

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA		41		40		39		38		37		36		35		34		33		32	
Count																					
Lab. Sample ID		O2009009644		O2009008645		O2009008643		O2009008300		O2009007736		O2009007340		O2009007164		O2009006796		O2009006649		O2009006650	
Collector No.		9522002		9522003		9522001		9522001		9522001		9522003		9522002		9516002		9522001		9522002	
Operator		Cabot		Cabot		Anadarko		East		East		East		XTO		Rex		Cabot		Cabot	
County		Susquehanna		Susquehanna		Clinton		Tioga		Tioga		Tioga		Indiana		Westmoreland		Susquehanna		Susquehanna	
Well Name		J. Grimsley 1		J. Grimsley 2H		COP Tract 285 2H		Smith K 253 1H		Bowers 408 1H		White 262 1H		Ind. Co. Airport 8391H		Eaglehouse Unit #7 1H		Hubbard 5H		Hubbard 6H	
Type of sample		Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Tank Frac Water		Tank Frac Water		Tank Frac Water	
Permit #		115-20095		115-20171		035-21155		117-20268		117-20325		117-20295		063-36435		129-27856		115-20148		115-20147	
Date		11/19/2009		11/19/2009		11/18/2009		11/4/2009		10/16/2009		10/1/2009		9/25/2009		9/14/2009		9/9/2009		9/9/2009	
Collector		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller/Tersine		Tersine		Fuller		Fuller	
Test/CAS #	Description	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results
630206	1,1,1,2-Tetrachloroethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
71556	1,1,1-Trichloroethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
79345	1,1,2,2-Tetrachloroethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
79005	1,1,2-Trichloroethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75343	1,1-Dichloroethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75354	1,1-Dichloroethene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
563586	1,1-Dichloropropene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
87616	1,2,3-Trichlorobenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
96184	1,2,3-Trichloropropane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
120821	1,2,4-Trichlorobenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
95636	1,2,4-Trimethylbenzene	<5	U	<5	U	1200	U	<5	U	<5	U	<5	U	<5	U	16.2	U	13.6	U	13.9	U
108678	1,3,5-Trimethylbenzene	<5	U	<5	U	264	Q	<5	U	<5	U	<5	U	<5	U	<5	U	7.6	U	8.5	U
96128	1,2-Dibromo-3-chloropropane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
106934	1,2-Dibromoethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
95501	1,2-Dichlorobenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
107062	1,2-Dichloroethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
78875	1,2-Dichloropropane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
541731	1,3-Dichlorobenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
142289	1,3-Dichloropropane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
106467	1,4-Dichlorobenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
123911	1,4-Dioxane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
594207	2,2-Dichloropropane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
591786	2-Hexanone	<25	U	<25	U	<25	U	<25	U	<25	U	<25	U	<25	U	<5	U	<25	U	<25	U
99876	4-Isopropyltoluene	<5	U	<5	U	150	U	<5	U	<5	U	<5	U	<5	U	5	U	<5.0	U	<5.0	U
67641	Acetone	365	U	<25	U	150	U	113	U	188	U	481	U	37.2	U	51.9	U	28.6	U	27.8	U
71432	Benzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
108861	Bromobenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75274	Bromodichloromethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
74839	Bromoethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75252	Bromoform	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75150	Carbon Disulfide	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	122	U	<5	U	<5.0	U	<5.0	U
56235	Carbon Tetrachloride	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
108907	Chlorobenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75003	Chloroethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75014	Chloroethene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
67663	Chloroform	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
74873	Chloromethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
156592	cis-1,2-Dichloroethene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
10061015	cis-1,3-Dichloropropene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
124481	Dibromochloromethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<20	U	<20	U
74953	Dibromomethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75718	Dichlorodifluoromethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
100414	Ethylbenzene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
87683	Hexachlorobutadiene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
98828	Isopropylbenzene	<5	U	<5	U	6.4	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
108383	m/p-Xylene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	10	U	<10	U	<10	U
78933	MEK	<25	U	<5	U	<25	U	<25	U	<5	U	<25	U	<25	U	25	U	<25	U	<25	U
1634044	Methyl Tert-Butyl Ether	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75092	Methylene Chloride	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
108101	MIBK	<25	U	<25	U	<25	U	<25	U	<25	U	<25	U	<25	U	25	U	<25	U	<25	U
91203	Naphthalene	10.3	U	<5	U	1300	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
104518	n-Butylbenzene	<5	U	<5	U	1040	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
103651	n-Propylbenzene	<5	U	<5	U	39.5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
95498	o-Chlorotoluene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
95476	o-Xylene	<5	U	<5	U	5.9	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
106434	p-Chlorotoluene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
98566	PCTFB	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
135988	Sec-Butylbenzene	<5	U	<5	U	130	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
100425	Styrene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75650	t-Butyl alcohol	<50	U	<50	U	287	U	<50	U	<50	U	<250	U	<250	U	<250	U	<50	U	<50	U
540885	tert-Butyl Acetate</																				

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA	41		40		39		38		37		36		35		34		33		32		
Count																					
Lab. Sample ID	O2009009644		O2009008645		O2009008643		O2009008300		O2009007736		O2009007340		O2009007164		O2009006796		O2009006649		O2009006650		
Collector No.	9522002		9522003		9522001		9522001		9522001		9522003		9522002		9516002		9522001		9522002		
Operator	Cabot		Cabot		Anadarko		East		East		East		XTO		Rex		Cabot		Cabot		
County	Susquehanna		Susquehanna		Clinton		Tioga		Tioga		Tioga		Indiana		Westmoreland		Susquehanna		Susquehanna		
Well Name	J. Grimsley 1		J. Grimsley 2H		COP Tract 285 2H		Smith K 253 1H		Bowers 408 1H		White 262 1H		Ind. Co. Airport 8391H		Eaglehouse Unit #7 1H		Hubbard 5H		Hubbard 6H		
Type of sample	Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Frac Flow Back		Tank Frac Water		Tank Frac Water		Tank Frac Water		
Permit #	115-20095		115-20171		035-21155		117-20268		117-20325		117-20295		063-36435		129-27856		115-20148		115-20147		
Date	11/19/2009		11/19/2009		11/18/2009		11/4/2009		10/16/2009		10/1/2009		9/25/2009		9/14/2009		9/9/2009		9/9/2009		
Collector	Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller/Tersine		Tersine		Fuller		Fuller		
Test/CAS #	Description	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results
98066	Tert-Butylbenzene	<5	U	<5	U	9.1		<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
127184	Tetrachloroethene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
109999	Tetrahydrofuran	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	<5	U	<5.0	U	<5.0	U
108883	Toluene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
156605	trans-1,2-Dichloroethene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
10061026	trans-1,3-Dichloropropene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
79016	Trichloroethene	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
75694	Trichlorofluoromethane	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U
108054	Vinyl Acetate	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5.0	U	<5.0	U

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA		x		x		x		x		x		x		x		x		x			
Count		31		30		29		28		27		26		25		24		23		22	
Lab. Sample ID		O2009006571		O2009006139		O02009005788		O2009005474		O2009005383		O2009005233		O2009005157		O2009004939		O2009004759		O2009003989	
Collector No.		9522001		9522001		9522001		9522014		9516013		9516010		9516001		9516001		9516001		9516002	
Operator		Anadarko		Atlas		Atlas		East		Atlas		Chief		Atlas		Chief		East		Samson	
County		Clinton		Fayette		Fayette		Tioga		Fayette		Clearfield		Green		Clearfield		Tioga		Somerset	
Well Name		COP Tract 653 1001H		W. Smith #1		Bezjak #26		Courtney H 255		Lee 11		Hutton #1H		Consol #66		Hutton #1H		Benson 130D		Yoder	
Type of sample		Frac Flow Back		Tank Frac Water		Frac Flow Back		Frac Flow Back		Frac Flow Back		Pit Water		Frac Flow Back		Pit Water		Pit Water		Frac Flow Back	
Permit #		035-21162		051-24098		051-24209		117-20279		051-24206		033-26803		059-25137		033-26803		117-20205		111-20268	
Date		9/2/2009		8/19/2009		8/5/2009		7/23/2009		7/22/2009		7/14/2009		7/8/2009		7/1/2009		6/24/2009		5/29/2009	
Collector		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Tersine	
Test/CAS #	Description	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results
630206	1,1,1,2-Tetrachloroethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
71556	1,1,1-Trichloroethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
79345	1,1,2,2-Tetrachloroethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
79005	1,1,2-Trichloroethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75343	1,1-Dichloroethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75354	1,1-Dichloroethene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
563586	1,1-Dichloropropene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
87616	1,2,3-Trichlorobenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
96184	1,2,3-Trichloropropane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
120821	1,2,4-Trichlorobenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
95636	1,2,4-Trimethylbenzene	<5.0	U	<5.0	U	27.8		<5.0	U	30.6		22.9		13.7		24		<0.5	U	12.6	
108678	1,3,5-Trimethylbenzene	<5.0	U	<5.0	U	7.2		<5.0	U	12.9		6.9		6.8		7.1		<0.5	U	5.5	
96128	1,2-Dibromo-3-chloropropane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
106934	1,2-Dibromoethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
95501	1,2-Dichlorobenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
107062	1,2-Dichloroethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	1.7	
78875	1,2-Dichloropropane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
541731	1,3-Dichlorobenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
142289	1,3-Dichloropropane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
106467	1,4-Dichlorobenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
123911	1,4-Dioxane	<5.0	U																		
594207	2,2-Dichloropropane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
591786	2-Hexanone	<25	U	<25	U	<25	U	<25.0	U	<25.0	U	<5.0	U	<25.0	U	<25.0	U	<2.5	U	<2.5	U
99876	4-Isopropyltoluene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
67641	Acetone	121		349		<25	U	<25.0	U	10,000		<25.0	U	<25.0	U	<25.0	U	5.4		<2.5	U
71432	Benzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	34.8		<5.0	U	<0.5	U	1.8	
108861	Bromobenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75274	Bromodichloromethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
74839	Bromoethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75252	Bromoform	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<1.0	U	<0.5	U
75150	Carbon Disulfide	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
56235	Carbon Tetrachloride	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
108907	Chlorobenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75003	Chloroethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75014	Chloroethene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
67663	Chloroform	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
74873	Chloromethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
156592	cis-1,2-Dichloroethene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
10061015	cis-1,3-Dichloropropene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
124481	Dibromochloromethane	<20	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
74953	Dibromomethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75718	Dichlorodifluoromethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
100414	Ethylbenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	10.2		<5.0	U	<0.5	U	<0.5	U
87683	Hexachlorobutadiene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
98828	Isopropylbenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
108383	m/p-Xylene	<10	U	<10	U	12.4		<10.0	U	14.4		27.6		15.5		17.5		<1.0	U	5.4	
78933	MEK	<25	U	<25	U	<25	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U	<2.5	U	<2.5	U
1634044	Methyl Tert-Butyl Ether	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75092	Methylene Chloride	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
108101	MIBK	<25	U	<25	U	<25	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U	<25.0	U	<2.5	U	<2.5	U
91203	Naphthalene	<5.0	U	7.3		83.1		<5.0	U	36.3		14.4		28.2		14.4		<0.5	U	11.5	
104518	n-Butylbenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
103651	n-Propylbenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
95498	o-Chlorotoluene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
95476	o-Xylene	<5.0	U	<5.0	U	8.9		<5.0	U	8.8		15.9		8.8		11.1		<0.5	U	3.8	
106434	p-Chlorotoluene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
98566	PCTFB	<5.0	U	<5.0	U	<5.															

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA																					
Count		31		x		x		x		x		x		x		x		x		x	
Lab. Sample ID		O2009006571		O2009006139		O02009005788		O2009005474		O2009005383		O2009005233		O2009005157		O2009004939		O2009004759		O2009003989	
Collector No.		9522001		9522001		9522001		9522014		9516013		9516010		9516001		9516001		9516001		9516002	
Operator		Anadarko		Atlas		Atlas		East		Atlas		Chief		Atlas		Chief		East		Samson	
County		Clinton		Fayette		Fayette		Tioga		Fayette		Clearfield		Green		Clearfield		Tioga		Somerset	
Well Name		COP Tract 653 1001H		W. Smith #1		Bezjak #26		Courtney H 255		Lee 11		Hutton #1H		Consol #66		Hutton #1H		Benson 130D		Yoder	
Type of sample		Frac Flow Back		Tank Frac Water		Frac Flow Back		Frac Flow Back		Frac Flow Back		Pit Water		Frac Flow Back		Pit Water		Pit Water		Frac Flow Back	
Permit #		035-21162		051-24098		051-24209		117-20279		051-24206		033-26803		059-25137		033-26803		117-20205		111-20268	
Date		9/2/2009		8/19/2009		8/5/2009		7/23/2009		7/22/2009		7/14/2009		7/8/2009		7/1/2009		6/24/2009		5/29/2009	
Collector		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Fuller		Tersine	
Test/CAS #	Description	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results
98066	Tert-Butylbenzene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
127184	Tetrachloroethene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
109999	Tetrahydrofuran	<5.0	U	<5.0	U	<5.0	U	<20.0	U	<20.0	U	<5.0	U	<5.0	U	<20.0	U	<0.5	U	<2.0	U
108883	Toluene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	6.3	U	48.5	U	<5.0	U	<0.5	U	0.87	U
156605	trans-1,2-Dichloroethene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
10061026	trans-1,3-Dichloropropene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
79016	Trichloroethene	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
75694	Trichlorofluoromethane	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U
108054	Vinyl Acetate	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<0.5	U

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA		x		x		x		x		x		x		x		x		x		x	
Count		21		20		19		18		17		16		15		14		13		12	
Lab. Sample ID		O2008008675		O2008008442		O2008008390		O2008007821		O2008007820		O2008007822		O2008007858		O2008007659		O2008007660		O2008007357	
Collector No.		9516003		9516002		9516003		9516004		9516001		9516007		9516010		9516001		9516002		9516004	
Operator												H#1		H#2		H#1		H#2			
County		Clearfield		Clearfield		Clearfield		Susquehanna		Susquehanna		Centre County		Centre County		Centre		Centre		Washington	
Well Name		Bonsall 7		Bonsall 7		Bonsall 7		Costello # 1		Teel # 7		Litke 7H		Litke 8H		Litke 7H		Litke 8H		Godwin #1H	
Type of sample		Frac Water		Frac Water		Frac Water		Frac Flow Back		Frac Flow Back		Frac Water		Frac Water		Frac Water		Frac Water		Seperator Water	
Permit #		033-26585		033-26585		033-26585						027-21478		027-21479		027-21478		027-21479		125-23100	
Date		11/5/2008		10/27/2008		10/23/2008		10/9/2008		10/9/2008		10/9/2008		10/9/2008		10/2/2008		10/2/2008		9/17/2008	
Collector		Tersine		Tersine		Tersine		Tersine		Tersine		Tersine		Tersine		Tersine		Tersine		Tersine	
Test/CAS #	Description	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results
98066	Tert-Butylbenzene	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
127184	Tetrachloroethene	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
109999	Tetrahydrofuran	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<5.0	U	8.1		<5.0	U	<5.0	U	<5.0	U	<5.0	U
108883	Toluene	<5.0	U	<5.0	U	3.5	U	<5.0	U	<5.0	U	5.4		4.1	J	<5.0	U	13.3		<5.0	U
156605	trans-1,2-Dichloroethene	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
10061026	trans-1,3-Dichloropropene	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
79016	Trichloroethene	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U
75694	Trichlorofluoromethane	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<100	U
108054	Vinyl Acetate	<150	U	<20	U	<1.0	U	<10.0	U	<10	U	<10	U	<10	U	<50.0	U	<50.0	U	<50	U

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA		11		10		9		8		7		6		5		4		3		2	
Count																					
Lab. Sample ID		O2008005129		O2008004931		O2008004396		O2008004388		O2008004324		O2008004279		O2008004230		O2008004276		O2008004039		O2008004040	
Collector No.		9516001		9516001		9501006		505084		2359071		505082		2442606		9501005		9516 009		9516 010	
Operator																					
County		Huntington		Butler		Washington		Greene		Westmoreland		Fayette		Tioga		Washington		Washington		Clearfield	
Well Name		Hess 2073		R Blauser Trust 1		Zappi 2H		Swartz 4		Skokut 2A		Szuhay 5		Root 1 Well		Cowden 1H		Truck at HRT		Truck at HRT	
Type of sample		Frac Water		Frac Water		Frac Flow Back		Pit Water		Frac Tank		Pit Water		Pit Frac Water		Frac Return Tank		Frac Flow Back		Frac Flow Back	
Permit #		061-20004		019-21476		125-23048		059-24394		129-27331		051-23926				125-23023					
Date		7/1/2008		6/25/2008		6/10/2008		6/10/2008		6/5/2008		6/4/2009		6/3/2008		6/3/2008		5/23/2008		5/23/2008	
Collector		Tersine		Matinko		Yantko		Higgins		Yantko		Stephens		Matinko		Tersine		Tersine			
Test/CAS #	Description	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results
630206	1,1,1,2-Tetrachloroethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
71556	1,1,1-Trichloroethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
79345	1,1,2,2-Tetrachloroethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
79005	1,1,2-Trichloroethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75343	1,1-Dichloroethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75354	1,1-Dichloroethene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
563586	1,1-Dichloropropene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
87616	1,2,3-Trichlorobenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
96184	1,2,3-Trichloropropane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
120821	1,2,4-Trichlorobenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
95636	1,2,4-Trimethylbenzene	125	U	<2	U	83.5	U	<5.0	U	<10	U	3,700	Q	<2.3	J	755	Q	4.4	U	231	Q
108678	1,3,5-Trimethylbenzene	<50.0	U	<2	U	66.1	J	<5.0	U	<20	U	1,560	Q	0.51	J	426	Q	2.8	J	126	U
96128	1,2-Dibromo-3-chloropropane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
106934	1,2-Dibromoethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
95501	1,2-Dichlorobenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
107062	1,2-Dichloroethane	55.3	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
78875	1,2-Dichloropropane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
541731	1,3-Dichlorobenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
142289	1,3-Dichloropropane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
106467	1,4-Dichlorobenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
123911	1,4-Dioxane	<1000	U	<5.0	U	14,700	BQ	<25	U	3,470	BQ	<25	U	4.0	U	<25.0	U	<2.5	U	<2.5	U
594207	2,2-Dichloropropane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
591786	2-Hexanone	<50.0	U	<2.5	U	<25.0	U	<25	U	<25	U	<25	U	<2.5	U	<25.0	U	<2.5	U	<2.5	U
99876	4-Isopropyltoluene	100	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	30	U	<0.5	U	34.3	U
67641	Acetone	5230	U	1,750	Q	<25.0	U	2,960	U	<50	U	<50	U	4,500	U	<50.0	U	231	U	<2.5	U
71432	Benzene	<50.0	U	<0.5	U	616.0	Q	<5.0	U	<5.0	U	<5.0	U	0.72	U	764	Q	<0.5	U	268	Q
108861	Bromobenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75274	Bromodichloromethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
74839	Bromoethane	<50.0	U	<0.5	U	<20.0	U	<20	U	<10	U	<10	U	<2.0	U	<10.0	U	<0.5	U	<0.5	U
75252	Bromoform	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	561.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75150	Carbon Disulfide	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
56235	Carbon Tetrachloride	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
108907	Chlorobenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75003	Chloroethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75014	Chloroethene	<50.0	U	<0.5	U	<10.0	U	<10	U	<5.0	U	<5.0	U	<1.0	U	<5.0	U	<0.5	U	<0.5	U
67663	Chloroform	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
74873	Chloromethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
156592	cis-1,2-Dichloroethene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
10061015	cis-1,3-Dichloropropene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
124481	Dibromochloromethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
74953	Dibromomethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75718	Dichlorodifluoromethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
100414	Ethylbenzene	<50.0	U	<0.5	U	49.0	Q	<5.0	U	<5.0	U	36.2	U	0.86	U	<5.0	U	<0.5	U	<0.5	U
87683	Hexachlorobutadiene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
98828	Isopropylbenzene	<50.0	U	<0.5	U	6.4	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
108383	m/p-Xylene	<50.0	U	2	Q	778.0	Q	<10	U	<10	U	956.0	Q	3.1	U	1,900	Q	<1.7	U	1060	Q
78933	MEK	<50.0	U	<2.5	U	<25.0	U	<25	U	<25	U	<25	U	<2.5	U	<25.0	U	8.7	U	<0.5	U
1634044	Methyl Tert-Butyl Ether	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75092	Methylene Chloride	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
108101	MIBK	<250	U	<2.5	U	<25.0	U	<25	U	<25	U	<25	U	<2.5	U	<25.0	U	<2.5	U	<0.5	U
91203	Naphthalene	<50.0	U	<0.5	U	<20.0	U	<20	U	<5.0	U	<5.0	U	10.4	U	<5.0	U	7.3	U	<0.5	U
104518	n-Butylbenzene	57.6	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
103651	n-Propylbenzene	<50.0	U	<0.5	U	7.4	U	<5.0	U	<5.0	U	<42.2	Q	<0.5	U	40.2	U	<0.5	U	16.8	U
95498	o-Chlorotoluene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
95476	o-Xylene	<50.0	U	0.9	U	<5.0	U	<5.0	U	<5.0	U	322.0	Q	<0.5	U	353	Q	0.85	U	221	Q
106434	p-Chlorotoluene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U				

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA	11		10		9		8		7		6		5		4		3		2		
Count																					
Lab. Sample ID	O2008005129		O2008004931		O2008004396		O2008004388		O2008004324		O2008004279		O2008004230		O2008004276		O2008004039		O2008004040		
Collector No.	9516001		9516001		9501006		505084		2359071		505082		2442606		9501005		9516 009		9516 010		
Operator																					
County	Huntington		Butler		Washington		Greene		Westmoreland		Fayette		Tioga		Washington		Washington		Clearfield		
Well Name	Hess 2073		R Blauser Trust 1		Zappi 2H		Swartz 4		Skokut 2A		Szuhay 5		Root 1 Well		Cowden 1H		Truck at HRT		Truck at HRT		
Type of sample	Frac Water		Frac Water		Frac Flow Back		Pit Water		Frac Tank		Pit Water		Pit Frac Water		Frac Return Tank		Frac Flow Back		Frac Flow Back		
Permit #	061-20004		019-21476		125-23048		059-24394		129-27331		051-23926				125-23023						
Date	7/1/2008		6/25/2008		6/10/2008		6/10/2008		6/5/2008		6/4/2009		6/3/2008		6/3/2008		5/23/2008		5/23/2008		
Collector	Tersine				Matinko		Yantko		Higgins		Yantko		Stephens		Matinko		Tersine		Tersine		
Test/CAS #	Description	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results	Reported (UG/L)	Results
98066	Tert-Butylbenzene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
127184	Tetrachloroethene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
109999	Tetrahydrofuran	<50.0	U	<2	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<1.0	U	<1.0	U
108883	Toluene	<50.0	U	0.87	Q	1,060	Q	<5.0	U	<5.0	U	174.0	Q	<0.5	U	2,160	Q	0.84	U	<0.5	U
156605	trans-1,2-Dichloroethene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
10061026	trans-1,3-Dichloropropene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
79016	Trichloroethene	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
75694	Trichlorofluoromethane	<50.0	U	<0.5	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<5.0	U	<0.5	U	<0.5	U
108054	Vinyl Acetate	<50.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<5.0	U	<0.5	U	<50.0	U	<10.0	U	<10.0	U

PADEP Frac and Flowback Water Analytical Data - VOAs

VOA			
Count		1	
Lab. Sample ID		O2008002138	
Collector No.		9516 303	
Operator			
County		Lycoming	
Well Name		Kensinger Unit 1 H	
Type of sample		Frac Flow Back	
Permit #			
Date		3/28/2008	
Collector		Tersine	
Test/CAS #	Description	Reported (UG/L)	Results
98066	Tert-Butylbenzene	<0.50	U
127184	Tetrachloroethene	<0.50	U
109999	Tetrahydrofuran	<2.0	U
108883	Toluene	<0.50	U
156605	trans-1,2-Dichloroethene	<0.50	U
10061026	trans-1,3-Dichloropropene	<0.50	U
79016	Trichloroethene	<0.50	U
75694	Trichlorofluoromethane	<0.50	U
108054	Vinyl Acetate	<0.50	U

Marcellus Shale Committee
2008/2009 Testing Results

Frac Fluid | Frac Flow Back

ND	ND
ND	ND
ND - 0.0067	ND - 2.3
ND	ND
ND	ND
ND	ND
ND	ND
ND	ND

DEP Laboratory List - VOAWW

- (1,1-Dimethylethyl)benzene
- Tetrachloroethene
- Tetrahydrofuran
- Toluene
- trans-1,2-Dichloroethene
- trans-1,3-Dichloropropene
- Trichloroethene
- Trichlorofluoromethane
- Vinyl Acetate