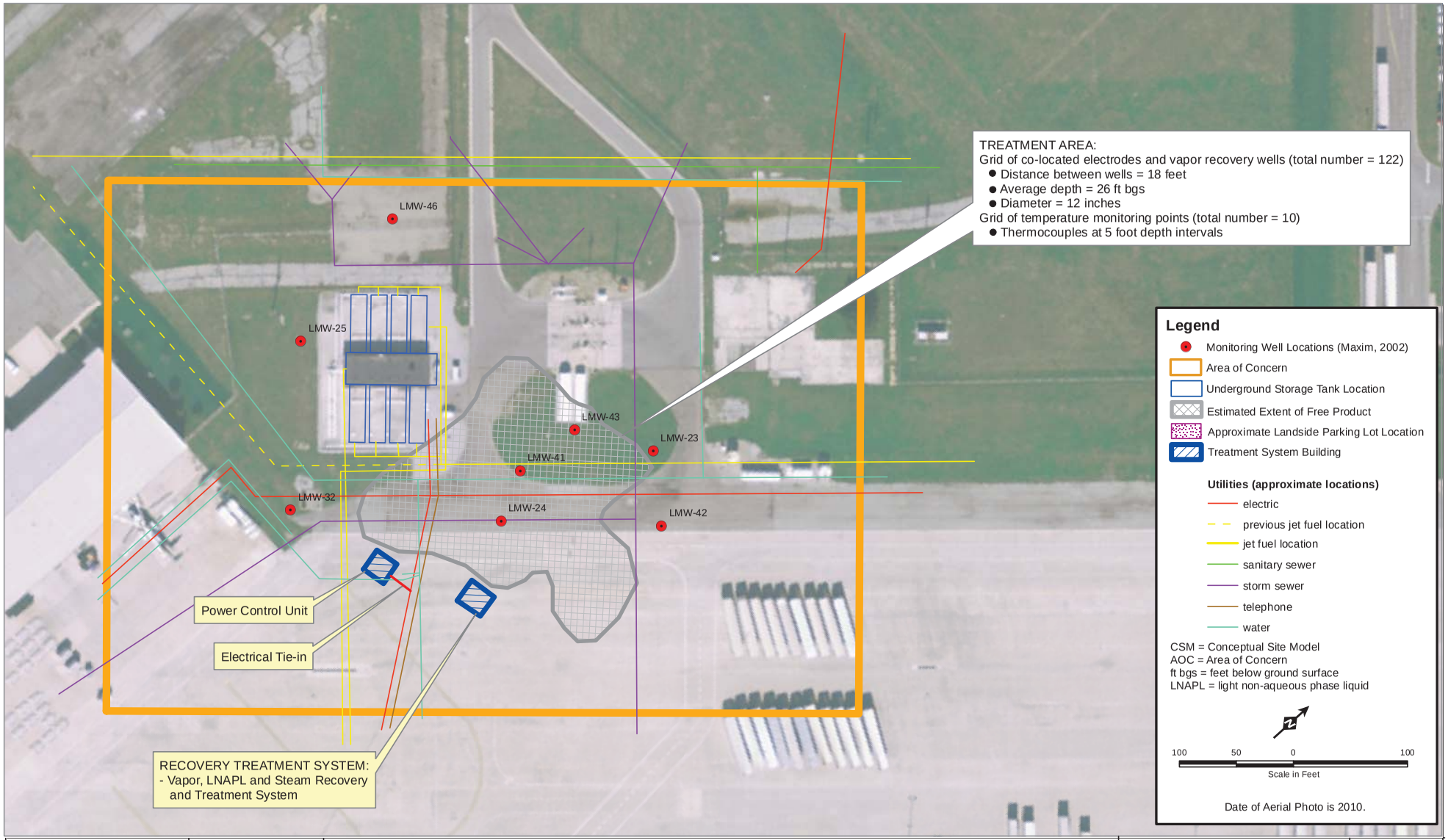

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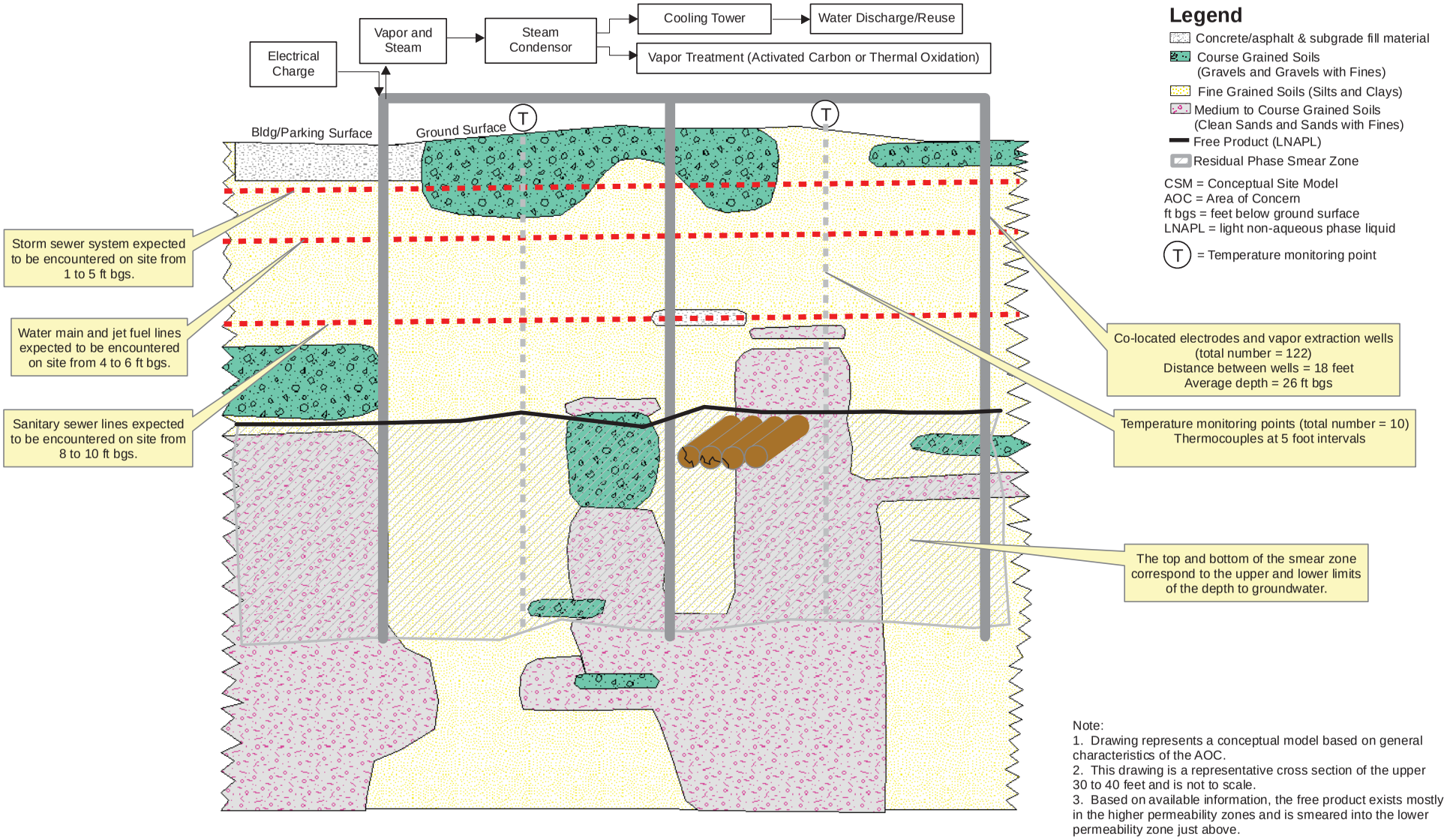
PROJECT: CELRL116662

DATE: 6/1/2012

REMEDIAL TECHNOLOGIES EVALUATION REPORT
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Electrical Resistance Heating Planar View AOC 11

Figure 37



Note:
1. Drawing represents a conceptual model based on general characteristics of the AOC.
2. This drawing is a representative cross section of the upper 30 to 40 feet and is not to scale.
3. Based on available information, the free product exists mostly in the higher permeability zones and is smeared into the lower permeability zone just above.

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REMEDIAL TECHNOLOGIES EVALUATION REPORT
PETROLEUM CONTAMINATION OF SOIL AND GROUNDWATER
AT FORMER UNDERGROUND STORAGE TANK FARMS
LOCKBOURNE AIR FORCE BASE
COLUMBUS, OHIO

CSM - Electrical Resistance Heating Cross Section AOC 11

Figure 38

Path: S:\AE\C\Celrb\116662099_GIS\LAFB\38_Conceptual_Model_AOC11.mxd

Appendix A

BUSTR Action Level Tables

Table 3.3- Delineation Levels

Chemicals of Concern	Ground Water (mg/L)	Soil (mg/kg)
Benzene	0.428	1.04
Toluene	15.5	61.3
Ethylbenzene	38.1	199
o, m and p-Xylenes	10	15.7
Methyl tertiary-butyl ether (MTBE)	1,240	1,240
Benzo(a)anthracene	66.7	11
Benzo(a)pyrene	12.7	1.1
Benzo(b)fluoranthene	6.72	11
Benzo(k)fluoranthene	2380	110
Chrysene	715	1,100
Dibenz(a,h)anthracene	35.3	1.1
Indeno(1,2,3 –c,d)pyrene	202	11
Naphthalene	2.22	54

NOTE: TPH must be delineated to the action levels in Table 3.8, TPH Action Levels.

3.9.2 Action Levels

Use the complete exposure pathways to determine the appropriate action level table(s). Use the data and information collected during the Tier 1 Investigation to determine the appropriate action level within each table. Refer to the tables listed in Section 3.9.3, Action Level Tables for the ALs specific to each applicable pathway listed below.

Drinking Water Scenario

If ground water is determined to be drinking water, then compare the highest concentration of each of the COCs in soil and ground water to the ALs for the following pathways:

- Direct Contact;
- Ground Water Ingestion;
- Ground Water to Outdoor Air;
- Ground Water to Indoor Air;
- Soil to Drinking Water Leaching;
- Soil to Indoor Air; and
- Soil to Outdoor Air.

In addition to the above-mentioned pathways, TPH concentrations must also be compared to the action levels in Table 3.8, TPH Action Levels.

Non-Drinking Water Scenario

If ground water is determined to be non-drinking water, then compare the highest concentration of each of the COCs in soil and ground water to the ALs for the following pathways:

- Ground Water to Indoor Air;
- Ground Water to Outdoor Air;
- Direct Contact;
- Soil to Indoor Air;
- Soil to Outdoor Air; and
- Soil to Non-Drinking Water Leaching.

In addition to the above-mentioned pathways, TPH concentrations must also be compared to the action levels in Table 3.8, TPH Action Levels.

No Ground Water Scenario

If no ground water has been encountered, then compare the highest concentration of each of the COCs in soil to the ALs in the following pathways:

- Direct Contact;
- Soil to Outdoor Air; and
- Soil to Indoor Air.

3.9.3 Action Level Tables

Table 3.4- Ground Water Ingestion Action Levels

Chemicals of Concern	Action Levels
Benzene	0.005
Toluene	1
Ethylbenzene	0.7
o, m and p-Xylenes	10
Methyl tertiary-butyl ether (MTBE)	0.04
Benzo(a)anthracene	0.00026
Benzo(a)pyrene	0.0002
Benzo(b)fluoranthene	0.00017
Benzo(k)fluoranthene	0.0017
Chrysene	.047
Dibenz(a,h)anthracene	0.0002
Indeno(1,2,3-c,d)pyrene	0.00022
Naphthalene	0.14

All chemical concentrations expressed in milligrams per liter (mg/L).

Tables 3.5- Ground Water to Indoor Air Action Levels

Soil Class 1

Chemicals of Concern	Ground Water to Indoor Air							
	<15 Feet		15-30 Feet		31-50 Feet		>50 Feet	
	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.
Benzene	4.28	26.80	4.28	26.80	4.34	27.20	4.42	27.70
Toluene	155.00	2,510.00	155.00	2,520.00	157.00	2,550.00	160.00	2,600.00
Ethylbenzene	381.00	6,180.00	381.00	6,180.00	387.00	6,270.00	393.00	6,380.00
o, m and p-Xylenes	41.30	670.00	41.30	671.00	41.90	681.00	42.70	692.00
MTBE*	12,400.00	200,000.00	12,400.00	201,000.00	12,600.00	204,000.00	12,800.00	208,000.00
Benzo(a)anthracene	667.00	4,170.00	668.00	4,180.00	683.00	4,270.00	701.00	4,390.00
Benzo(a)pyrene	127.00	794.00	127.00	796.00	132.00	825.00	137.00	860.00
Benzo(b)fluoranthene	67.20	421.00	67.30	421.00	68.40	428.00	69.60	436.00
Benzo(k)fluoranthene	23,800.00	149,000.00	23,900.00	149,000.00	25,000.00	156,000.00	26,300.00	164,000.00
Chrysene	7,150.00	44,700.00	7,160.00	44,800.00	7,270.00	45,500.00	7,410.00	46,400.00
Dibenz(a,h)anthracene	353.00	2,210.00	356.00	2,230.00	404.00	2,530.00	461.00	2,890.00
Indeno(1,2,3-c,d)pyrene	2,020.00	12,600.00	2,030.00	12,700.00	2,100.00	13,100.00	2,190.00	13,700.00
Naphthalene	22.20	359.00	22.20	360.00	22.50	365.00	22.90	372.00

All chemical concentrations expressed in milligrams per liter (mg/L).
*Methyl tertiary-butyl ether

Soil Class 2

Chemicals of Concern	Ground Water to Indoor Air							
	<15 Feet		15-30 Feet		31-50 Feet		>50 Feet	
	Residential	Non-Resid.	Residential	Non-Resid	Residential	Non-Resid	Residential	Non-Resid
Benzene	4.29	26.80	4.29	26.90	4.38	27.40	4.49	28.10
Toluene	155.00	2,520.00	155.00	2,520.00	159.00	2,570.00	162.00	2,640.00
Ethylbenzene	382.00	6,190.00	382.00	6,200.00	390.00	6,330.00	399.00	6,480.00
o, m and p-Xylenes	41.40	672.00	41.40	672.00	42.30	686.00	43.30	703.00
MTBE*	12,400.00	201,000.00	12,400.00	201,000.00	12,700.00	206,000.00	13,000.00	211,000.00
Benzo(a)anthracene	669.00	4,180.00	670.00	4,190.00	689.00	4,310.00	712.00	4,450.00
Benzo(a)pyrene	127.00	795.00	127.00	797.00	132.00	828.00	138.00	865.00
Benzo(b)fluoranthene	67.40	422.00	67.50	422.00	69.00	432.00	70.80	443.00
Benzo(k)fluoranthene	23,800.00	149,000.00	23,800.00	149,000.00	24,900.00	156,000.00	26,200.00	164,000.00
Chrysene	7,170.00	44,900.00	7,180.00	44,900.00	7,340.00	45,900.00	7,530.00	47,100.00
Dibenz(a,h)anthracene	344.00	2,150.00	346.00	2,160.00	369.00	2,310.00	397.00	2,490.00
Indeno(1,2,3-c,d)pyrene	2,020.00	12,700.00	2,030.00	12,700.00	2,110.00	13,200.00	2,200.00	13,800.00
Naphthalene	22.20	360.00	22.20	361.00	22.70	369.00	23.30	378.00

All chemical concentrations expressed in milligrams per liter (mg/L).
*Methyl tertiary-butyl ether

Soil Class 3

Chemicals of Concern	Ground Water to Indoor Air							
	<15 Feet		15-30 Feet		31-50 Feet		>50 Feet	
	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.
Benzene	4.39	27.50	4.42	27.60	4.80	30.10	5.26	32.90
Toluene	159.00	2,580.00	160.00	2,600.00	174.00	2,820.00	190.00	3,090.00
Ethylbenzene	391.00	6,350.00	393.00	6,380.00	427.00	6,930.00	468.00	7,590.00
o, m and p-Xylenes	42.40	688.00	42.70	692.00	46.40	752.00	50.80	824.00
MTBE**	12,700.00	206,000.00	12,800.00	207,000.00	13,900.00	226,000.00	15,300.00	249,000.00
Benzo(a)anthracene	669.00	4,190.00	670.00	4,190.00	690.00	4,320.00	714.00	4,470.00
Benzo(a)pyrene	126.00	789.00	126.00	790.00	129.00	804.00	131.00	822.00
Benzo(b)fluoranthene	68.90	431.00	69.30	433.00	74.90	469.00	81.70	511.00
Benzo(k)fluoranthene	23,500.00	147,000.00	23,600.00	147,000.00	23,900.00	150,000.00	24,400.00	153,000.00
Chrysene	7,330.00	45,800.00	7,360.00	46,100.00	7,960.00	49,800.00	8,660.00	54,200.00
Dibenz(a,h)anthracene	337.00	2,110.00	337.00	2,110.00	342.00	2,140.00	347.00	2,170.00
Indeno(1,2,3-c,d)pyrene	2,010.00	12,600.00	2,010.00	12,600.00	2,050.00	12,800.00	2,090.00	13,100.00
Naphthalene	22.80	370.00	22.90	372.00	25.00	406.00	27.50	446.00

All chemical concentrations expressed in milligrams per liter (mg/L).
*Methyl tertiary-butyl ether

Tables 3.6- Ground Water to Outdoor Air Action Levels

Soil Class 1

Chemicals of Concern	Ground Water to Outdoor Air		
	Residential	Non-Residential	Excavation Worker
Benzene	818.00	515.00	5,520.00
Toluene	32,500.00	53,100.00	68,800.00
Ethylbenzene	82,700.00	135,000.00	175,000.00
o, m, and p-Xylenes	8,560.00	14,000.00	18,100.00
Methyl tertiary-butyl ether (MTBE)	758,000.00	>1E^+6	>1E^+6
Benzo(a)anthracene	24,800.00	15,600.00	507,000.00
Benzo(a)pyrene	7,680.00	4,840.00	157,000.00
Benzo(b)fluoranthene	2,020.00	1,270.00	41,200.00
Benzo(k)fluoranthene	>1E^+6	>1E^+6	>1E^+6
Chrysene	212,000.00	133,000.00	>1E^+6
Dibenz(a,h)anthracene	78,400.00	49,400.00	>1E^+6
Indeno(1,2,3-c,d)pyrene	123,000.00	77,200.00	>1E^+6
Naphthalene	1,200.00	1,970.00	2,550.00

All chemical concentrations expressed in milligrams per liter (mg/L).

Soil Class 2

Chemicals of Concern	Ground Water to Outdoor Air		
	Residential	Non-Residential	Excavation Worker
Benzene	860.00	541.00	5,800.00
Toluene	34,000.00	55,600.00	72,000.00
Ethylbenzene	86,300.00	141,000.00	183,000.00
o, m and p-Xylenes	8,960.00	14,600.00	18,900.00
Methyl tertiary-butyl ether (MTBE)	885,000.00	>1E^+6	>1E^+6
Benzo(a)anthracene	31,600.00	19,900.00	645,000.00
Benzo(a)pyrene	8,200.00	5,170.00	167,000.00
Benzo(b)fluoranthene	2,720.00	1,710.00	55,500.00
Benzo(k)fluoranthene	>1E^+6	>1E^+6	>1E^+6
Chrysene	286,000.00	180,000.00	>1E^+6
Dibenz(a,h)anthracene	38,700.00	24,400.00	789,000.00
Indeno(1,2,3-c,d)pyrene	131,000.00	82,400.00	>1E^+6
Naphthalene	1,430.00	2,340.00	3,030.00

All chemical concentrations expressed in milligrams per liter (mg/L).

Soil Class 3

Chemicals of Concern	Ground Water to Outdoor Air		
	Residential	Non-Residential	Excavation Worker
Benzene	1,350.00	848.00	9,080.00
Toluene	51,500.00	84,100.00	109,000.00
Ethylbenzene	129,000.00	211,000.00	273,000.00
o, m, and p-Xylenes	13,600.00	22,200.00	28,800.00
Methyl tertiary-butyl ether (MTBE)	>1E^+6	>1E^+6	>1E^+6
Benzo(a)anthracene	33,000.00	20,800.00	673,000.00
Benzo(a)pyrene	3,870.00	2,440.00	78,900.00
Benzo(b)fluoranthene	9,560.00	6,020.00	195,000.00
Benzo(k)fluoranthene	642,000.00*	405,000.00*	>1E^+6
Chrysene	991,000.00	625,000.00	>1E^+6
Dibenz(a,h)anthracene	7,210.00	4,540.00	147,000.00
Indeno(1,2,3-c,d)pyrene	61,500.00	38,700.00	>1E^+6
Naphthalene	4,030.00	6,590.00	8,540.00

All chemical concentrations expressed in milligrams per liter (mg/L).
*Concentration listed in OAC 1301:7-9-13(J)(3) were incorrectly calculated. The concentrations listed in the above table should be utilized.

Table 3.7- Direct Contact Action Levels

Chemicals Of Concern	Direct Contact		
	Residential	Non-Residential	Excavation Worker
Benzene	9.8	100	310
Toluene	590	5,900	24,000
Ethylbenzene	1,500	17,000	160,000
o, m and p-Xylenes	660	6400	7,000
Methyl tertiary-butyl ether (MTBE)	5,300	57,000	57,000
Benzo(a)anthracene	11	63	810
Benzo(a)pyrene	1.1	6.3	81
Benzo(b)fluoranthene	11	63	810
Benzo(k)fluoranthene	110	630	8,100
Chrysene	1,100	6,700	41,000
Dibenz(a,h)anthracene	1.1	6.7	41
Indeno(1,2,3-c,d)pyrene	11	67	410
Naphthalene	54	530	1,900

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

Table 3.8- TPH Action Levels

Petroleum Fraction	Soil Class 1	Soil Class 2	Soil Class 3
Light Distillate Fraction (C6-C12)	1,000	5,000	8,000
Middle Distillate Fraction (C10-20)	2,000	10,000	20,000
Heavy Distillate Fraction (C20-C34)	5,000	20,000	40,000

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

Table 3.9- Soil to Indoor Air, Drinking Water Leaching and Non-Drinking Water Leaching

Soil Class 1

Chemicals of Concern	Soil to Indoor Air		Soil to Outdoor Air			Soil to Drinking Water Leaching	Soil to Non-Drinking Water Leaching
	Residential	Non-Residential	Residential	Non-Residential	Excavation		
Benzene	1.04	6.50	32.70	20.60	221.00	0.149	12.80
Toluene	61.30	994.00	1,930.00	3,150.00	4,090.00	49.10	760.00
Ethylbenzene	199.00	3,230.00	6,280.00	10,300.00	13,300.00	45.50	2,480.00
o, m and p-Xylenes	15.70	254.00	494.00	806.00	1,040.00	469.00	194.00
Methyl tertiary-butyl ether (MTBE)	1,240.00	20,200.00	39,300.00	64,200.00	83,100.00	0.470	14,600.00
Benzo(a)anthracene	476,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	22.20	>1E^+6
Benzo(a)pyrene	245,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	50.60	>1E^+6
Benzo(b)fluoranthene	165,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	55.30	>1E^+6
Benzo(k)fluoranthene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	501.00	>1E^+6
Chrysene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	4,410.00*	>1E^+6
Dibenz(a,h)anthracene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	94.00*	>1E^+6
Indeno(1,2,3-c,d)pyrene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	244.00	>1E^+6
Naphthalene	54.00	877.00	1,710.00	2,790.00	3,610.00	39.80	632.00

All chemical concentrations expressed in milligrams per kilogram (mg/kg).
*Concentration listed in OAC 1301:7-9-13(J)(3) were incorrectly calculated. The concentrations listed in the above table should be utilized.

Soil Class 2

Chemical of Concern	Soil to Indoor Air		Soil to Outdoor Air			Soil to Drinking Water Leaching	Soil to Non-Drinking Water Leaching
	Residential	Non-Residential	Residential	Non-Residential	Excavation		
Benzene	1.15	7.22	51.00	32.10	344.00	0.252	21.60
Toluene	70.80	1,150.00	3,130.00	5,110.00	6,610.00	105.00	1,630.00
Ethylbenzene	233.00	3,780.00	10,300.00	16,800.00	21,800.00	83.00	4,530.00
o, m and p-Xylenes	18.00	291.00	793.00	1,300.00	1,680.00	825.00	342.00
Methyl tertiary-butyl ether (MTBE)	1,370.00	22,200.00	60,500.00	98,900.00	128,000.00	0.788	24,400.00
Benzo(a)anthracene	596,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	18,600.00	>1E^+6
Benzo(a)pyrene	306,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Benzo(b)fluoranthene	206,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Benzo(k)fluoranthene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	738,000.00	>1E^+6
Chrysene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	451,000.00*	>1E^+6
Dibenz(a,h)anthracene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Indeno(1,2,3-c,d)pyrene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Naphthalene	67.30	1,090.00	2,980.00	4,860.00	6,300.00	84.20	1,340.00

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

*Concentration listed in OAC 1301:7-9-13(J)(3) were incorrectly calculated. The concentrations listed in the above table should be utilized.

Soil Class 3

Chemical of Concern	Soil to Indoor Air		Soil to Outdoor Air			Soil to Drinking Water Leaching	Soil to Non-Drinking Water Leaching
	Residential	Non-Residential	Residential	Non-Residential	Excavation		
Benzene	1.42	8.86	267.00	168.00	1,800.00	0.937	82.30
Toluene	86.00	1,400.00	16,200.00	26,500.00	34,300.00	479.00	7,610.00*
Ethylbenzene	282.00	4,570.00	53,100.00	86,800.00	112,000.00	313.00	17,500.00
o, m and p-Xylenes	21.70	353.00	4,100.00	6,700.00	8,670.00	3,060.00	1,300.00
Methyl tertiary-butyl ether (MTBE)	1,970.00	32,000.000	368,000.00	601,000.00	778,000.00	3.440	109,000.00
Benzo(a)anthracene	716,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Benzo(a)pyrene	366,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Benzo(b)fluoranthene	251,000.00	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Benzo(k)fluoranthene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Chrysene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Dibenz(a,h)anthracene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Indeno (1,2,3-c,d)pyrene	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6	>1E^+6
Naphthalene	82.80	1,340.00	15,400.00	25,100.00	32,500.00	362.00	5,890.00

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

*Concentration listed in OAC 1301:7-9-13(J)(3) were incorrectly calculated. The concentrations listed in the above table should be utilized.

Appendix B

Tables and Figures from the MNA Assessment

TABLE 4-2
WATER LEVELS AND GROUNDWATER ELEVATIONS
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

Well ID	Top of Casing Elevation (feet above MSL)	Depth to Water (feet BTOC)				Water Level Elevation (feet Above MSL)			
		Round 1	Round 2	Round 3	Round 4	Round 1	Round 2	Round 3	Round 4
AOC 3									
LMW-04 (W)	738.92	16.70	16.52	16.52	14.08	722.22 (722.31)	722.40 (722.41)	722.40 (722.42)	724.84 (724.97)
LMW-04 (FP)	738.92	16.59	16.51	16.50	13.92	722.33	722.41	722.42	725.00
LMW-07	738.7	13.70	14.35	13.72	10.86	725.00	724.35	724.98	727.84
LMW-08	740.16	15.31	15.90	14.60	12.31	724.85	724.26	725.56	727.85
LMW-09 (W)	739.29	16.37	16.17	15.23	13.55	722.92 (723.07)	723.12 (723.14)	724.06 (724.63)	725.74 (725.85)
LMW-09 (FP)	739.29	16.18	16.15	15.11	13.41	723.11	723.14	724.18	725.88
LMW-10	738.33	14.85	15.59	15.08	12.23	723.48	722.74	723.25	726.10
LMW-11	736.44	12.27	13.33	12.57	8.94	724.17	723.11	723.87	727.50
LMW-12	734.21	9.10	9.48	8.50	5.83	725.11	724.73	725.71	728.38
LMW-33	741.93	16.31	17.17	16.35	12.56	725.62	724.76	725.58	729.37
LMW-34	740.56	13.95	14.77	12.80	5.66	726.61	725.79	727.76	734.90
LMW-35	738.02	14.41	14.91	14.78	11.81	723.61	723.11	723.24	726.21
LMW-36	740.68	15.65	16.30	14.82	11.50	725.03	724.38	725.86	729.18
LMW-37	739.85	14.93	15.67	14.77	11.85	724.92	724.18	725.08	728.00
LMW-38[1]	738.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TB-01 (W)	738.79	N/A	N/A	15.62	13.44	N/A	N/A	723.17 (723.19)	725.35 (725.59)
TB-01 (FP)	738.79	N/A	N/A	15.61	13.14	N/A	N/A	723.18	725.65
TB-02	738.63	N/A	N/A	15.55	13.45	N/A	N/A	723.08	725.18
AOC 8/9									
LMW-03	745.14	10.64	12.45	10.35	7.48	734.50	732.69	734.79	737.66
LMW-13	742.19	11.71	12.61	11.05	9.83	730.48	729.58	731.14	732.36
LMW-14	743.60	12.95	13.61	12.03	9.67	730.65	729.99	731.57	733.93
LMW-15	741.80	7.87	11.60	5.63	5.58	733.93	730.20	736.17	736.22
LMW-16	739.97	9.02	10.63	7.85	5.81	730.95	729.34	732.12	734.16
LMW-17	741.70	9.88	11.18	7.93	6.10	731.82	730.52	733.77	735.60
LMW-18	739.78	6.30	7.82	2.20	2.40	733.48	731.96	737.58	737.38
LMW-39	741.41	3.95	8.55	4.42	1.04	737.46	732.86	736.99	740.37
LMW-40	744.66	6.98	7.43	6.55	3.75	737.68	737.23	738.11	740.91
LMW-H9 (W)	742.40	N/A	N/A	11.21	16.97	N/A	N/A	731.19 (731.25)	725.43 (725.61)
LMW-H9 (FP)	742.40	N/A	N/A	11.13	16.75	N/A	N/A	731.27	725.65

TABLE 4-2
WATER LEVELS AND GROUNDWATER ELEVATIONS
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

Well ID	Top of Casing Elevation (feet above MSL)	Depth to Water (feet BTOC)				Water Level Elevation (feet Above MSL)			
		Round 1	Round 2	Round 3	Round 4	Round 1	Round 2	Round 3	Round 4
AOC 11									
LMW-23	739.62	8.92	9.03	8.58	7.33	730.70	730.59	731.04	732.29
LMW-24	739.00	12.48	13.38	12.84	11.61	726.52	725.62	726.16	727.39
LMW-25	739.06	10.74	10.84	10.45	9.05	728.32	728.22	728.61	730.01
LMW-32	738.17	10.00	9.71	9.49	8.34	728.17	728.46	728.68	729.83
LMW-41 (W)	739.61	14.47	13.79	14.66	13.95	725.14 (725.20)	725.82 (725.89)	724.95 (725.11)	725.66
LMW-41 (FP)	739.61	14.40	13.70	14.46	N/A	725.21	725.91	725.15	N/A
LMW-42	739.42	13.64	13.70	13.42	13.43	725.78	725.72	726.00	725.99
LMW-43 (W)	739.77	13.89	15.11	15.49	14.55	725.88	724.66 (724.78)	724.28 (724.30)	725.22
LMW-43 (FP)	739.77	N/A	15.00	15.46	N/A	N/A	724.77	724.31	N/A
LMW-46	740.15	11.53	11.96	10.98	9.66	728.62	728.19	729.17	730.49

	Round 1	Round 2	Round 3	Round 4
LMW-04 Free Product Thickness (feet)	0.11	0.01	0.02	0.16
LMW-09 Free Product Thickness (feet)	0.19	0.02	0.12	0.14
LMW-41 Free Product Thickness (feet)	0.07	0.09	0.20	N/A
LMW-43 Free Product Thickness (feet)	N/A	0.11	0.03	N/A
TB-01 Free Product Thickness (feet)	N/A	N/A	0.01	0.30
LMW-H9 Free Product Thickness (feet)	N/A	N/A	0.08	0.22

Notes:

Sampling Dates:

Round 1 - mid-July 2009.

Round 2 - mid-October 2009.

Round 3 - mid-January 2010.

Round 4 - early-April 2010

[1] - Well is dry.

Elevations are in National Geodetic Vertical Datum of 1929 (NGVD29) in feet above Mean Sea Level.

(FP) = Free Product Level

(W) = Water Level

(725.89) = Water Level corrected for the presence of free product.

bgs = below ground surface

BTOC = Below Top-of-Casing

ID = Identification

MSL = Mean Sea Level

N/A = Not applicable

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW04-09A			AOC3-MW04-09B			AOC3-MW04-10A			AOC3-MW04-10B		
DATE COLLECTED					July 20, 2009			October 9, 2009			January 22, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	0.35	0.01		0.4	0.02		0.3	0.01		0.6	0.01	J
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	0.028	0.001		0.02	0.001		0.02	0.01		0.036	0.01	J
Benzene	26.8	515	0.5	22/52	0.048	0.001		0.03	0.001		0.04	0.01		0.097	0.01	
Ethylbenzene	6,180	53,100	0.54	21/52	0.01	0.001		0.002	0.001		0.003	0.01	J	0.035	0.01	J
m,p-Xylenes	670	14,000	1.8	23/52	0.051	0.001		0.01	0.001		0.02	0.01		0.061	0.01	J
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.19 J	21/52	0.038	0.001		0.02	0.001		0.03	0.01		0.11	0.01	J
o-Xylene	670	14,000	0.01	7/52	0.00053	0.001	J	0.0005	0.001	J	<	0.01	U	<	0.01	U
Toluene	2,510	53,100	0.0005 J	11/52	0.00023	0.001	J	<	0.001	U	<	0.01	U	<	0.01	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	0.023	0.01	J	0.06	0.01		0.06	0.01	J	0.86	1.25	J
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	0.026	0.01	J	0.07	0.01		0.05	0.01	J	1.1	1.25	J
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	0.007	0.01	J	0.004	0.01	J	<	1.25	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	1.25	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	0.005	0.01	J	0.003	0.01	J	<	1.25	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	0.003	0.01	J	<	0.01	U	<	1.25	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	0.004	0.01	J	0.003	0.01	J	<	1.25	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	1.25	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	1.25	U
Naphthalene	359	1,970	1.1 J	16/51	0.01	0.01	J	0.03	0.01		0.03	0.01	J	1.1	1.25	J
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	498	2		478	2		491	2		513	2	
Methane	N/A	N/A	23	49/52	13	0.017		6.3	0.0085		9.5	0.017		23	0.0425	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	173	52/52	0.8	1	J	0.7	1	J	0.81	1	J	1	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	13.65		S	11.29		S	11.09		S	>16.5		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-41.9		S	-72.2		S	-65.2		S	-69.2		S
pH	N/A	N/A	7.6	52/52	6.53		S	6.86		S	6.62		S	6.67		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.709		S	0.913		S	0.714		S	0.833		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.33		S	0.77		S	1.34		S	0.28		S
Turbidity	N/A	N/A	63.8	52/52	11.3		S	32.6		S	10.1		S	22.3		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential
AOC = Area Of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW07-09A			AOC3-MW07-09B			AOC3-MW07-10A			AOC3-MW07-10B		
DATE COLLECTED					July 19, 2009			October 7, 2009			January 21, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.5	22/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	1.8	23/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	0.0002	0.001	J	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	513	2		525	2		532	2		529	2	
Methane	N/A	N/A	23	49/52	0.0022	0.0017		<	0.0017	U	0.011	0.0017		0.012	0.0017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	0.79	0.3	
Sulfate	N/A	N/A	173	52/52	44	1		46.8	5		50.7	2		49.2	2	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	0.21		S	0.32		S	0.22		S	1.2		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	41.9		S	16.7		S	51.7		S	77.6		S
pH	N/A	N/A	7.6	52/52	6.64		S	7.13		S	6.49		S	6.70		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.839		S	1.000		S	0.792		S	0.951		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.68		S	0.24		S	0.50		S	0.67		S
Turbidity	N/A	N/A	63.8	52/52	6.4		S	30.2		S	6.3		S	5.7		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential
AOC = Area Of Concern
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N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW08-09A			AOC3-MW08-09B			AOC3-MW08-10A			AOC3-MW08-10B		
DATE COLLECTED					July 20, 2009			October 8, 2009			January 22, 2010			April 6, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	0.0021	0.001		0.002	0.001		0.0009	0.001	J	0.0014	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	0.00087	0.001	J	0.0006	0.001	J	0.0002	0.001	J	0.00027	0.001	J
Benzene	26.8	515	0.5	22/52	0.012	0.001		0.002	0.001		0.003	0.001		0.016	0.001	
Ethylbenzene	6,180	53,100	0.54	21/52	0.00033	0.001	J	0.0003	0.001	J	<	0.001	U	0.00036	0.001	J
m,p-Xylenes	670	14,000	1.8	23/52	0.0004	0.001	J	0.001	0.001		0.0003	0.001	J	0.00057	0.001	J
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	0.0012	0.001		0.002	0.001		0.0006	0.001	J	0.0009	0.001	J
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	0.00033	0.001	J	0.0002	0.001	J	0.0002	0.001	J	0.00047	0.001	J
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	394	2		376	2		281	2		370	2	
Methane	N/A	N/A	23	49/52	21	0.017		4.8	0.0085		5.7	0.017		15	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	173	52/52	1.2	1		57.6	2		69.2	2		18.1	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	10.4		S	12.76		S	10.57		S	2.62		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-54.3		S	-238.8		S	-167.9		S	-174.0		S
pH	N/A	N/A	7.6	52/52	6.66		S	7.31		S	6.95		S	6.94		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.604		S	0.968		S	0.510		S	0.472		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.46		S	0.28		S	0.68		S	0.81		S
Turbidity	N/A	N/A	63.8	52/52	19.1		S	63.8		S	5.2		S	13.9		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential
AOC = Area Of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW09-09A			AOC3-MW09-09B			AOC3-MW09-10A			AOC3-MW09-10B		
DATE COLLECTED					July 20, 2009			October 9, 2009			January 22, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	0.22	0.02		0.3	0.05		0.2	0.01		0.23	0.01	
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	0.087	0.001		0.1	0.001		0.09	0.01		0.1	0.01	
Benzene	26.8	515	0.5	22/52	0.4	0.02		0.5	0.05		0.3	0.01		0.26	0.01	
Ethylbenzene	6,180	53,100	0.54	21/52	0.032	0.001		0.03	0.001		0.03	0.01		0.032	0.01	
m,p-Xylenes	670	14,000	1.8	23/52	0.062	0.001		0.1	0.001		0.06	0.01		0.055	0.01	
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.19 J	21/52	0.071	0.001		0.07	0.001		0.06	0.01		0.057	0.01	
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	0.0002	0.001	J	<	0.01	U	<	0.01	U
Toluene	2,510	53,100	0.0005 J	11/52	0.00046	0.001	J	0.0003	0.001	J	<	0.01	U	<	0.01	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	0.017	0.01	J	0.0009	0.01	J	0.03	0.01	J	0.023	0.01	J
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	0.021	0.01	J	0.01	0.01		0.04	0.01	J	0.026	0.01	J
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	0.044	0.1	J	0.04	0.01		0.08	0.01	J	0.064	0.01	J
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	439	2		422	2		406	2		457	2	
Methane	N/A	N/A	23	49/52	18	0.017		7.5	0.0085		13	0.017		22	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	173	52/52	1.7	1		0.69	1	J	1.3	1		1.1	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	13.5		S	12.14		S	12.39		S	12.1		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-42.3		S	-64.0		S	-77.5		S	-48.0		S
pH	N/A	N/A	7.6	52/52	6.68		S	6.94		S	6.74		S	6.89		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.624		S	0.818		S	0.607		S	0.688		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.32		S	0.59		S	0.42		S	0.24		S
Turbidity	N/A	N/A	63.8	52/52	5.3		S	5.2		S	5.6		S	6.3		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
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AOC = Area Of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW10-09A			AOC3-MW10-09B			AOC3-MW10-10A			AOC3-MW10-10B		
DATE COLLECTED					July 19, 2009			October 8, 2009			January 20, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	0.0014	0.001		0.0005	0.001	J	<	0.001	U	0.021	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.5	22/52	<	0.001	U	0.0003	0.001	J	<	0.001	U	0.0063	0.001	
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	0.0003	0.001	J	<	0.001	U	0.0028	0.001	
m,p-Xylenes	670	14,000	1.8	23/52	0.00043	0.001	J	0.0009	0.001	J	<	0.001	U	0.011	0.001	
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	0.017	0.001		0.02	0.001		0.014	0.001		0.021	0.001	
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	0.00032	0.001	J	0.0005	0.001	J	0.00038	0.001	J	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	0.002	0.01	J	0.0021	0.01	J	0.0052	0.01	J
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	0.002	0.01	J	0.0021	0.01	J	0.0054	0.01	J
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	0.0071	0.01	J	0.01	0.01		0.011	0.01		0.021	0.01	
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	379	2		357	2		381	2		368	2	
Methane	N/A	N/A	23	49/52	9.4	0.017		5.2	0.0085		8.8	0.017		12	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	173	52/52	1.8	1		0.65	1	J	1	1		1.8	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	9.35		S	2.11		S	2.77		S	5.98		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-73.9		S	-96.5		S	-115.3		S	-139.4		S
pH	N/A	N/A	7.6	52/52	7.00		S	7.21		S	7.01		S	7.04		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.575		S	0.662		S	0.525		S	0.533		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.52		S	0.59		S	0.53		S	0.46		S
Turbidity	N/A	N/A	63.8	52/52	18.6		S	40.6		S	21.2		S	42.1		S

Notes:

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AOC = Area Of Concern
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DO = Dissolved Oxygen
ID = Identification
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mg/L = milligram per liter
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mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW11-09A			AOC3-MW11-09B			AOC3-MW11-10A			AOC3-MW11-10B		
DATE COLLECTED					July 19, 2009			October 7, 2009			January 20, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.5	22/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	1.8	23/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	343	2		330	2		367	2		351	2	
Methane	N/A	N/A	23	49/52	0.23	0.017		0.06	0.0085		0.15	0.017		0.27	0.0017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	1.5	0.3	
Sulfate	N/A	N/A	173	52/52	39.8	1		46.1	1		45	1		42.4	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	0.96		S	1.21		S	1.3		S	1.71		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-6.4		S	-42.2		S	-49.6		S	-20.1		S
pH	N/A	N/A	7.6	52/52	6.84		S	7.60		S	6.89		S	6.94		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.677		S	0.843		S	0.609		S	0.824		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.65		S	0.68		S	0.70		S	0.55		S
Turbidity	N/A	N/A	63.8	52/52	4.6		S	4.1		S	5.1		S	5.1		S

Notes:

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N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW12-09A			AOC3-MW12-09B			AOC3-MW12-10A			AOC3-MW12-10B		
DATE COLLECTED					July 19, 2009			October 9, 2009			January 20, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.5	22/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	1.8	23/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	316	2		316	2		301	2		273	2	
Methane	N/A	N/A	23	49/52	0.16	0.017		0.02	0.0085		0.057	0.0017		0.029	0.0017	
Nitrate	N/A	N/A	3.4	11/52	0.67	0.3	J	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	173	52/52	28.7	1		44	1		40.6	1		46.7	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	0.08		S	0.11		S	ND		S	4.5		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	29.7		S	90.4		S	102.1		S	110.5		S
pH	N/A	N/A	7.6	52/52	6.77		S	6.71		S	6.82		S	6.79		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.535		S	0.657		S	0.466		S	0.421		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.52		S	0.32		S	0.57		S	0.96		S
Turbidity	N/A	N/A	63.8	52/52	4.6		S	16.5		S	5.6		S	2.8		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential
AOC = Area Of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW33-09A			AOC3-MW33-09B			AOC3-MW33-10A			AOC3-MW33-10B		
DATE COLLECTED					July 17, 2009			October 8, 2009			January 20, 2010			April 6, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	UJ
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.5	22/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	1.8	23/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	0.00041	0.001	J
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	237	2		201	2		411	2		471	2	
Methane	N/A	N/A	23	49/52	0.5	0.0017		0.2	0.0085		6.3	0.017		11	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	UJ	<	0.3	U	0.78	0.3		<	0.3	U
Sulfate	N/A	N/A	173	52/52	108	5		123	5		77	2		78.1	2	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	3		S	1.54		S	1.19		S	3.1		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-72.7		S	-88.7		S	-120.2		S	-115.9		S
pH	N/A	N/A	7.6	52/52	7.34		S	7.23		S	7.02		S	6.94		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	1.252		S	0.738		S	0.655		S	0.980		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.40		S	0.81		S	1.89		S	0.65		S
Turbidity	N/A	N/A	63.8	52/52	0.4		S	2.1		S	5.1		S	8.4		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential
AOC = Area Of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW34-09A			AOC3-MW34-09B			AOC3-MW34-10A			AOC3-MW34-10B		
DATE COLLECTED					July 20, 2009			October 8, 2009			January 21, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.5	22/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	1.8	23/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	337	2		368	2		401	2		325	2	
Methane	N/A	N/A	23	49/52	<	0.0017	U	<	0.0017	U	0.007	0.0017		0.0015	0.0017	J
Nitrate	N/A	N/A	3.4	11/52	3.4	0.3		1.1	0.3		2.4	0.3		2.6	0.3	
Sulfate	N/A	N/A	173	52/52	155	5		152	5		173	5		73.7	2	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	0		S	0.81		S	0.08		S	0.13		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	51.9		S	27.9		S	87.4		S	78.9		S
pH	N/A	N/A	7.6	52/52	6.92		S	7.04		S	6.85		S	7.36		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.686		S	0.949		S	0.754		S	0.550		S
DO (mg/L)	N/A	N/A	1.89	52/52	1.88		S	1.87		S	0.62		S	0.83		S
Turbidity	N/A	N/A	63.8	52/52	3.8		S	2.0		S	6.8		S	3.2		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential
AOC = Area Of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW35-09A			AOC3-MW35-09B			AOC3-MW35-10A			AOC3-MW35-10B		
DATE COLLECTED					July 20, 2009			October 8, 2009			January 20, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	0.00041	0.001	J	<	0.001	U	<	0.001	U	0.0012	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	0.00012	0.001	J
Benzene	26.8	515	0.5	22/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	1.8	23/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	419	2		426	2		493	2		428	2	
Methane	N/A	N/A	23	49/52	4.6	0.017		0.6	0.0017		3.4	0.017		9.1	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	0.78	0.3	
Sulfate	N/A	N/A	173	52/52	4.9	1		3.3	1		1.1	1		2.6	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	8.25		S	7.61		S	10		S	11.04		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-65.8		S	-94.6		S	-114.5		S	-133.7		S
pH	N/A	N/A	7.6	52/52	6.86		S	7.50		S	6.95		S	7.08		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.612		S	0.814		S	0.581		S	0.733		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.47		S	0.62		S	0.37		S	0.41		S
Turbidity	N/A	N/A	63.8	52/52	3.0		S	3.6		S	4.2		S	4.1		S

Notes:

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mg/L = milligram per liter
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mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW36-09A			AOC3-MW36-09B			AOC3-MW36-10A			AOC3-MW36-10B		
DATE COLLECTED					July 20, 2009			October 8, 2009			January 21, 2010			April 5, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	0.0015	0.001		0.006	0.001		0.0089	0.001		0.02	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	0.00046	0.001	J	0.002	0.001		0.003	0.001		0.0078	0.001	
Benzene	26.8	515	0.5	22/52	0.00071	0.001	J	0.003	0.001		0.003	0.001		0.004	0.001	
Ethylbenzene	6,180	53,100	0.54	21/52	0.0028	0.001		0.01	0.001		0.015	0.001		0.029	0.001	
m,p-Xylenes	670	14,000	1.8	23/52	0.0056	0.001		0.02	0.001		0.031	0.001		0.065	0.001	
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.01	7/52	0.00097	0.001	J	0.003	0.001		0.0054	0.001		0.01	0.001	
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	0.00022	0.001	J
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	315	2		321	2		353	2		421	2	
Methane	N/A	N/A	23	49/52	1.4	0.017		5.2	0.0085		5.4	0.017		9.4	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	173	52/52	127	5		116	5		113	5		111	5	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	5.55		S	2.62		S	0.3		S	2.5		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-84.1		S	-110.7		S	-107.6		S	-202.4		S
pH	N/A	N/A	7.6	52/52	7.07		S	6.65		S	7.19		S	7.33		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.653		S	0.855		S	0.644		S	0.862		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.45		S	0.59		S	0.12		S	0.22		S
Turbidity	N/A	N/A	63.8	52/52	4.9		S	5.1		S	3.6		S	21.7		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential
AOC = Area Of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-MW37-09A			AOC3-MW37-09B			AOC3-MW37-10A			AOC3-MW37-10B		
DATE COLLECTED					July 17, 2009			October 8, 2009			January 20, 2010			April 6, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.5	22/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.54	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	1.8	23/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.01	7/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	412	2		403	2		387	2		361	2	
Methane	N/A	N/A	23	49/52	15	0.017		5.2	0.0085		8.4	0.017		14	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	UJ	<	0.3	U	0.76	0.3		1.2	0.3	
Sulfate	N/A	N/A	173	52/52	0.81	1	J	0.64	1	J	1.1	1		3.6	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	8		S	2.67		S	5.56		S	6.5		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-61.6		S	-98.4		S	-79.4		S	-105.0		S
pH	N/A	N/A	7.6	52/52	7.01		S	7.11		S	6.91		S	7.01		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	1.285		S	0.778		S	0.574		S	0.609		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.44		S	1.20		S	0.71		S	0.57		S
Turbidity	N/A	N/A	63.8	52/52	6.1		S	9.0		S	31.0		S	42.4		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
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DO = Dissolved Oxygen
ID = Identification
J = Estimated
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N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-1
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 3
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC3-TB01-10A			AOC3-TB01-10B			AOC3-TB02-10A			AOC3-TB02-10B		
DATE COLLECTED					January 22, 2010			April 5, 2010			January 22, 2010			April 6, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.91	25/52	0.59	0.1		0.91	0.1		0.65	0.1		0.81	0.02	
1,3,5-Trimethylbenzene	N/A	N/A	0.28	21/52	0.16	0.1		0.28	0.1		0.17	0.1		0.24	0.02	
Benzene	26.8	515	0.5	22/52	0.34	0.1		0.24	0.1		0.032	0.1	J	0.028	0.001	
Ethylbenzene	6,180	53,100	0.54	21/52	0.54	0.1		0.5	0.1		0.46	0.1		0.5	0.02	
m,p-Xylenes	670	14,000	1.8	23/52	1.6	0.1		1.8	0.1		1	0.1		1.4	0.02	
Methyl tert-butyl ether	200,000	1,000,000	0.002 J	1/52	<	0.1	U	<	0.1	U	<	0.1	U	<	0.001	U
Naphthalene	359	1,970	0.19 J	21/52	0.1	0.1		0.17	0.1		0.14	0.1		0.19	0.001	J
o-Xylene	670	14,000	0.01	7/52	<	0.1	U	<	0.1	U	<	0.1	U	<	0.001	U
Toluene	2,510	53,100	0.0005 J	11/52	<	0.1	U	<	0.1	U	<	0.1	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.86 J	15/52	0.015	0.01		0.066	0.01	J	0.019	0.01		0.025	0.01	
2-Methylnaphthalene	N/A	N/A	1.1 J	15/52	0.016	0.01		0.084	0.01	J	0.024	0.01		0.029	0.01	
Benzo(a)anthracene	4,170	15,600	0.007 J	3/52	<	0.01	U	0.0033	0.01	J	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	2/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.004 J	3/52	<	0.01	U	0.0031	0.01	J	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/52	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	1.1 J	16/51	0.066	0.01		0.18	0.05	J	0.083	0.01		0.085	0.01	
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	532	52/52	414	2		410	2		422	2		369	2	
Methane	N/A	N/A	23	49/52	11	0.017		18	0.017		14	0.017		22	0.017	
Nitrate	N/A	N/A	3.4	11/52	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	173	52/52	0.79	1	J	0.84	1	J	0.76	1	J	0.84	1	J
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	16.5	50/52	1.32		S	11.5		S	7.74		S	8.4		S
ORP (mV)	N/A	N/A	110.5 / -238.8	52/52	-91.9		S	-89.1		S	-86.0		S	-109.8		S
pH	N/A	N/A	7.6	52/52	6.72		S	6.92		S	6.68		S	6.83		S
Specific Conductivity (mS/cm)	N/A	N/A	1.285	52/52	0.601		S	0.678		S	0.620		S	0.662		S
DO (mg/L)	N/A	N/A	1.89	52/52	0.62		S	0.31		S	0.63		S	0.45		S
Turbidity	N/A	N/A	63.8	52/52	2.9		S	4.8		S	5.0		S	4.4		S

Notes:

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mg/L = milligram per liter
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mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

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TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW03-09A			AOC8/9-MW03-09B			AOC8/9-MW03-10A			AOC8/9-MW03-10B		
DATE COLLECTED					July 16, 2009			October 7, 2009			January 21, 2010			April 9, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	UJ
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	379	2		383	2		366	2		357	2	
Methane	N/A	N/A	16	37/38	14	0.017		4.5	0.0085		13	0.017		12	0.017	J
Nitrate	N/A	N/A	0.84	11/38	<	0.3	U	<	0.3	U	<	0.3	U	0.81	0.3	
Sulfate	N/A	N/A	753	36/38	0.7	1	J	0.59	1	J	<	1	U	0.78	1	J
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	2.4		S	1.9		S	1.4		S	10.0		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-85.1		S	-112.9		S	-119.8		S	-94.3		S
pH	N/A	N/A	7.58	38/38	7.15		S	7.40		S	7.00		S	7.10		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	0.647		S	0.680		S	0.510		S	0.543		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.50		S	0.52		S	0.79		S	1.65		S
Turbidity	N/A	N/A	100.6	38/38	1.1		S	9.2		S	6.4		S	6.9		S

Notes:

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mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
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ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW13-09A			AOC8/9-MW13-09B			AOC8/9-MW13-10A			AOC8/9-MW13-10B		
DATE COLLECTED					July 19, 2009			October 6, 2009			January 20, 2010			April 7, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	405	2		397	2		428	2		408	2	
Methane	N/A	N/A	16	37/38	5.4	0.017		0.9	0.0085		3.4	0.017		6	0.017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	UJ	<	0.3	U	<	0.3	U	<	0.3	UJ
Sulfate	N/A	N/A	753	36/38	7	1		4.1	1		14.9	1		8.2	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	2.8		S	2.7		S	0.6		S	6.8		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-64.6		S	-89.5		S	-100.1		S	-112.3		S
pH	N/A	N/A	7.58	38/38	6.90		S	7.10		S	6.95		S	6.99		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	0.660		S	0.752		S	0.583		S	0.780		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.60		S	0.53		S	0.72		S	0.79		S
Turbidity	N/A	N/A	100.6	38/38	4.6		S	3.7		S	4.3		S	2.1		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW14-09A			AOC8/9-MW14-09B			AOC8/9-MW14-10A			AOC8/9-MW14-10B		
DATE COLLECTED					July 17, 2009			October 7, 2009			January 19, 2010			April 9, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	463	2		443	2		468	2		490	2	
Methane	N/A	N/A	16	37/38	0.09	0.0017		0.03	0.0085		0.054	0.0017		0.0038	0.0017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	UJ	<	0.3	U	<	0.3	U	0.81	0.3	
Sulfate	N/A	N/A	753	36/38	26.7	1		29.2	1		33.3	1		42.6	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	2.2		S	2.5		S	1.1		S	1.4		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-19.2		S	-64.6		S	-8.1		S	9.5		S
pH	N/A	N/A	7.58	38/38	6.83		S	7.01		S	6.77		S	6.78		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	1.481		S	0.885		S	0.729		S	0.934		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.49		S	0.60		S	0.83		S	1.48		S
Turbidity	N/A	N/A	100.6	38/38	4.8		S	8.1		S	5.8		S	4.6		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW15-09A			AOC8/9-MW15-09B			AOC8/9-MW15-10A			AOC8/9-MW15-10B		
DATE COLLECTED					July 17, 2009			October 7, 2009			January 19, 2010			April 7, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	0.0039	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	0.001	0.001	
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	0.00057	0.001	J
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	0.0014	0.001	
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	0.0036	0.001	
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	0.00081	0.001	J
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	350	2		356	2		373	2		319	2	
Methane	N/A	N/A	16	37/38	0.05	0.0017		1.4	0.0085		0.043	0.0017		5.6	0.017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	UJ	<	0.3	U	<	0.3	U	0.82	0.3	
Sulfate	N/A	N/A	753	36/38	40.3	1		32.8	1		42.3	1		43.5	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	5.2		S	0.7		S	1.1		S	4.7		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-31.0		S	-60.1		S	-59.4		S	-38.8		S
pH	N/A	N/A	7.58	38/38	6.96		S	6.94		S	6.89		S	6.94		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	1.166		S	0.730		S	0.509		S	0.546		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.41		S	0.38		S	0.48		S	0.65		S
Turbidity	N/A	N/A	100.6	38/38	6.7		S	7.1		S	5.8		S	41.6		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
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AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW16-09A			AOC8/9-MW16-09B			AOC8/9-MW16-10A			AOC8/9-MW16-10B		
DATE COLLECTED					July 16, 2009			October 7, 2009			January 19, 2010			April 8, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	0.00044	0.001	J	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	0.00056	0.001	J	<	0.001	U
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	538	2		522	2		559	2		538	2	
Methane	N/A	N/A	16	37/38	0.03	0.0017		<	0.0017	U	0.024	0.0017		0.0026	0.0017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	U	<	0.3	U	<	0.3	U	0.8	0.3	
Sulfate	N/A	N/A	753	36/38	92.7	5		101	5		100	5		96.1	2	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	2.2		S	2.1		S	3.2		S	2.2		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-8.6		S	-36.6		S	-12.5		S	3.6		S
pH	N/A	N/A	7.58	38/38	6.66		S	6.82		S	6.63		S	6.68		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	1.124		S	1.163		S	0.866		S	1.051		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.36		S	0.34		S	1.24		S	1.85		S
Turbidity	N/A	N/A	100.6	38/38	16.4		S	12.7		S	10.1		S	36.8		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
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AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW17-09A			AOC8/9-MW17-09B			AOC8/9-MW17-10A			AOC8/9-MW17-10B		
DATE COLLECTED					July 19, 2009			October 6, 2009			January 20, 2010			April 7, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	455	2		405	2		376	2		323	2	
Methane	N/A	N/A	16	37/38	4.9	0.017		1.6	0.0085		0.34	0.017		0.76	0.017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	UJ	<	0.3	U	<	0.3	U	<	0.3	UJ
Sulfate	N/A	N/A	753	36/38	109	5		18.9	1		282	10		115	5	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	1.1		S	1.2		S	1.0		S	0.2		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-48.8		S	-109.5		S	3.0		S	12.6		S
pH	N/A	N/A	7.58	38/38	6.69		S	7.26		S	6.74		S	6.89		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	0.863		S	0.778		S	0.825		S	0.712		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.44		S	0.36		S	0.33		S	1.27		S
Turbidity	N/A	N/A	100.6	38/38	3.6		S	9.6		S	16.8		S	4.1		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW18-09A			AOC8/9-MW18-09B			AOC8/9-MW18-09A			AOC8/9-MW18-10B		
DATE COLLECTED					July 19, 2009			October 6, 2009			January 19, 2010			April 7, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	597	2		562	2		367	2		345	2	
Methane	N/A	N/A	16	37/38	3.4	0.017		0.5	0.0085		0.0052	0.0017		0.0043	0.0017	
Nitrate	N/A	N/A	0.84	11/38	0.79	0.3	J	<	0.3	U	0.79	0.3		0.84	0.3	
Sulfate	N/A	N/A	753	36/38	368	10		114	5		753	25		483	20	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	1.1		S	1.7		S	1.0		S	1.0		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-20.8		S	-101.0		S	104.2		S	-25.0		S
pH	N/A	N/A	7.58	38/38	6.49		S	7.25		S	6.56		S	6.67		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	1.620		S	1.175		S	1.125		S	1.464		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.50		S	0.32		S	1.81		S	0.64		S
Turbidity	N/A	N/A	100.6	38/38	5.4		S	5.7		S	7.2		S	3.1		S

Notes:

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AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW39-09A			AOC8/9-MW39-09B			AOC8/9-MW39-10A			AOC8/9-MW39-10B		
DATE COLLECTED					July 17, 2009			October 7, 2009			January 19, 2010			May 7, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	0.001	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	0.00033	0.001	J
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	0.00057	0.001	J
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	372	2		364	2		385	2		359	2	
Methane	N/A	N/A	16	37/38	0.005	0.0017		0.02	0.0085		0.0048	0.0017		0.002	0.0017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	UJ	0.65	0.3		0.82	0.3		0.81	0.3	
Sulfate	N/A	N/A	753	36/38	27.1	1		27.4	1		27.6	1		29.1	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	0.1		S	0.4		S	0.4		S	0.0		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	22.7		S	13.7		S	65.5		S	73.7		S
pH	N/A	N/A	7.58	38/38	6.99		S	7.58		S	6.86		S	7.00		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	1.226		S	0.745		S	0.535		S	0.522		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.28		S	0.46		S	2.60		S	1.60		S
Turbidity	N/A	N/A	100.6	38/38	3.5		S	49.1		S	42.7		S	46.1		S

Notes:

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[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit	Project Action Limit			AOC8/9-MW40-09A			AOC8/9-MW40-09B			AOC8/9-MW40-10A			AOC8/9-MW40-10B		
DATE COLLECTED					July 17, 2009			October 7, 2009			January 19, 2010			April 9, 2010		
	(mg/L)[1]	(mg/L)[2]	Maximum	Frequency	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	1.1	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.47	3/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.99	4/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.098	5/38	<	0.001	U	<	0.001	U	<	0.001	U	0.00072	0.001	J
o-Xylene	670	14,000	0.006	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.003	1/38	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	597	38/38	336	2		307	2		311	2		373	2	
Methane	N/A	N/A	16	37/38	12	0.017		2.1	0.0085		9.3	0.017		7.1	0.017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	UJ	<	0.3	U	<	0.3	U	0.79	0.3	
Sulfate	N/A	N/A	753	36/38	0.71	1	J	<	1	U	0.8	1	J	0.78	1	J
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	2.6		S	1.8		S	2.0		S	11.7		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-77.6		S	-129.9		S	-78.5		S	-89.1		S
pH	N/A	N/A	7.58	38/38	7.10		S	7.27		S	7.02		S	7.14		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	1.029		S	0.600		S	0.464		S	0.466		S
DO (mg/L)	N/A	N/A	2.6	38/38	0.60		S	1.38		S	1.50		S	1.13		S
Turbidity	N/A	N/A	100.6	38/38	0.8		S	1.6		S	5.6		S	3.6		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
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AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = milliSiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-2
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 8/9
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID DATE COLLECTED	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC8/9-MWH9-10A January 21, 2010			AOC8/9-MWH9-10B April 7, 2010		
					Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)										
1,2,4-Trimethylbenzene	N/A	N/A	1.4	5/38	1.4	0.05		0.7	0.05	
1,3,5-Trimethylbenzene	N/A	N/A	0.2	3/38	0.2	0.001		0.19	0.05	
Benzene	26.8	515	1.1	4/38	0.74	0.05		1.1	0.05	
Ethylbenzene	6,180	53,100	0.47	3/38	0.47	0.05		0.34	0.05	
m,p-Xylenes	670	14,000	0.99	4/38	0.99	0.05		0.72	0.05	
Methyl tert-butyl ether	200,000	1,000,000	ND	0/38	<	0.001	U	<	0.05	U
Naphthalene	359	1,970	0.098	5/38	0.075	0.001		0.098	0.05	
o-Xylene	670	14,000	0.006	1/38	0.0056	0.001		<	0.05	U
Toluene	2,510	53,100	0.003	1/38	0.0027	0.001		<	0.05	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)										
1-Methylnaphthalene	N/A	N/A	0.59 J	2/38	0.59	0.25	J	0.055	0.01	
2-Methylnaphthalene	N/A	N/A	0.67 J	2/38	0.67	0.25	J	0.062	0.01	
Benzo(a)anthracene	4,170	15,600	ND	0/38	<	0.05	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/38	<	0.05	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	ND	0/38	<	0.05	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0/38	<	0.05	U	<	0.01	U
Chrysene	44,700	133,000	ND	0/38	<	0.05	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/38	<	0.05	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/38	<	0.05	U	<	0.01	U
Naphthalene	359	1,970	0.4 J	2/38	0.4	0.05	J	0.074	0.05	
OTHER PARAMETERS (mg/L)										
Alkalinity, Total	N/A	N/A	597	38/38	393	2		377	2	
Methane	N/A	N/A	16	37/38	9.1	0.017		16	0.017	
Nitrate	N/A	N/A	0.84	11/38	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	753	36/38	6	1		0.86	1	J
FIELD WATER QUALITY PARAMETERS										
Ferrous Iron (mg/L)	N/A	N/A	12.9	37/38	11.2		S	12.9		S
ORP (mV)	N/A	N/A	104.2 / -129.9	38/38	-32.6		S	-62.7		S
pH	N/A	N/A	7.58	38/38	6.66		S	6.62		S
Specific Conductivity (mS/cm)	N/A	N/A	1.62	38/38	0.562		S	0.820		S
DO (mg/L)	N/A	N/A	2.6	38/38	2.37		S	0.45		S
Turbidity	N/A	N/A	100.6	38/38	48.0		S	100.6		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
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mg/L = milligram per liter
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Qual = Qualifier
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S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW23-09A			AOC11-MW23-09B			AOC11-MW23-10A			AOC11-MW23-10B		
DATE COLLECTED					July 16, 2009			October 6, 2009			January 18, 2010			April 8, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.2	8/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.007	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.011	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.21	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.00031 J	2/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0012	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	290	2		294	2		270	2		286	2	
Methane	N/A	N/A	19	31/32	0.01	0.0017		0.1	0.0017		0.14	0.0017		0.097	0.017	
Nitrate	N/A	N/A	3.9	10/32	0.69	0.3		<	0.3	U	<	0.3	U	0.79	0.3	
Sulfate	N/A	N/A	101	30/32	48.9	5		57.3	2		63.9	5		77.4	2	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	3.3		S	2.76		S	1.93		S	10.7		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	-62.3		S	-90.8		S	-76.1		S	-75.1		S
pH	N/A	N/A	7.79	32/32	7.26		S	7.41		S	7.01		S	7.09		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.668		S	0.675		S	0.500		S	0.509		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.20		S	0.37		S	0.38		S	2.06		S
Turbidity	N/A	N/A	674	32/32	1.7		S	2.2		S	5.1		S	4.1		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = millisiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW24-09A			AOC11-MW24-09B			AOC11-MW24-10A			AOC11-MW24-10B		
DATE COLLECTED					July 16, 2009			October 5, 2009			January 18, 2010			April 6, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	0.009	0.001		0.02	0.001		0.02	0.001		0.042	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	0.0002	0.001	J	0.0005	0.001	J	0.001	0.001		0.0046	0.001	
Benzene	26.8	515	0.2	8/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.007	12/32	0.0004	0.001	J	0.0002	0.001	J	0.00033	0.001	J	0.00088	0.001	J
m,p-Xylenes	670	14,000	0.011	12/32	0.0007	0.001	J	0.0008	0.001	J	0.00096	0.001	J	0.002	0.001	
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	0.004	0.001		0.004	0.001		0.0039	0.001		<	0.001	U
Naphthalene	359	1,970	0.21	12/32	0.003	0.001		0.004	0.001		0.0063	0.001		0.011	0.001	
o-Xylene	670	14,000	0.00031 J	2/32	<	0.001	U	<	0.001	U	<	0.001	U	0.00031	0.001	J
Toluene	2,510	53,100	0.0012	12/32	0.0002	0.001	J	0.0003	0.001	J	0.00043	0.001	J	0.0012	0.001	
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	0.002	0.01	J	0.009	0.01	J	0.011	0.01	J	0.0089	0.01	J
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	0.004	0.01	J	0.01	0.01	J	0.014	0.01	J	0.011	0.01	
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	0.002	0.01	J	0.005	0.01	J	0.0057	0.01	J	0.0075	0.01	J
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	402	2		397	2		391	2		371	2	
Methane	N/A	N/A	19	31/32	11	0.017		6.3	0.0085		7.5	0.017		11	0.017	
Nitrate	N/A	N/A	3.9	10/32	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	101	30/32	0.7	1	J	0.64	1	J	<	1	U	1.3	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	3.3		S	2.66		S	3.3		S	9.4		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	-56.2		S	-91.7		S	-113.5		S	-98.2		S
pH	N/A	N/A	7.79	32/32	6.86		S	7.22		S	6.86		S	6.94		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.761		S	0.811		S	0.626		S	0.788		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.26		S	0.31		S	0.56		S	0.72		S
Turbidity	N/A	N/A	674	32/32	0.8		S	1.2		S	5.1		S	5.1		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet
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DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = millisiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW25-09A			AOC11-MW25-09B			AOC11-MW25-10A			AOC11-MW25-10B		
DATE COLLECTED					July 16, 2009			October 5, 2009			January 18, 2010			April 6, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.2	8/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.007	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.011	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.21	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.00031 J	2/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0012	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	309	2		295	2		489	2		340	2	
Methane	N/A	N/A	19	31/32	2.2	0.0017		2.8	0.0017		0.38	0.0017		5.4	0.017	
Nitrate	N/A	N/A	3.9	10/32	<	0.3	U	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	101	30/32	26.5	1		26.5	1	J	101	5		51.5	2	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	1.02		S	1.62		S	3.62		S	1.21		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	-75.6		S	-91.2		S	-150.4		S	-107.3		S
pH	N/A	N/A	7.79	32/32	7.04		S	7.79		S	7.09		S	7.23		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.620		S	0.534		S	0.648		S	0.536		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.42		S	0.58		S	0.24		S	0.48		S
Turbidity	N/A	N/A	674	32/32	4.6		S	17.1		S	6.2		S	5.2		S

Notes:

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AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = millisiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW32-09A			AOC11-MW32-09B			AOC11-MW32-10A			AOC11-MW32-10B		
DATE COLLECTED					July 16, 2009			October 5, 2009			January 18, 2010			April 6, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.2	8/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.007	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.011	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.21	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.00031 J	2/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0012	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	314	2		289	2		329	2		303	2	
Methane	N/A	N/A	19	31/32	0.5	0.0017		0.07	0.0017		0.012	0.0017		<	0.0017	U
Nitrate	N/A	N/A	3.9	10/32	<	0.3	U	<	0.3	U	1.2	0.3		3.9	0.3	
Sulfate	N/A	N/A	101	30/32	47.2	1		46.4	5		76.8	5		93.5	5	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	0.2		S	1.73		S	0.18		S	0.3		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	22.6		S	58.6		S	-32.2		S	31.7		S
pH	N/A	N/A	7.79	32/32	7.02		S	7.09		S	6.99		S	7.09		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.645		S	0.631		S	0.520		S	0.569		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.33		S	0.35		S	1.64		S	3.23		S
Turbidity	N/A	N/A	674	32/32	2.2		S	3.7		S	11.0		S	6.1		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
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AOC = Area of Concern
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mg/L = milligram per liter
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Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW41-09A			AOC11-MW41-09B			AOC11-MW41-10A			AOC11-MW41-10B		
DATE COLLECTED					July 16, 2009			October 6, 2009			January 18, 2010			April 8, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	0.06	0.001		0.07	0.001		0.057	0.001		0.028	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	0.003	0.001		0.003	0.001		0.0013	0.001		0.00043	0.001	J
Benzene	26.8	515	0.2	8/32	0.1	0.005		0.2	0.02		0.11	0.001		0.059	0.001	
Ethylbenzene	6,180	53,100	0.007	12/32	0.002	0.001		0.002	0.001		0.0016	0.001		0.001	0.001	
m,p-Xylenes	670	14,000	0.011	12/32	0.003	0.001		0.003	0.001		0.0021	0.001		0.0016	0.001	
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	<	0.001	U	<	0.001	U	0.00051	0.001	J	<	0.001	U
Naphthalene	359	1,970	0.21	12/32	0.02	0.001		0.02	0.001		0.017	0.001		0.019	0.001	
o-Xylene	670	14,000	0.00031 J	2/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0012	12/32	0.0003	0.001	J	0.0004	0.001	J	0.00032	0.001	J	0.00051	0.001	J
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	0.03	0.01	J	0.07	0.01	J	0.021	0.01		0.049	0.01	
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	0.04	0.01	J	0.06	0.05	J	0.026	0.01		0.058	0.01	
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.01	U	0.004	0.01	J	<	0.01	U	0.0053	0.01	J
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.01	U	0.005	0.01	J	<	0.01	U	0.0045	0.01	J
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.01	U	0.003	0.01	J	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.01	U	<	0.01	U	<	0.01	U	0.0033	0.01	J
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	0.01	0.01	J	0.04	0.01	J	0.011	0.01		0.025	0.01	
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	357	2		347	2		344	2		359	2	
Methane	N/A	N/A	19	31/32	5	0.034		14	0.017		11	0.017		15	0.017	
Nitrate	N/A	N/A	3.9	10/32	<	0.3	U	<	0.3	U	<	0.3	U	0.79	0.3	
Sulfate	N/A	N/A	101	30/32	0.68	1	J	0.58	1	J	0.8	1	J	0.78	1	J
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	1.89		S	2.35		S	2.72		S	5.5		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	-27.9		S	-100.3		S	-100.4		S	-88.7		S
pH	N/A	N/A	7.79	32/32	7.20		S	7.46		S	6.94		S	7.04		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.617		S	0.649		S	0.475		S	0.504		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.13		S	0.29		S	0.48		S	0.78		S
Turbidity	N/A	N/A	674	32/32	15.8		S	87.0		S	6.3		S	6.3		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = millisiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID DATE COLLECTED	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW42-09A July 16, 2009			AOC11-MW42-09B October 6, 2009			AOC11-MW42-10A January 18, 2010			AOC11-MW42-10B April 8, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.2	8/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.007	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.011	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.21	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.00031 J	2/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0012	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	327	2		311	2		303	2		310	2	
Methane	N/A	N/A	19	31/32	0.006	0.0017		0.01	0.0017		0.073	0.0017		0.19	0.017	
Nitrate	N/A	N/A	3.9	10/32	1	0.3		1.3	0.3		0.88	0.3		1.1	0.3	
Sulfate	N/A	N/A	101	30/32	63.8	5		70	2		56.2	5		34.6	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	0.27		S	0.13		S	0.05		S	0		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	46.1		S	162.1		S	8.4		S	69.4		S
pH	N/A	N/A	7.79	32/32	6.95		S	7.01		S	6.97		S	7.14		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.762		S	0.747		S	0.555		S	0.452		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.32		S	0.69		S	0.95		S	1.32		S
Turbidity	N/A	N/A	674	32/32	4.2		S	7.2		S	6.3		S	5.1		S

Notes:

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AOC = Area of Concern
BUSTR = Bureau of Underground Storage Tank Regulations
DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = millisiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW43-09A			AOC11-MW43-09B			AOC11-MW43-10A			AOC11-MW43-10B		
DATE COLLECTED					July 17, 2009			October 6, 2009			January 19, 2010			April 8, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	0.1	0.001		0.08	0.001		0.15	0.001		0.059	0.001	
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	0.01	0.001		0.004	0.001		0.014	0.001		0.0024	0.001	
Benzene	26.8	515	0.2	8/32	0.1	0.001		0.04	0.001		0.13	0.001		0.009	0.001	
Ethylbenzene	6,180	53,100	0.007	12/32	0.007	0.001		0.007	0.001		0.0066	0.001		0.0041	0.001	
m,p-Xylenes	670	14,000	0.011	12/32	0.01	0.001		0.005	0.001		0.011	0.001		0.0028	0.001	
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	<	0.001	U	<	0.001	U	0.00049	0.001	J	<	0.001	U
Naphthalene	359	1,970	0.21	12/32	0.2	0.001		0.1	0.02		0.17	0.001		0.21	0.001	
o-Xylene	670	14,000	0.00031 J	2/32	0.0003	0.001	J	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0012	12/32	0.0008	0.001	J	0.0007	0.001	J	0.00085	0.001	J	0.00066	0.001	J
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	0.1	0.1	J	0.09	0.01	J	0.11	0.05	J	0.063	0.01	
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	0.2	0.1	J	0.1	0.05	J	0.14	0.05	J	0.075	0.01	
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.1	U	0.003	0.01	J	0.0074	0.01	J	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.1	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.1	U	0.003	0.01	J	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.1	U	<	0.01	UJ	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.1	U	<	0.01	U	0.0048	0.01	J	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.1	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.1	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	0.1	0.1	J	0.1	0.05	J	0.14	0.05	J	0.11	0.05	
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	318	2		358	2		285	2		349	2	
Methane	N/A	N/A	19	31/32	18	0.017		19	0.017		9.3	0.017		17	0.017	
Nitrate	N/A	N/A	3.9	10/32	<	0.3	UJ	<	0.3	U	<	0.3	U	0.81	0.3	
Sulfate	N/A	N/A	101	30/32	0.8	1	J	<	1	U	0.75	1	J	0.82	1	J
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	9.55		S	3.3		S	4.2		S	11.6		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	-48.7		S	-105.0		S	-108.9		S	-109.5		S
pH	N/A	N/A	7.79	32/32	7.01		S	6.93		S	6.92		S	6.87		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.616		S	0.716		S	0.528		S	0.759		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.46		S	0.33		S	0.79		S	1.29		S
Turbidity	N/A	N/A	674	32/32	674.0		S	144.0		S	292.0		S	3.8		S

Notes:

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DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = millisiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-3
SUMMARY OF GROUNDWATER ANALYSIS AT AOC 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC11-MW46-09A			AOC11-MW46-09B			AOC11-MW46-10A			AOC11-MW46-10B		
DATE COLLECTED					July 19, 2009			October 5, 2009			January 18, 2010			April 6, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	0.15	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
1,3,5-Trimethylbenzene	N/A	N/A	0.014	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Benzene	26.8	515	0.2	8/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Ethylbenzene	6,180	53,100	0.007	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
m,p-Xylenes	670	14,000	0.011	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Methyl tert-butyl ether	200,000	1,000,000	0.004	5/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Naphthalene	359	1,970	0.21	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
o-Xylene	670	14,000	0.00031 J	2/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
Toluene	2,510	53,100	0.0012	12/32	<	0.001	U	<	0.001	U	<	0.001	U	<	0.001	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	0.11 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
2-Methylnaphthalene	N/A	N/A	0.2 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)anthracene	4,170	15,600	0.0074 J	4/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(a)pyrene	794	4,840	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(b)fluoranthene	421	1,270	0.005 J	3/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Benzo(k)fluoranthene	149,000	1,000,000	0.003 J	1/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Chrysene	44,700	133,000	0.0048 J	2/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
Naphthalene	359	1,970	0.14 J	12/32	<	0.01	U	<	0.01	U	<	0.01	U	<	0.01	U
OTHER PARAMETERS (mg/L)																
Alkalinity, Total	N/A	N/A	489	32/32	397	2		401	2		364	2		357	2	
Methane	N/A	N/A	19	31/32	1.1	0.017		0.2	0.0017		0.19	0.0017		2	0.017	
Nitrate	N/A	N/A	3.9	10/32	<	0.3	UJ	<	0.3	U	<	0.3	U	<	0.3	U
Sulfate	N/A	N/A	101	30/32	36	1		36.2	1		34.8	1		17.1	1	
FIELD WATER QUALITY PARAMETERS																
Ferrous Iron (mg/L)	N/A	N/A	11.6	31/32	4.5		S	2.26		S	2.87		S	3.75		S
ORP (mV)	N/A	N/A	162.1 / -150.4	32/32	-39.2		S	-25.0		S	-48.1		S	-85.0		S
pH	N/A	N/A	7.79	32/32	6.69		S	7.40		S	6.86		S	6.99		S
Specific Conductivity (mS/cm)	N/A	N/A	1.045	32/32	0.855		S	1.045		S	0.744		S	0.901		S
DO (mg/L)	N/A	N/A	3.23	32/32	0.60		S	0.58		S	0.40		S	0.84		S
Turbidity	N/A	N/A	674	32/32	12.9		S	5.2		S	1.2		S	10.6		S

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
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DO = Dissolved Oxygen
ID = Identification
J = Estimated
mg/L = milligram per liter
ms/cm = millisiemens per centimeter
mV = millivolt
N/A = Not Applicable
ND = Not Detected
ORP =Oxidation Reduction Potential
Qual = Qualifier
RL = Reporting Limit
S = Field screening parameter
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-4
SUMMARY OF LNAPL ANALYSIS AT AOC 3, 8/9, AND 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID / DATE COLLECTED	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC3-MW04-09A July 21, 2009			AOC3-MW04-10B April 5, 2010			AOC3-MW09-09A July 14, 2009			AOC3-MW09-09B October 7, 2009		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	920	11 / 11	1.7	0.025		920	5		63	0.5		190	5	
1,3,5-Trimethylbenzene	N/A	N/A	270	10 / 11	0.2	0.025		82	5		26	0.5		85	5	
Benzene	26.8	515	30	11 / 11	0.04	0.025		2.3	5	J	6.8	0.5		7.9	5	
Ethylbenzene	6,180	53,100	380	10 / 11	0.02	0.025	J	44	5		4.4	0.5		6.8	5	
m,p-Xylenes	670	14,000	1200	11 / 11	0.2	0.025		120	5		12	0.5		34	5	
Methyl tert-butyl ether	200,000	1,000,000	ND	0 / 11	<	0.025	U	<	5	U	<	0.5	U	<	5	U
Naphthalene	359	1,970	140	11 / 11	0.2	0.025		140	5		9.1	0.5		27	5	
o-Xylene	670	14,000	303 J	1 / 11	<	0.025	U	<	5	U	<	0.5	U	<	5	U
Toluene	2,510	53,100	1.5 J	1 / 11	<	0.025	U	<	5	U	<	0.5	U	<	5	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	3500	10 / 11	3500	500		340	125		95	250	J	87	10	
2-Methylnaphthalene	N/A	N/A	3900	10 / 11	3900	500		440	125		130	250	J	110	10	
Benzo(a)anthracene	4,170	15,600	32 J	2 / 11	<	500	U	<	125	U	<	250	U	5.8	10	J
Benzo(a)pyrene	794	4,840	ND	0 / 11	<	500	U	<	125	U	<	250	U	<	10	U
Benzo(b)fluoranthene	421	1,270	ND	0 / 11	<	500	U	<	125	U	<	250	U	<	10	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0 / 11	<	500	U	<	125	U	<	250	U	<	10	U
Chrysene	44,700	133,000	220 J	2 / 11	220	500	J	<	125	U	<	250	U	3.8	10	J
Dibenzo(a,h)anthracene	2,210	49,400	ND	0 / 11	<	500	U	<	125	U	<	250	U	<	10	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0 / 11	<	500	U	<	125	U	<	250	U	<	10	U
Naphthalene	359	1,970	1000	10 / 11	1000	500		450	125		160	250	J	180	10	

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
J = Estimated
LNAPL = Light Non-Aqueous Phase Liquid
mg/L = milligram per liter
MNA = Monitored Natural Attenuation
ND = Not Detected
Qual = Qualifier
RL = Reporting Limit
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-4
SUMMARY OF LNAPL ANALYSIS AT AOC 3, 8/9, AND 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID DATE COLLECTED	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC3-MW09-10A January 20, 2010			AOC3-MW09-10B April 5, 2010			AOC3-TB01-10A January 20, 2010			AOC3-TB01-10B April 5, 2010		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)																
1,2,4-Trimethylbenzene	N/A	N/A	920	11 / 11	29	1		280	5		850	5		380	5	
1,3,5-Trimethylbenzene	N/A	N/A	270	10 / 11	15	1		130	5		270	5		130	5	
Benzene	26.8	515	30	11 / 11	0.4	1	J	2	5	J	12	5		1.5	5	J
Ethylbenzene	6,180	53,100	380	10 / 11	0.79	1	J	16	5		380	5		93	5	
m,p-Xylenes	670	14,000	1200	11 / 11	2.8	1		31	5		1200	5		360	5	
Methyl tert-butyl ether	200,000	1,000,000	ND	0 / 11	<	1	U	<	5	U	<	5	U	<	5	U
Naphthalene	359	1,970	140	11 / 11	4	1		47	5		110	5		55	5	
o-Xylene	670	14,000	303 J	1 / 11	<	1	U	<	5	U	<	5	U	<	5	U
Toluene	2,510	53,100	1.5 J	1 / 11	<	1	U	<	5	U	<	5	U	<	5	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)																
1-Methylnaphthalene	N/A	N/A	3500	10 / 11	160	100		100	125	J	490	100		270	125	
2-Methylnaphthalene	N/A	N/A	3900	10 / 11	170	100		120	125	J	650	100		360	125	
Benzo(a)anthracene	4,170	15,600	32 J	2 / 11	<	100	U	<	125	U	32	100	J	<	125	U
Benzo(a)pyrene	794	4,840	ND	0 / 11	<	100	U	<	125	U	<	100	U	<	125	U
Benzo(b)fluoranthene	421	1,270	ND	0 / 11	<	100	U	<	125	U	<	100	U	<	125	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0 / 11	<	100	U	<	125	U	<	100	U	<	125	U
Chrysene	44,700	133,000	220 J	2 / 11	<	100	U	<	125	U	<	100	U	<	125	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0 / 11	<	100	U	<	125	U	<	100	U	<	125	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0 / 11	<	100	U	<	125	U	<	100	U	<	125	U
Naphthalene	359	1,970	1000	10 / 11	210	100		160	125		510	100		410	125	

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
J = Estimated
LNAPL = Light Non-Aqueous Phase Liquid
mg/L = milligram per liter
MNA = Monitored Natural Attenuation
ND = Not Detected
Qual = Qualifier
RL = Reporting Limit
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

TABLE 6-4
SUMMARY OF LNAPL ANALYSIS AT AOC 3, 8/9, AND 11
FORMER LOCKBOURNE AIR FORCE BASE, FRANKLIN COUNTY, OHIO

FIELD ID DATE COLLECTED	Project Action Limit (mg/L)[1]	Project Action Limit (mg/L)[2]	Maximum	Frequency	AOC8/9-MWH9-10A January 20, 2010			AOC8/9-MWH9-10B April 5, 2010			AOC11-MW41-09A July 17, 2009		
					Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
VOLATILE ORGANIC COMPOUNDS (mg/L)													
1,2,4-Trimethylbenzene	N/A	N/A	920	11 / 11	880	5		680	5		0.3	0.025	
1,3,5-Trimethylbenzene	N/A	N/A	270	10 / 11	250	5		190	5		<	0.025	U
Benzene	26.8	515	30	11 / 11	30	5		11	5		0.2	0.025	
Ethylbenzene	6,180	53,100	380	10 / 11	320	5		140	5		<	0.025	U
m,p-Xylenes	670	14,000	1200	11 / 11	690	5		380	5		0.006	0.025	J
Methyl tert-butyl ether	200,000	1,000,000	ND	0 / 11	<	5	U	<	5	U	<	0.025	U
Naphthalene	359	1,970	140	11 / 11	68	5		47	5		0.05	0.025	
o-Xylene	670	14,000	303 J	1 / 11	3.3	5	J	<	5	U	<	0.025	U
Toluene	2,510	53,100	1.5 J	1 / 11	1.5	5	J	<	5	U	<	0.025	U
SEMI-VOLATILE ORGANIC COMPOUNDS (mg/L)													
1-Methylnaphthalene	N/A	N/A	3500	10 / 11	410	100		270	125		<	0.5	U
2-Methylnaphthalene	N/A	N/A	3900	10 / 11	480	100		330	125		<	0.5	U
Benzo(a)anthracene	4,170	15,600	32 J	2 / 11	<	100	U	<	125	U	<	0.5	U
Benzo(a)pyrene	794	4,840	ND	0 / 11	<	100	U	<	125	U	<	0.5	U
Benzo(b)fluoranthene	421	1,270	ND	0 / 11	<	100	U	<	125	U	<	0.5	U
Benzo(k)fluoranthene	149,000	1,000,000	ND	0 / 11	<	100	U	<	125	U	<	0.5	U
Chrysene	44,700	133,000	220 J	2 / 11	<	100	U	<	125	U	<	0.5	U
Dibenzo(a,h)anthracene	2,210	49,400	ND	0 / 11	<	100	U	<	125	U	<	0.5	U
Indeno(1,2,3-cd)pyrene	12,600	77,200	ND	0 / 11	<	100	U	<	125	U	<	0.5	U
Naphthalene	359	1,970	1000	10 / 11	290	100		320	125		<	0.5	U

Notes:

[1] = Ohio BUSTR Soil Class 1, Groundwater to Indoor Air, Non-Residential, <15 feet.
[2] = Ohio BUSTR Soil Class 1, Groundwater to Outdoor Air, Non-Residential.
AOC = Area of Concern
J = Estimated
LNAPL = Light Non-Aqueous Phase Liquid
mg/L = milligram per liter
MNA = Monitored Natural Attenuation
ND = Not Detected
Qual = Qualifier
RL = Reporting Limit
U = Nondetect
The calculation of detection frequency does not include results from reanalyzed samples.

LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

December 07, 2010 8:53:01 a.m.
Drawing: T:\16170434\100\4-1a.dwg

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

200 100 0 200
SCALE IN FEET

URS

AOC 3
JULY 2009 (ROUND 1) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-1a
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

December 07, 2010 9:00:05 a.m.
Drawing: T:\16170434\100\4-1b.dwg

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

200 100 0 200
SCALE IN FEET

URS

AOC 3
OCTOBER 2009 (ROUND 2) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-1b
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

December 07, 2010 8:55:20 a.m.
Drawing: T:\16170434\100\4-1c.dwg

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

200 100 0 200
SCALE IN FEET

URS

AOC3
JANUARY 2010 (ROUND 3) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-1c
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

December 07, 2010 8:57:18 a.m.
Drawing: T:\16170434\100\4-1d.dwg

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

200 100 0 200
SCALE IN FEET

URS

AOC3
APRIL 2010 (ROUND 4) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-1d
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- 725.00 WATER LEVEL (FEET,MSL)

December 07, 2010 9:01:50 a.m.
Drawing: T:\16170434\100\4-2a.dwg

N

100 50 0 100
SCALE IN FEET

URS

AOC 8/9
JULY 2009 (ROUND 1) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-2a
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- 725.00 WATER LEVEL (FEET,MSL)

December 07, 2010 9:04:05 a.m.
Drawing: T:\16170434\100\4-2b.dwg

N

100 50 0 100
SCALE IN FEET

URS

AOC 8/9
OCTOBER 2009 (ROUND 2) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-2b
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

100 50 0 100

SCALE IN FEET

December 07, 2010 9:06:34 a.m.
Drawing: T:\16170434\100\4-2c.dwg

URS

AOC 8/9
JANUARY 2010 (ROUND 3) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-2c
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

100 50 0 100

SCALE IN FEET

December 07, 2010 9:09:52 a.m.
Drawing: T:\16170434\100\4-2d.dwg

URS

AOC 8/9
APRIL 2010 (ROUND 4) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-2d
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

100 50 0 100

SCALE IN FEET

December 07, 2010 9:11:52 a.m.
Drawing: T:\16170434\100\4-3a.dwg

URS

AOC 11
JULY 2009 (ROUND 1) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-3a
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

100 50 0 100

SCALE IN FEET

December 07, 2010 9:14:10 a.m.
Drawing: T:\16170434\100\4-3b.dwg

URS

AOC 11
OCTOBER 2009 (ROUND 2) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-3b
CHK'D. BY: BG	REVISION: 0		

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- MONITORING WELL WITH LNAPL
- 725.00 WATER LEVEL (FEET,MSL)
- (725.00) CORRECTED WATER LEVEL (FEET,MSL)

NOTE: MONITORING WELLS WITH LNAPL WERE INCLUDED TO DEVELOP WATER TABLE ELEVATION MAPS.

N

100 50 0 100

SCALE IN FEET

URS

AOC 11
JANUARY 2010 (ROUND 3) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-3c
CHK'D. BY: BG	REVISION: 0		

December 07, 2010 9:15:44 a.m.
Drawing: T:\16170434\100\4-3c.dwg

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LEGEND

- FORMER LOCKBOURNE AFB BOUNDARY
- AOC BOUNDARY
- WATER LEVEL CONTOUR
- MONITORING WELL
- 725.00 WATER LEVEL (FEET,MSL)

N

100 50 0 100

SCALE IN FEET

December 07, 2010 9:17:16 a.m.
Drawing: T:\16170434\100\4-3d.dwg

URS

AOC 11
APRIL 2010 (ROUND 4) WATER LEVELS
FORMER LOCKBOURNE AIR FORCE BASE, OHIO

DRN. BY: LLS	DATE: 12/01/10	PROJECT NO. 16170434	FIG. NO. 4-3d
CHK'D. BY: BG	REVISION: 0		

Appendix C

Figures from Previous Reports

Appendix C-1
Figure 3. Site Map – AOC 3
Figure 4. Site Utilities and Contours Map – AOC 3
Figure 6A. Cross-Sectional Location Map – AOC 3
Figure 6B. Geologic Cross Section E-E'

Appendix C-2
Figure 4. Site Utilities and Contours Map – AOC 8/9
Figure 5. Soil Boring and Well Locations
Figure 6. Borings and Well Locations – AOC 8/9
Figure 9. Cross-Sectional Map – AOC 8/9
Figure 10. Geologic Cross Section – AOC 8/9

Appendix C-3
Figure 1-3. AOC 11/Bldg 1076 Layout
Figure 2-1. AOC 11/Bldg 1076 Contaminant Areas

Appendix C-1

AOC 3 Boring and Well Location, Free Product Extent, and Cross Section Drawings

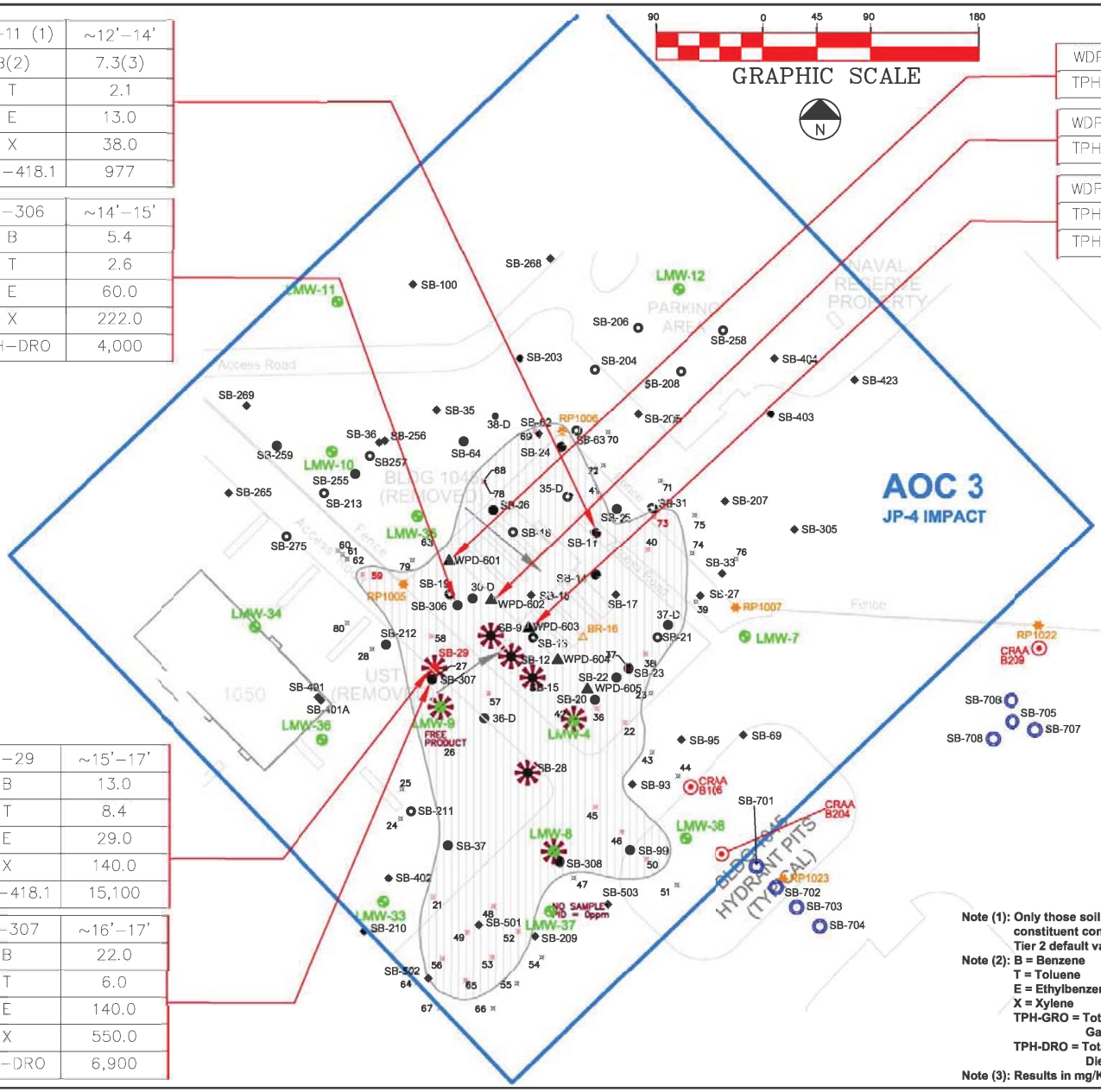
From
Tier 2 Evaluation Report From Building 1045 Area
AOC 3 prepared by Tetra Tech, August 2007 (Ref 3)

SB-11 (1)	~12'-14'
B(2)	7.3(3)
T	2.1
E	13.0
X	38.0
TPH-418.1	977

SB-306	~14'-15'
B	5.4
T	2.6
E	60.0
X	222.0
TPH-DRO	4,000

SB-29	~15'-17'
B	13.0
T	8.4
E	29.0
X	140.0
TPH-418.1	15,100

SB-307	~16'-17'
B	22.0
T	6.0
E	140.0
X	550.0
TPH-DRO	6,900



WDP-601	@ 14'
TPH-GRO	1,130

WDP-603	@ 17'
TPH-GRO	2,070

WDP-604	@ 15'
TPH-GRO	1,960
TPH-DRO	3,780

LEGEND:

- ESTIMATED EXTENT OF FREE PRODUCT
- FREE PRODUCT ENCOUNTERED IN WELL OR BORING
- PHASE I DEEP SOIL BORING LOCATION (0-27')
- PHASE I SHALLOW SOIL BORING LOCATION 90-15')
- MONITOR WELL LOCATION
- RPA MONITOR WELL LOCATION
- CRAA GEOTECHNICAL BORINGS
- TT SOIL BORINGS (701-708)
- SOIL BORING LOCATION ABOVE PRIOR BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE PRIOR BUSTR
- SOIL BORING LOCATION ABOVE PRIOR BUSTR
- SOIL BORING LOCATION BELOW PRIOR BUSTR
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS
- WIDE DP-601 to 605 (TPH ANALYSES NOV '06)
- STORM SEWER INLET
- SAN. SEWER LINE
- WATER LINE
- TOPOGRAPHIC CONTOUR LINE
- DRAINAGE
- STORM SEWER LINE
- STREAM
- JET FUEL/AVGAS(PREV. REMOVED)
- JET FUEL/AVGAS(GROUTED/PLACE)
- JET FUEL/AVGAS
- TELEPHONE LINE
- ELECTRIC LINE

Note (1): Only those soil boring locations with constituent concentrations exceeding BUSTR Tier 2 default values are listed on this figure

Note (2): B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylene
TPH-GRO = Total Petroleum Hydrocarbons Gasoline Range Organics
TPH-DRO = Total Petroleum Hydrocarbons Diesel Range Organics

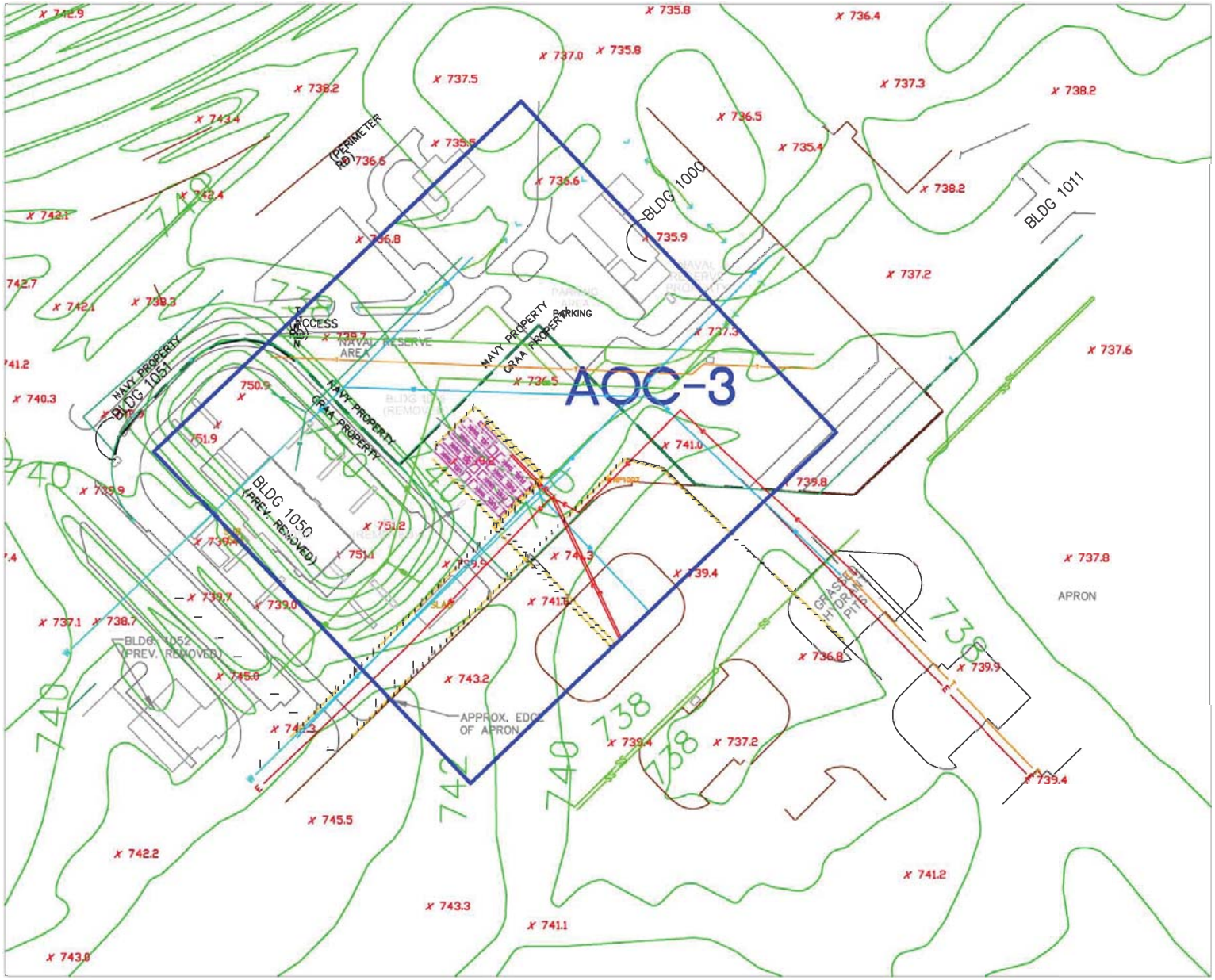
Note (3): Results in mg/Kg

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base		
LOCATION:	Columbus, Ohio		
PROJECT:	BUSTR Tier 2 Report - AOC 3		
TITLE:	SITE MAP - AOC 3		
USACE CONTRACT #:	DACW62-94-D-0001		
TETRA TECH PROJECT NO.:	19170		
SCALE:	Graphic	CHECKED BY:	DNL
DATE:	8/16/2007	DRAWN BY:	DWC

FIGURE 3

FILE NAME: Figure 3 Site Map AOC 3.dwg



N

130 0 65 130 260

GRAPHIC SCALE
(IN FEET)

LEGEND:

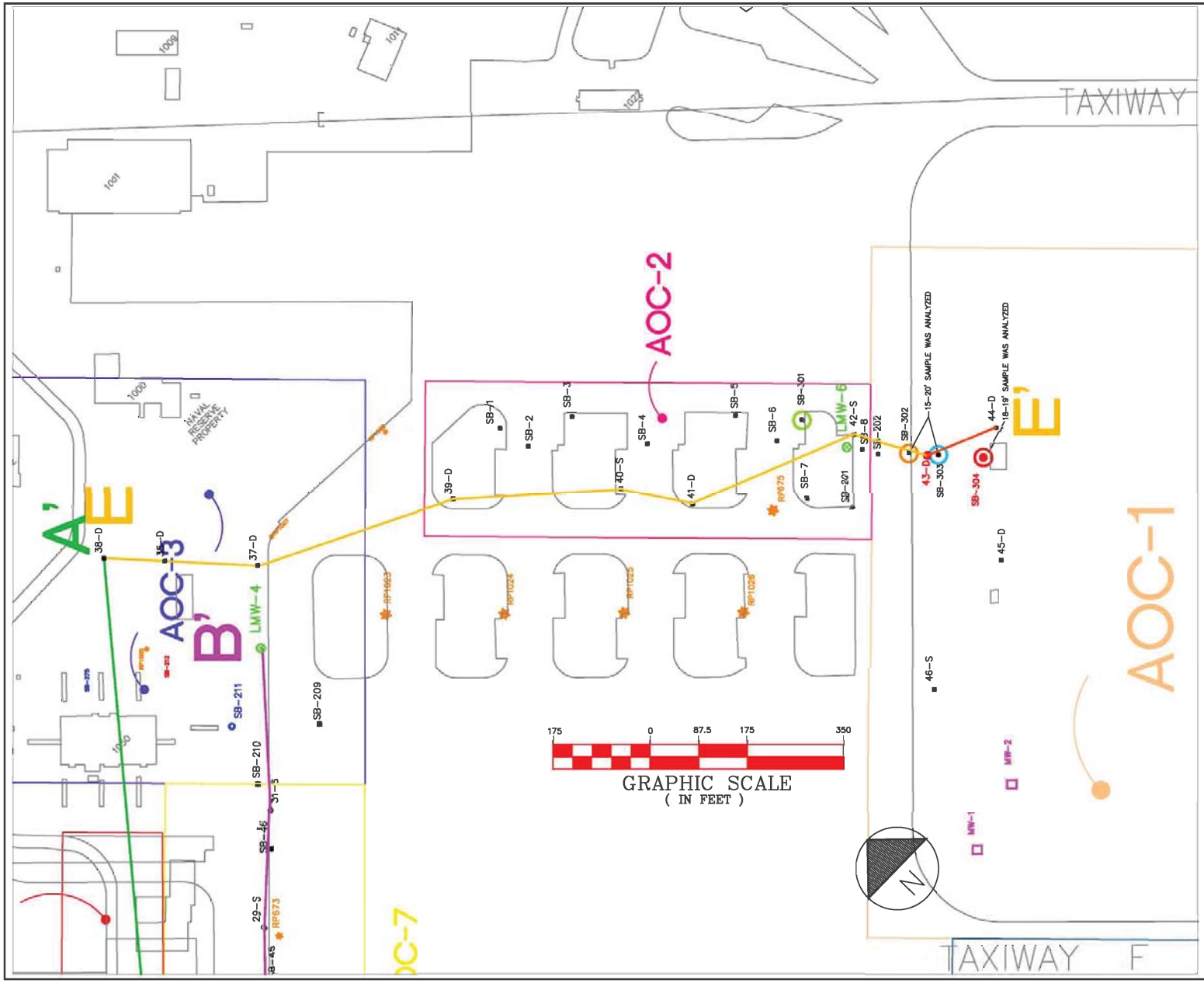
- AREA OF CONCERN
- MONITOR WELL LOCATION
- RPA MONITOR WELL LOCATION
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 2 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING LOCATION BELOW OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS
- STORM SEWER INLET
- S — SAN. SEWER LINE
- W — WATER LINE
- TOPOGRAPHIC CONTOUR LINE
- DRAINAGE
- SS — STORM SEWER LINE
- STREAM
- JET FUEL/AVGAS(PREV. REMOVED)
- JF — JET FUEL/AVGAS(GROUTED/PLACE)
- JF — JET FUEL/AVGAS
- T — TELEPHONE LINE
- E — ELECTRIC LINE

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base		
LOCATION:	Columbus, Ohio		
PROJECT:	BUSTR Tier 2 Report - AOC 3		
TITLE:	SITE UTILITIES AND CONTOURS MAP - AOC 3		
USACE CONTRACT #:	DACW62-94-D-0001		
TETRA TECH PROJECT NO.:	19170		
SCALE: Graphic		CHECKED BY:	DNL
DATE: 8/16/2007		DRAWN BY:	DWC

FIGURE 4

FILE NAME: Figure_4_Site Utilities/ContourAOC 3.dwg



LEGEND:

- ESTIMATED EXTENT OF FREE PRODUCT
- FREE PRODUCT ENCOUNTERED IN WELL OR BORING
- PHASE I DEEP SOIL BORING LOCATION (0–27')
- PHASE I SHALLOW SOIL BORING LOCATION 90–15')
- MONITOR WELL LOCATION
- RPA MONITOR WELL LOCATION
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 2 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING LOCATION BELOW OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS

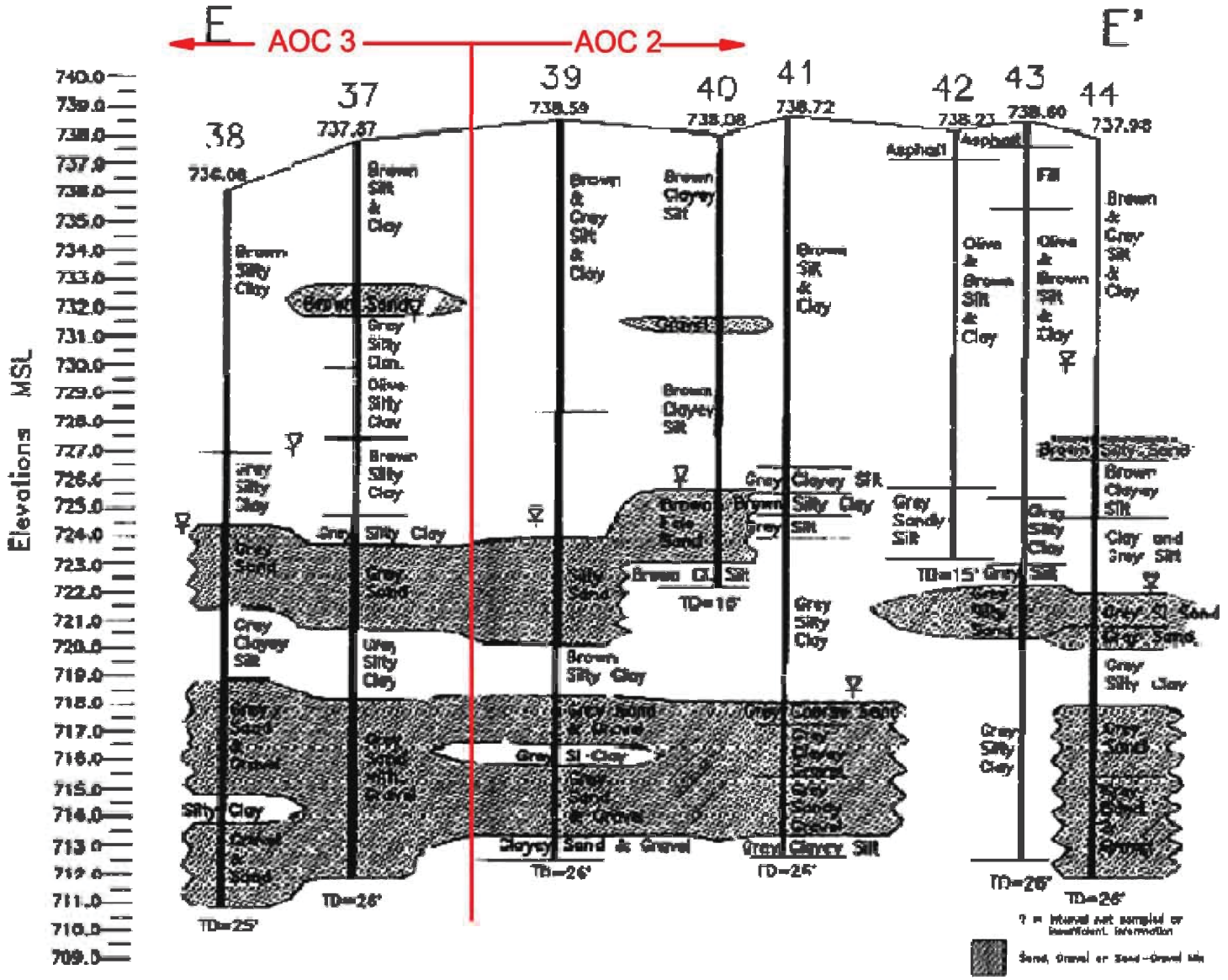
- STORM SEWER INLET
- SAN. SEWER LINE
- WATER LINE
- TOPOGRAPHIC CONTOUR LINE
- DRAINAGE
- STORM SEWER LINE
- STREAM
- JET FUEL/AVGAS(PREV. REMOVED)
- JET FUEL/AVGAS(GROUTED/PLACE)
- JET FUEL/AVGAS
- TELEPHONE LINE
- ELECTRIC LINE

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base
LOCATION:	Columbus, Ohio
PROJECT:	BUSTR Tier 2 Report - AOC 3
TITLE:	CROSS-SECTIONAL LOCATION MAP AOC 3
USACE CONTRACT #:	DACW62-94-D-0001
TETRA TECH PROJECT NO.:	19170
SCALE: Graphic	CHECKED BY: DNL
DATE: 8/16/2007	DRAWN BY: DWC

FIGURE 6A

FILE NAME: Fig 6A Cross-Sect Locations Map AOC3.dwg



SOURCE: Huntington TCT RI-Phase I

LEGEND:

- ESTIMATED EXTENT OF FREE PRODUCT
- FREE PRODUCT ENCOUNTERED IN WELL OR BORING
- PHASE I DEEP SOIL BORING LOCATION (0–27')
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- RPA MONITOR WELL LOCATION
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 2 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING LOCATION BELOW OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS
- STORM SEWER INLET
- SAN. SEWER LINE
- WATER LINE
- TOPOGRAPHIC CONTOUR LINE
- DRAINAGE
- STORM SEWER LINE
- STREAM
- JET FUEL/AVGAS(PREV. REMOVED)
- JET FUEL/AVGAS(GROUTED/PLACE)
- JET FUEL/AVGAS
- TELEPHONE LINE
- ELECTRIC LINE

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base
LOCATION:	Columbus, Ohio
PROJECT:	BUSTR Tier 2 Report AOC 3
TITLE:	GEOLOGIC CROSS-SECTION E-E'
USACE CONTRACT #:	DACW62-94-D-0001
TETRA TECH PROJECT NO.:	19170
SCALE: NTS	CHECKED BY: DNL
DATE: 8/16/2007	DRAWN BY: DWC

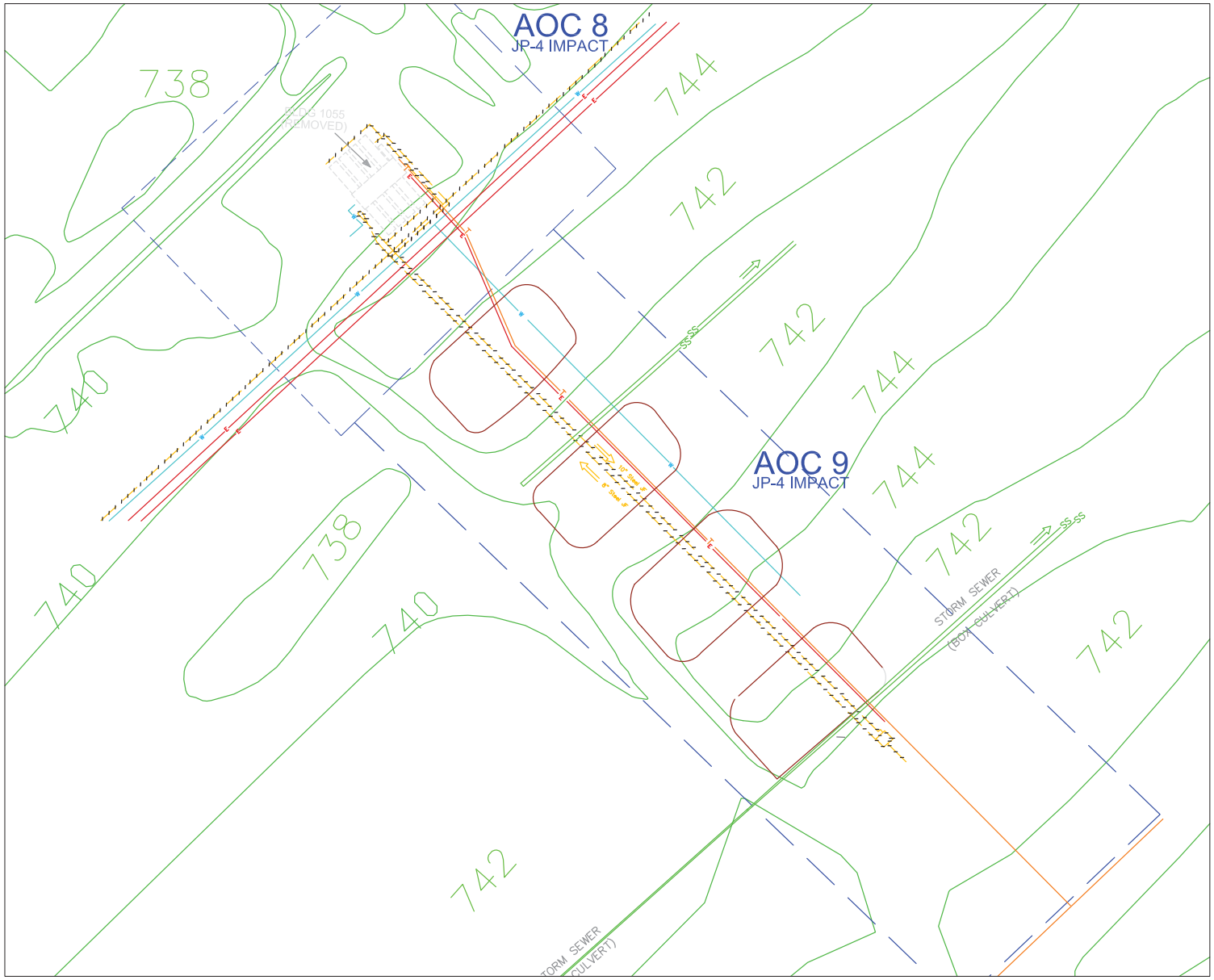
FIGURE 6B

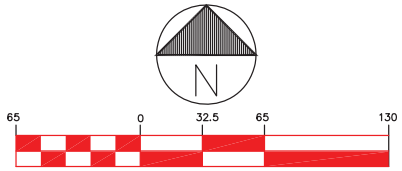
FILE NAME: Fig_6B_Geologic Cross-Section E-E'.dwg

Appendix C-2

AOC 8/9 Boring and Well Location, Free Product Extent, and Cross Section Drawings

From
Tier 2 Evaluation Report Form Building 1055 Area and Hydrant Pits Area, AOC 8/9 prepared by Tetra Tech, September 2007 (Ref 4)





GRAPHIC SCALE
(IN FEET)

LEGEND:

- AREA OF CONCERN
- MONITOR WELL LOCATION
- RPA MONITOR WELL LOCATION
- SOIL BORING LOCATION ABOVE PRIOR OHIO BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE PRIOR OHIO BUSTR CATEGORY 2 CRITERIA
- SOIL BORING LOCATION ABOVE PRIOR OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING LOCATION BELOW PRIOR OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS
- STORM SEWER INLET
- S — SAN. SEWER LINE
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- DRAINAGE
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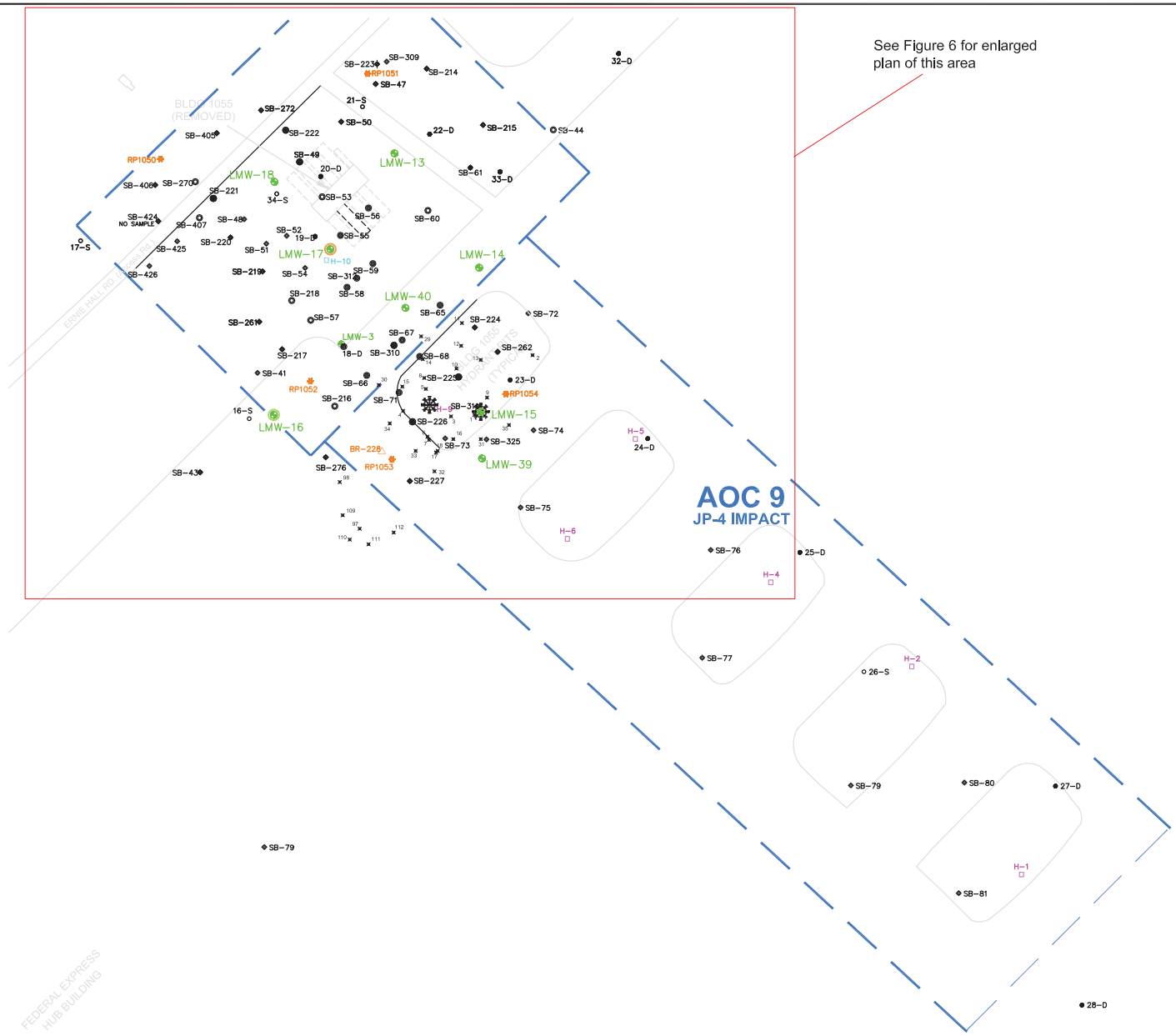
- JET FUEL/AVGAS(PREV. REMOVED)
- JF — JET FUEL/AVGAS(GROUTED/PLACE)
- JF — JET FUEL/AVGAS
- T — TELEPHONE LINE
- E — ELECTRIC LINE

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base		
LOCATION:	Columbus, Ohio		
PROJECT:	BUSTR Tier 2 Evaluation Report		
TITLE: SITE UTILITIES AND CONTOURS MAP - AOC 8/9			
USACE CONTRACT #:	DACW62-99-D-0024		
TETRA TECH PROJECT NO.:	19170		
SCALE:	Graphic	CHECKED BY:	DNL
DATE:	Sept. 6, 2007	DRAWN BY:	DWC

FIGURE 4

FILE NAME: Fig_4_Site Utilities/ContourAOC 8/9.dwg



N

130 0 65 130 260

GRAPHIC SCALE
(IN FEET)

LEGEND:

- AREA OF CONCERN
- MONITOR WELL LOCATION
- RPA MONITOR WELL LOCATION
- SOIL BORING LOCATION ABOVE PRIOR OHIO BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE PRIOR OHIO BUSTR CATEGORY 2 CRITERIA
- SOIL BORING LOCATION ABOVE PRIOR OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING LOCATION BELOW PRIOR OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS
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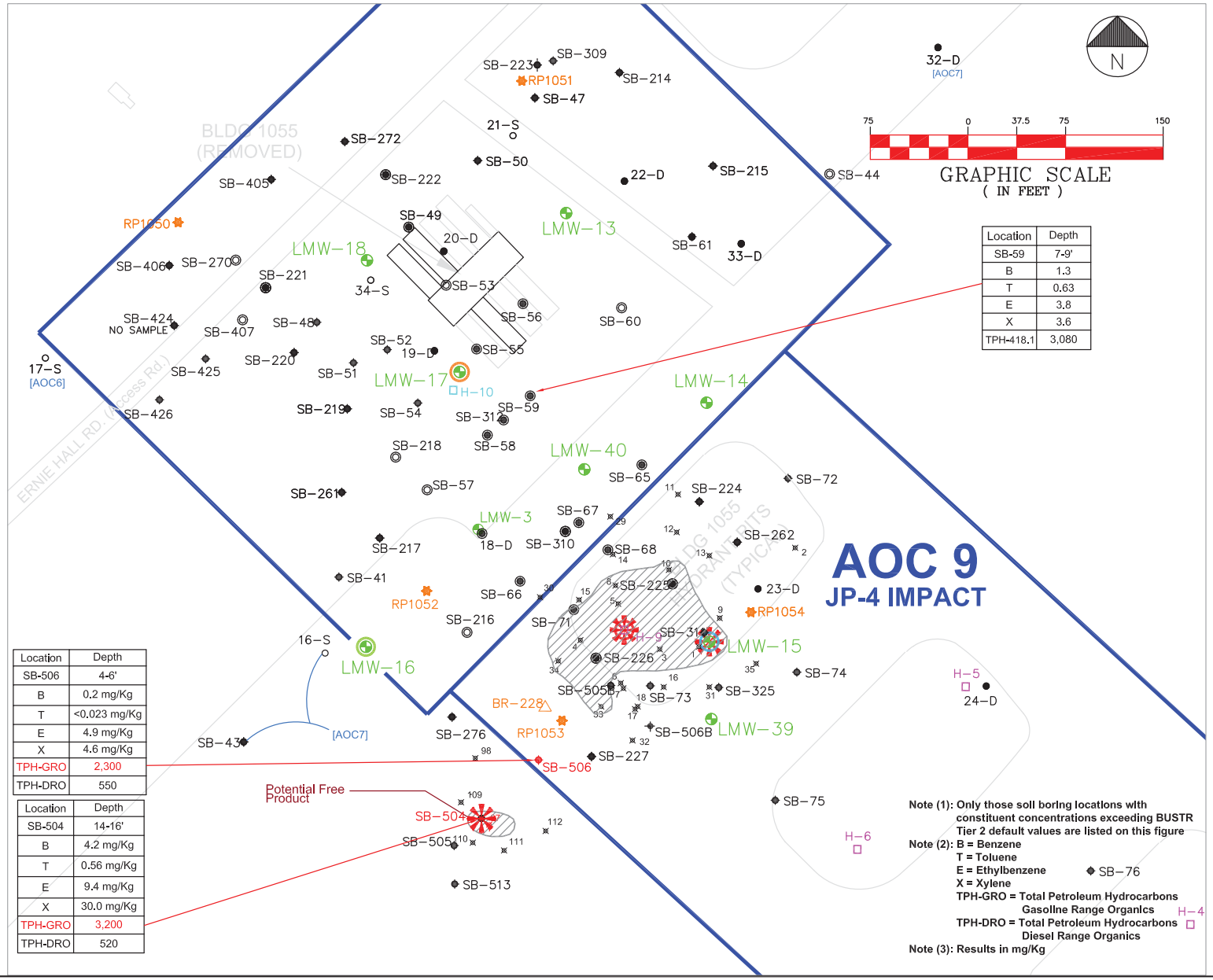
- W — WATER LINE
- TOPOGRAPHIC CONTOUR LINE
- DRAINAGE
- SS — STORM SEWER LINE
- STREAM
- JET FUEL/AVGAS(PREV. REMOVED)
- JF — JET FUEL/AVGAS(GROUTED/PLACE)
- JF — JET FUEL/AVGAS
- T — TELEPHONE LINE
- E — ELECTRIC LINE

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base
LOCATION:	Columbus, Ohio
PROJECT:	BUSTR Tier 2 Evaluation Report
TITLE:	SOIL BORING AND WELL LOCATIONS
USACE CONTRACT #:	DACW62-99-D-0024
TETRA TECH PROJECT NO.:	19170
SCALE: Graphic	CHECKED BY: DNL
Date: Sept. 6, 2007	DRAWN BY: DWC

FIGURE 5

FILE NAME: Figure_5_Soil Borings.dwg



Location	Depth
SB-59	7-9'
B	1.3
T	0.63
E	3.8
X	3.6
TPH-418.1	3,080

Location	Depth
SB-506	4-6'
B	0.2 mg/Kg
T	<0.023 mg/Kg
E	4.9 mg/Kg
X	4.6 mg/Kg
TPH-GRO	2,300
TPH-DRO	550

Location	Depth
SB-504	14-16'
B	4.2 mg/Kg
T	0.56 mg/Kg
E	9.4 mg/Kg
X	30.0 mg/Kg
TPH-GRO	3,200
TPH-DRO	520

Note (1): Only those soil boring locations with constituent concentrations exceeding BUSTR Tier 2 default values are listed on this figure

Note (2): B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylene
TPH-GRO = Total Petroleum Hydrocarbons Gasoline Range Organics
TPH-DRO = Total Petroleum Hydrocarbons Diesel Range Organics

Note (3): Results in mg/Kg

LEGEND:

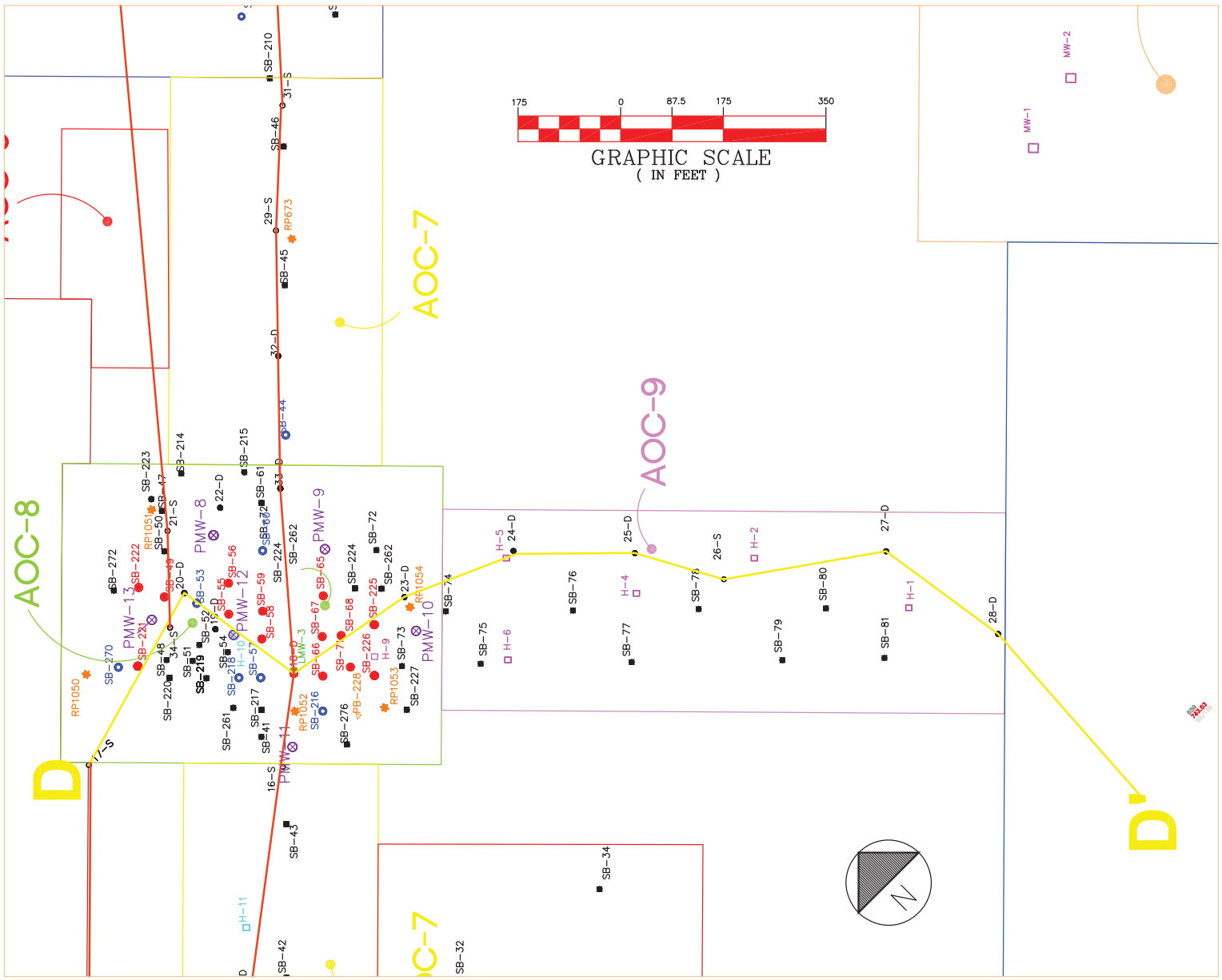
- ESTIMATED EXTENT OF FREE PRODUCT
- FREE PRODUCT ENCOUNTERED IN WELL OR BORING
- PHASE I DEEP SOIL BORING LOCATION (0–27')
- PHASE I SHALLOW SOIL BORING LOCATION 90–15')
- MONITOR WELL LOCATION
- RPA MONITOR WELL LOCATION
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 2 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING LOCATION BELOW OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS
- STORM SEWER INLET
- S — SAN. SEWER LINE
- W — WATER LINE
- TOPOGRAPHIC CONTOUR LINE
- DRAINAGE
- SS — STORM SEWER LINE
- STREAM
- JET FUEL/AVGAS(PREV. REMOVED)
- JF — JET FUEL/AVGAS(GROUTED/PLACE)
- JF — JET FUEL/AVGAS
- T — TELEPHONE LINE
- E — ELECTRIC LINE

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base
LOCATION:	Columbus, Ohio
PROJECT:	BUSTR Tier 2 Evaluation Report
TITLE:	Borings & Well Locations AOC 8/9
USACE CONTRACT #:	DACW62-99-D-0024
TETRA TECH PROJECT NO.:	19170
SCALE: Graphic	CHECKED BY: DNL
DATE: Sept. 6, 2007	DRAWN BY: DWC

FIGURE 6

FILE NAME: Figure_6_Borings & Well locations.dwg



LEGEND:

- ESTIMATED EXTENT OF FREE PRODUCT
- FREE PRODUCT ENCOUNTERED IN WELL OR BORING
- PHASE I DEEP SOIL BORING LOCATION (0–27')
- PHASE I SHALLOW SOIL BORING LOCATION 90–15')
- MONITOR WELL LOCATION
- RPA MONITOR WELL LOCATION
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 3 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 2 CRITERIA
- SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING LOCATION BELOW OHIO BUSTR CATEGORY 1 CRITERIA
- SOIL BORING REFUSAL LOCATION
- SURVEYED REFERENCE POINTS

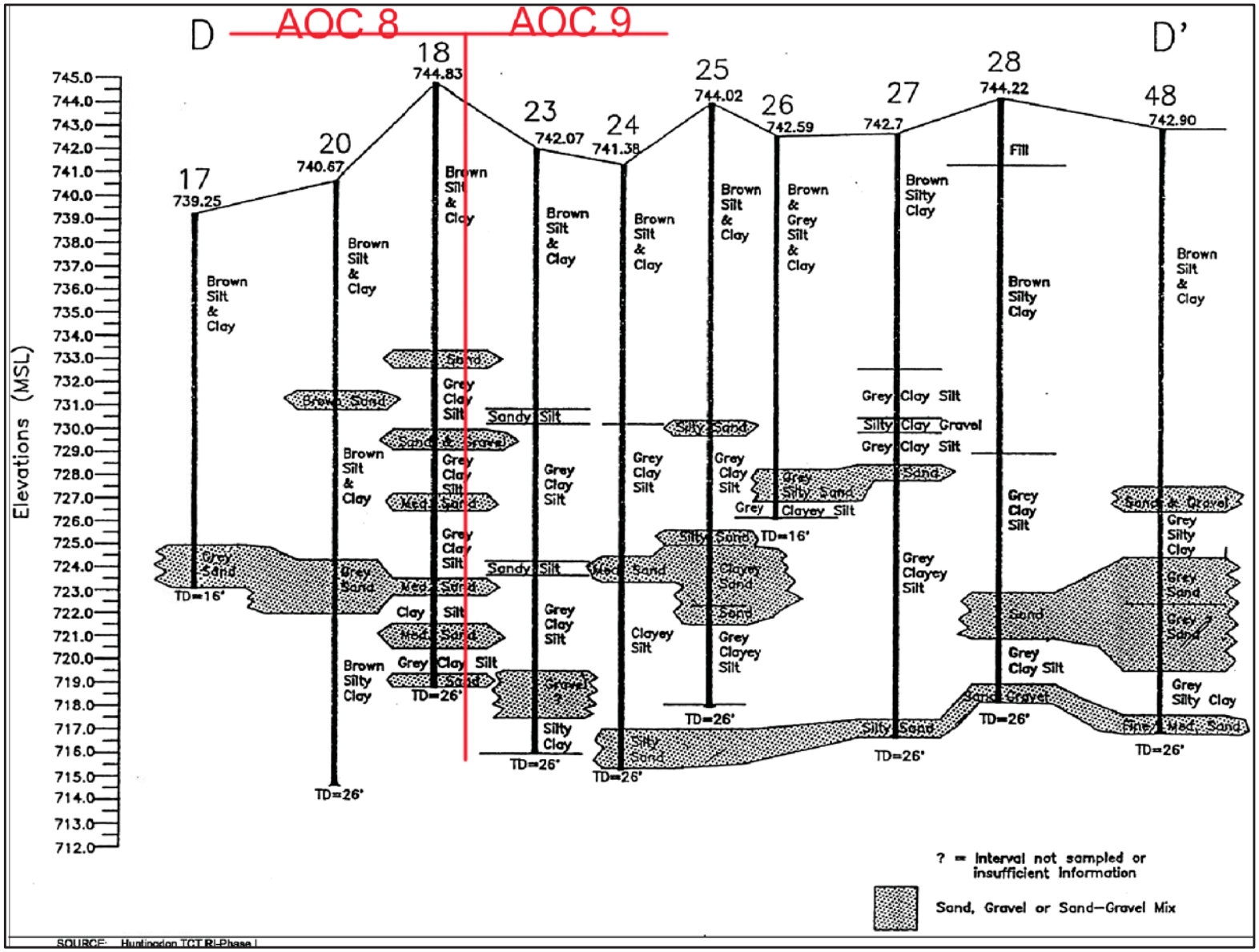
- STORM SEWER INLET
- S — SAN. SEWER LINE
- W — WATER LINE
- TOPOGRAPHIC CONTOUR LINE
- DRAINAGE
- SS — STORM SEWER LINE
- STREAM
- JET FUEL/AVGAS(PREV. REMOVED)
- JF — JET FUEL/AVGAS(GROUTED/PLACE)
- JF — JET FUEL/AVGAS
- T — TELEPHONE LINE
- E — ELECTRIC LINE

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE: Former Lockbourne Air Force Base	
Location: Columbus, Ohio	
PROJECT: BUSTR Tier 2 Evaluation Report	
TITLE: CROSS-SECTIONAL MAP AOC 8/9	
USACE CONTRACT #: DACW62-99-D-0024	
TETRA TECH PROJECT NO.: 19170	
SCALE: Graphic	CHECKED BY: DNL
DATE: Sept. 6, 2007	DRAWN BY: DWC

FIGURE 9

FILE NAME: Fig 9 Cross-Section Map AOC 8/9



SOURCE: Huntingdon TCT RI-Phase I

Tetra Tech, Inc.
Environmental Engineers & Scientists

SITE:	Former Lockbourne Air Force Base
LOCATION:	Columbus, Ohio
PROJECT:	BUSTR Tier 2 Evaluation Report
TITLE:	GEOLOGIC CROSS-SECTION- AOC 8/9
USACE CONTRACT #:	DACW62-99-D-0024
TETRA TECH PROJECT NO.:	19170
SCALE: NTS	CHECKED BY: DNL
DATE: Sept 6, 2007	DRAWN BY: DWC

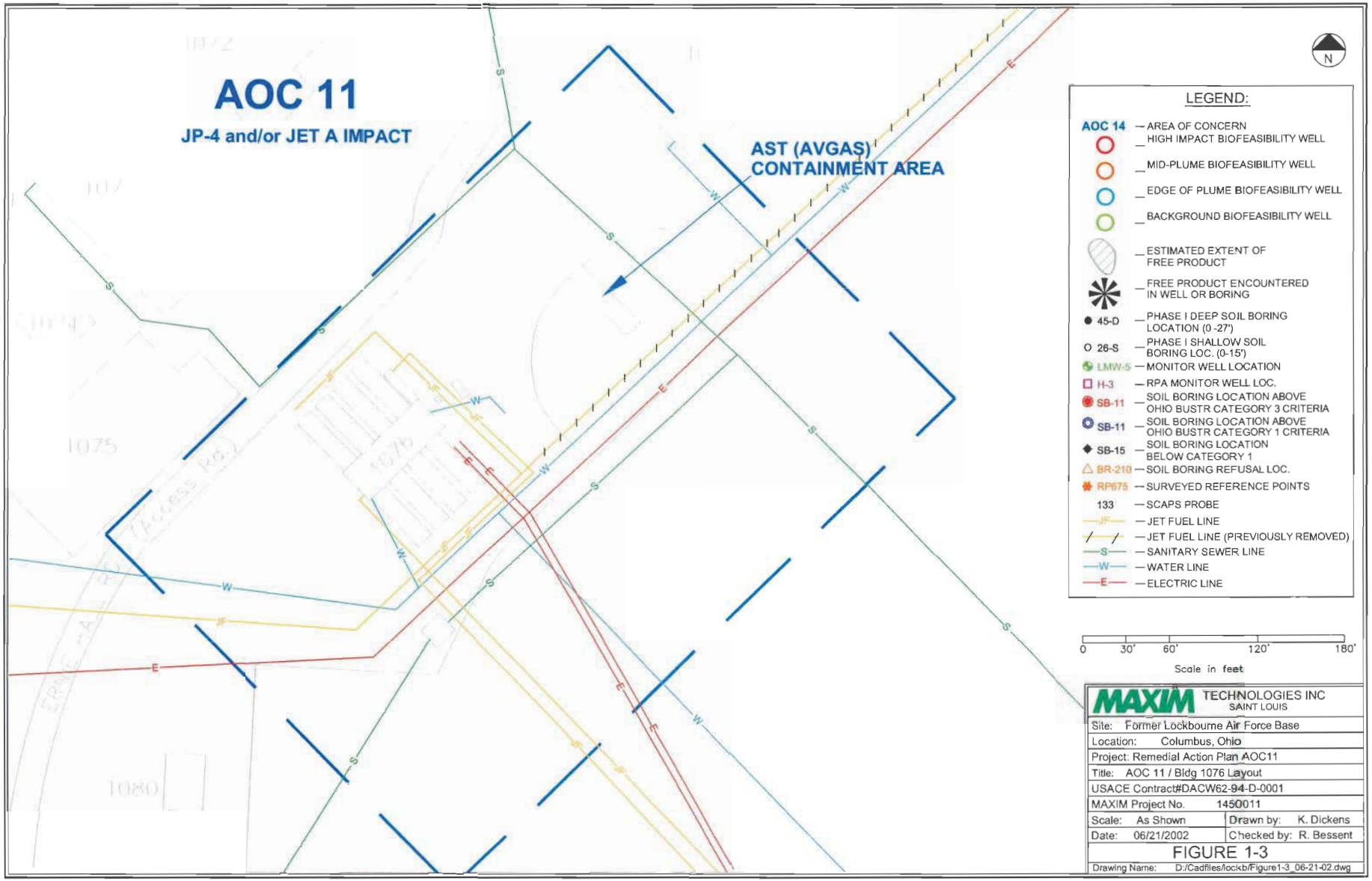
FIGURE 10

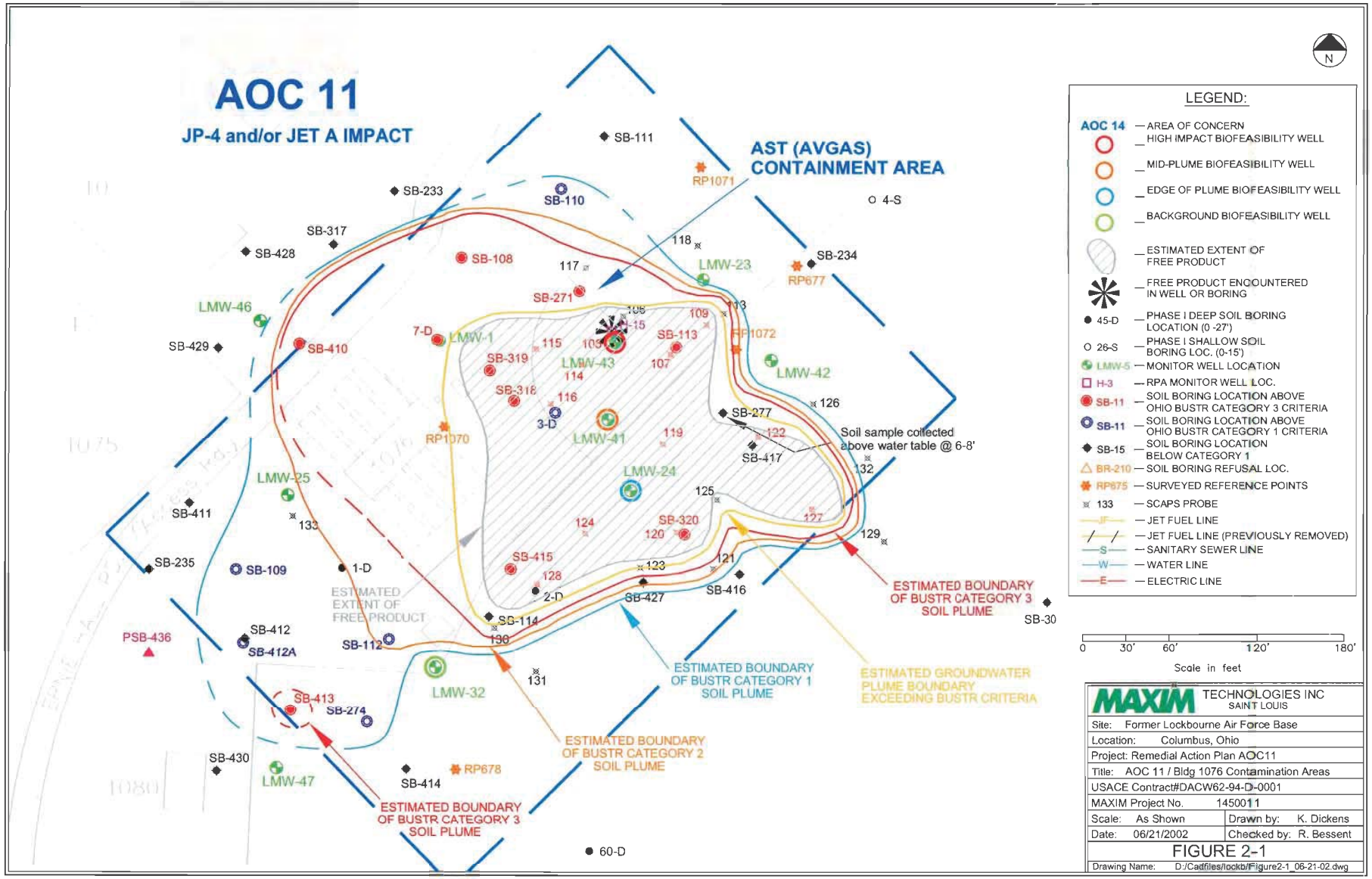
FILE NAME: Fig_10_Geologic Cross Section.dwg

Appendix C-3

AOC 11 Boring and Well Location and Free Product Extent Drawings

From
Remedial Action Plan (RAP), Area of Concern (AOC) 11 Building 1076 Area
Maxim Technologies, June 26, 2002 (Ref 15)


AOC 11
JP-4 and/or JET A IMPACT
AST (AVGAS)
CONTAINMENT AREA
1075
1076
1080
N
LEGEND:
AOC 14 — AREA OF CONCERN
— HIGH IMPACT BIOFEASIBILITY WELL
— MID-PLUME BIOFEASIBILITY WELL
— EDGE OF PLUME BIOFEASIBILITY WELL
— BACKGROUND BIOFEASIBILITY WELL
— ESTIMATED EXTENT OF FREE PRODUCT
— FREE PRODUCT ENCOUNTERED IN WELL OR BORING
45-D — PHASE I DEEP SOIL BORING LOCATION (0 -27')
26-S — PHASE I SHALLOW SOIL BORING LOC. (0-15')
LMW-5 — MONITOR WELL LOCATION
H-3 — RPA MONITOR WELL LOC.
SB-11 — SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 3 CRITERIA
SB-11 — SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 1 CRITERIA
SB-15 — SOIL BORING LOCATION BELOW CATEGORY 1
BR-210 — SOIL BORING REFUSAL LOC.
RP675 — SURVEYED REFERENCE POINTS
133 — SCAPS PROBE
JF — JET FUEL LINE
— JET FUEL LINE (PREVIOUSLY REMOVED)
S — SANITARY SEWER LINE
W — WATER LINE
E — ELECTRIC LINE
0 30' 60' 120' 180'
Scale in feet
MAXIM TECHNOLOGIES INC
SAINT LOUIS
Site: Former Lockbourne Air Force Base
Location: Columbus, Ohio
Project: Remedial Action Plan AOC11
Title: AOC 11 / Bldg 1076 Layout
USACE Contract#DACW62-94-D-0001
MAXIM Project No. 1450011
Scale: As Shown
Drawn by: K. Dickens
Date: 06/21/2002
Checked by: R. Bessent
FIGURE 1-3
Drawing Name: D:/Cadfiles/lockb/Figure1-3_06-21-02.dwg


AOC 11
JP-4 and/or JET A IMPACT
AST (AVGAS) CONTAINMENT AREA
SB-111
SB-233
SB-110
RP1071
4-S
SB-317
SB-428
SB-108
117
118
LMW-23
SB-234
RP677
LMW-46
SB-271
105
115
109
113
SB-429
SB-410
7-D
LMW-1
SB-113
RP1072
SB-319
115
103
LMW-43
107
LMW-42
114
SB-318
116
126
3-D
SB-277
RP1070
LMW-41
119
122
Soil sample collected above water table @ 6-8'
SB-417
LMW-24
132
LMW-25
125
SB-411
133
124
SB-320
127
120
129
SB-235
SB-109
1-D
SB-415
123
121
128
2-D
SB-427
SB-416
ESTIMATED EXTENT OF FREE PRODUCT
SB-114
SB-30
PSB-436
SB-412
SB-412A
SB-112
136
131
LMW-32
SB-413
SB-274
SB-430
LMW-47
SB-414
RP678
60-D
ESTIMATED BOUNDARY OF BUSTR CATEGORY 3 SOIL PLUME
ESTIMATED BOUNDARY OF BUSTR CATEGORY 1 SOIL PLUME
ESTIMATED GROUNDWATER PLUME BOUNDARY EXCEEDING BUSTR CRITERIA
ESTIMATED BOUNDARY OF BUSTR CATEGORY 2 SOIL PLUME
ESTIMATED BOUNDARY OF BUSTR CATEGORY 3 SOIL PLUME
N
LEGEND:
AOC 14 — AREA OF CONCERN
— HIGH IMPACT BIOFEASIBILITY WELL
— MID-PLUME BIOFEASIBILITY WELL
— EDGE OF PLUME BIOFEASIBILITY WELL
— BACKGROUND BIOFEASIBILITY WELL
— ESTIMATED EXTENT OF FREE PRODUCT
— FREE PRODUCT ENCOUNTERED IN WELL OR BORING
45-D — PHASE I DEEP SOIL BORING LOCATION (0 -27')
26-S — PHASE I SHALLOW SOIL BORING LOC. (0-15')
LMW-5 — MONITOR WELL LOCATION
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SB-11 — SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 3 CRITERIA
SB-11 — SOIL BORING LOCATION ABOVE OHIO BUSTR CATEGORY 1 CRITERIA
SB-15 — SOIL BORING LOCATION BELOW CATEGORY 1
BR-210 — SOIL BORING REFUSAL LOC.
RP675 — SURVEYED REFERENCE POINTS
133 — SCAPS PROBE
— JET FUEL LINE
— JET FUEL LINE (PREVIOUSLY REMOVED)
— SANITARY SEWER LINE
— WATER LINE
— ELECTRIC LINE
0 30' 60' 120' 180'
Scale in feet
MAXIM TECHNOLOGIES INC SAINT LOUIS
Site: Former Lockbourne Air Force Base
Location: Columbus, Ohio
Project: Remedial Action Plan AOC11
Title: AOC 11 / Bldg 1076 Contamination Areas
USACE Contract#DACW62-94-D-0001
MAXIM Project No. 1450011
Scale: As Shown
Drawn by: K. Dickens
Date: 06/21/2002
Checked by: R. Bessent
FIGURE 2-1
Drawing Name: D:/Cadfiles/lockb/Figure2-1_06-21-02.dwg

Appendix D

ATSDR JP-4 Properties

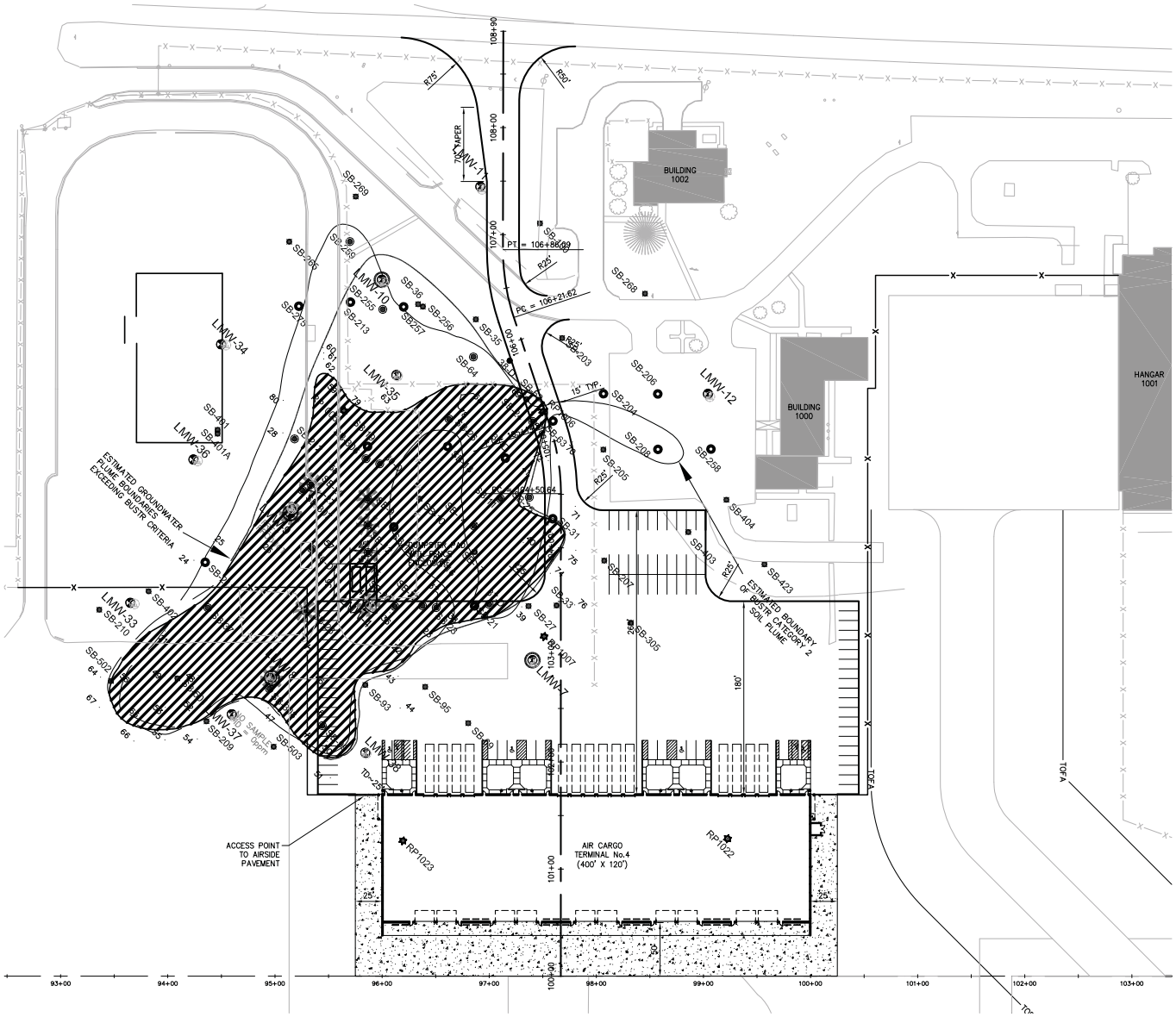
TABLE 3-3. Physical and Chemical Properties of JP-4[a]

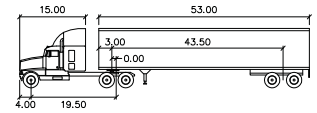
Property	Information	Reference
Molecular weight	Not applicable[b]	
Color	Colorless to straw colored	CHRIS 1986; Martel 1992
Physical state	Liquid	CHRIS 1986
Melting point	-46 °C	OHM/TADS 1985
	-40–72 °C	ITC 1985
Boiling point (1 atm)	50–270 °C	Air Force 1989b
	90–300 °C	ITC 1985
	45–280 °C	Dickson and Woodward 1987
Density:		
at 15 °C	751–802 kg/m^3 (specification)	
Odor	Like gasoline and/or kerosene	
Odor threshold:		
Water	No data	
Air	1 ppm	CHRIS 1986
Solubility:		
Water at 20 °C	57 mg/L	CRC 1984
Organic solvent(s)	Since many of the components are organic solvents, the fuel is generally miscible with organic solvents	ITC 1985
Partition coefficients:		
Log K_{ow}	Major components range from 3 to 4.5	ITC 1985
Log K_{oc}	No data	
Vapor pressure at 20 °C	91 mm Hg	Air Force 1989b
Henry's law constant	1.00×10^{-4}-$1.00 \times 10^{+1}$ atm-m^3/mol	Air Force 1989b
Autoignition temperature	246 °C	CRC 1984
Flashpoint	-23–1 °C	NFPA 1986
Flammability limits	1.3% lower; 8.0% upper	NFPA 1986
Explosive limits	No data	

[a]JP-4, or jet propellant-4, is a mixed compound composed primarily of hydrocarbons (i.e., alkanes, cycloalkanes, alky-benzenes, indan/tetralins, and naphthalenes).
[b]Jet fuels are blends prepared to meet certain gross property specifications. Most characteristic data only reflect gross properties covered in the specifications. Proportions and values vary with the type of crude oil from which the final fuel is derived and the refining process used.

Appendix E

Existing and Proposed Structures





WB-65

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.00
Trailer Width	: 8.50	Steering Angle	: 28.40
Tractor Track	: 8.00	Articulating Angle	: 70.00
Trailer Track	: 8.50		

DESIGN VEHICLE: WB-65

SITE DATA

PARKING SPACES CAR (9' X 18.5' TYP.)	78
HANDICAP PARKING SPACES	4
TOTAL PARKING SPACES	82

NORTH

0 50 100 150
SCALE IN FEET

REVISIONS

DATE	BY

SCALE: 1"=50'
DATE: 03-29-07
DRAWN BY: RDH

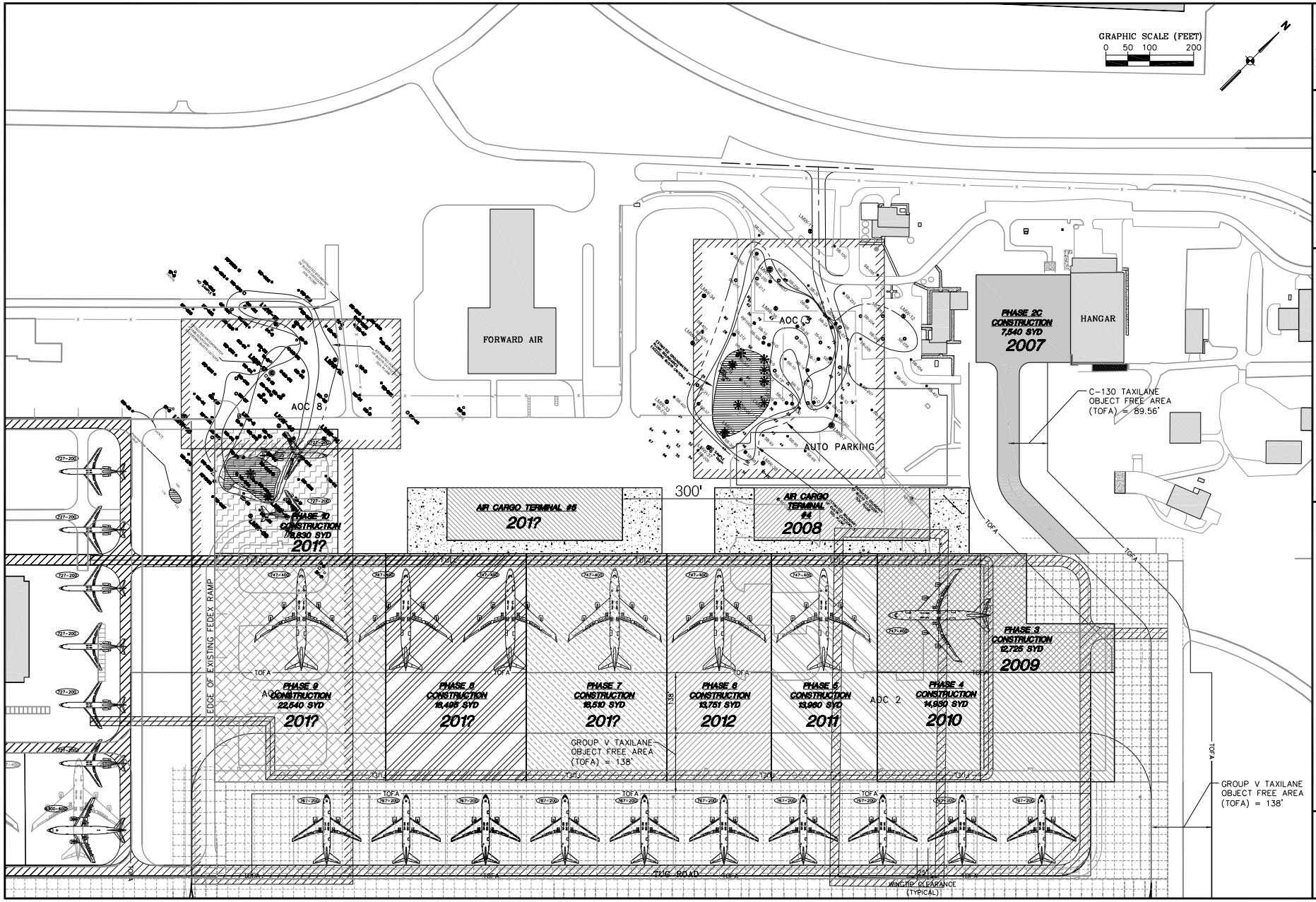
HSH Architect, Engineer, Planner and Environmental Services
8040 Cliff Ridge Drive, Suite 200
Dublin, Ohio 43016
614-889-0480 FAX 614-889-0481
www.hsh-inc.com

Rickenbacker International Airport
Air Cargo Terminal No. 4
PARKING & ENTRANCE ROAD
LAYOUT No. 1

COLUMBUS REGIONAL AIRPORT AUTHORITY
COLUMBUS, OHIO

PORT COLUMBUS INTERNATIONAL AIRPORT RICKENBACKER INTERNATIONAL AIRPORT BOLTON FIELD

EXHIBIT 01



REVISIONS		
DATE	BY	
06/16/06	RLR	
11/03/06	BSE	
01/11/07	BSE	

SCALE: AS SHOWN
DATE: 9/25/06
DRAWN BY: BSE
DESIGNED: SCL
APPROVED: SCL

ARMSTRONG.
Union Station / 300 S. Meridian St.
Indianapolis, IN 46225
317.636.4682 FAX: 317.636.0957
www.armstrong.com

RICKENBACKER INTERNATIONAL AIRPORT CARGO RAMP No. 3 REHABILITATION

PROPOSED RAMP LAYOUT

COLUMBUS REGIONAL AIRPORT AUTHORITY
COLUMBUS, OHIO

PORT COLUMBUS INTERNATIONAL AIRPORT RICKENBACKER INTERNATIONAL AIRPORT BOLTON FIELD

01

File Name: P:\Airports\Clients\CRAA\Rickenbacker\20060130-31 Phase 2C - ACT #4\Drawings\Production\Exhibits\07-01-11 - Ramp Layout\RAMP3 LAYOUT - OPTION 2A revisions.dwg - 24X36
Modified / By: January 11, 2007 9:44:20 AM / bellenbrook
Plotted / By: January 11, 2007 10:35:10 AM / Brian Eisenbrook

Appendix F

Technology Cost Tables

Table F-1

Cost Estimate

Natural Source Zone Depletion AOC 3

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Work Planning	1	LS	50000.00	50,000.00
Mobilization/Demobilization	1	LS	1,500.00	1,500.00
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Surveying	1	LS	2,000.00	2,000.00
Bench scale testing	1	LS	30,000.00	30,000.00
Groundwater/Gas Sampling	4	EVENT	10,500.00	42,000.00
Fuel Fingerprinting	3	LS	210.00	630.00
Waste Disposal	8	DRUM	200.00	1,600.00
Reporting	1	LS	50,000.00	50,000.00
Site Restoration	1	LS	1,000.00	1,000.00
CAPITAL COST SUBTOTAL				194,730.00
Bid and Scope Contingencies (15%)				29,209.50
Permitting and Legal (5%)				9,736.50
TOTAL CAPITAL COST				**233,676.00**
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**418,146.00**

*30 years, 5% interest

Table F-2

Cost Estimate
Excavation AOC 3

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Test Pits	1	LS	20,000.00	20,000.00
Clearing and Grubbing	0.1	AC	7,650.00	765.00
Surveying	1	LS	2,000.00	2,000.00
Temporary Fencing	1,400	LF	5.75	8,050.00
Decontamination Pad Construction	1,500	SF	3.00	4,500.00
Decontamination	1	LS	11,000.00	11,000.00
Excavate/Stockpile Soil	48,000	TON	7.00	336,000.00
Confirmation Samples (Clean)	25	EACH	300.00	7,500.00
Excavate/Load Soil	21,800	TON	7.00	152,600.00
Soil Sampling				
Characterization Samples (LF)	10	EACH	500.00	5,000.00
Soil Transportation (THR)	21,800	TON	10.00	218,000.00
Soil Disposal (THR)	21,800	TON	41.50	904,700.00
Structural Backfill	10,000	CY	25.00	250,000.00
Backfill Excavated Soil	32,000	CY	3.00	96,000.00
General Backfill	4,500	CY	10.00	45,000.00
4" Parking lot & Road Replacement	20,000	SF	4.50	90,000.00
Relocate Utilities	1,500	LF	60.00	90,000.00
Excavation Water Pump out & Treat	1	LS	55,000.00	55,000.00
Reseed Disturbed areas	2.5	AC	2,500.00	6,250.00
Groundwater Monitoring (1-year)	4	LS	10,500.00	42,000.00
Prevailing Wages (10% Extra)	2,261,615.00	10% of Cost	0.10	226,161.50
CONSTRUCTION SUBTOTAL				2,590,526.50
Bid and Scope Contingencies (15%)				388,578.98
Permitting and Legal (5%)				129,526.33
Engineering Design and Construction Services (20%)				518,105.30
TOTAL CAPITAL COST				**3,626,737.10**

Table F-3

Cost Estimate

In-Situ Soil Mixing with Grout Additive AOC 3

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Bench Scale Testing	1	LS	75,000.00	75,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Clearing and Grubbing	0.1	AC	7,650.00	765.00
Surveying	1	LS	5,000.00	5,000.00
Temporary Fencing	1400	LF	5.75	8,050.00
Decontamination Pad Construction	1500	SF	3.00	4,500.00
Decontamination	1	LS	11,000.00	11,000.00
ISSM - Grout Additive	58100	CY	60.00	3,486,000.00
Laboratory Sampling				
Confirmation Soil/GW Samples	58	EACH	225.00	13,050.00
Geotechnical Samples	75	EACH	250.00	18,750.00
General Backfill	10000	CY	10.00	100,000.00
Parking lot & Road Replacement	20000	SF	4.50	90,000.00
Relocate Utilities	1500	LF	60.00	90,000.00
Reseed Disturbed areas	2.5	AC	2,500.00	6,250.00
Groundwater Monitoring (1-year)	4	EVENT	10,500.00	42,000.00
Prevailing Wages	3,810,315.00	10% Cost	0.10	381,031.50
CONSTRUCTION SUBTOTAL				4,351,396.50
Bid and Scope Contingencies (15%)				652,709.48
Permitting and Legal (5%)				217,569.83
Engineering Design and Construction Services (20%)				870,279.30
TOTAL CAPITAL COST				**6,091,955.10**

Table F-4

Multi-Phase Extraction AOC 3

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Temporary Fencing	1400	FOOT	5.75	8,050.00
Surveying	1	LS	5,000.00	5,000.00
Install Extraction Wells	443	WELL	2,000.00	886,000.00
Vapor Treatment Lease and Operations	36	MONTH	52,200.00	1,879,200.00
Recycling LNAPL	35200	GALLON	(5.90)	(208,000.00)
Site Restoration	1	LS	2,000.00	2,000.00
Prevailing Wages (10% Extra)	2,620,650.00	Cost	0.10	262,065.00
CONSTRUCTION SUBTOTAL				2,882,715.00
Bid and Scope Contingencies (15%)				432,407.25
Permitting and Legal (5%)				144,135.75
Engineering Design and Construction Services (20%)				576,543.00
TOTAL CAPITAL COST				**4,035,801.00**
Costs based on estimate provided by G.E.O. Inc. on February 2, 2012.				
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**4,128,527.04**

*10 years, 5% interest

Table F-5

Multi-Phase Extraction with Heating AOC 3

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Temporary Fencing	1400	FOOT	5.75	8,050.00
Surveying	1	LS	5,000.00	5,000.00
Install Extraction Wells	390	WELL	750.00	292,500.00
Install Heating Wells	975	WELL	750.00	731,250.00
Vapor Treatment Lease and Operations	20	MONTH	74,000.00	1,480,000.00
Recycling LNAPL	35200	GALLON	(5.90)	(208,000.00)
Site Restoration	1	LS	2,000.00	2,000.00
Prevailing Wages (10% Extra)	2,359,200.00	Cost	0.10	235,920.00
CONSTRUCTION SUBTOTAL				2,595,120.00
Bid and Scope Contingencies (15%)				389,268.00
Permitting and Legal (5%)				129,756.00
Engineering Design and Construction Services (20%)				519,024.00
TOTAL CAPITAL COST				**3,633,168.00**
Costs based on estimate provided by G.E.O. Inc. on February 2, 2012.				
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**3,685,122.00**

*5 years, 5% interest

Table F-6

Electrical Resistance Heating AOC 3

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	100,000.00	100,000.00
Surveying	1	LS	5,000.00	5,000.00
Temporary Fencing	1400	LF	5.75	8,050.00
Subsurface Installation	1	LS	651,200.00	651,200.00
Surface Install and Setup	1	LS	1,367,520.00	1,367,520.00
Remediation System Operations	1	LS	1,562,880.00	1,562,880.00
Drill Cuttings and Waste Disposal	1	LS	130,240.00	130,240.00
Electrical Utility Connection to PCU	1	LS	130,240.00	130,240.00
Electrical Energy Usage	1	LS	651,200.00	651,200.00
Carbon Usage, Trasportation, Regeneration	1	LS	130,240.00	130,240.00
Site Restoration	1	LS	2,000.00	2,000.00
Groundwater Monitoring (1-year)	4	EVENT	10,500.00	42,000.00
Prevailing Wages (10% Extra)	4,766,970.00	Cost	0.10	476,697.00
CONSTRUCTION SUBTOTAL				5,285,667.00
Bid and Scope Contingencies (15%)				792,850.05
Permitting and Legal (5%)				264,283.35
Engineering Design and Construction Services (20%)				1,057,133.40
TOTAL CAPITAL COST				**7,399,933.80**

Table F-7

Cost Estimate

Natural Source Zone Depletion AOC 8-9

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Work Planning	1	LS	50000.00	50,000.00
Mobilization/Demobilization	1	LS	1,500.00	1,500.00
Install Monitoring Wells	6	WELL	2,000.00	12,000.00
Install Gas Wells	3	NEST	1,500.00	4,500.00
Surveying	1	LS	2,000.00	2,000.00
Bench scale testing	1	LS	30,000.00	30,000.00
Groundwater/Gas Sampling	4	EVENT	10,500.00	42,000.00
Fuel Fingerprinting	3	LS	210.00	630.00
Waste Disposal	10	DRUM	200.00	2,000.00
Reporting	1	LS	50,000.00	50,000.00
Site Restoration	1	LS	1,000.00	1,000.00
CAPITAL COST SUBTOTAL				195,630.00
Bid and Scope Contingencies (15%)				29,344.50
Permitting and Legal (5%)				9,781.50
TOTAL CAPITAL COST				**234,756.00**
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**419,226.00**

*30 years, 5% interest

Table F-8

Cost Estimate
Excavation AOC 8-9

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Test Pits	1	LS	20,000.00	20,000.00
Clearing and Grubbing	0	AC	7,650.00	0.00
Surveying	1	LS	2,000.00	2,000.00
Temporary Fencing	800	LF	5.75	4,600.00
Decontamination Pad Construction	1,500	SF	3.00	4,500.00
Decontamination	1	LS	11,000.00	11,000.00
Excavate/Stockpile Soil	2,700	TON	7.00	18,900.00
Confirmation Samples (Clean)	5	EACH	300.00	1,500.00
Excavate/Load Soil	2,700	TON	7.00	18,900.00
Soil Sampling				
Characterization Samples (LF)	3	EACH	500.00	1,500.00
Soil Transportation (THR)	2,700	TON	10.00	27,000.00
Soil Disposal (THR)	2,700	TON	41.50	112,050.00
Structural Backfill	1,800	CY	25.00	45,000.00
Backfill Excavated Soil	1,800	CY	3.00	5,400.00
General Backfill	0	CY	10.00	0.00
Parking lot & Road Replacement	2400	SF	4.50	10,800.00
Relocate Utilities	0	LF	60.00	0.00
Excavation Water Pump out & Treat	1	LS	20,000.00	20,000.00
Reseed Disturbed areas	0.3	AC	2,500.00	750.00
Groundwater Monitoring (1-year)	4	LS	10,500.00	42,000.00
Prevailing Wages	278,150.00	10% of Cost	0.10	27,815.00
CONSTRUCTION SUBTOTAL				393,715.00
Bid and Scope Contingencies (15%)				59,057.25
Permitting and Legal (5%)				19,685.75
Engineering Design and Construction Services (20%)				78,743.00
TOTAL CAPITAL COST				**551,201.00**

Table F-9

Cost Estimate

In-Situ Soil Mixing with Grout Additive AOC 8-9

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Bench Scale Testing	1	LS	75,000.00	75,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Clearing and Grubbing	0	AC	7,650.00	0.00
Surveying	1	LS	5,000.00	5,000.00
Temporary Fencing	800	LF	5.75	4,600.00
Decontamination Pad Construction	1500	SF	3.00	4,500.00
Decontamination	1	LS	11,000.00	11,000.00
ISSM - Grout Additive	4444	CY	60.00	266,640.00
Laboratory Sampling				
Confirmation Soil/GW Samples	6	EACH	225.00	1,350.00
Geotechnical Samples	12	EACH	250.00	3,000.00
Parking lot & Road Replacement	2400	SF	4.50	10,800.00
Relocate Utilities	0	LF	60.00	0.00
Reseed Disturbed areas	0.3	AC	2,500.00	750.00
Groundwater Monitoring (1-year)	4	EVENT	10,500.00	42,000.00
Prevailing Wages	317,540.00	10% Cost	0.10	31,754.00
CONSTRUCTION SUBTOTAL				476,394.00
Bid and Scope Contingencies (15%)				71,459.10
Permitting and Legal (5%)				23,819.70
Engineering Design and Construction Services (20%)				95,278.80
TOTAL CAPITAL COST				**666,951.60**

Table F-10

Multi-Phase Extraction AOC 8/9

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Temporary Fencing	800	FOOT	5.75	4,600.00
Surveying	1	LS	3,000.00	3,000.00
Install Extraction Wells	60	WELL	2,000.00	120,000.00
Vapor Treatment Lease and Operations	36	MONTH	17,500.00	630,000.00
Recycling LNAPL	1800	GALLON	(5.90)	(11,000.00)
Site Restoration	1	LS	1,000.00	1,000.00
Prevailing Wages (10% Extra)	796,000.00	Cost	0.10	79,600.00
CONSTRUCTION SUBTOTAL				875,600.00
Bid and Scope Contingencies (15%)				131,340.00
Permitting and Legal (5%)				43,780.00
Engineering Design and Construction Services (20%)				175,120.00
TOTAL CAPITAL COST				**1,225,840.00**
Costs based on estimate provided by G.E.O. Inc. on February 2, 2012.				
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**1,318,566.04**

*10 years, 5% interest

Table F-11

Multi-Phase Extraction with Heating AOC 8/9

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Temporary Fencing	800	FOOT	5.75	4,600.00
Surveying	1	LS	3,000.00	3,000.00
Install Extraction Wells	45	WELL	1,265.00	56,925.00
Install Heating Wells	113	WELL	1,265.00	142,945.00
Vapor Treatment Lease and Operations	20	MONTH	24,000.00	480,000.00
Recycling LNAPL	1800	GALLON	(5.90)	(11,000.00)
Site Restoration	1	LS	1,000.00	1,000.00
Prevailing Wages (10% Extra)	725,870.00	Cost	0.10	72,587.00
CONSTRUCTION SUBTOTAL				798,457.00
Bid and Scope Contingencies (15%)				119,768.55
Permitting and Legal (5%)				39,922.85
Engineering Design and Construction Services (20%)				159,691.40
TOTAL CAPITAL COST				**1,117,839.80**
Costs based on estimate provided by G.E.O. Inc. on February 2, 2012.				
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**1,169,793.80**

*5 years, 5% interest

Table F-12

Electrical Resistance Heating AOC 8/9

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	100,000.00	100,000.00
Surveying	1	LS	5,000.00	5,000.00
Temporary Fencing	800	LF	5.75	4,600.00
Subsurface Installation	1	LS	99,200.00	99,200.00
Surface Install and Setup	1	LS	208,320.00	208,320.00
Remediation System Operations	1	LS	238,080.00	238,080.00
Drill Cuttings and Waste Disposal	1	LS	19,840.00	19,840.00
Electrical Utility Connection to PCU	1	LS	19,840.00	19,840.00
Electrical Energy Usage	1	LS	99,200.00	99,200.00
Carbon Usage, Trasportation, Regeneration	1	LS	19,840.00	19,840.00
Site Restoration	1	LS	1,000.00	1,000.00
Groundwater Monitoring (1-year)	4	EVENT	10,500.00	42,000.00
Prevailing Wages (10% Extra)	843,320.00	Cost	0.10	84,332.00
CONSTRUCTION SUBTOTAL				969,652.00
Bid and Scope Contingencies (15%)				145,447.80
Permitting and Legal (5%)				48,482.60
Engineering Design and Construction Services (20%)				193,930.40
TOTAL CAPITAL COST				**1,357,512.80**

Costs based on estimate provided by TRS Group, Inc. on November 23, 2011.

Table F-13

Cost Estimate

Natural Source Zone Depletion AOC 11

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Work Planning	1	LS	50000.00	50,000.00
Mobilization/Demobilization	1	LS	1,500.00	1,500.00
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	4	NEST	2,000.00	8,000.00
Surveying	1	LS	2,000.00	2,000.00
Bench scale testing	1	LS	30,000.00	30,000.00
Groundwater/Gas Sampling	4	EVENT	10,500.00	42,000.00
Fuel Fingerprinting	3	LS	210.00	630.00
Waste Disposal	8	DRUM	200.00	1,600.00
Reporting	1	LS	50,000.00	50,000.00
Site Restoration	1	LS	1,000.00	1,000.00
CAPITAL COST SUBTOTAL				192,730.00
Bid and Scope Contingencies (15%)				28,909.50
Permitting and Legal (5%)				9,636.50
TOTAL CAPITAL COST				**231,276.00**
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**415,746.00**

*30 years, 5% interest

Table F-14

Cost Estimate
Excavation AOC 11

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Test Pitting	1	LS	20,000.00	20,000.00
Clearing and Grubbing	0	AC	7,650.00	0.00
Surveying	1	LS	2,000.00	2,000.00
Temporary Fencing	900	LF	5.75	5,175.00
Decontamination Pad Construction	1,500	SF	3.00	4,500.00
Decontamination	1	LS	11,000.00	11,000.00
Excavate/Stockpile Soil	20,900	TON	7.00	146,300.00
Confirmation Samples (Clean)	10	EACH	300.00	3,000.00
Excavate/Load Soil	3,800	TON	7.00	26,600.00
Soil Sampling				
Characterization Samples	5	EACH	500.00	2,500.00
Soil Transportation (THR)	3,800	TON	10.00	38,000.00
Soil Disposal (THR)	3,800	TON	41.50	157,700.00
Structural Backfill	2,500	CY	25.00	62,500.00
Backfill Excavated Soil	14,000	CY	3.00	42,000.00
General Backfill	0	CY	10.00	0.00
18" Parking lot & Road Replacement	25,200	SF	8.00	201,600.00
Relocate Utilities	1,000	LF	60.00	60,000.00
Relocate AVGAS AST	1	LS	100,000.00	100,000.00
Excavation Water Pump out & Treat	1	LS	35,000.00	35,000.00
Reseed Disturbed areas	0.4	AC	2,500.00	1,000.00
Groundwater Monitoring (1-year)	4	LS	10,500.00	42,000.00
Prevailing Wages	913,375.00	10% of Cost	0.10	91,337.50
CONSTRUCTION SUBTOTAL				1,072,212.50
Bid and Scope Contingencies (15%)				160,831.88
Permitting and Legal (5%)				53,610.63
Engineering Design and Construction Services (20%)				214,442.50
TOTAL CAPITAL COST				**1,501,097.50**

Table F-15

Cost Estimate

In-Situ Soil Mixing with Grout Additive AOC 11

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Bench Scale Testing	1	LS	75,000.00	75,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Clearing and Grubbing	0	AC	7,650.00	0.00
Surveying	1	LS	5,000.00	5,000.00
Temporary Fencing	900	LF	5.75	5,175.00
Decontamination Pad Construction	1500	SF	3.00	4,500.00
Decontamination	1	LS	11,000.00	11,000.00
ISSM - Grout Additive	19000	CY	60.00	1,140,000.00
Laboratory Sampling				
Confirmation Soil/GW Samples	25	EACH	225.00	5,625.00
Geotechnical Samples	45	EACH	250.00	11,250.00
18" Parking lot & Road Replacement	25200	SF	8.00	201,600.00
Relocate Utilities	1000	LF	60.00	60,000.00
Reseed Disturbed areas	0.4	AC	2,500.00	1,000.00
Groundwater Monitoring (1-year)	1	LS	10,500.00	10,500.00
Prevailing Wages	1,442,275.00	10% Cost	0.10	144,227.50
CONSTRUCTION SUBTOTAL				1,694,877.50
Bid and Scope Contingencies (15%)				254,231.63
Permitting and Legal (5%)				84,743.88
Engineering Design and Construction Services (20%)				338,975.50
TOTAL CAPITAL COST				**2,372,828.50**

Table F-16

Multi-Phase Extraction AOC 11

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Temporary Fencing	800	FOOT	5.75	4,600.00
Surveying	1	LS	3,000.00	3,000.00
Install Extraction Wells	60	WELL	2,000.00	120,000.00
Vapor Treatment Lease and Operations	36	MONTH	32,800.00	1,180,800.00
Recycling LNAPL	6400	GALLON	(5.90)	(38,000.00)
Site Restoration	1	LS	1,000.00	1,000.00
Prevailing Wages (10% Extra)	1,319,800.00	Cost	0.10	131,980.00
CONSTRUCTION SUBTOTAL				1,451,780.00
Bid and Scope Contingencies (15%)				217,767.00
Permitting and Legal (5%)				72,589.00
Engineering Design and Construction Services (20%)				290,356.00
TOTAL CAPITAL COST				**2,032,492.00**
Costs based on estimate provided by G.E.O. Inc. on February 2, 2012.				
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**2,125,218.04**

*10 years, 5% interest

Table F-17

Multi-Phase Extraction with Heating AOC 11

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	20,000.00	20,000.00
Temporary Fencing	800	FOOT	5.75	4,600.00
Surveying	1	LS	3,000.00	3,000.00
Install Extraction Wells	193	WELL	750.00	144,750.00
Install Heating Wells	484	WELL	750.00	363,000.00
Vapor Treatment Lease and Operations	20	MONTH	59,000.00	1,180,000.00
Recycling LNAPL	6400	GALLON	(5.90)	(38,000.00)
Site Restoration	1	LS	3,000.00	3,000.00
Prevailing Wages (10% Extra)	1,708,750.00	Cost	0.10	170,875.00
CONSTRUCTION SUBTOTAL				1,879,625.00
Bid and Scope Contingencies (15%)				281,943.75
Permitting and Legal (5%)				93,981.25
Engineering Design and Construction Services (20%)				375,925.00
TOTAL CAPITAL COST				**2,631,475.00**
Costs based on estimate provided by G.E.O. Inc. on February 2, 2012.				
ANNUAL MONITORING				
Groundwater/Gas Sampling	1	LS	12,000.00	12,000.00
PRESENT WORTH TOTAL*				**2,683,429.00**

*5 years, 5% interest

Table F-18

Electrical Resistance Heating AOC 11

	Quantity	Unit of Measure	Unit Cost	Extended Cost
Install Monitoring Wells	3	WELL	2,000.00	6,000.00
Install Gas Wells	5	NEST	2,000.00	10,000.00
Investigative Sampling				
Groundwater Sampling and Analysis	10	EACH	400.00	4,000.00
LNAPL Sampling and Analysis	3	EACH	800.00	2,400.00
Soil Gas Sampling and Analysis	2	EACH	3,000.00	6,000.00
Mob/Demob Equipment/Personnel	1	LS	100,000.00	100,000.00
Surveying	1	LS	5,000.00	5,000.00
Temporary Fencing	900	LF	5.75	5,175.00
Subsurface Installation	1	LS	282,200.00	282,200.00
Surface Install and Setup	1	LS	592,620.00	592,620.00
Remediation System Operations	1	LS	677,280.00	677,280.00
Drill Cuttings and Waste Disposal	1	LS	56,440.00	56,440.00
Electrical Utility Connection to PCU	1	LS	56,440.00	56,440.00
Electrical Energy Usage	1	LS	282,200.00	282,200.00
Carbon Usage, Trasportation, Regeneration	1	LS	56,440.00	56,440.00
Site Restoration	1	LS	3,000.00	3,000.00
Groundwater Monitoring (1-year)	4	EVENT	10,500.00	42,000.00
Prevailing Wages (10% Extra)	2,145,195.00	Cost	0.10	214,519.50
CONSTRUCTION SUBTOTAL				2,373,314.50
Bid and Scope Contingencies (15%)				355,997.18
Permitting and Legal (5%)				118,665.73
Engineering Design and Construction Services (20%)				474,662.90
TOTAL CAPITAL COST				**3,322,640.30**

Costs based on estimate provided by TRS Group, Inc. on November 23, 2011.
This cost estimate does not account for the removal of the source of contamination.