April 2000

22603-BAZ-0000-06000

CHARACTERIZATION REPORT
FORMER BAZETTA COMPRESSOR STATION
TRUMBULL COUNTY, OHIO

Prepared for

COLUMBIA GAS TRANSMISSION CORPORATION
Environmental Affairs-Remediation
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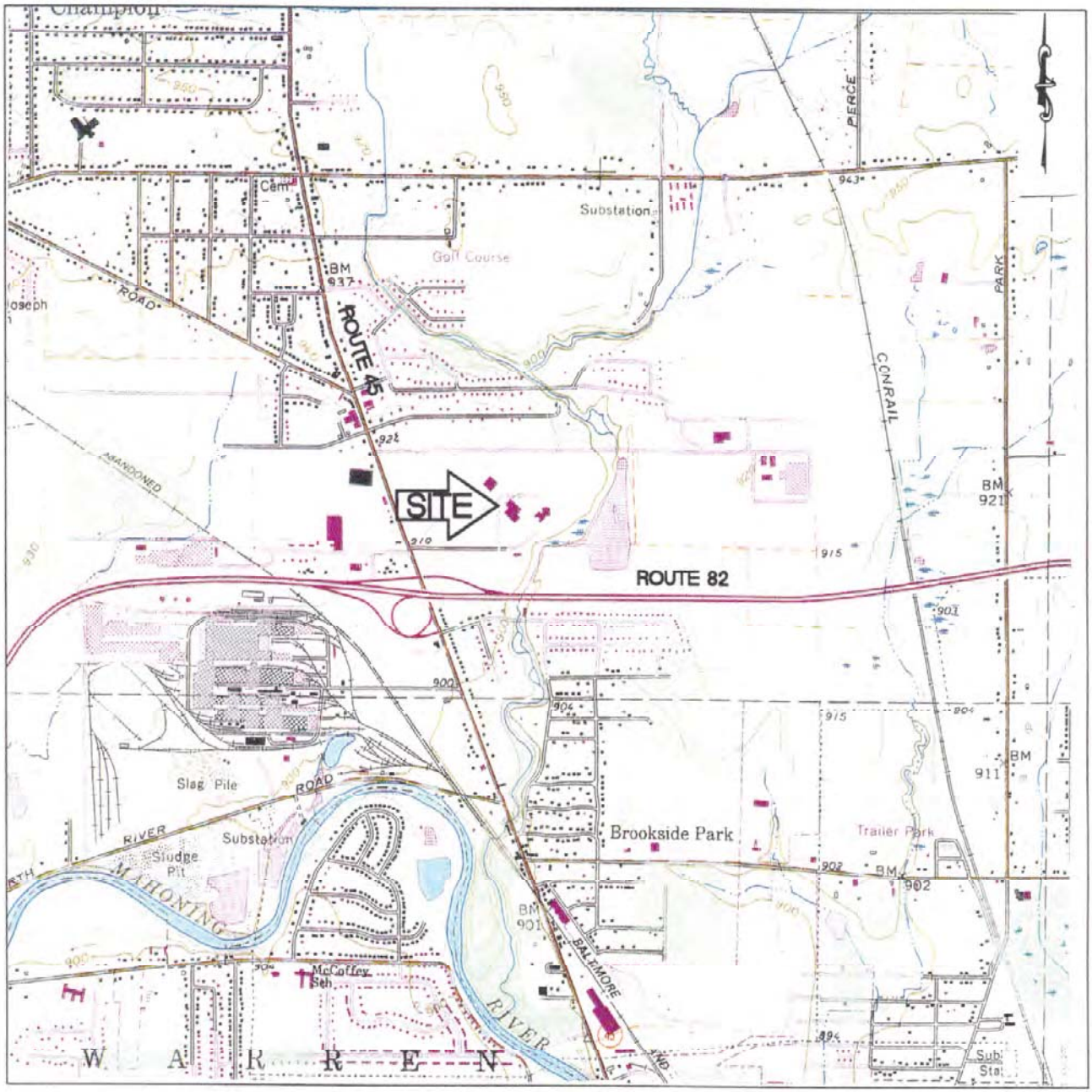
22803F80



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAP, CHAMPION QUADRANGLE, OHIO.

2000 0 1000 2000
1 inch = 2000 ft.

QUADRANGLE LOCATION

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FIGURE 1-1
SITE LOCATION MAP
FORMER BAZETTA COMPRESSOR STATION

COLUMBIA GAS TRANSMISSION CORPORATION
TRUMBULL COUNTY, OHIO

2.0 ENVIRONMENTAL SETTING

2.1 Physical Setting

The Former Bazetta CS is surrounded by a 6-foot high chain link fence and occupies approximately three quarters of an acre in area, of which the operational portion of the compressor station occupies approximately one quarter of an acre. A gravel base covers the site within the fenced area and land surrounding the CS is agricultural and woodlands. Topography at the site is nearly level to gently sloping to the southeast (i.e., northwest being topographically up gradient and the southeast being topographically down gradient). The site is at an elevation of approximately 915 feet above mean sea level (msl) with the surrounding topography generally less than 950 feet msl (Figure 1-1).

2.2 Climate

The geographic area of the portion of Ohio in which the CS is located receives a mean annual precipitation of approximately 38 inches which is fairly well distributed throughout the year with a majority of the precipitation occurring between April and September. The average seasonal snowfall is approximately 58 inches. Prevailing wind direction is from the southwest. Temperatures vary widely, with average lows during the winter months reaching 19 degrees Fahrenheit to average highs during the summer months reaching 80 degrees Fahrenheit. (Soil Survey of Trumbull County, Ohio, 1992).

2.3 Surface Water Hydrology

The site is relatively flat in topography. No obvious drainage ditches or channels were noted during characterization activities. Several unnamed, intermittent streams confluence approximately one quarter of a mile north of the site (only the confluence is shown on Figure 1-1). As a result of recent highway construction, this stream forms a large, shallow pond located east of the site. This stream eventually discharges into the Mahoning River approximately 4,000 feet to the south (DeLorme, 1995).

The site is not located in a flood prone area based on a topographic review of the USGS Champion Quadrangle map.

2.4 Geology and Soils

The Former Bazetta Compressor Station is located within the glaciated part of the Allegheny Plateau Physiographic Province (Figure 2-1). The bedrock in this region is sedimentary in origin and consists predominantly of the Mississippian System/Cuyahoga Formation Bedrock. Bedrock in the area consists mainly of shale, interbedded sandstone, and siltstone with thicknesses up to 180 feet (Bownocker 1981).

Soils in the area were formed during Wisconsin-Age glacial episodes and consist predominantly of a silt loam. These soils typically are deep, poorly drained soils that formed in stratified glacial outwash on stream terraces and outwash plains. Permeability is moderate in the subsoil and rapid or moderately rapid in the substratum. (Soil Survey of Trumbull County, Ohio, 1992).

2.5 Hydrogeology and Groundwater Quality

In valley bottoms, useable quantities of groundwater are generally obtained from both shallow dug wells in unconsolidated deposits and/or wells installed into bedrock formations. In other topographic areas, wells completed in bedrock or springs are a source of potable water supplies.

Groundwater in the area mainly occurs in the natural porosity of consolidated sandstone bedrock portions of the Waverly and Maxville Formations (Pennsylvania Age) of the Appalachian Plateau Physiographic Province (Bownocker, 1981). Wells commonly range from 25 to 300 feet deep with yields typically ranging from 5 to 25 gallons per minute (gpm). Groundwater quality diminishes rapidly when brine generally is encountered at depths exceeding 300 feet. Joints and openings along bedding planes yield most of the water in these formations (USGS, 1984).

TABLE 3-1
SAMPLING PROGRAM SUMMARY
FORMER BAZETTA COMPRESSOR STATION

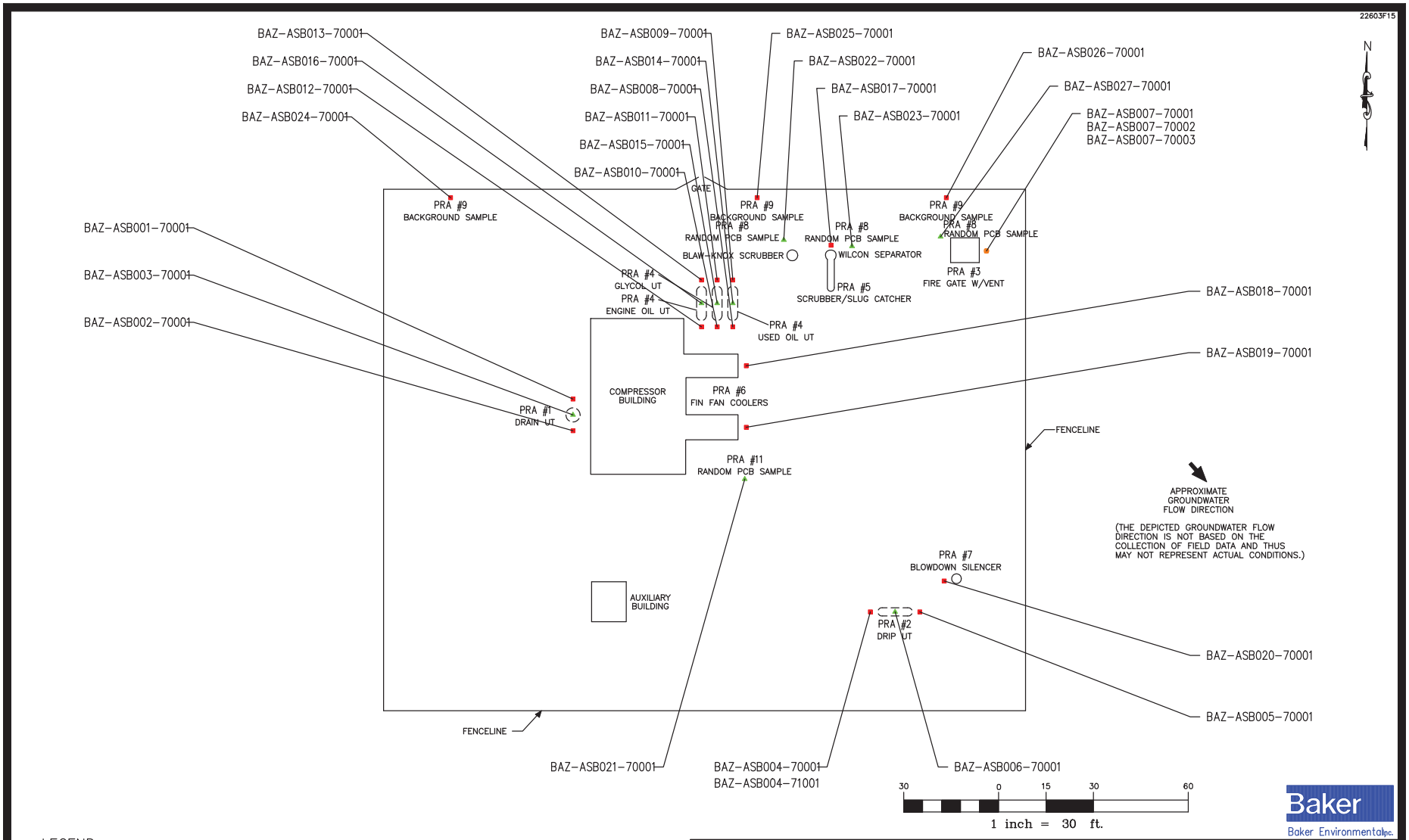
Potential Release Area	PRA Description		# Borings	# Samples	Sample Depth (ft)	Matrix	Type	Analytes	SAP Scope of Work	Modifications to SAP
PRA #1	Drain UT (200 Gal.)		2	2	8'	Soil	Grab	TPH/BTEX	To determine the presence of BTEX and TPH constituents in soils	
			N/A	1	0-1'					
PRA #2	Drip UT (3,000 Gal.)		2	2	12'	Soil	Grab	TPH/BTEX/ PCBs	To determine the presence of BTEX, TPH, and PCB constituents in soils	
			N/A	1	0-1'					
PRA #3	Fire Valve with Vent		1	3	0-1'/2.5'/5'	Soil	Grab	TPH/BTEX	To determine the presence of BTEX and TPH constituents in soils.	
PRA #4	UT Farm	Used Oil UT (1,000 Gal.)	2	2	10'	Soil	Grab	Table 1 (CWP)	To determine the presence of Table 1 (CWP), Glycol, and TPH constituents in soils.	
		Glycol UT (1,000 Gal.)	2	2	10'	Soil	Grab	Glycol		
		Engine Oil UT (1,000 Gal.)	2	2	10'	Soil	Grab	TPH/BTEX		
			N/A	1	0-1'	Soil	Grab	Table 1 (CWP)		
				1	6-12"			Glycol		
				1	0-1'			TPH/BTEX		
PRA #5	Scrubber/Slug Catcher		1	1	5'	Soil	Grab	TPH/BTEX	To determine the presence of BTEX and TPH constituents in soils.	
PRA #6	Fin Fans/Coolers		2	2	5'	Soil	Grab	TPH/BTEX	To determine the presence of BTEX and TPH constituents in soils.	
PRA #7	Blowdown Silencer		1	1	5'	Soil	Grab	TPH/BTEX	To determine the presence of BTEX and TPH constituents in soils.	

TABLE 3-1 (cont.)
FORMER BAZETTA COMPRESSOR STATION

Potential Release Area	PRA Description	# Borings	# Samples	Sample Depth (ft)	Matrix	Type	Analytes	SAP Scope of Work	Modifications to SAP
	Random PCBs Samples	N/A	4	0-6"	Soil	Grab	PCBs	To determine the presence of PCBs in surface soil samples. The sample locations were randomly selected from within the uncharacterized areas of the CS.	1 additional sample added in field
	Background Samples	3	3	1-3'	Soil	Grab	Table 1 (CWP)	To determine the presence of Table 1 (CWP) constituents in the soil. The sample locations were background locations believed not to be affected by CS operations.	
Total Investigative Samples			29					* A description of QA/QC samples is provided in Table 3-4.	
Total QA/QC Samples*			5						
Total Samples			34						

N/A = Not Applicable

Columbia followed CWP SOPs on samples for 0-1' interval: metals and PCBs: 0-0.5' interval; BTEX, VOCs, and SVOCs: 0.5'-1.0' interval.



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LEGEND

- SURFACE AND AT DEPTH SOIL SAMPLE LOCATION
- SURFACE SOIL/SEDIMENT SAMPLE LOCATION
- AT DEPTH SOIL SAMPLE LOCATION

SCALE:	1" = 30'	DATE:	01/20/98
S.O. NO.:	22603-BAZ-0000-06000	FILE:	22603F15
REV:	0, 10/28/97	CHK:	

FIGURE 3-1
SAMPLE LOCATION MAP
BAZETTA COMPRESSOR STATION

Table 4-3
Summary of Analytical Results

		PRA			4			
		PRA Description			**PRA #4-TANK FARM**			
		Sample Type			**Normal Sample**			
		Sample Id	**BAZ-ASB007-70003**		**BAZ-ASB008-70001**		**BAZ-ASB009-70001**	
		Depth - ft bgs	**4 - 5**		**8 - 10**		**8 - 10**	
		Collected Date	**05/29/97**		**05/29/97**		**05/29/97**	
		Laboratory	**Ecology and Environment, Inc.**		**Ecology and Environment, Inc.**		**Ecology and Environment, Inc.**	
		Sample Collector	**Baker Environmental, Inc.**		**Baker Environmental, Inc.**		**Baker Environmental, Inc.**	
		Result Units	**MG/KG**		**MG/KG**		**MG/KG**	
Category	Analyte	Action Level	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***
VOA	**METHYLENE CHLORIDE**	85			0.037		ND	
	GASOLINE		ND		ND		ND	
BNA	**PYRENE**	2300			ND		ND	
	BENZO(A)PYRENE	.087			ND		ND	
	BENZO(GHI)PERYLENE	2300			ND		ND	
	INDENO(1,2,3-C,D)PYRENE	.87			ND		ND	
	DIESEL		ND		5.2		8.6	
METAL	**BARIUM, TOTAL**	5500			54.2		72.9	
	CHROMIUM, TOTAL	230			15.5		23.5	
	LEAD, TOTAL	400			ND		ND	
	NICKEL, TOTAL	1600			21.7		34.1	
	ARSENIC, TOTAL	.43			15.6	X	15.3	X

Notes:

* "> CAL" equals "X" when reported value is above characterization action level for this locale.
J flag - Numerical value is an estimated quantity.
ND indicates Non-Detect
Blank cells in result column indicate an analysis was not performed for that analyte.

Table 4-3
Summary of Analytical Results

		PRA						
		PRA Description						
		Sample Type						
		Sample Id	**BAZ-ASB013-70001**		**BAZ-ASB014-70001**		**BAZ-ASB015-70001**	
		Depth - ft bgs	**8 - 10**		**0 - 1**		**0 - 1**	
		Collected Date	**05/29/97**		**05/29/97**		**05/29/97**	
		Laboratory	**Ecology and Environment, Inc.**		**Ecology and Environment, Inc.**		**Ecology and Environment, Inc.**	
		Sample Collector	**Baker Environmental, Inc.**		**Baker Environmental, Inc.**		**Baker Environmental, Inc.**	
		Result Units	**MG/KG**		**MG/KG**		**MG/KG**	
Category	Analyte	Action Level	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***
VOA	**METHYLENE CHLORIDE**	85			0.010			
	GASOLINE		ND		ND			
BNA	**PYRENE**	2300			0.56			
	BENZO(A)PYRENE	.087			0.47	X		
	BENZO(GHI)PERYLENE	2300			0.75			
	INDENO(1,2,3-C,D)PYRENE	.87			0.71			
	DIESEL		7.5		3000			
METAL	**BARIUM, TOTAL**	5500			66.6			
	CHROMIUM, TOTAL	230			ND			
	LEAD, TOTAL	400			36.9			
	NICKEL, TOTAL	1600			24.2			
	ARSENIC, TOTAL	.43			13.9	X		

Notes:

* "> CAL" equals "X" when reported value is above characterization action level for this locale.
J flag - Numerical value is an estimated quantity.
ND indicates Non-Detect
Blank cells in result column indicate an analysis was not performed for that analyte.

Table 4-3
Summary of Analytical Results

		PRA	9					
		PRA Description	PRA #9-BACKGROUND SAMPLES					
		Sample Type	Normal Sample					
		Sample Id	BAZ-ASB024-70001		BAZ-ASB025-70001		BAZ-ASB026-70001	
		Depth - ft bgs	1 - 3		1 - 3		1 - 3	
		Collected Date	05/29/97		05/29/97		05/29/97	
		Laboratory	Ecology and Environment, Inc.		Ecology and Environment, Inc.		Ecology and Environment, Inc.	
		Sample Collector	Baker Environmental, Inc.		Baker Environmental, Inc.		Baker Environmental, Inc.	
		Result Units	MG/KG		MG/KG		MG/KG	
Category	Analyte	Action Level	Result Flag	> CAL*	Result Flag	> CAL*	Result Flag	> CAL*
VOA	METHYLENE CHLORIDE	85	0.006		0.006		ND	
	GASOLINE		ND		ND		ND	
BNA	PYRENE	2300	ND		ND		ND	
	BENZO(A)PYRENE	.087	ND		ND		ND	
	BENZO(GHI)PERYLENE	2300	ND		ND		ND	
	INDENO(1,2,3-C,D)PYRENE	.87	ND		ND		ND	
	DIESEL		ND		5.6		ND	
METAL	BARIUM, TOTAL	5500	63.1		73.9		61.9	
	CHROMIUM, TOTAL	230	14.1		14.6		24.1	
	LEAD, TOTAL	400	ND		ND		ND	
	NICKEL, TOTAL	1600	28.7		26.1		40.0	
	ARSENIC, TOTAL	.43	21.0	X	20.2	X	25.2	X

Notes:

* "> CAL" equals "X" when reported value is above characterization action level for this locale.
J flag - Numerical value is an estimated quantity.
ND indicates Non-Detect
Blank cells in result column indicate an analysis was not performed for that analyte.