APPENDIX E

SUMMARY OF ANALYTICAL RESULTS
OHIO CHARACTERIZATION ACTION LEVELS

Summary of Analytical Results
Ohio Characterization Action Levels

		PRA	0					
		PRA Description	BACKGROUNDS					
		Sample Type	Normal Sample					
		Sample Id	COL-ASU005-70001		COL-ASU006-70001		COL-ASU007-70001	
		Depth - ft bgs	5 - 5		5 - 5		5 - 5	
		Collected Date	06/17/98		06/17/98		06/17/98	
		Laboratory	CT&E Environmental Services		CT&E Environmental Services		CT&E Environmental Services	
		Sample Collector	Civil + Environmental Cons.		Civil + Environmental Cons.		Civil + Environmental Cons.	
		Result Units	MG/KG		MG/KG		MG/KG	
Category	Analyte	Action Level	Result Flag	> CAL*	Result Flag	> CAL*	Result Flag	> CAL*
VOA	BENZENE	22	ND		ND		ND	
	TOLUENE	16000	ND		ND		ND	
	ETHYL BENZENE	7800	ND		ND		ND	
	XYLENES (TOTAL)	160000	ND		ND		ND	
	METHYLENE CHLORIDE	85	ND		ND		ND	
P/PCB	AROCLOR-1221	1	ND		ND		ND	
METAL	BARIUM, TOTAL	5500	132 J-		121 J-		226 J-	
	CADMIUM, TOTAL	39	1.4 J-		1.4 J-		1.7 J-	
	CHROMIUM, TOTAL	230	11.3 J-		11.0 J-		12.6 J-	
	NICKEL, TOTAL	1600	46.5 J-		54.1 J-		52.6 J-	
	ARSENIC, TOTAL	.43	21.3 J	X	18.5 J	X	25.8 J	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.

Summary of Analytical Results
Ohio Characterization Action Levels

		PRA						
		PRA Description	**RANDOM PCBS**					
		Sample Type	**Normal Sample**					
		Sample Id	**COL-ASS009-40001**		**COL-ASS010-40001**		**COL-ASS011-40001**	
		Depth - ft bgs	**0 - 1**		**0 - 1**		**0 - 0**	
		Collected Date	**06/17/98**		**06/17/98**		**06/17/98**	
		Laboratory	**CT&E Environmental Services**		**CT&E Environmental Services**		**CT&E Environmental Services**	
		Sample Collector	**Civil + Environmental Cons.**		**Civil + Environmental Cons.**		**Civil + Environmental Cons.**	
		Result Units	**MG/KG**		**MG/KG**		**MG/KG**	
Category	Analyte	Action Level	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***
VOA	**BENZENE**	22						
	TOLUENE	16000						
	ETHYL BENZENE	7800						
	XYLENES (TOTAL)	160000						
	METHYLENE CHLORIDE	85						
P/PCB	**AROCLOR-1221**	1	ND		ND		ND	
METAL	**BARIUM, TOTAL**	5500						
	CADMIUM, TOTAL	39						
	CHROMIUM, TOTAL	230						
	NICKEL, TOTAL	1600						
	ARSENIC, TOTAL	.43						

Notes:

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Summary of Analytical Results
Ohio Characterization Action Levels

		PRA			1			
		PRA Description			PRA #1 OFFICE BUILDING SEPTIC SYSTEM DRAIN FIELD			
		Sample Type			Normal Sample			
		Sample Id	COL-ASS012-40001		COL-ASU001-70001		COL-ASU002-70001	
		Depth - ft bgs	0 - 1		5 - 5		5 - 5	
		Collected Date	06/17/98		06/17/98		06/17/98	
		Laboratory	CT&E Environmental Services		CT&E Environmental Services		CT&E Environmental Services	
		Sample Collector	Civil + Environmental Cons.		Civil + Environmental Cons.		Civil + Environmental Cons.	
		Result Units	MG/KG		MG/KG		MG/KG	
Category	Analyte	Action Level	Result Flag	> CAL*	Result Flag	> CAL*	Result Flag	> CAL*
VOA	BENZENE	22			ND		ND	
	TOLUENE	16000			ND		ND	
	ETHYL BENZENE	7800			ND		ND	
	XYLENES (TOTAL)	160000			ND		ND	
	METHYLENE CHLORIDE	85						
P/PCB	AROCLOR-1221	1	ND		ND		ND	
METAL	BARIUM, TOTAL	5500						
	CADMIUM, TOTAL	39						
	CHROMIUM, TOTAL	230						
	NICKEL, TOTAL	1600						
	ARSENIC, TOTAL	.43						

Notes:

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Summary of Analytical Results
Ohio Characterization Action Levels

		PRA	2					
		PRA Description	PRA #2 FORMER LAB BUILDING SEPTIC SYSTEM DRAIN FIELD					
		Sample Type	Field Duplicate (Rep)		Normal Sample			
		Sample Id	COL-ASU004-71001		COL-ASU003-70001		COL-ASU004-70001	
		Depth - ft bgs	5 - 5		5 - 5		5 - 5	
		Collected Date	06/17/98		06/17/98		06/17/98	
		Laboratory	CT&E Environmental Services		CT&E Environmental Services		CT&E Environmental Services	
		Sample Collector	Civil + Environmental Cons.		Civil + Environmental Cons.		Civil + Environmental Cons.	
		Result Units	MG/KG		MG/KG		MG/KG	
Category	Analyte	Action Level	Result Flag	> CAL*	Result Flag	> CAL*	Result Flag	> CAL*
VOA	BENZENE	22	ND		ND		ND	
	TOLUENE	16000	ND		ND		ND	
	ETHYL BENZENE	7800	ND		ND		ND	
	XYLENES (TOTAL)	160000	ND		ND		ND	
	METHYLENE CHLORIDE	85	0.016 J		ND		ND	
P/PCB	AROCLOR-1221	1	ND		ND		ND	
METAL	BARIUM, TOTAL	5500	85.5 J-		84.6 J-		77.2 J-	
	CADMIUM, TOTAL	39	ND		ND		ND	
	CHROMIUM, TOTAL	230	10.6 J-		8.8 J-		9.5 J-	
	NICKEL, TOTAL	1600	30.0 J-		43.3 J-		46.9 J-	
	ARSENIC, TOTAL	.43	13.4 J	X	19.9 J	X	25.0 J	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.

Summary of Analytical Results
Ohio Characterization Action Levels

		PRA	3					
		PRA Description	PRA #3 NON-HAZARDOUS WASTE					
		Sample Type	Field Duplicate (Rep)		Normal Sample			
		Sample Id	COL-ASS001-41001		COL-ASS001-40001		COL-ASS013-40001	
		Depth - ft bgs	0 - 1		0 - 1		0 - 1	
		Collected Date	06/17/98		06/17/98		06/17/98	
		Laboratory	CT&E Environmental Services		CT&E Environmental Services		CT&E Environmental Services	
		Sample Collector	Civil + Environmental Cons.		Civil + Environmental Cons.		Civil + Environmental Cons.	
		Result Units	MG/KG		MG/KG		MG/KG	
Category	Analyte	Action Level	Result Flag	> CAL*	Result Flag	> CAL*	Result Flag	> CAL*
VOA	BENZENE	22	ND		ND		ND	
	TOLUENE	16000	ND		ND		ND	
	ETHYL BENZENE	7800	ND		ND		ND	
	XYLENES (TOTAL)	160000	ND		ND		ND	
	METHYLENE CHLORIDE	85	ND		ND		ND	
P/PCB	AROCLOR-1221	1	ND		ND		ND	
METAL	BARIUM, TOTAL	5500	175		115 J-		167 J-	
	CADMIUM, TOTAL	39	ND		ND		ND	
	CHROMIUM, TOTAL	230	13.9 J-		13.5 J-		13.3 J-	
	NICKEL, TOTAL	1600	16.0 J-		16.1 J-		14.8 J-	
	ARSENIC, TOTAL	.43	26.6 J	X	18.7 J	X	23.9 J	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.

Summary of Analytical Results
Ohio Characterization Action Levels

		PRA	4					
		PRA Description	PRA #4 LIQUID REMOVAL POINT AT SCRUBBERS					
		Sample Type	Field Duplicate (Rep)				Normal Sample	
		Sample Id	COL-ASB001-41001		COL-ASB001-71002		COL-ASB001-40001	
		Depth - ft bgs	0 - 1		5 - 5		0 - 1	
		Collected Date	06/17/98		06/17/98		06/17/98	
		Laboratory	CT&E Environmental Services		CT&E Environmental Services		CT&E Environmental Services	
		Sample Collector	Civil + Environmental Cons.		Civil + Environmental Cons.		Civil + Environmental Cons.	
		Result Units	MG/KG		MG/KG		MG/KG	
Category	Analyte	Action Level	Result Flag	> CAL*	Result Flag	> CAL*	Result Flag	> CAL*
VOA	BENZENE	22	ND		ND		ND	
	TOLUENE	16000	ND		ND		ND	
	ETHYL BENZENE	7800	ND		ND		ND	
	XYLENES (TOTAL)	160000	ND		ND		ND	
	METHYLENE CHLORIDE	85						
P/PCB	AROCLOR-1221	1	ND		0.19		ND	
METAL	BARIUM, TOTAL	5500						
	CADMIUM, TOTAL	39						
	CHROMIUM, TOTAL	230						
	NICKEL, TOTAL	1600						
	ARSENIC, TOTAL	.43						

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.

Summary of Analytical Results
Ohio Characterization Action Levels

		PRA					5	
		PRA Description					**PRA #5 METER BUILDING**	
		Sample Type					**Normal Sample**	
		Sample Id	**COL-ASB001-70001**		**COL-ASB001-70002**		**COL-ASS002-40001**	
		Depth - ft bgs	**2.5 - 2.5**		**5 - 5**		**0 - 1**	
		Collected Date	**06/17/98**		**06/17/98**		**06/17/98**	
		Laboratory	**CT&E Environmental Services**		**CT&E Environmental Services**		**CT&E Environmental Services**	
		Sample Collector	**Civil + Environmental Cons.**		**Civil + Environmental Cons.**		**Civil + Environmental Cons.**	
		Result Units	**MG/KG**		**MG/KG**		**MG/KG**	
Category	Analyte	Action Level	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***	**Result Flag**	**> CAL***
VOA	**BENZENE**	22	0.031		ND			
	TOLUENE	16000	0.028		ND			
	ETHYL BENZENE	7800	0.19		ND			
	XYLENES (TOTAL)	160000	0.48		ND			
	METHYLENE CHLORIDE	85						
P/PCB	**AROCLOR-1221**	1	3.8 J	X	0.25			
METAL	**BARIUM, TOTAL**	5500						
	CADMIUM, TOTAL	39						
	CHROMIUM, TOTAL	230						
	NICKEL, TOTAL	1600						
	ARSENIC, TOTAL	.43						

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.

Summary of Analytical Results
Ohio Characterization Action Levels

PRA	
PRA Description	
Sample Type	
Sample Id	**COL-ASS003-40001**
Depth - ft bgs	**0 - 1**
Collected Date	**06/17/98**
Laboratory	**CT&E Environmental Services**
Sample Collector	**Civil + Environmental Cons.**
Result Units	**MG/KG**

Category	Analyte	Action Level	**Result Flag**	**> CAL***
VOA	**BENZENE**	22		
	TOLUENE	16000		
	ETHYL BENZENE	7800		
	XYLENES (TOTAL)	160000		
	METHYLENE CHLORIDE	85		
P/PCB	**AROCLOR-1221**	1		
METAL	**BARIUM, TOTAL**	5500		
	CADMIUM, TOTAL	39		
	CHROMIUM, TOTAL	230		
	NICKEL, TOTAL	1600		
	ARSENIC, TOTAL	.43		

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.

Summary of Analytical Results
Ohio Characterization Action Levels

		PRA	6					
		PRA Description	PRA #6 CATCH BASIN					
		Sample Type	Field Duplicate (Rep)				Normal Sample	
		Sample Id	COL-AML001-21001		COL-AML001-21002		COL-AML001-20001	
		Depth - ft bgs	0 - 0		0 - 0		0 - 0	
		Collected Date	06/18/98		06/18/98		06/18/98	
		Laboratory	CT&E Environmental Services		CT&E Environmental Services		CT&E Environmental Services	
		Sample Collector	Civil + Environmental Cons.		Civil + Environmental Cons.		Civil + Environmental Cons.	
		Result Units	UG/L		UG/L		UG/L	
Category	Analyte	Action Level	Result Flag	> CAL*	Result Flag	> CAL*	Result Flag	> CAL*

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.

APPENDIX G

SITE BACKGROUND CALCULATIONS

Appendix G
Metals Background Level Work Sheet
Columbus District Office, Ohio
Columbia Gas Transmission

Sample Identification Number	Constituent	Concentration (mg/kg)
COL-ASU005-70001	Arsenic	21.30
COL-ASU006-70001	Arsenic	18.50
COL-ASU007-70001	Arsenic	25.80
	Average (a):	**21.87**
	Two Times Average (b):	**43.73**
	Site Background (c):	**43.73**

COL-ASU005-70001	Barium	132.00
COL-ASU006-70001	Barium	121.00
COL-ASU007-70001	Barium	226.00
	Average (a):	**159.67**
	Two Times Average (b):	**319.33**
	Site Background (c):	**319.33**

COL-ASU005-70001	Chromium	11.30
COL-ASU006-70001	Chromium	11.00
COL-ASU007-70001	Chromium	12.60
	Average (a):	**11.63**
	Two Times Average (b):	**23.27**
	Site Background (c):	**23.27**

COL-ASU005-70001	Nickel	46.50
COL-ASU006-70001	Nickel	54.10
COL-ASU007-70001	Nickel	52.60
	Average (a):	**51.07**
	Two Times Average (b):	**102.13**
	Site Background (c):	**102.13**

Notes:

(a) - Arithmetic mean of all samples.
(b) - According to USEPA, Region IV, two times the average background concentration may be used as the site background concentration for inorganics.
(c) - Site Background concentration is the higher of the maximum detected and the two times average background concentrations.