Prairie Analytical Systems, INCORPORATED

Friday, August 31, 2012

Ms. Connie Blair
Flint Hills Resources
501 Brunner Street
Peru, IL 61354

TEL: (815) 224-5451

FAX: NA

RE: Roll Off Box Analysis / Special Waste PAS WO: 12H0421

Prairie Analytical Systems, Inc. received 4 sample(s) on 8/20/2012 for the analyses presented in the following report.

All applicable quality control procedures met method specific acceptance criteria unless otherwise noted.

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If you have any questions, please feel free to contact me at (217) 753-1148.

Respectfully submitted,

Michael D. Brophy
Project Manager

Certifications: NELAP/NELAC - IL #100323

1210 Capital Airport Drive * Springfield, IL 62707 * 1.217.753.1148 * 1.217.753.1152 Fax
9114 Virginia Road Suite #112 * Lake in the Hills, IL 60156 * 1.847.651.2604 * 1.847.458.0538 Fax

Prairie Analytical Systems, Inc. **Date:** 8/31/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste **Lab Order:** 12H0421
Client Sample ID: CA 1 **Lab ID:** 12H0421-01
Collection Date: 8/20/12 11:07 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*2-Butanone	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*Carbon tetrachloride	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*Chlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*Chloroform	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*1,2-Dichloroethane	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*1,1-Dichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*Tetrachloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*Trichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
*Vinyl chloride	U	200		µg/L	10	8/23/12 16:23	8/23/12 16:55	SW 8260B	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 14:58	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 15:59	SW 8082	BDP
*Aroclor 1221	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 15:59	SW 8082	BDP
*Aroclor 1232	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 15:59	SW 8082	BDP
*Aroclor 1242	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 15:59	SW 8082	BDP
*Aroclor 1248	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 15:59	SW 8082	BDP
*Aroclor 1254	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 15:59	SW 8082	BDP
*Aroclor 1260	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 15:59	SW 8082	BDP
TCLP Metals by ICP-MS									
*Arsenic	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
***Barium**	**0.541**	0.0300		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
***Cadmium**	**0.0722**	0.00600		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
*Chromium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
***Lead**	**0.0830**	0.0150		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
*Mercury	U	0.000600		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
*Selenium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 21:13	SW 6020A	JHN
Conventional Chemistry Parameters									
*Cyanide	U	0.243		mg/Kg	1	8/27/12 9:33	8/27/12 15:47	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	8/21/12 12:00	8/21/12 12:00	SW 1010 (M)	RSR

Prairie Analytical Systems, Inc. **Date:** 8/31/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste **Lab Order:** 12H0421
Client Sample ID: CA 1 **Lab ID:** 12H0421-01
Collection Date: 8/20/12 11:07 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Paint Filter	Pass			P/F	1	8/21/12 12:00	8/21/12 12:00	SW 9095A	RSR
***pH**	**7.85**	0.0100		pH Units	1	8/23/12 10:45	8/23/12 14:50	SW 9045C	CEP
*Phenolics	U	4.76		mg/Kg	1	8/21/12 13:50	8/22/12 9:11	SW 9065 (M)	RSR
*Reactive Sulfide	U	9.50		mg/Kg	1	8/21/12 10:12	8/21/12 16:00	SW 9034	AJD
Percent Solids	**99.5**	0.100		%	1	8/21/12 15:13	8/22/12 8:15	ASTM D2216	CCD
				Precision Petroleum Labs, Inc					
Extractable Organic Halides	U	1		mg/Kg	1	8/27/12 0:00	8/27/12 0:00	SW 9023	SUB

Prairie Analytical Systems, Inc. **Date:** 8/31/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste **Lab Order:** 12H0421
Client Sample ID: S 1 **Lab ID:** 12H0421-02
Collection Date: 8/20/12 11:58 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*2-Butanone	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*Carbon tetrachloride	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*Chlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*Chloroform	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*1,2-Dichloroethane	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*1,1-Dichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*Tetrachloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*Trichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
*Vinyl chloride	U	200		µg/L	10	8/23/12 16:23	8/23/12 17:28	SW 8260B	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 15:31	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.4		µg/Kg	1	8/21/12 10:45	8/22/12 16:33	SW 8082	BDP
*Aroclor 1221	U	32.4		µg/Kg	1	8/21/12 10:45	8/22/12 16:33	SW 8082	BDP
*Aroclor 1232	U	32.4		µg/Kg	1	8/21/12 10:45	8/22/12 16:33	SW 8082	BDP
*Aroclor 1242	U	32.4		µg/Kg	1	8/21/12 10:45	8/22/12 16:33	SW 8082	BDP
*Aroclor 1248	U	32.4		µg/Kg	1	8/21/12 10:45	8/22/12 16:33	SW 8082	BDP
*Aroclor 1254	U	32.4		µg/Kg	1	8/21/12 10:45	8/22/12 16:33	SW 8082	BDP
*Aroclor 1260	U	32.4		µg/Kg	1	8/21/12 10:45	8/22/12 16:33	SW 8082	BDP
TCLP Metals by ICP-MS									
*Arsenic	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
***Barium**	**0.725**	0.0300		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
***Cadmium**	**0.128**	0.00600		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
*Chromium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
***Lead**	**0.140**	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
*Mercury	U	0.000600		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
*Selenium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:11	SW 6020A	JHN
Conventional Chemistry Parameters									
***Cyanide**	**0.254**	0.234		mg/Kg	1	8/27/12 9:33	8/27/12 15:47	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	8/27/12 0:00	8/27/12 0:00	SW 1010 (M)	CCD

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste
Client Sample ID: S 1
Collection Date: 8/20/12 11:58

Lab Order: 12H0421
Lab ID: 12H0421-02
Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Paint Filter	Pass			P/F	1	8/27/12 0:00	8/27/12 0:00	SW 9095A	CCD
***pH**	**8.02**	0.0100		pH Units	1	8/23/12 10:45	8/23/12 14:50	SW 9045C	CEP
*Phenolics	U	4.95		mg/Kg	1	8/21/12 13:50	8/22/12 9:11	SW 9065 (M)	RSR
*Reactive Sulfide	U	9.39		mg/Kg	1	8/21/12 10:12	8/21/12 16:00	SW 9034	AJD
Percent Solids	**90.0**	0.100		%	1	8/21/12 15:13	8/22/12 8:15	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	8/27/12 0:00	8/27/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste **Lab Order:** 12H0421
Client Sample ID: S 2 **Lab ID:** 12H0421-03
Collection Date: 8/20/12 12:17 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*2-Butanone	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*Carbon tetrachloride	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*Chlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*Chloroform	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*1,2-Dichloroethane	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*1,1-Dichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*Tetrachloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*Trichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
*Vinyl chloride	U	200		µg/L	10	8/23/12 16:23	8/23/12 18:02	SW 8260B	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:05	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:06	SW 8082	BDP
*Aroclor 1221	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:06	SW 8082	BDP
*Aroclor 1232	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:06	SW 8082	BDP
*Aroclor 1242	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:06	SW 8082	BDP
*Aroclor 1248	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:06	SW 8082	BDP
*Aroclor 1254	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:06	SW 8082	BDP
*Aroclor 1260	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:06	SW 8082	BDP
TCLP Metals by ICP-MS									
*Arsenic	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
***Barium**	**0.440**	0.0300		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
***Cadmium**	**0.175**	0.00600		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
*Chromium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
***Lead**	**0.109**	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
*Mercury	U	0.000600		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
*Selenium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:20	SW 6020A	JHN
Conventional Chemistry Parameters									
*Cyanide	U	0.229		mg/Kg	1	8/27/12 9:33	8/27/12 15:47	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	8/27/12 0:00	8/27/12 0:00	SW 1010 (M)	CCD

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste
Client Sample ID: S 2
Collection Date: 8/20/12 12:17

Lab Order: 12H0421
Lab ID: 12H0421-03
Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Paint Filter	Pass			P/F	1	8/27/12 0:00	8/27/12 0:00	SW 9095A	CCD
***pH**	**7.80**	0.0100		pH Units	1	8/23/12 10:45	8/23/12 14:50	SW 9045C	CEP
*Phenolics	U	4.90		mg/Kg	1	8/21/12 13:50	8/22/12 9:11	SW 9065 (M)	RSR
*Reactive Sulfide	U	9.48		mg/Kg	1	8/21/12 10:12	8/21/12 16:00	SW 9034	AJD
Percent Solids	**90.7**	0.100		%	1	8/21/12 15:13	8/22/12 8:15	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	8/27/12 0:00	8/27/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste
Client Sample ID: S 3
Collection Date: 8/20/12 12:30

Lab Order: 12H0421
Lab ID: 12H0421-04
Matrix: Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*2-Butanone	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*Carbon tetrachloride	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*Chlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*Chloroform	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*1,2-Dichloroethane	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*1,1-Dichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*Tetrachloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*Trichloroethene	U	250		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
*Vinyl chloride	U	200		µg/L	10	8/23/12 16:23	8/23/12 18:35	SW 8260B	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	8/22/12 10:25	8/23/12 16:38	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:40	SW 8082	BDP
*Aroclor 1221	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:40	SW 8082	BDP
*Aroclor 1232	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:40	SW 8082	BDP
*Aroclor 1242	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:40	SW 8082	BDP
*Aroclor 1248	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:40	SW 8082	BDP
*Aroclor 1254	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:40	SW 8082	BDP
*Aroclor 1260	U	32.9		µg/Kg	1	8/21/12 10:45	8/22/12 17:40	SW 8082	BDP
TCLP Metals by ICP-MS									
*Arsenic	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
***Barium**	**0.507**	0.0300		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
***Cadmium**	**0.119**	0.00600		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
*Chromium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
***Lead**	**0.118**	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
*Mercury	U	0.000600		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
*Selenium	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	8/22/12 9:37	8/25/12 22:28	SW 6020A	JHN
Conventional Chemistry Parameters									
***Cyanide**	**0.322**	0.240		mg/Kg	1	8/27/12 12:13	8/27/12 15:47	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	8/27/12 0:00	8/27/12 0:00	SW 1010 (M)	CCD

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste **Lab Order:** 12H0421
Client Sample ID: S 3 **Lab ID:** 12H0421-04
Collection Date: 8/20/12 12:30 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Paint Filter	Pass			P/F	1	8/27/12 0:00	8/27/12 0:00	SW 9095A	CCD
***pH**	**7.90**	0.0100		pH Units	1	8/23/12 10:45	8/23/12 14:50	SW 9045C	CEP
*Phenolics	U	4.90		mg/Kg	1	8/21/12 13:50	8/22/12 9:11	SW 9065 (M)	RSR
*Reactive Sulfide	U	9.30		mg/Kg	1	8/21/12 10:12	8/21/12 16:00	SW 9034	AJD
Percent Solids	**90.7**	0.100		%	1	8/21/12 15:13	8/22/12 8:15	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	8/27/12 0:00	8/27/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Box Analysis / Special Waste **Lab Order:** 12H0421

Notes and Definitions

S	Spike recovery outside acceptance limits.
P1	Pass
*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

FHRPRU001460

Chain of Custody Record

Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9680
Central/Southern IL Office - Phone (217) 414-7762 - Facsimile (217) 223-7922

Prairie Analytical Systems, Incorporated
www.prairieanalytical.com

Client	Flint Hills Resources
Address	501 Bunker Street
City, State, Zip Code	Peru, IL 61354
Phone / Facsimile	815-224-5451
Project Name / Number	Roll Off Box Analysis / Sp. Waste
Project Location	FH LaSalle / Peru
P.O. # or Invoice To	F. Hills
Contact Person	Connie Blair

Analysis and/or Method Requested

Sample Description	Sampling Date	Sampling Time	Matrix Code	Preserv Code	No. of Containers	Sample Type Comp	Sample Type Grab	Flash Point	TCLP VOC / SVOC	TCLP Metals	PCB's	TCN / RxS / Fide	Phenolics	pH / P Filter	FOX		Sampler Comments
(A)	8-20-12	11:07	S	O	2	X		✓	✓	✓	✓	✓	✓	✓	✓		
S-1	8/20/12	11:58	S	O	2	X		✓	✓	✓	✓	✓	✓	✓	✓		
S-2	8/20/12	12:17	S	O	2	X		✓	✓	✓	✓	✓	✓	✓	✓		
S-3	8/20/12	12:30	S		2	X		✓	✓	✓	✓	✓	✓	✓	✓		

Reporting
TACO: ☐ Resid ☐ Ind/Comm
CALM: ☐ A ☐ D ☐ B ☐ E ☐ C ☐ F
RISC: ☐ Resid ☐ Indust

Matrix Code	A - Aqueous	DW - Drinking Water	GW - Ground Water	NA - Non-Aqueous Liquid	S - Solid	O - Oil	X - Other (Specify)
Preserv Code	0 - None	1 - HCl	2 - H2SO4	3 - HNO3	4 - NaOH	5 - 5035 Kit	X - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	8/20/12	3:35pm	PAS	8/20/12	3:35pm	HAND

Special Instructions:

Turnaround Time: Standard ☒ Rush ☐
Date Required:

QC Level: 1 ☑ 2 ☐ 3 ☐ 4 ☐

On wet ice? Yes No

Temperature (°C): 3.8°C

Copies: White - Client / Yellow - PAS, Inc. / Pink - Sampler

Friday, July 13, 2012

Mr. Ganesh Krish

Flint Hills Resources
501 Brunner Street
Peru, IL 61354

TEL: (815) 224-5451

FAX: NA

RE: Rush Metals PAS WO: 12G0223

Prairie Analytical Systems, Inc. received 4 sample(s) on 7/10/2012 for the analyses presented in the following report.

All applicable quality control procedures met method specific acceptance criteria unless otherwise noted.

This report shall not be reproduced, except in full, without the prior written consent of Prairie Analytical Systems, Inc.

If you have any questions, please feel free to contact me at (217) 753-1148.

Respectfully submitted,

Michael D. Brophy
Project Manager

Certifications: NELAP/NELAC - IL #100323

Prairie Analytical Systems, Inc. **Date:** 7/13/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Rush Metals **Lab Order:** 12G0223
Client Sample ID: S-1 **Lab ID:** 12G0223-01
Collection Date: 7/10/12 11:37 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Metals by ICP-MS									
***Cadmium**	**0.121**	0.00600		mg/L	3	7/12/12 9:55	7/13/12 13:30	SW 6020A	JTC
***Lead**	**0.354**	0.0150		mg/L	3	7/12/12 9:55	7/13/12 13:30	SW 6020A	JTC
*Mercury	U	0.000600		mg/L	3	7/12/12 9:55	7/13/12 13:30	SW 6020A	JTC

Client Sample ID: CA-1 **Lab ID:** 12G0223-02
Collection Date: 7/10/12 12:00 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Metals by ICP-MS									
***Cadmium**	**0.0956**	0.00600		mg/L	3	7/12/12 9:55	7/13/12 14:04	SW 6020A	JTC
***Lead**	**1.11**	0.0150		mg/L	3	7/12/12 9:55	7/13/12 14:04	SW 6020A	JTC
*Mercury	U	0.000600		mg/L	3	7/12/12 9:55	7/13/12 14:04	SW 6020A	JTC

Client Sample ID: S-3 **Lab ID:** 12G0223-03
Collection Date: 7/10/12 12:30 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Metals by ICP-MS									
***Cadmium**	**0.0593**	0.00600		mg/L	3	7/12/12 9:55	7/13/12 14:13	SW 6020A	JTC
***Lead**	**0.0743**	0.0150		mg/L	3	7/12/12 9:55	7/13/12 14:13	SW 6020A	JTC
*Mercury	U	0.000600		mg/L	3	7/12/12 9:55	7/13/12 14:13	SW 6020A	JTC

Client Sample ID: S-2 **Lab ID:** 12G0223-04
Collection Date: 7/10/12 12:45 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Metals by ICP-MS									
***Cadmium**	**0.120**	0.00600		mg/L	3	7/12/12 9:55	7/13/12 14:21	SW 6020A	JTC
***Lead**	**0.0519**	0.0150		mg/L	3	7/12/12 9:55	7/13/12 14:21	SW 6020A	JTC
*Mercury	U	0.000600		mg/L	3	7/12/12 9:55	7/13/12 14:21	SW 6020A	JTC

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Rush Metals **Lab Order:** 12G0223

Notes and Definitions

*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

FHRPRU001464

Chain of Custody Record

Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9680
Central/Southern IL Office - Phone (217) 414-7762 - Facsimile (217) 223-7922

Prairie Analytical Systems, INCORPORATED
www.prairieanalytical.com

Client	Flint Hills Resources
Address	501 Brunner
City, State, Zip Code	Peru, Ill 61354
Phone / Facsimile	815-224-5451
Project Name / Number	
Project Location	FH LaSalle, Peru
P.O. # or Invoice To	
Contact Person	Ganesh Kirish

Analysis and/or Method Requested: TCLP Cd, Pb + Hg

Reporting: TACO ☐ Resid ☐ Ind/Comm; CALM ☐ A ☐ D ☐ B ☐ E ☐ C ☐ F; RISC ☐ Resid ☐ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code	Preserv Code	No. of Containers	Sample Type Comp	Sample Type Grab	TCLP Cd, Pb + Hg	Sampler Comments
S-1	7-10-12	11:37	S	0	1	X		✓	
CA-1	7-10-12	12:00	S	0	1	X		✓	
S-3	7-10-12	12:30	S	0	1	X		✓	
S-2	7-10-12	12:45	S	0	1	X		✓	

Matrix Code	A - Aqueous	DW - Drinking Water	GW - Ground Water	NA - Non-Aqueous Liquid	S - Solid	O - Oil	X - Other (Specify)
Preserv Code	0 - None	1 - HCl	2 - H2SO4	3 - HNO3	4 - NaOH	5 - 5035 Kit	X - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	7/10/12	5:23	PAS	7/10/12	5:23	HAND

Special Instructions: Infrmfield/Cadingbegun

Turnaround Time: Standard ☐ Rush ☑
Date Required: 7/13/12

QC Level: 1 ☑ 2 ☐ 3 ☐ 4 ☐

On wet ice? Yes No

Temperature (°C): 6.6°C