Thursday, December 6, 2012

Mr. Ross Hubbard

Flint Hills Resources
501 Brunner Street
Peru, IL 61354

TEL: (815) 224-5451

FAX: NA

RE: Roll Off Boxes / Special Waste La Salle/Peru PAS WO: 12K0540

Prairie Analytical Systems, Inc. received 3 sample(s) on 11/29/2012 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

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Boxes / Special Waste La Salle/Peru **Lab Order:** 12K0540
Client Sample ID: Unit 3 Asphalt **Lab ID:** 12K0540-01
Collection Date: 11/29/12 10:47 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*2-Butanone	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*Carbon tetrachloride	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*Chlorobenzene	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*Chloroform	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*1,4-Dichlorobenzene	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*1,2-Dichloroethane	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*1,1-Dichloroethene	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*Tetrachloroethene	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*Trichloroethene	U	125		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
*Vinyl chloride	U	100		µg/L	5	12/3/12 10:35	12/4/12 10:36	SW 8260B Re	BDP
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 11:59	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	96.6		µg/Kg	1	11/30/12 10:44	11/30/12 16:15	SW 8082	BDP
*Aroclor 1221	U	96.6		µg/Kg	1	11/30/12 10:44	11/30/12 16:15	SW 8082	BDP
*Aroclor 1232	U	96.6		µg/Kg	1	11/30/12 10:44	11/30/12 16:15	SW 8082	BDP
*Aroclor 1242	U	96.6		µg/Kg	1	11/30/12 10:44	11/30/12 16:15	SW 8082	BDP
*Aroclor 1248	U	96.6		µg/Kg	1	11/30/12 10:44	11/30/12 16:15	SW 8082	BDP
*Aroclor 1254	U	96.6		µg/Kg	1	11/30/12 10:44	11/30/12 16:15	SW 8082	BDP
*Aroclor 1260	U	96.6		µg/Kg	1	11/30/12 10:44	11/30/12 16:15	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/3/12 13:30	12/3/12 19:12	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/3/12 13:30	12/3/12 19:12	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/3/12 13:30	12/3/12 17:57	SW 6010B	JHN
***Barium**	**0.620**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 17:57	SW 6010B	JHN
***Cadmium**	**0.124**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 17:57	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/3/12 13:30	12/3/12 17:57	SW 6010B	JHN
***Lead**	**0.103**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 17:57	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/3/12 13:30	12/3/12 17:57	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/6/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Boxes / Special Waste La Salle/Peru **Lab Order:** 12K0540
Client Sample ID: Unit 3 Asphalt **Lab ID:** 12K0540-01
Collection Date: 11/29/12 10:47 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.263		mg/Kg	1	12/4/12 12:33	12/4/12 17:07	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	11/30/12 16:14	11/30/12 16:15	SW 1010 (M)	AJD
*Paint Filter	Pass			P/F	1	11/30/12 16:14	11/30/12 16:15	SW 9095A	AJD
***pH**	**7.70**	0.0100		pH Units	1	11/30/12 9:20	11/30/12 12:53	SW 9045C	RSR
*Phenolics	U	4.39		mg/Kg	1	12/5/12 8:55	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	8.77		mg/Kg	1	12/3/12 10:19	12/3/12 10:19	SW 9034	RSR
Percent Solids	**91.2**	0.100		%	1	12/3/12 10:00	12/3/12 15:51	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/6/12 0:00	12/6/12 0:00	SW 9023	SUB

Prairie Analytical Systems, Inc. **Date:** 12/6/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Boxes / Special Waste La Salle/Peru **Lab Order:** 12K0540
Client Sample ID: Unit 2 **Lab ID:** 12K0540-02
Collection Date: 11/29/12 11:08 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*2-Butanone	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*Carbon tetrachloride	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*Chlorobenzene	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*Chloroform	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*1,4-Dichlorobenzene	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*1,2-Dichloroethane	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*1,1-Dichloroethene	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*Tetrachloroethene	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*Trichloroethene	U	125		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
*Vinyl chloride	U	100		µg/L	5	12/3/12 10:35	12/4/12 11:06	SW 8260B Re	BDP
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 12:31	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	95.8		µg/Kg	1	11/30/12 10:44	11/30/12 16:48	SW 8082	BDP
*Aroclor 1221	U	95.8		µg/Kg	1	11/30/12 10:44	11/30/12 16:48	SW 8082	BDP
*Aroclor 1232	U	95.8		µg/Kg	1	11/30/12 10:44	11/30/12 16:48	SW 8082	BDP
*Aroclor 1242	U	95.8		µg/Kg	1	11/30/12 10:44	11/30/12 16:48	SW 8082	BDP
*Aroclor 1248	U	95.8		µg/Kg	1	11/30/12 10:44	11/30/12 16:48	SW 8082	BDP
*Aroclor 1254	U	95.8		µg/Kg	1	11/30/12 10:44	11/30/12 16:48	SW 8082	BDP
*Aroclor 1260	U	95.8		µg/Kg	1	11/30/12 10:44	11/30/12 16:48	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/3/12 13:30	12/3/12 19:21	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/3/12 13:30	12/3/12 19:21	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/3/12 13:30	12/3/12 18:01	SW 6010B	JHN
***Barium**	**0.212**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 18:01	SW 6010B	JHN
***Cadmium**	**0.278**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 18:01	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/3/12 13:30	12/3/12 18:01	SW 6010B	JHN
***Lead**	**0.387**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 18:01	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/3/12 13:30	12/3/12 18:01	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/6/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Boxes / Special Waste La Salle/Peru **Lab Order:** 12K0540
Client Sample ID: Unit 2 **Lab ID:** 12K0540-02
Collection Date: 11/29/12 11:08 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.289		mg/Kg	1	12/4/12 12:33	12/4/12 17:07	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	11/30/12 16:14	11/30/12 16:15	SW 1010 (M)	AJD
*Paint Filter	Pass			P/F	1	11/30/12 16:14	11/30/12 16:15	SW 9095A	AJD
***pH**	**7.15**	0.0100		pH Units	1	11/30/12 9:20	11/30/12 12:53	SW 9045C	RSR
*Phenolics	U	4.90		mg/Kg	1	12/5/12 13:27	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	8.47		mg/Kg	1	12/3/12 10:19	12/3/12 10:19	SW 9034	RSR
Percent Solids	**87.3**	0.100		%	1	12/3/12 10:00	12/3/12 15:51	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/6/12 0:00	12/6/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Boxes / Special Waste La Salle/Peru **Lab Order:** 12K0540
Client Sample ID: Unit 1 **Lab ID:** 12K0540-03
Collection Date: 11/29/12 11:45 **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	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*2-Butanone	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*Carbon tetrachloride	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*Chlorobenzene	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*Chloroform	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*1,4-Dichlorobenzene	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*1,2-Dichloroethane	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*1,1-Dichloroethene	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*Tetrachloroethene	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*Trichloroethene	U	250		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
*Vinyl chloride	U	200		µg/L	10	12/3/12 10:35	12/4/12 12:05	SW 8260B Re	BDP
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/3/12 13:09	12/4/12 13:03	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	92.5		µg/Kg	1	11/30/12 10:44	11/30/12 17:22	SW 8082	BDP
*Aroclor 1221	U	92.5		µg/Kg	1	11/30/12 10:44	11/30/12 17:22	SW 8082	BDP
*Aroclor 1232	U	92.5		µg/Kg	1	11/30/12 10:44	11/30/12 17:22	SW 8082	BDP
*Aroclor 1242	U	92.5		µg/Kg	1	11/30/12 10:44	11/30/12 17:22	SW 8082	BDP
*Aroclor 1248	U	92.5		µg/Kg	1	11/30/12 10:44	11/30/12 17:22	SW 8082	BDP
*Aroclor 1254	U	92.5		µg/Kg	1	11/30/12 10:44	11/30/12 17:22	SW 8082	BDP
*Aroclor 1260	U	92.5		µg/Kg	1	11/30/12 10:44	11/30/12 17:22	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/3/12 13:30	12/3/12 19:30	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/3/12 13:30	12/3/12 19:30	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/3/12 13:30	12/3/12 18:05	SW 6010B	JHN
***Barium**	**1.12**	0.0500		mg/L	5	12/3/12 13:30	12/4/12 12:59	SW 6010B	JHN
***Cadmium**	**0.236**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 18:05	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/3/12 13:30	12/3/12 18:05	SW 6010B	JHN
***Lead**	**0.122**	0.0100		mg/L	1	12/3/12 13:30	12/3/12 18:05	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/3/12 13:30	12/3/12 18:05	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/6/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Boxes / Special Waste La Salle/Peru **Lab Order:** 12K0540
Client Sample ID: Unit 1 **Lab ID:** 12K0540-03
Collection Date: 11/29/12 11:45 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.278		mg/Kg	1	12/4/12 12:33	12/4/12 17:07	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	11/30/12 16:14	11/30/12 16:15	SW 1010 (M)	AJD
*Paint Filter	Pass			P/F	1	11/30/12 16:14	11/30/12 16:15	SW 9095A	AJD
***pH**	**8.14**	0.0100		pH Units	1	11/30/12 9:20	11/30/12 12:53	SW 9045C	RSR
*Phenolics	U	4.17		mg/Kg	1	12/5/12 13:27	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	8.22		mg/Kg	1	12/4/12 10:32	12/5/12 17:15	SW 9034	RSR
Percent Solids	**82.4**	0.100		%	1	12/3/12 10:00	12/3/12 15:51	ASTM D2216	CCD

Precision Petroleum Labs, Inc

Extractable Organic Halides	U	1		mg/Kg	1	12/6/12 0:00	12/6/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Roll Off Boxes / Special Waste La Salle/Peru **Lab Order:** 12K0540

Notes and Definitions

S	Spike recovery outside acceptance limits.
R	RPD outside acceptance limits.
P1	Pass
I	Matrix interference.
B	Analyte detected in the associated method blank.
*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

FHRPRU001482

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 Street
City, State, Zip Code	Peru, IL 61354
Phone / Facsimile	815-224-5451
Project Name / Number	Rolloff Boxess/Special Waste
Project Location	LaSalle / Peru Facility
P.O. # or Invoice To	FH PEP12440
Contact Person	C. Blair / R. Hubbard

Analysis and/or Method Requested: Special Waste Profile Parameters

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	Special Waste Profile Parameters	Sampler Comments
①	Unit 3 Asphault	11-29-12	10:47	S	0	1	X		X	
②	Unit 2	11-29-12	11:08	S	0	1	X		X	
③	Unit 1	11-29-12	11:45	S	0	1	X		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]	11/29/12	3:05pm	PAS	11/29/12	3:05	HAND

Special Instructions: ① - RT3985 ② RT3869 ③ RT3956

Turnaround Time: Standard ☑ Rush ☐
Date Required:

QC Level: 1☑ 2☐ 3☐ 4☐

On wet ice? Yes No

Temperature (°C): 7.5°C

* In from field / cooling begun

PAS COC Rev. 3

Page 1 of 1

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

FLINT HILLS resources

MANAGEMENT OF CHANGE FORM

(REFER TO PROCEDURE EHS-I-006 FOR EXPLANATION OF THIS FORM)

PROCESS UNIT/AREA: New Control Room / Building 4 & Utilities MOC#: 12058A

ORIGINATOR: J.Cacciatori DATE: 11/05/2012

SECTION A - TECHNICAL BASIS FOR PROPOSED CHANGE

Purpose and Technical Basis:	Part of Facility Siting Project
Description: *Attach additional paper if necessary*	Install new conduit runs along pipe racks from Building 4, MCC#7, Emergency Generator Switch, & Maintenance Building for New Control Room Location which will be located between Guard House Building & Maintenance Building.
Impact of change On Environmental Health / Safety:	N/A

SECTION B - DOCUMENTATION - *Attach appropriate documentation illustrating proposed changes*

☐	Procedures	☐	Inspections, Testing, PM's	☐	Engineering DWGS	☐	PHA'S
☐	PSM Documentation	☐	CHEMGEMS Specifications	☐	P&ID's	☐	MI Applicability Checklist
☐	MSDS Information	☐	Energy Control Plans	☐	PFD's		
☒	Training/Communication	☐	Floor Plans	☐	LDAR		
☐	Quality Issues	☐	Mechanical Integrity DWGS	☐	Site/Plot Plan		
☐	Customer Impact	☒	Electrical Schematics	☒	Electrical Single Lines		
☐	Alarm Response Tables	☐	Loop DWGS	☐	Elect'l Classification		
☐	Other	☐	JSA's	☐	OJT's		

Affected Personnel Needing To Be Informed/Trained On Proposed Change

☐	Operations	☒	I/E Technicians	☐	Community
☐	Production Facilitators	☐	Engineering	☐	Regulatory Entities
☐	Mechanics/Welders	☐	Contractor(s) _____	☐	Corporate _____
☒	Electricians	☐	Office Personnel	☐	Other

SECTION C - Is Change Permanent?

☒	YES	Proposed Project Start Date 11/05/2012
☐	NO	Proposed Project Completion Date 07/31/2013

SECTION D - Is Change Temporary ?

☐	YES	From:
☒	NO	To:

SECTION E - Is Change Emergency ?

☐	Yes	
☒	NO	Start:

Approval Received From:

☐ Area Mgr./Designee ☐ Env. Mgr. /Designee

☐ Plant Mgr./Designee (if requested) ☐ Engineering/Maint. Mgr./Designee

☐ H&S Mgr/Designee

Approval Received By:

_____

Signature *Date*

Returned To Original Service: _____/_____/_____

Area Manager/Designee Signature: _____

Extended To: _____/_____/_____*

Plant Managers Approval:

Plant Mgr./

Signature *Date*

*Note: Temporary MOCAs may be extended up to 6 months at a time

FHRPRU001483

SECTION F - DESIGN SAFETY REVIEW

PHA. Does the proposed change require a PHA? (i.e. What-if/Checklist, Hazop, Revalidation, Review) If yes indicate type of PHA in Action to be Taken section.	☐YES	☒NO
PSSR. Does the proposed change require a Pre-Start-up Safety Review (PSSR)? See EHS-I-067 for Requirements. Mandatory if change involves DCS Interface.	☒YES	☐NO

1. RELIEF AND BLOWDOWN

Does the Proposed Change:	YES	NO
1. Introduce or alter any potential cause of over/under pressurizing of the system?	☐	☒
2. In any way affect existing equipment installed to prevent over/under pressurization?	☐	☒
3. Introduce or alter any potential cause of raising/lowering the system temperature?	☐	☒
4. Introduce a risk of creating/reducing vacuum in the system?	☐	☒
5. Have any critical relief devices been identified for verification of proper rating and installation?	☐	☒

2. AREA CLASSIFICATION

Does the Proposed Change:	YES	NO
1. Introduce or alter the storage of flammable materials?	☐	☒
2. Introduce or alter the location of potential leaks of flammable materials?	☐	☒
3. Introduce new or alter existing electrical equipment?	☒	☐
4. Affect area ventilation?	☐	☒
5. Has the established building electrical classification been changed?	☐	☒

3. SAFETY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Require any additional safety equipment or layers of protection?	☐	☒
2. Alter or affect existing safety equipment or means of egress?	☐	☒
3. Require changes to the function or independence of existing equipment or layers of protection?	☐	☒
4. Alter or affect critical safety instrumented functions (SIF's)?	☐	☒
5. Alter the noise level in the surrounding area?	☐	☒
6. Increase the potential for exposure to any chemicals?	☐	☒
7. Introduce a new or previously unused chemical/raw material?	☐	☒
8. Affect de-energization? (able to lock-out, drain materials)	☐	☒
9. Create any ergonomic concerns?	☐	☒
10. Affect the Battery Limit Valves (BLV)?	☐	☒
11. Affect the overall security of the facility?	☐	☒
12. Does this increase the risk of potential impact to plant personnel (employees and contractors)?	☐	☒
13. Does the proposed change affect facility siting relative to both people and equipment in any of the following situations: temporary changes , before startup after a permanent change, or before startup after temporary change has been removed/closed/returned to original condition?	☐	☒
14. If the proposed change affects replacement or demolition of piping or conduit, will the entire run be identified and clearly marked prior to work, to ensure safe work activity?	☐	☒
15. Affect the safe transport of hazardous material? For ex., introducing a new hazardous material for transport or changing the method of transportation of the hazardous material.	☐	☒

4. ENVIRONMENTAL AND QUALITY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Alter the composition or amount of a process water?	☐	☒
2. Increase the emissions of any regulated pollutant?	☐	☒
3. Require a new or modified operating/construction permit?	☐	☒
4. Affect the control of the process?	☐	☒
5. Affect the composition or physical properties of the final product?	☐	☒
6. Impact any Pentane/Styrene components in the Leak Detection and Repair (LDAR) Program?	☐	☒
7. Increase risk of off-site residential & environmental receptors?	☐	☒
8. Introduce new materials/chemicals to the site?	☐	☒
9. Does an evaluation of chemical compatibility need to be conducted?	☐	☒
10. Involve decommissioning/demolition of equipment or structures?	☐	☒
11. If answered YES to question 10, do NESHAP or decontamination requirements apply? **	☐	☒
12. Will this change require portable engines to be brought on to FHR property?	☐	☒

** Consult with Environmental Engineer for completion of this question.

SECTION F - DESIGN SAFETY REVIEW -- cont.

5. OPERATION AND DESIGN

Does the Proposed Change:	YES	NO
1. Affect the process or equipment upstream/downstream of the change?	☐	☒
2. Affect access to process or equipment/controls for personnel?	☐	☒
3. Introduce any new or affect existing interlocks or alarms systems?	☐	☒
4. Affect manpower or qualified personnel?	☐	☒
5. Affect the loads/strengths of existing foundations, structures, vessels, or pipe racks?	☐	☒
6. Impact requirements of existing or proposed piping supports? *(Needs to be adequately designed for expected stresses due to pressure and thermal loadings.)*	☐	☒
7. Alter the DCS/Software logic of process operations?	☐	☒
8. Affect process chemistry? (reactivity/compatibility)	☐	☒
9. Affect maximum intended inventory, that would require updating maximum inventory tables?	☐	☒
10. Affect safe upper/lower limits for such items as temperature, process flows or compositions?	☐	☒
11. Affect material/energy balances?	☐	☒
12. Affect plant utility resources? (i.e. steam, water, electricity, etc.)	☐	☒
13. Affect equipment with heat-up/cool-down cycling requiring bolt retightening after start-up?	☐	☒
14. Is an exception/revision to design codes or standards (CHEM-GEMS, etc.) required?	☐	☒

SECTION G - AFFECTS ON PROCEDURES, TRAINING, AND DOCUMENTATION

Will the Proposed Change:	YES	NO
1. Introduce new or impact existing operational procedures? *	☐	☒
2. Introduce new or impact existing maintenance procedures? *	☐	☒
3. Add or Remove equipment/instrumentation? *(Contact ETA to assign Equipment/Instrumentation Location Numbers. If equipment/instrumentation is being added, MI Applicability Checklist MNT-F-161 shall be completed by MOC originator, and approval form(s) sent to the MI coordinator.)*	☒	☐
4. Revise equipment preventative maintenance/ inspections, job plans , and/or frequencies?	☒	☐
5. Require additional training for operational or maintenance personnel? *(requires completion of Leaning and Development Job Aid addendum A))*	☐	☒
6. Require additional notification for operational or maintenance personnel?	☒	☐
7. Require updating controlled drawings? * *(PFD'S, LDAR, P&ID's, Floor Plans, Electrical Single Lines, Loop Drawings/Electrical Schematics, MCC arrangement, MI Iso Drawings)*	☒	☐
8. Require updating equipment files? *(Engineering, Maintenance, Manufacturers Inspect/Test results)*	☒	☐
9. Require a spare parts list and inventory to be developed?	☐	☒
10. Require major project spare equipment to be turned over to maintenance?	☐	☒
11. Require equipment labeling in the field?	☒	☐
12. Require updating of Alarm Response Tables? *	☐	☒
13. Require a new/modification of existing energy control plans? *	☐	☒
14. Cause any PSM/RMP applicability issues?	☐	☒
15. Cause a change in PSM/RMP program level?	☐	☒
16. Will this change have any effect on the overall plant facility siting issues?	☐	☒
17. Increase or decrease the impact contour for worst-case scenario by a factor of two or more?	☐	☒
18. Will this MOC supersede /interfere with any other Temporary/Emergency/Permanent MOC's?	☐	☒
19. Is there a need to update the EPS-I-004, Chemical Compatibility Matrix?	☐	☒
20. Is a Layer of Protection Analysis (LOPA) study required?	☐	☒
21. Will this affect the Interlock Matrix?	☐	☒
22. Require updating of electrical energy consumption spreadsheet? Update required for any MCC, CB panel or bus bar connection additions or alterations.	☒	☐
23. Will this change impact Proprietary Technology including product, process, equipment, technical data, or other trade secret information licensed to FHR by third parties" If yes, contact the Proprietary Technology Coordinator.	☐	☒

*** NOTE: Refer to Engineering Equipment Location Database for a list of affected documents, sorted by Location Number.**

FHRPRU001485

Any questions with a 'YES' answer, requires follow-up activity. List the action(s) to be taken to resolve any issues identified in 'Section F' and 'Section G'			
Item No.	**Action To Be Taken**	**Responsible Party**	**Target Completion Date**
F-PSSR	Complete PSSR	J.Cacciatori	07/31/2013
F2.3	Install conduit runs for New Control Room	J.Cacciatori	07/31/2013
G3A	Assign equipment numbers for electrical items	B.Christmann	07/31/2013
G3B	Complete form MNT-F-161	J.Cacciatori	07/31/2013
~~G4~~	~~Add PM for new Electrical Equipment~~	~~D.Tostovarsnik~~	~~07/31/2013~~
G6	Notify Maintenance ETM's of changes	J.Vittone	07/31/2013
G7	Update electrical singlelines, MCC's, schematics	L.Grant	07/31/2013
G8	Update Equipment Files	B.Christmann	07/31/2013
G11	Label Equipment in Field	J.Cacciatori	07/31/2013
G22	Update electrical spreadsheet	L.Grant	07/31/2013

MOC APPROVAL FORM		
Originator:	MOC No.	
MOC Packet Completeness Verification Review		
Title/Position	**Verification Review Signatures**	**Date**
Drafting Tech, or Designee	Lisa [illegible]	11-6-12
MI Coordinator, or Designee	[illegible]	11-6-12
Maintenance Tech from appropriate area	[illegible]	11-6-12
Operator from affected area	[illegible]	11-6-12
Area Training Contact, or Designee	[illegible]	11/6/12

Signatures required Prior To Implementation of MOC.

Title/Position	Authorizing Signatures	Date
Area Manager, or Designee (Operations Representative Assignee: _____)	[illegible]	11/6/12
Engineering /Maintenance Manager or Designee (Electrical Engineering Review: _____)	Justin Cuccicter for Jeff Moran 11/6/12	11/6/12
Health and Safety Manager or Designee (PSM Coordinator Review _____)	Mary Steinbach	11/7/12
Operations Manager or Designee	[illegible]	11/7/12
Environment Manager or Designee	[illegible]	11/6/12

Plant Managers Review
(as requested by any of the Authorizing signers)

Title/Position	Review Signature	Date
Plant Manager or Designee		

VERIFICATION OF MOC CLOSURE

By signing below:

1. The Originator of this MOC confirms that all action items have been completed & that equipment/documentation in this change is set to start up.
2. The Engineering/Maintenance Manager has completed and attached the MOC – Closure Checklist.

MOC closure requires the Originators Signature, and that of the Engineering/Maintenance Manager

MOC Originator: Date:_____

Engineering/ Maintenance Manager: Date:_____

MANAGEMENT OF CHANGE - CLOSURE CHECKLIST

This Form MUST BE completed by the Engineering/Maintenance Manager, and attached to MOC Prior to MOC Being Closed By ETA

Originator:_____ MOC No. _____

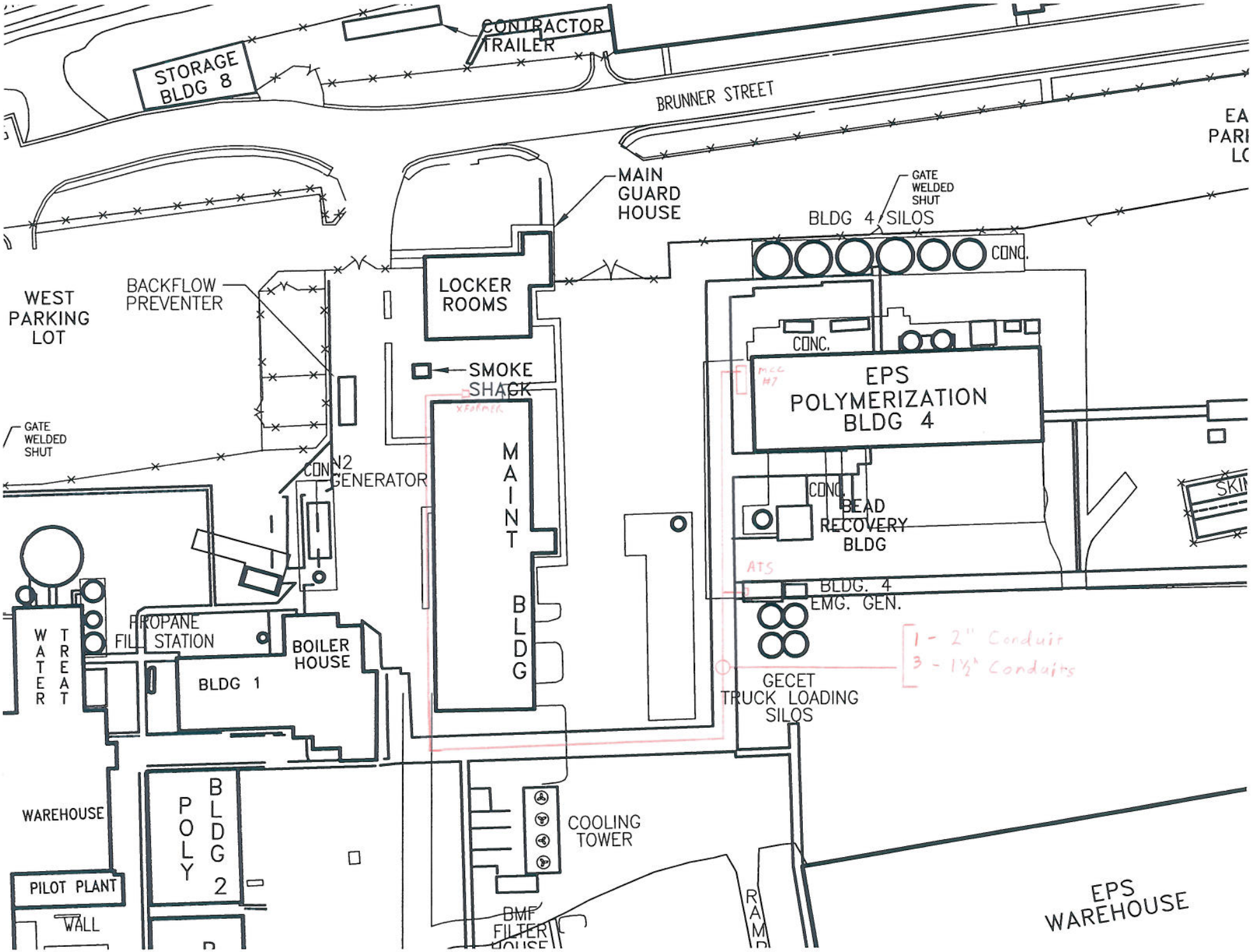
1. What Type of Management of Change?
   - [ ] Permanent MOC
   - [ ] Emergency MOC
     - *Returned to Original Service?*
     - [ ] YES [ ] NO
   - [ ] Temporary MOC
     - *Returned to Original Service?*
     - [ ] YES [ ] NO
2. PHA. completed. (HAZOP, Safety Review, Independent Review)
   - [ ] YES
   - [ ] NO
   - [ ] N/A
3. Documentation included in file or referenced, which verifies affected change has been communicated to all effected parties?
   - [ ] YES
   - [ ] NO
   - [ ] N/A
4. Documentation illustrating changes included in MOC package? *(marked-up drawings, etc.)*
   - [ ] YES
   - [ ] NO
   - [ ] N/A
5. Referenced Drawings Updated?
   - [ ] YES
   - [ ] NO
   - [ ] N/A
6. All applicable documentation has been updated to reflect changes?
   - [ ] YES
   - [ ] NO
   - [ ] N/A
7. All training has been completed.
   - [ ] YES
   - [ ] NO
   - [ ] N/A

'Management of Change' Audited By:

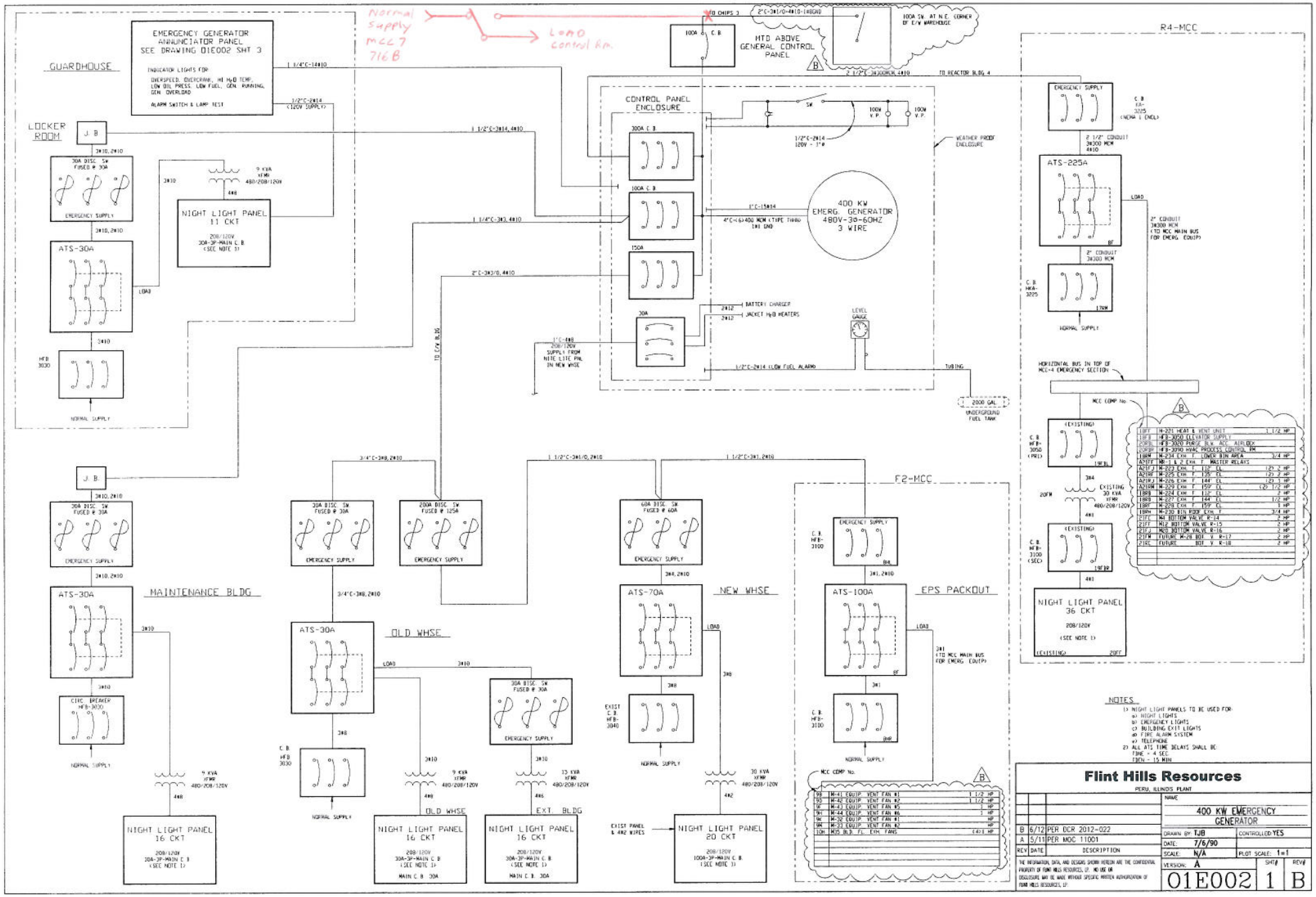
Title:_____

Signature: _____ Date: _____

FHRPRU001488



FHRPRU001489



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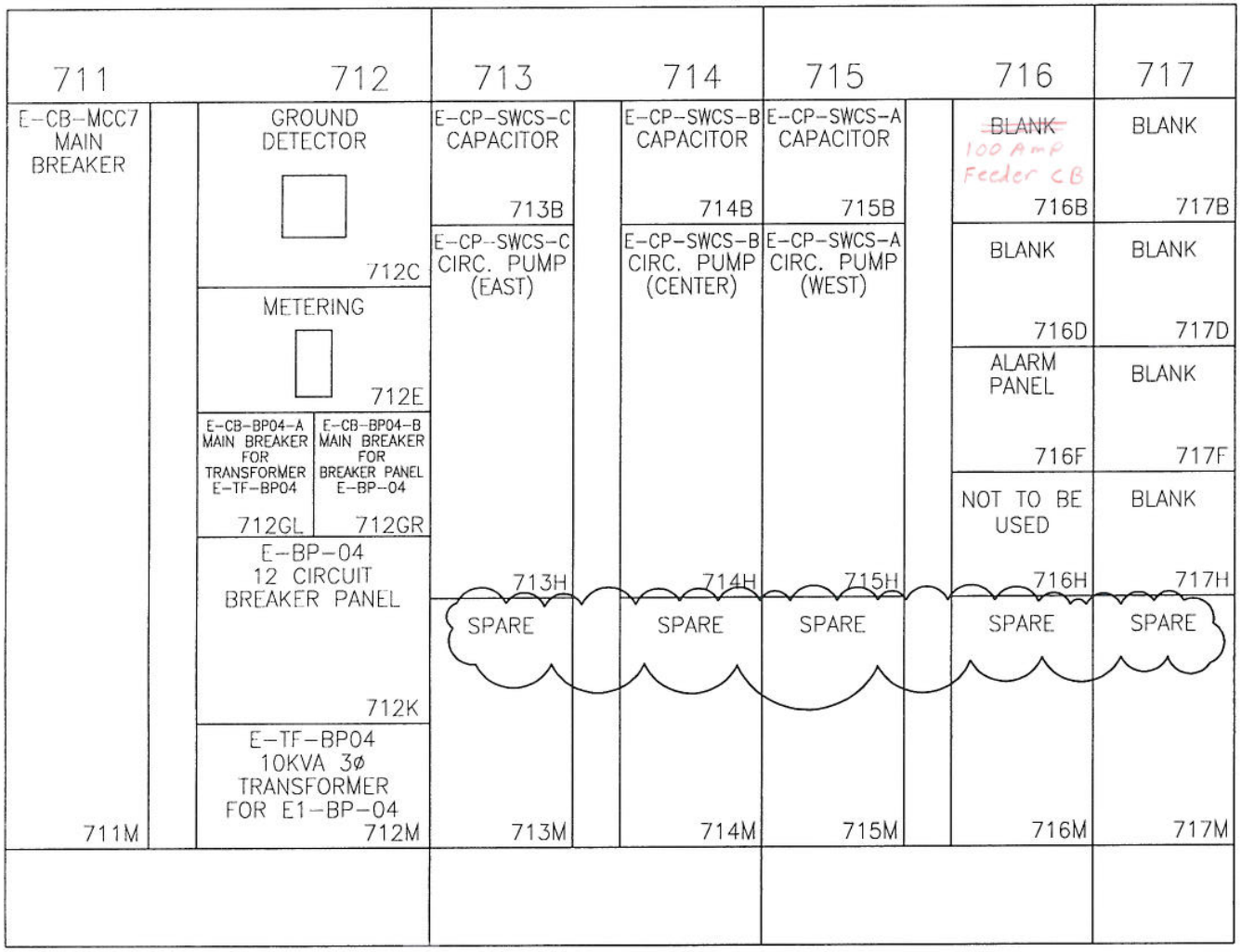
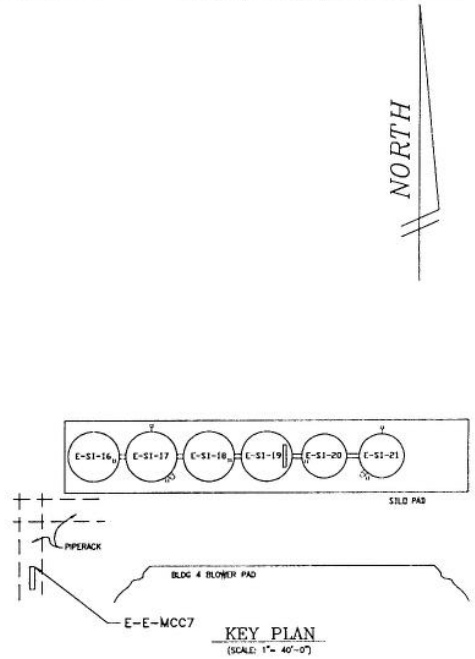


E-E-MCC7



Flint Hills Resources

PERU, ILLINOIS PLANT

REV	DATE	DESCRIPTION
E	12/03	PER MOCA #03059
D	8/01	PER DCR
C	11/99	AS-BUILT PER MOC #99066
B	11/96	ADDED MCC #7
A	8/94	PROJECT SAFETY MANAGEMENT

THE INFORMATION, DATA, AND DESIGNS SHOWN HEREON ARE THE CONFIDENTIAL PROPERTY OF FLINT HILLS RESOURCES, LP. NO USE OR DISCLOSURE MAY BE MADE WITHOUT SPECIFIC WRITTEN AUTHORIZATION OF FLINT HILLS RESOURCES, LP.

NAME: EPS - BLDG 4 MCC COMPONENT ALLOCATION E-E-MCC7

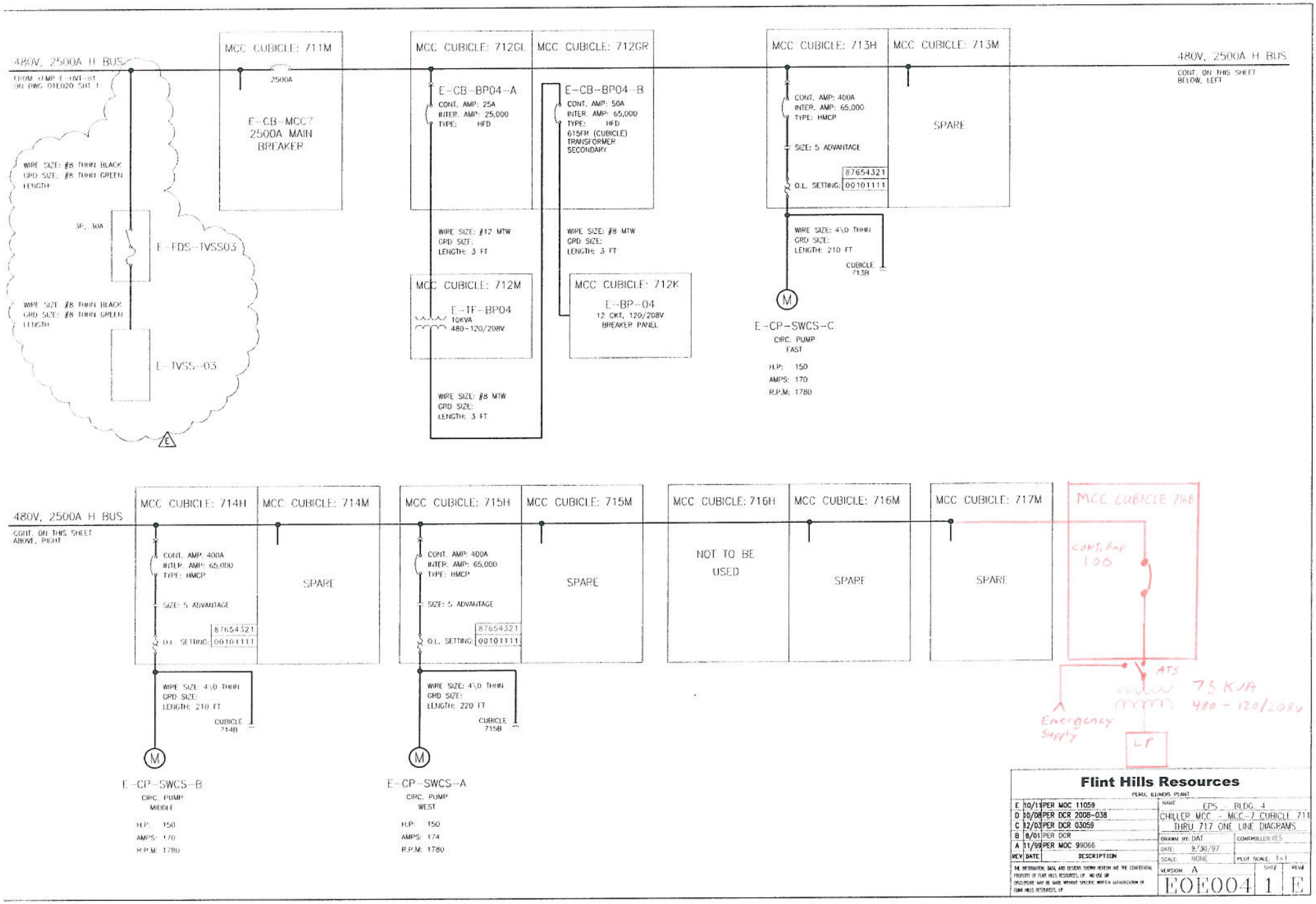
DRAWN BY: TJB | CONTROLLED: C:\DRAW\B4

DATE: 3/19/90 | N/A

SCALE: N/A | PLOT SCALE: 1=1

VERSION: A | SHT: 2 | REV: E

EOE001



FHRPRU001492

Mechanical Integrity Applicability Checklist

Project Number: _____ MOC Number: _____ Date: _____
Project Description: _____
Equipment Number: _____ Equipment Description: _____

		Yes	No	If yes, Why
1.	Is the equipment/process PSM/RMP covered per EHS-I-105?	☐	☐	
2.	Do jurisdictional requirements mandate MI coverage? (Federal, state, local law or regulations)	☐	☐	
3.	Is a transportation container being used as a storage tank?	☐	☐	
4.	Is equipment part of an environmental permit?	☐	☐	
5.	Should equipment/process be MI covered due to Good Engineering Practice?	☐	☐	

Completed By: _____ Date: _____
Engineering and Maintenance Manager Approval: _____ Date: _____

If yes is answered to any of the above questions:

- Forward the completed ITPM frequency change form (MNT-F-149 or RDC Task Bundle Entry Form DOC-F-027) to the Mechanical Integrity Coordinator with PM requirements.
- MI Coordinator signature required once ITPM task has been created.

MI Coordinator: _____ Date: _____

FHRPRU001493

FLINT HILLS resources

MANAGEMENT OF CHANGE FORM

(REFER TO PROCEDURE EHS-I-006 FOR EXPLANATION OF THIS FORM)

PROCESS UNIT/AREA: Building #4 / Utilities (New Control Room) MOC#: 12058 B

ORIGINATOR: J.Cacciatori DATE: 11/26/2012

SECTION A - TECHNICAL BASIS FOR PROPOSED CHANGE

Purpose and Technical Basis:	Part of Facility Siting Project
Description: *Attach additional paper if necessary*	Install New 24' x 60' Control Room for Building #4 ~~& Utilities~~ & utilities OK as per the attachments * See Structural Drawing Attachment (Meece Eng. DWG's) * See Building Detail Attachment (Hunter DWG's)
Impact of change On Environmental Health / Safety:	Attached is copy of Baker Risk Siting Study

SECTION B - DOCUMENTATION - *Attach appropriate documentation illustrating proposed changes*

☐	Procedures	☐	Inspections, Testing, PM's	☐	Engineering DWGS	☒	PHA'S
☐	PSM Documentation	☐	CHEMGEMS Specifications	☒	P&ID's	☐	MI Applicability Checklist
☐	MSDS Information	☐	Energy Control Plans	☐	PFD's		
☐	Training/Communication	☒	Floor Plans	☐	LDAR		
☐	Quality Issues	☐	Mechanical Integrity DWGS	☒	Site/Plot Plan		
☐	Customer Impact	☒	Electrical Schematics	☒	Electrical Single Lines		
☐	Alarm Response Tables	☐	Loop DWGS	☐	Elect'l Classification		
☐	Other	☐	JSA's	☐	OJT's		

Affected Personnel Needing To Be Informed/Trained On Proposed Change

☒	Operations	☒	I/E Technicians	☐	Community
☒	Production Facilitators	☐	Engineering	☐	Regulatory Entities
☒	Mechanics/Welders	☐	Contractor(s) _____	☐	Corporate _____
☒	Electricians	☐	Office Personnel	☐	Other

SECTION C - Is Change Permanent?

☒	**YES**	**Proposed Project Start Date** **11/29/2012**
☐	**NO**	**Proposed Project Completion Date** **07/31/2012**

SECTION D - Is Change Temporary ?

☐	**YES**	**From:**
☒	**NO**	**To:**

SECTION E - Is Change Emergency ?

☐	**Yes**	
☒	**NO**	**Start:**

Approval Received From:

☐ Area Mgr./Designee ☐ Env. Mgr. /Designee

☐ Plant Mgr./Designee (if requested) ☐ Engineering/Maint. Mgr./Designee

☐ H&S Mgr/Designee

Approval Received By:

_____

Signature *Date*

Returned To Original Service: _____/_____/_____

Area Manager/Designee Signature: _____

Extended To: _____/_____/_____*

Plant Managers Approval:

Plant Mgr./

Signature *Date*

*Note: Temporary MOCAs may be extended up to 6 months at a time

FHRPRU001494

SECTION F - DESIGN SAFETY REVIEW

PHA. Does the proposed change require a PHA? (i.e. What-if/Checklist, Hazop, Revalidation, Review) If yes indicate type of PHA in Action to be Taken section.	☒YES	☐NO
PSSR. Does the proposed change require a Pre-Start-up Safety Review (PSSR)? See EHS-I-067 for Requirements. Mandatory if change involves DCS Interface.	☒YES	☐NO

1. RELIEF AND BLOWDOWN

Does the Proposed Change:	YES	NO
1. Introduce or alter any potential cause of over/under pressurizing of the system?	☐	☒
2. In any way affect existing equipment installed to prevent over/under pressurization?	☐	☒
3. Introduce or alter any potential cause of raising/lowering the system temperature?	☐	☒
4. Introduce a risk of creating/reducing vacuum in the system?	☐	☒
5. Have any critical relief devices been identified for verification of proper rating and installation?	☐	☒

2. AREA CLASSIFICATION

Does the Proposed Change:	YES	NO
1. Introduce or alter the storage of flammable materials?	☐	☒
2. Introduce or alter the location of potential leaks of flammable materials?	☐	☒
3. Introduce new or alter existing electrical equipment?	☒	☐
4. Affect area ventilation?	☐	☒
5. Has the established building electrical classification been changed?	☐	☒

3. SAFETY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Require any additional safety equipment or layers of protection?	☐	☒
2. Alter or affect existing safety equipment or means of egress?	☐	☒
3. Require changes to the function or independence of existing equipment or layers of protection?	☐	☒
4. Alter or affect critical safety instrumented functions (SIF's)?	☐	☒
5. Alter the noise level in the surrounding area?	☐	☒
6. Increase the potential for exposure to any chemicals?	☐	☒
7. Introduce a new or previously unused chemical/raw material?	☐	☒
8. Affect de-energization? (able to lock-out, drain materials)	☐	☒
9. Create any ergonomic concerns?	☐	☒
10. Affect the Battery Limit Valves (BLV)?	☐	☒
11. Affect the overall security of the facility?	☐	☒
12. Does this increase the risk of potential impact to plant personnel (employees and contractors)?	☐	☒
13. Does the proposed change affect facility siting relative to both people and equipment in any of the following situations: temporary changes , before startup after a permanent change, or before startup after temporary change has been removed/closed/returned to original condition?	☐	☒
14. If the proposed change affects replacement or demolition of piping or conduit, will the entire run be identified and clearly marked prior to work, to ensure safe work activity?	☐	☒
15. Affect the safe transport of hazardous material? For ex., introducing a new hazardous material for transport or changing the method of transportation of the hazardous material.	☐	☒

4. ENVIRONMENTAL AND QUALITY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Alter the composition or amount of a process water?	☐	☒
2. Increase the emissions of any regulated pollutant?	☐	☒
3. Require a new or modified operating/construction permit?	☒	☐
4. Affect the control of the process?	☐	☒
5. Affect the composition or physical properties of the final product?	☐	☒
6. Impact any Pentane/Styrene components in the Leak Detection and Repair (LDAR) Program?	☐	☒
7. Increase risk of off-site residential & environmental receptors?	☐	☒
8. Introduce new materials/chemicals to the site?	☐	☒
9. Does an evaluation of chemical compatibility need to be conducted?	☐	☒
10. Involve decommissioning/demolition of equipment or structures?	☐	☒
11. If answered YES to question 10, do NESHAP or decontamination requirements apply? **	☐	☒
12. Will this change require portable engines to be brought on to FHR property?	☐	☒

** Consult with Environmental Engineer for completion of this question.

SECTION F - DESIGN SAFETY REVIEW -- cont.

5. OPERATION AND DESIGN

Does the Proposed Change:	YES	NO
1. Affect the process or equipment upstream/downstream of the change?	☐	☒
2. Affect access to process or equipment/controls for personnel?	☐	☒
3. Introduce any new or affect existing interlocks or alarms systems?	☐	☒
4. Affect manpower or qualified personnel?	☐	☒
5. Affect the loads/strengths of existing foundations, structures, vessels, or pipe racks?	☐	☒
6. Impact requirements of existing or proposed piping supports? *(Needs to be adequately designed for expected stresses due to pressure and thermal loadings.)*	☐	☒
7. Alter the DCS/Software logic of process operations?	☒	☐
8. Affect process chemistry? (reactivity/compatibility)	☐	☒
9. Affect maximum intended inventory, that would require updating maximum inventory tables?	☐	☒
10. Affect safe upper/lower limits for such items as temperature, process flows or compositions?	☐	☒
11. Affect material/energy balances?	☐	☒
12. Affect plant utility resources? (i.e. steam, water, electricity, etc.)	☐	☒
13. Affect equipment with heat-up/cool-down cycling requiring bolt retightening after start-up?	☐	☒
14. Is an exception/revision to design codes or standards (CHEM-GEMS, etc.) required?	☐	☒

SECTION G - AFFECTS ON PROCEDURES, TRAINING, AND DOCUMENTATION

Will the Proposed Change:	YES	NO
1. Introduce new or impact existing operational procedures? *	☒	☐
2. Introduce new or impact existing maintenance procedures? *	☒	☐
3. Add or Remove equipment/instrumentation? *(Contact ETA to assign Equipment/Instrumentation Location Numbers. If equipment/instrumentation is being added, MI Applicability Checklist MNT-F-161 shall be completed by MOC originator, and approval form(s) sent to the MI coordinator.)*	☒	☐
4. Revise equipment preventative maintenance/ inspections, job plans , and/or frequencies?	☐	☒
5. Require additional training for operational or maintenance personnel? *(requires completion of Leaning and Development Job Aid addendum A))*	☐	☒
6. Require additional notification for operational or maintenance personnel?	☒	☐
7. Require updating controlled drawings? * *(PFD'S, LDAR, P&ID's, Floor Plans, Electrical Single Lines, Loop Drawings/Electrical Schematics, MCC arrangement, MI Iso Drawings)*	☒	☐
8. Require updating equipment files? *(Engineering, Maintenance, Manufacturers Inspect/Test results)*	☒	☐
9. Require a spare parts list and inventory to be developed?	☐	☒
10. Require major project spare equipment to be turned over to maintenance?	☐	☒
11. Require equipment labeling in the field?	☒	☐
12. Require updating of Alarm Response Tables? *	☐	☒
13. Require a new/modification of existing energy control plans? *	☐	☒
14. Cause any PSM/RMP applicability issues?	☐	☒
15. Cause a change in PSM/RMP program level?	☐	☒
16. Will this change have any effect on the overall plant facility siting issues?	☒ MTS	~~☒~~
17. Increase or decrease the impact contour for worst-case scenario by a factor of two or more?	☐	☒
18. Will this MOC supersede /interfere with any other Temporary/Emergency/Permanent MOC's?	☐	☒
19. Is there a need to update the EPS-I-004, Chemical Compatibility Matrix?	☐	☒
20. Is a Layer of Protection Analysis (LOPA) study required?	☐	☒
21. Will this affect the Interlock Matrix?	☐	☒
22. Require updating of electrical energy consumption spreadsheet? Update required for any MCC, CB panel or bus bar connection additions or alterations.	☒	☐
23. Will this change impact Proprietary Technology including product, process, equipment, technical data, or other trade secret information licensed to FHR by third parties" If yes, contact the Proprietary Technology Coordinator.	☐	☒

*** NOTE: Refer to Engineering Equipment Location Database for a list of affected documents, sorted by Location Number.**

FHRPRU001496

Any questions with a 'YES' answer, requires follow-up activity. List the action(s) to be taken to resolve any issues identified in 'Section F' and 'Section G'			
Item No.	**Action To Be Taken**	**Responsible Party**	**Target Completion Date**
F.PHA	Perform PHA - Facility Siting Checklist	J.Cacciatori	07/31/2013
F.PSSR	Perform PSSR	J.Cacciatori	07/31/2013
F 2.3	Install new conduit runs to new control room	J.Cacciatori	07/31/2013
F 4.3	Obtain new construction permit	J.Cacciatori	12/31/2012
F 5.7	Complete and implement DCS logics to new control room	K.Marshall	07/31/2013
G.1	Update operational procedures as necessary	D.Thurman	07/31/2013
G.2	Update maintenance procedures as necessary	J.Vittone	07/31/2013
G.3	Update MI equipment list as necessary	D.Tostovarsnik J.Cacciatori	07/31/2013
G.6a G.6b G.6c	Notify Operations Notify Facilitators Notify Maintenance & electricians	S.Emmett S.Emmett J.Vittone	07/31/2013
G.7	Update Drawings	L.Grant	07/31/2013
G.8	Update Equipment Files	B.Christmann	07/31/2013
G.11	Label Equipment in Field	J.Cacciatori	07/31/2013
G.22	Update Electrical Spreadsheet	L.Grant	07/31/2013
PHA.1	Change traffic routes for large vehicles	M.Steinbach	07/31/2013
PHA.2	Update Emergency / Evacuation Plans	M.Steinbach	07/31/2013
PHA.3	Pressurization of new control room (Tracy Clem)	M.Steinbach	12/31/2012
G.16	Project will reduce facility siting risk by reducing	J. Cacciatori	7/31/13
	number of employees in BDL4 structure. Complete relocation of control room.		

FHRPRU001497

MOC APPROVAL FORM

Originator: Justin Cacciatori MOC No. 12058B

MOC Packet Completeness Verification Review

Title/Position	Verification Review Signatures	Date
Drafting Tech, or Designee		11-27-12
MI Coordinator, or Designee		11-27-12
Maintenance Tech from appropriate area		11/27/12
Operator from affected area		11-27-12
Area Training Contact, or Designee		11/27/12

Signatures required Prior To Implementation of MOC.

Title/Position	Authorizing Signatures	Date
Area Manager, or Designee (Operations Representative Assignee: _____)		11/27/12
Engineering /Maintenance Manager or Designee (Electrical Engineering Review: _____)		11/28/12
Health and Safety Manager or Designee (PSM Coordinator Review _____)	Mary Steinbach	11/27/12
Operations Manager or Designee		11/30/12
Environment Manager or Designee		12/21/12

Plant Managers Review
(as requested by any of the Authorizing signers)

Title/Position	Review Signature	Date
Plant Manager or Designee		

VERIFICATION OF MOC CLOSURE

By signing below:

1. The Originator of this MOC confirms that all action items have been completed & that equipment/documentation in this change is set to start up.
2. The Engineering/Maintenance Manager has completed and attached the MOC – Closure Checklist.

MOC closure requires the Originators Signature, and that of the Engineering/Maintenance Manager

MOC Originator: Date:_____

Engineering/ Maintenance Manager: Date:_____

MANAGEMENT OF CHANGE - CLOSURE CHECKLIST

This Form MUST BE completed by the Engineering/Maintenance Manager, and attached to MOC Prior to MOC Being Closed By ETA

Originator: Justin Cacciatori **MOC No.** 12058B

1. What Type of Management of Change?

- [ ] **Permanent MOC**
- [ ] **Emergency MOC**

Returned to Original Service?

[ ] **YES** [ ] **NO**

- [ ] **Temporary MOC**

Returned to Original Service?

[ ] **YES** [ ] **NO**

2. PHA. completed. (HAZOP, Safety Review, Independent Review)

- [ ] **YES**
- [ ] **NO**
- [ ] **N/A**

3. Documentation included in file or referenced, which verifies affected change has been communicated to all effected parties?

- [ ] **YES**
- [ ] **NO**
- [ ] **N/A**

4. Documentation illustrating changes included in MOC package? *(marked-up drawings, etc.)*

- [ ] **YES**
- [ ] **NO**
- [ ] **N/A**

5. Referenced Drawings Updated?

- [ ] **YES**
- [ ] **NO**
- [ ] **N/A**

6. All applicable documentation has been updated to reflect changes?

- [ ] **YES**
- [ ] **NO**
- [ ] **N/A**

7. All training has been completed.

- [ ] **YES**
- [ ] **NO**
- [ ] **N/A**

'Management of Change' Audited By:

Title: _____

Signature: _____ **Date:** _____

FHRPRU001499

FLINT HILLS RESOURCES CHEMICAL INTERMEDIATES, LLC.

BUILDING #4 CONTROL ROOM

501 BRUNNER STREET PERU, ILLINOIS 61354

BUILDING INFORMATION:

USE GROUP CLASSIFICATION: -

CONSTRUCTION TYPE:

ACTUAL FLOOR AREA: FIRST FLOOR ---S.F.
TOTAL ---S.F.

ACTUAL BUILDING HEIGHT:

OPEN PERIMETER DISTANCES:	OVERALL	OPEN
NORTH =	x'-x"	x'-x"
EAST =	x'-x"	x'-x"
WEST =	x'-x"	x'-x"
SOUTH =	x'-x"	x'-x"
TOTAL =	x'-x"	x'-x"

% OPEN PERIMETER= x100 = %

% TABULAR AREA INCREASE= = %

AREA MODIFICATIONS:
% OF ALLOWABLE TABULAR AREA = %
% REDUCTION FOR HEIGHT = %
% INCREASE FOR OPEN PERIMETER = %
% INCREASE FOR AUTOMATIC SPRINKLERS = %

TOTAL = %/100 =

ALLOWABLE FLOOR AREA PER FLOOR:
= S.F.

ALLOWABLE BUILDING HEIGHT:

INCREASED ALLOWABLE FLOOR AREA:
NOT REQUIRED (ACTUAL LESS THAN ALLOWABLE)

OCCUPANT LOAD: (NORMALLY UNOCCUPIED) =	MAXIMUM	ACTUAL
REQUIRED EXITS PER FLOOR:	REQUIRED	ACTUAL
MINIMUM EXIT DOOR WIDTH:	INCHES	
LENGTH OF EXIT ACCESS TRAVEL:	REQUIRED	ACTUAL

FIRE SEPARATION ASSEMBLIES RATINGS:	WALLS	DOORS
EXTERIOR WALLS LOAD BEARING	- HOUR	- HOUR
(EXTERIOR WALLS NON-LOAD BEARING	- HOUR	- HOUR
0' TO 5'	- HOUR	- HOUR
> 5' TO 10'	- HOUR	- HOUR
> 10' TO 30'	- HOUR	- HOUR
> 30'	- HOUR	- HOUR

DESIGN LOADS:

ROOF LIVE LOAD	- PSF
SNOW LOAD	- PSF
ROOFING/FRAMING/MECH DEAD LOAD	- PSF
TOTAL LOAD	- PSF

ABBREVIATIONS:

H.P.	-	HIGH POINT
L.P.	-	LOW POINT
F.F.	-	FINISHED FLOOR
O.H.	-	OVER HANG
F.D.	-	FLOOR DRAIN
C.O.	-	CLEAN OUT
D.S.	-	DOWN SPOUT
G.B.	-	GLASS BLOCK
M.O.	-	MASONRY OPENING
R.O.	-	ROUGH OPENING
V.T.R.	-	VENT TO ROOF
F.A.I.	-	FAN AIR INTAKE
T.O.C.	-	TOP OF CONCRETE
T.O.W.	-	TOP OF WALL
B.O.W.	-	BOTTOM OF WALL
F.R.P.	-	FIBERGLASS REINFORCEMENT PLASTIC

OWNER:

FLINT HILLS RESOURCES CHEMICAL INTERMEDIATES, LLC.
501 BRUNNER STREET, PERU, IL 61354
PH: (815) 224-1525 FAX: --

PROJECT ARCHITECT/ENGINEER:

J.L. MEECE ENGINEERING, INC.
760 S. BROADWAY, P.O. BOX 159, COAL CITY, IL 60416
815-631-2727 FAX 815-634-2739

GENERAL CONTRACTOR:

-

ELECTRICAL CONTRACTOR:

-

PLUMBING CONTRACTOR:

-

MECHANICAL CONTRACTOR:

-

STATEMENT OF COMPLIANCE:

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH THE ENVIRONMENTAL BARRIERS ACT (410 IL CS 25) AND THE ILLINOIS ACCESSIBILITY CODE (71 ILL. ADM. CODE 400).

SIGNED: _____
ARCHITECT

ILLINOIS LICENSE NO.: _____

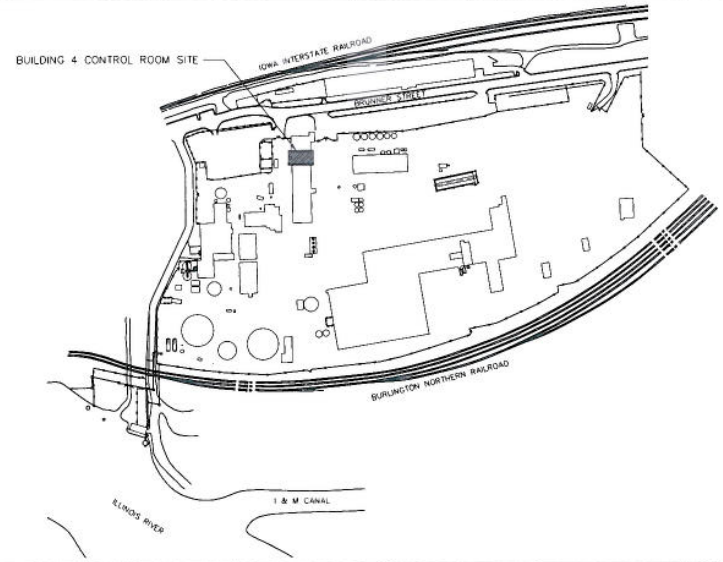
DATE: _____

GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO PROJECT SPECIFICATIONS & DRAWINGS, INTERNATIONAL BUILDING CODE (IBC 2003 AS ADOPTED BY THE CITY OF PERU, IL), AND ALL OTHER APPLICABLE STATE AND LOCAL CODES.
2. ALL PLUMBING WORK SHALL CONFORM TO THE ILLINOIS STATE PLUMBING CODE, 2004.
3. ALL ELECTRICAL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (NEC) 2005.
4. ALL FIRE PROTECTION WORK SHALL CONFORM TO NFPA 13.
5. ALL HVAC WORK SHALL CONFORM TO THE INTERNATIONAL MECHANICAL CODE (2003) AND SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS.
6. ALL WORK SHALL CONFORM TO ALL CURRENT LOCAL CODES & ORDINANCES.
7. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, CLEARANCES, AND ELEVATIONS PRIOR TO START OF CONSTRUCTION.

SCHEDULE OF DRAWINGS

Number	Rev.	Title
2012-162-CD-00	D	CIVIL - TITLE SHEET
2012-162-CD-01	D	CIVIL - SITE PLAN
2012-162-CD-02	D	CIVIL - LOCATION PLAN
2012-162-CD-03	D	CIVIL - ELEVATION
2012-162-CD-04	D	CIVIL - ELEVATION
2012-162-CD-05	D	CIVIL - SECTION
2012-162-CD-06	D	CIVIL - CONCRETE PLAN
2012-162-CD-06A	D	CIVIL - CONCRETE/SITE WORK DETAILS
2012-162-CD-07	D	CIVIL - BUILDING ANCHORAGE PLAN
2012-162-ED-01	D	ELECTRICAL - GROUNDING PLAN & DETAILS
2012-162-PD-01	D	PIPING - UNDERGROUND PIPING PLAN



LEGEND

SYMBOL	DESCRIPTION
	EARTH
	GRANULAR FILL
	CONCRETE
	CONCRETE BLOCK
	BRICK
	STEEL
	STONE
	ROUGH LUMBER
	FINISHED LUMBER
	PLYWOOD
	CERAMIC TILE
	BATT INSULATION
	RIGID INSULATION

1 / A2 DETAIL MARK — DETAIL OR SECTION NO. / DRAWING NO. DETAIL OR SECTION APPEARS ON

A / A2 SECTION MARK

A / A2 ELEVATION MARK

PRELIMINARY NOT FOR CONSTRUCTION

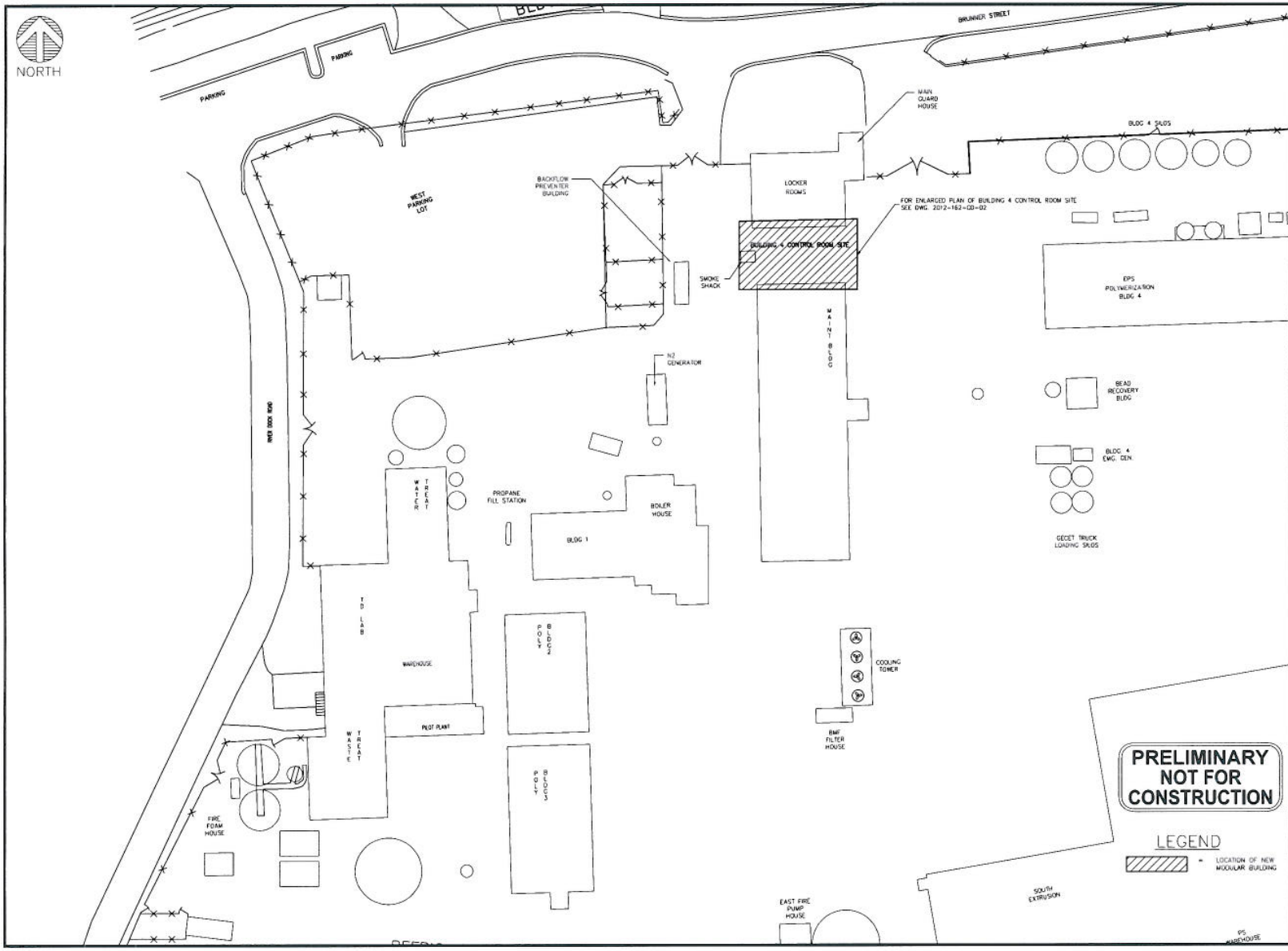
J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
760 S. Broadway, Coal City, IL 60416
(815) 634-2727 Fax (815) 634-2739

MARK	DATE	LIST OF REVISIONS	DRN.	APPD.
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/26/12	ISSUED FOR FLOOD PERMIT	KS	RW

Drawn DRB
Checked RW
Approved MT
Scale AS NOTED
Plot Scale 1:1
Date 9/27/12

FLINT HILLS RESOURCES CHEMICAL INTERMEDIATES, LLC
FACILITIES SITING PROJECT
TITLE SHEET
BUILDING 4 CONTROL SITE

CAD File Name 2012-162-CD-00.dwg
Dwg No 2012-162-CD-00
Rev D



NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS, CLEARANCES AND DIMENSIONS, INCLUDING WORK BY OTHERS, PRIOR TO START OF WORK OR FABRICATION.
2. CONTRACTOR SHALL EMPLOY THE SERVICES OF A PRIVATE UNDERGROUND UTILITY LOCATOR TO SURVEY ALL UNDERGROUND SERVICES IN, AROUND, AND BENEATH THE AREA OF WORK PRIOR TO BREAKING GROUND. ALL EXISTING PLANT AND MUNICIPAL UTILITIES SHALL REMAIN UNDISTURBED.
3. MEANS, METHODS AND FINAL CONSTRUCTION SHALL CONFORM TO THE LATEST O.S.H.A. REGULATIONS. THE FOLLOWING SPECIFICATIONS AND STANDARDS ALSO APPLY:

FABRICATION, PLACEMENT, AND ALL CONSTRUCTION:	ACI-318-11
JOINT MATERIALS:	ASTM D-544
NON-SHRINK GROUT:	ASTM C-1107
WELDED WIRE FABRIC:	ASTM A-185
CEMENTS	ASTM C-150, TYPE I OR II, EXCEPT TYPE V FOR SULFATE RESISTANCE AS NOTED.
AGGREGATES:	ASTM C-33 FOR NORMAL WEIGHT, C-330 FOR LIGHT WEIGHT
WATERPROOF PAPER OR PLASTIC FILM	ASTM C-171
LIQUID MEMBRANE FORMING CURING COMPOUNDS:	ASTM C-309
MIXTURES AND PRODUCTION OF CONCRETE:	ACI-301
CONSOLIDATION OF CONCRETE:	ACI-309
REINFORCING STEEL:	ASTM A-615 GR.40 FOR #3 BARS, GR.60 FOR #4 & LARGER BARS.
ANCHOR BOLTS HOT DIP GALVANIZED:	ASTM F1554, GR. 36
WELDED REINFORCING STEEL:	ASTM-706

4. VAPOR RETARDER FOR UNDER SLAB USE SHALL BE 10 MIL MINIMUM THICKNESS AND CONFORM TO ASTM-E1745.
5. EPOXY SHALL BE HILTI HIT OR AN EQUAL APPROVED BY THE ENGINEER.
6. CONCRETE PATCHING SHALL BE SIKATOP 122 MORTAR MANUFACTURED BY SIKA CORP. OR AN EQUAL APPROVED BY THE ENGINEER.
7. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 4000 P.S.I. MINIMUM, WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45, AND MINIMUM AIR ENTRAINMENT OF 6%. COLD WEATHER CONCRETING SHALL BE PERFORMED PER ACI 306R-10.
8. NON-SHRINK GROUT SHALL HAVE A COMPRESSIVE STRENGTH OF AT LEAST 5000 P.S.I. AT 3 DAYS.
9. DIMENSIONS SHOWN ON THE DRAWINGS FOR REINFORCING BARS ARE TO THE FACE OF BARS AND DENOTE CLEAR COVERAGE, UNLESS SPECIFICALLY NOTED THE FOLLOWING CLEARANCES APPLY:

CONCRETE DEPOSITED DIRECTLY AGAINST EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER BUT CAST IN FORMS:	2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	1½"
WALLS, INTERIOR FACE:	¾"
SLABS ON GRADE:	2" FROM TOP

10. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
11. ALL SLAB SURFACES SHALL HAVE A LIGHT-BROOM FINISH UNLESS NOTED OTHERWISE.
12. PROVIDE (2) #5 X 48" DIAGONAL BARS AT ALL INTERIOR (RE-ENTRANT) CORNERS UNLESS NOTED OTHERWISE.
13. UNLESS SPECIFICALLY NOTED, SPLICE LENGTHS SHALL BE 40 BAR DIAMETERS AND ADJACENT BAR SPLICES SHALL BE AT LEAST 36" APART. ALTERNATIVELY, SPLICE LENGTHS MAY BE INCREASED TO 1.3X SPECIFIED DISTANCE WITHOUT STAGGERING SPLICES. LAP SPLICE W.W.F. 2 MESHES MINIMUM. #5 AND SMALLER BARS MAY BE FIELD RE-BENT (1) TIME ONLY AS REQUIRED.
14. UNLESS SPECIFICALLY NOTED ON PLANS, SLAB CONTRACTION JOINTS SHALL BE SPACED AT 24 X SLAB THICKNESS, AND SAW CUTTING SHALL BE PERFORMED DIRECTLY AFTER FINISHING.
15. ALL BELOW GRADE CONCRETE WORK SHALL BE PERFORMED ACCORDING TO THE GEOTECHNICAL REPORT TO BE PROVIDED BY THE OWNER.
16. UNLESS OTHERWISE NOTED IN THE GEOTECHNICAL REPORT, ALL SUBGRADE MATERIALS SHALL BE PLACED IN LIFTS NOT TO EXCEED 6" AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.

PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

= LOCATION OF NEW MODULAR BUILDING

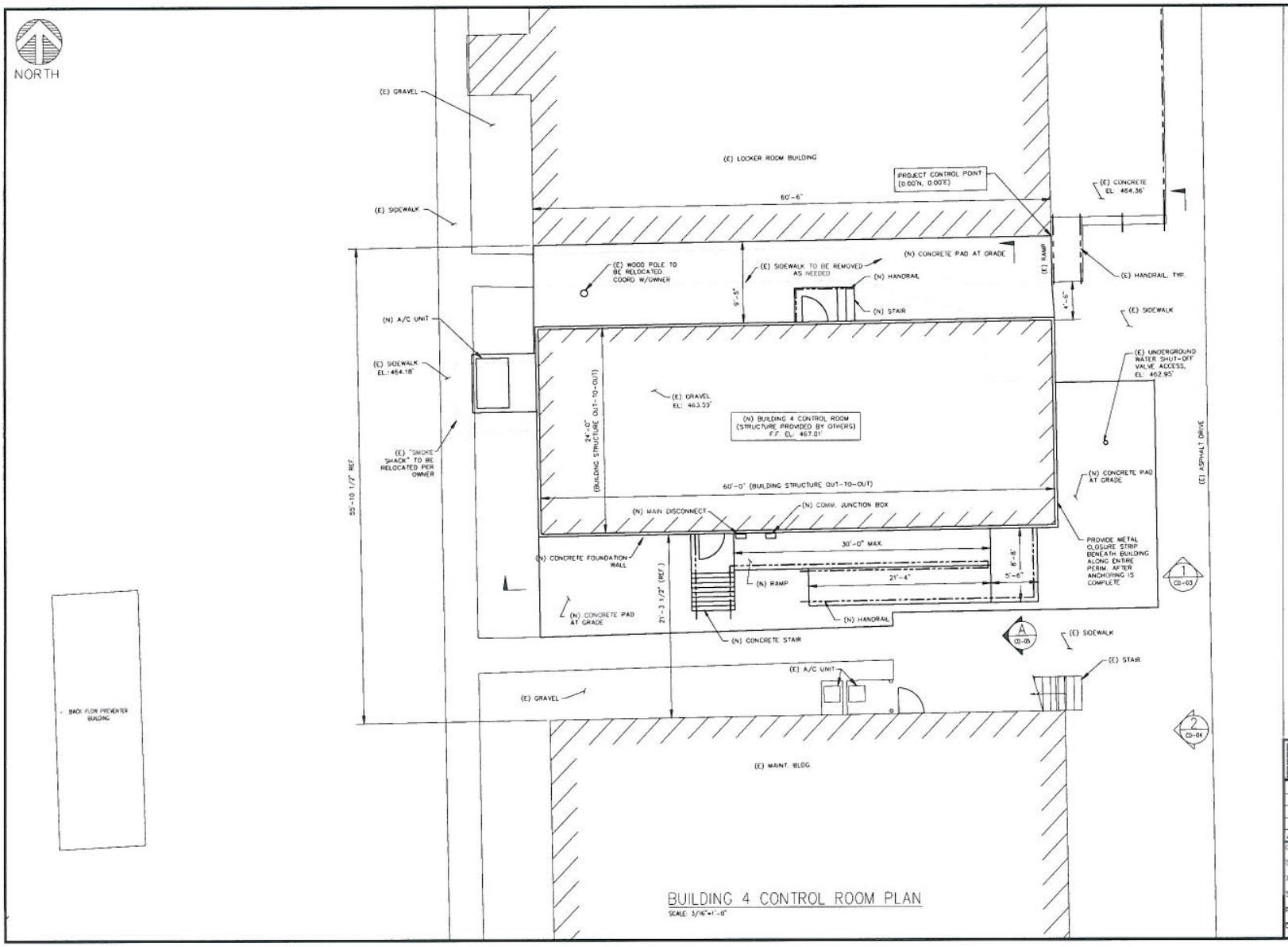
J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
780 S. Broadway, Coal City, IL 60416
(815) 634-2727 Fax (815) 634-2730

MARK	DATE	LIST OF REVISIONS	DRN	APPD
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/08/12	ISSUED FOR FLOOD PERMIT	KS	RW
B	8/29/12	RE-ISSUED FOR APPROVAL	DRB	RW
A	7/25/12	ISSUED FOR APPROVAL	DRB	RW

Drawn: DRB
Checked: RW
Approved: MT
Scale: 1/32" = 1'
Plot Scale: 1:1
Date: 7/25/12

FLINT HILLS RESOURCES
CMML
SITE PLAN
BUILDING 4 CONTROL ROOM SITE

CAD File Name: 2012-162-CD-01.dwg
Dwg No. 2012-162-CD-01
Rev. D



BUILDING 4 CONTROL ROOM PLAN

SCALE: 3/16"=1'-0"

NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES.
2. REFER TO 2012-162-CD-06 CONCRETE PLAN FOR ADD'L FOUNDATION AND GRADING/ELEVATION INFO.

LEGEND

(N) = NEW

(E) = EXISTING

PRELIMINARY NOT FOR CONSTRUCTION

J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
760 S. Broadway, Coal City, IL 60448
(815) 634-2727 Fax (815) 634-2738

MARK	DATE	LIST OF REVISIONS	DRN	APPD
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
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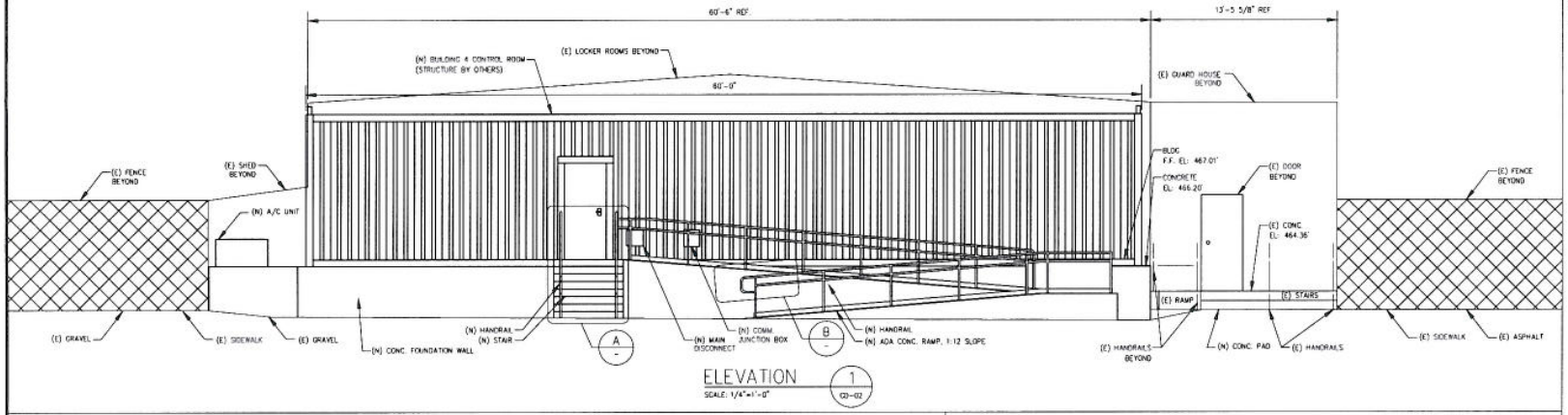
A	7/25/12	ISSUED FOR APPROVAL	DRB	RW

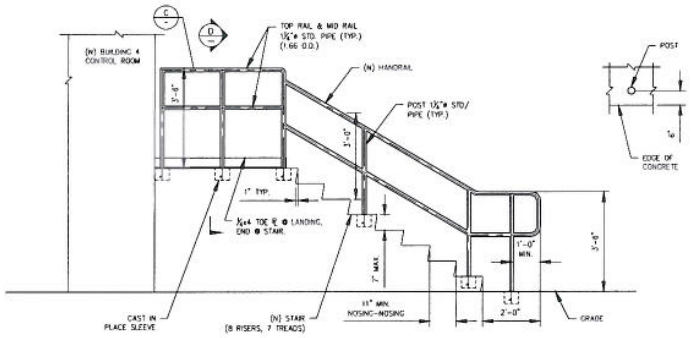
Drawn: DRB
Checked: RW
Approved: WT
Scale: 3/16" = 1'
Plot Scale: 1:1
Date: 7/25/12

FLINT HILLS RESOURCES
CIVIL
LOCATION PLAN
BUILDING 4 CONTROL ROOM SITE

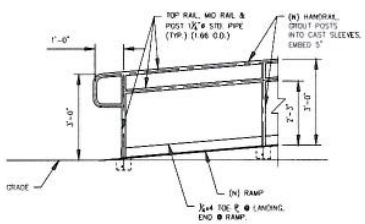
CAD File Name: 2012-162-CD-02.dwg
Dwg. No.: 2012-162-CD-02
Rev.: D



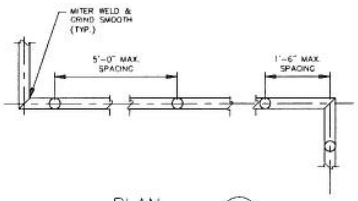
ELEVATION 1 (CD-02)
SCALE: 1/4"=1'-0"



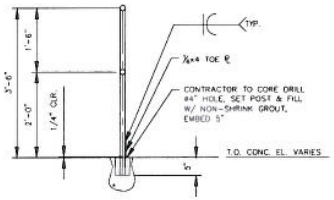
DETAIL A
SCALE: 1/2"=1'-0"



DETAIL B
SCALE: 1/2"=1'-0"



PLAN C
SCALE: 3/4"=1'-0"



SECTION D
SCALE: 3/4"=1'-0"

HANDRAIL TYPICAL DETAILS
SCALE: 3/4"=1'-0"

NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES

LEGEND

(N) = NEW

(E) = EXISTING

PRELIMINARY NOT FOR CONSTRUCTION

J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
780 S. Broadway, Coal City, IL 60416
(815) 634-2727 Fax (815) 634-2736

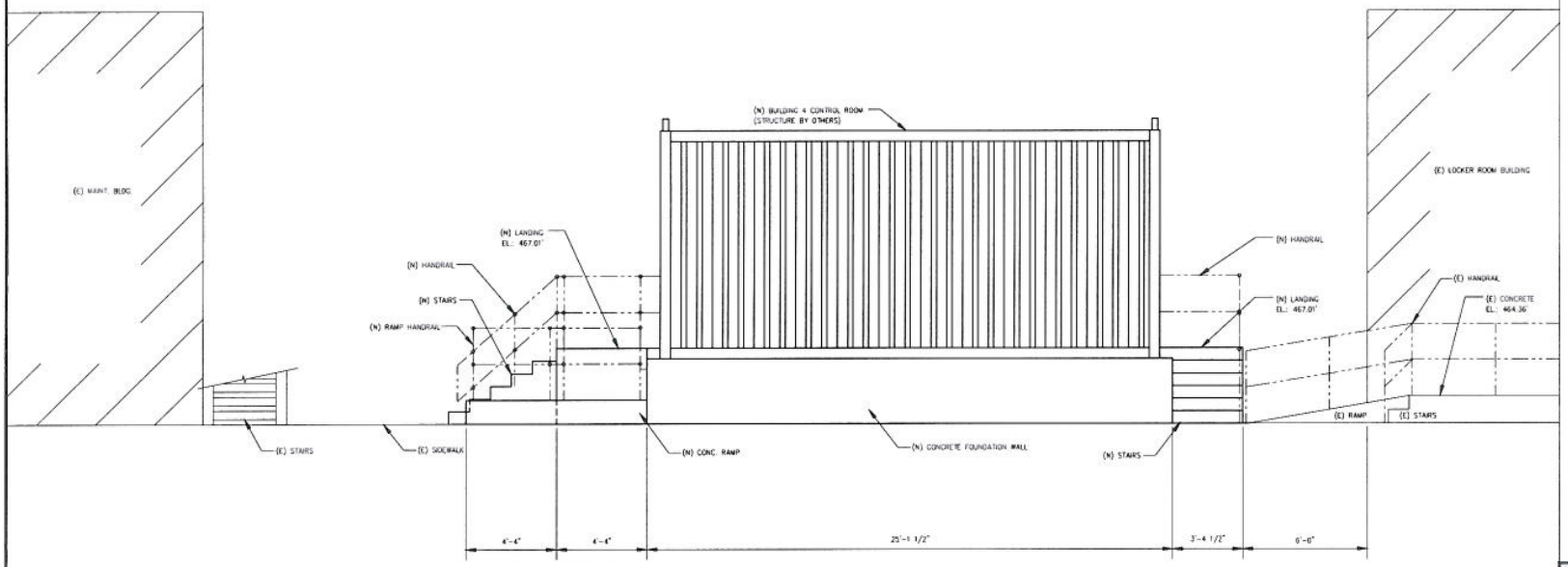
MARK	DATE	LIST OF REVISIONS	DRN	APPD
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/08/12	ISSUED FOR FLOOD PERMIT	KS	RW
B	8/29/12	RE-ISSUED FOR APPROVAL	DRB	RW
A	7/27/12	ISSUED FOR APPROVAL	DRB	RW

Drawn: DRB
Checked: RW
Approved: MT
Scale: 1/4" = 1'
Plot Scale: 1:1
Date: 7/25/12

FLINT HILLS RESOURCES
CIVIL
ELEVATION
BUILDING 4 CONTROL ROOM SITE

CAD File Name: 2012-162-CD-03.dwg
Dwg. No.: 2012-162-CD-03
Rev.: D

FHRPRU001503



ELEVATION 2 CD-02
SCALE: 3/8"=1'-0"

NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES.

LEGEND

(N) = NEW

(E) = EXISTING

PRELIMINARY
NOT FOR
CONSTRUCTION

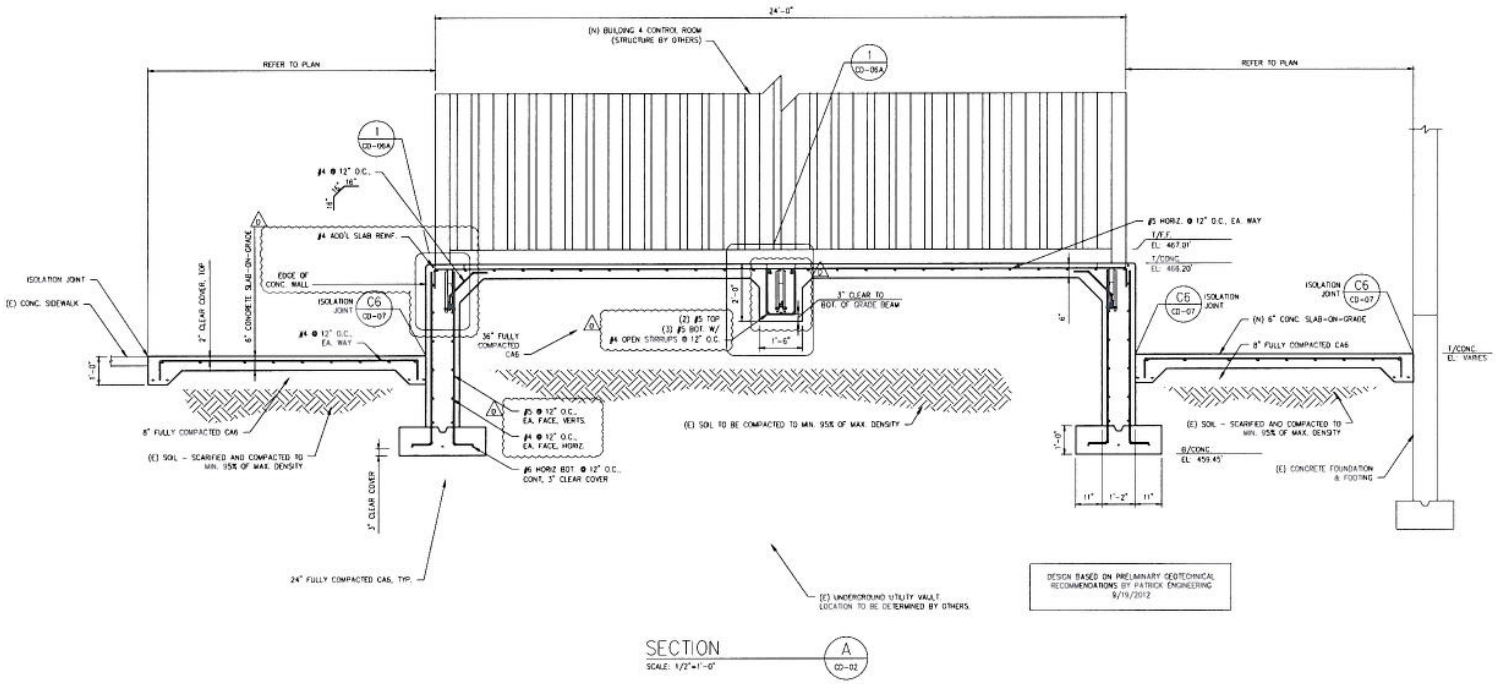
J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
780 S. Broadway, Coal City, IL 60416
(815) 634-2727 Fax (815) 634-2739

MARK	DATE	LIST OF REVISIONS	DRN	APPD
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/08/12	ISSUED FOR FLOOD PERMIT	KS	RW
B	8/28/12	RE-ISSUED FOR APPROVAL	DRB	RW
A	8/22/12	ISSUED FOR APPROVAL	DRB	RW

Drawn: DRB
Checked: JW
Approved: MT
Scale: 3/8" = 1'
Plot Scale: 1:1
Date: 7/25/12

FLINT HILLS RESOURCES
CIVIL
ELEVATION
BUILDING 4 CONTROL ROOM SITE

CAD File Name: 2012-162-CD-04.dwg
Dwg No.: 2012-162-CD-04
Rev.: D



SECTION A CD-02
SCALE: 1/2"=1'-0"

NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES.

LEGEND

(N) = NEW

(E) = EXISTING

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Professional Engineers and Consultants
780 S. Broadway, Coal City, IL 60416
(815) 634-2727 Fax (815) 634-2738

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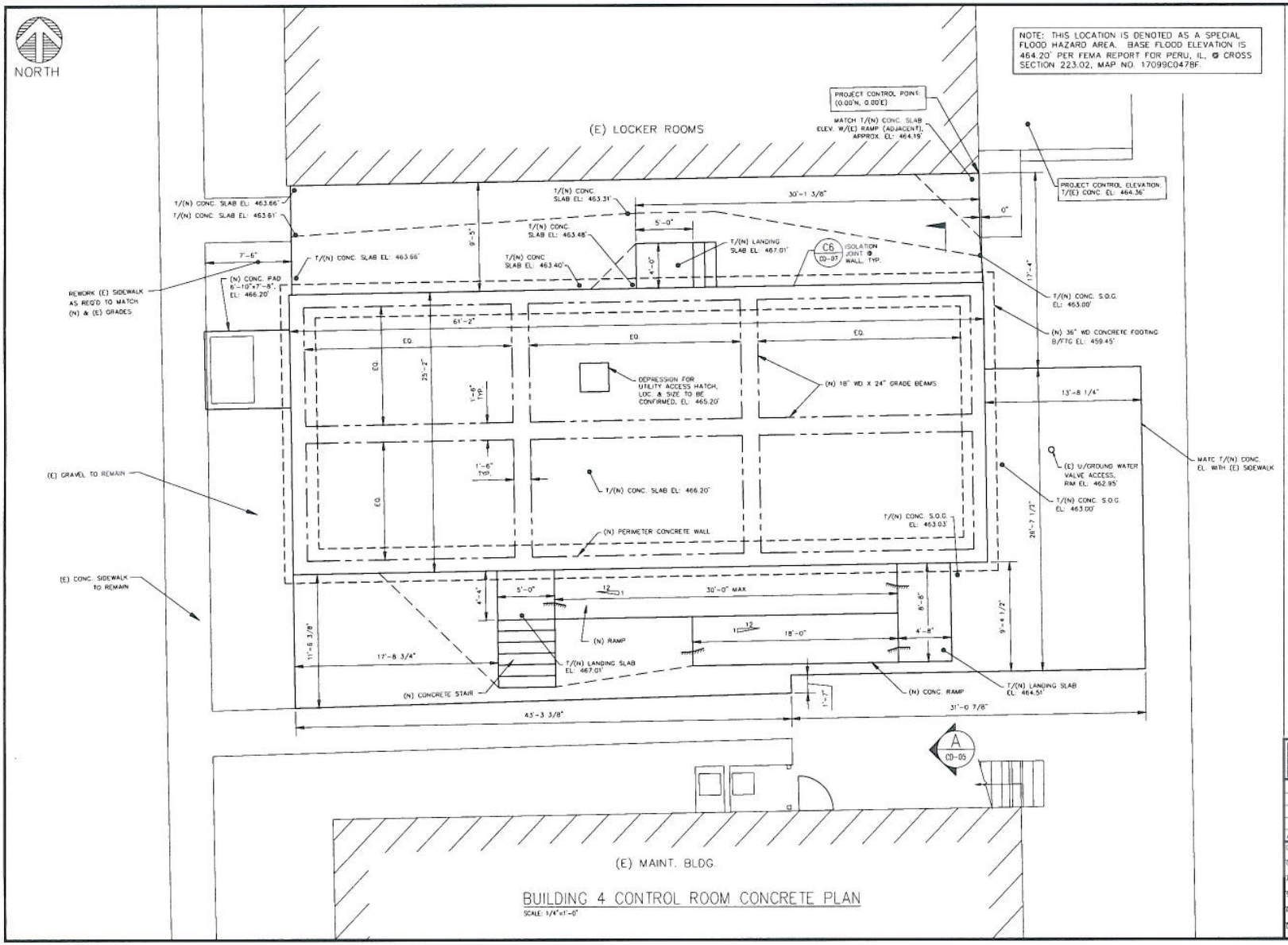
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	ORB	RW
C	10/18/12	ISSUED FOR FLOOD PERMIT	KS	RW
B	8/29/12	RE-ISSUED FOR APPROVAL	ORB	RW
A	7/27/12	ISSUED FOR APPROVAL	ORB	RW

Drawn: ORB
Checked: RW
Approved: MT
Scale: VARIES
Plot Scale: 1:1
Date: 7/26/12

FLINT HILLS RESOURCES
CIVIL
SECTION
BUILDING 4 CONTROL ROOM SITE

CAD File Name: 2012-162-CD-05.dwg
Dwg No.: 2012-162-CD-05
Rev.: D

FHRPRU001505



NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES.

LEGEND

(N) = NEW

(E) = EXISTING

PRELIMINARY NOT FOR CONSTRUCTION

J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
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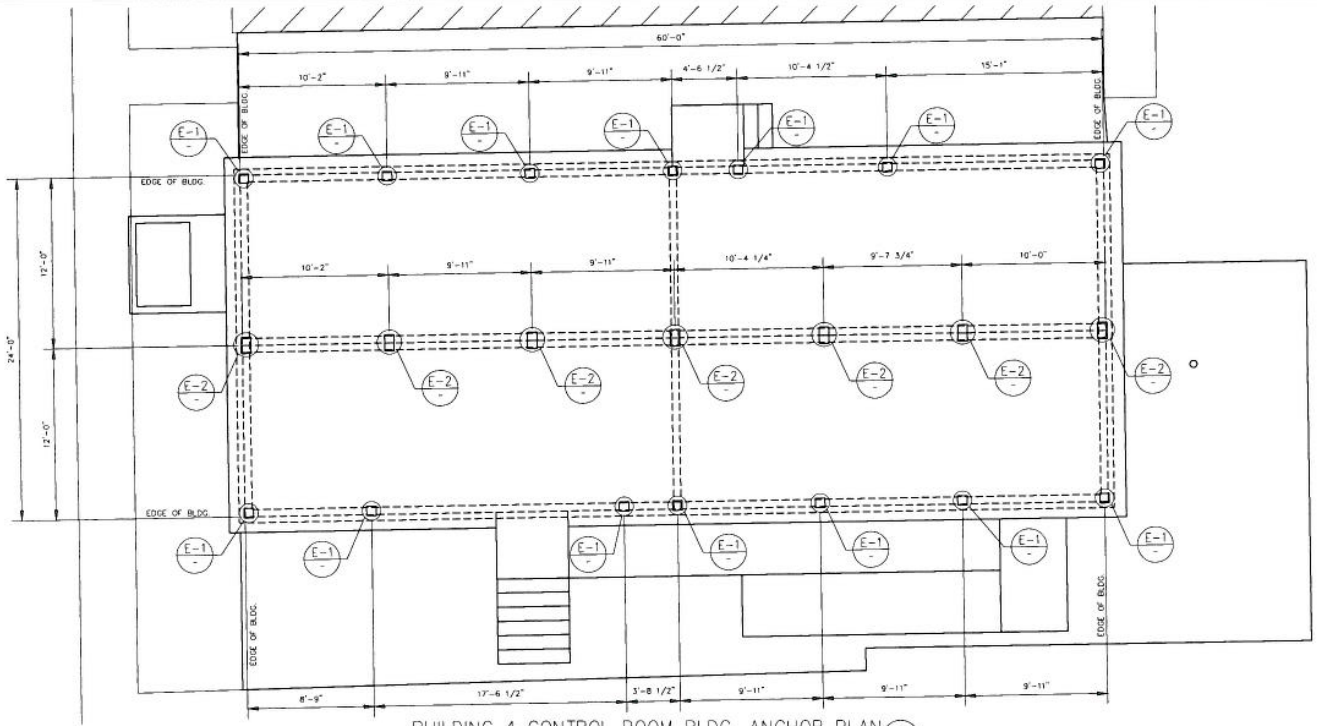
MARK	DATE	LIST OF REVISIONS	DRN.	APPD.
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/18/12	ISSUED FOR FLOOD PERMIT	KS	RW
B	8/6/12	ISSUED FOR APPROVAL	DRB	RW
A	7/25/12	ISSUED FOR APPROVAL	DRB	RW

Drawn: DRB
Checked: RW
Approved: MT
Scale: 1/4" = 1'
Plot Scale: 1:1
Date: 7/25/12

FLINT HILLS RESOURCES
CIVIL
CONCRETE PLAN
BUILDING 4 CONTROL ROOM SITE

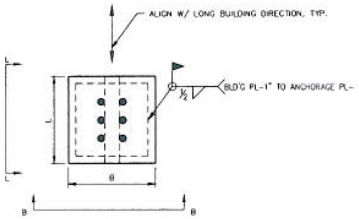
CAD File Name: 2012-162-CD-06.dwg
Dwg. No.: 2012-162-CD-06
Rev.: D

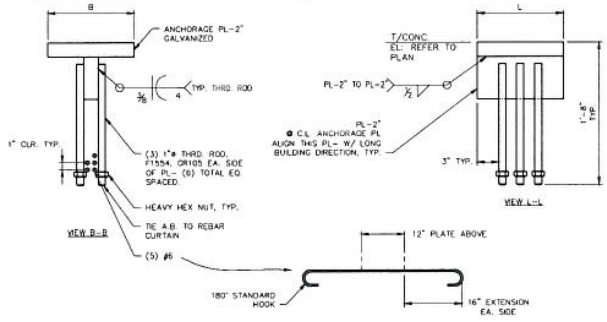


BUILDING 4 CONTROL ROOM BLDG. ANCHOR PLAN (1)

SCALE: 1/4"=1'-0"

CONCRETE EMBED SCHEDULE			
EMBED ID	L (in.)	B (in.)	QTY
E-1	12	12	14
E-2	12	20	7





ANCHOR PLATE DETAIL (A)

SCALE: 1 1/2"=1'-0"

NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES.

LEGEND

(N) = NEW

(E) = EXISTING

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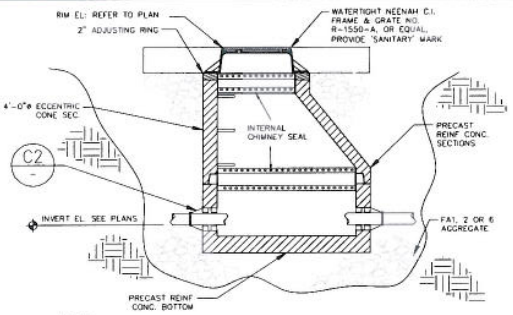
Professional Engineers and Consultants
760 S. Broadway, Coal City, IL 60448
(815) 634-2727 Fax (815) 634-2739

MARK	DATE	LIST OF REVISIONS	DRN.	APPD
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/08/12	ISSUED FOR FLOOD PERMIT	KS	RW
B	8/8/12	ISSUED FOR APPROVAL	DRB	RW
A	7/25/12	ISSUED FOR APPROVAL	DRB	RW

Drawn: DRB
Checked: RW
Approved: MT
Scale: 1/4" = 1'
Plot Scale: 1:1
Date: 7/25/12
CAD File Name: 2012-162-CD-06A.dwg
Dwg. No.: 2012-162-CD-06A
Rev.: D

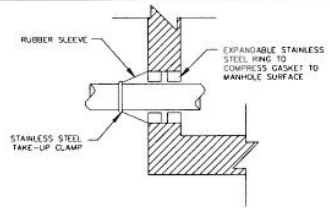
FLINT HILLS RESOURCES
CIVIL
BUILDING ANCHOR PLAN
BUILDING 4 CONTROL ROOM SITE



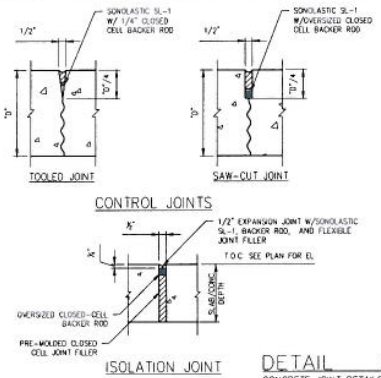
NOTES:

1. STEPS SHALL CONFORM TO I.D.O.T. STANDARDS.
2. PROVIDE CA1, 2 OR 6 AGGREGATE BACKFILL AROUND C.B. TO SUBGRADE ALLEY.
3. INTERNAL CHIMNEY SEALS SHALL BE OF FLEXIBLE RUBBER MANUFACTURED TYPE, AS PROVIDED BY CRETEX OR EQUAL.
4. DRESS UP INTERIOR JOINTS WITH HYDRAULIC CEMENT. APPLY A CONTINUOUS LAYER OF NON-HARDENING, BITUMINOUS MASTIC MATERIAL (RUB R NEK OR E Z STIK) TO EACH JOINT TO PREVENT INFLOW.
5. FORM MANHOLE INVERTS TO PROVIDE SMOOTH FLOW THROUGH UNIT.

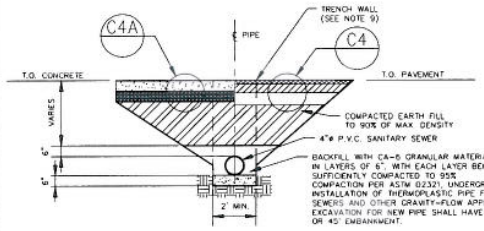
DETAIL C1
SANITARY MANHOLE PD-01
SCALE: 1/2"=1'-0"



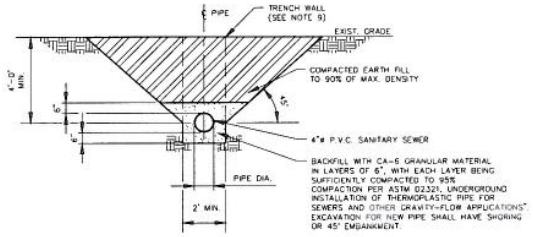
DETAIL C2
FLEXIBLE SLEEVE PD-01
SCALE: 1/2"=1'-0"



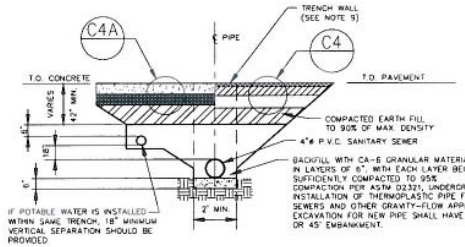
DETAIL C6
CONCRETE JOINT DETAILS CD-06
SCALE: NTS



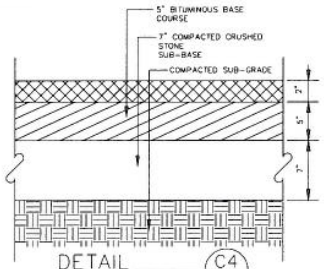
DETAIL C3
PIPE BEDDING AND BACKFILL PD-01
SCALE: 3/8"=1'-0"



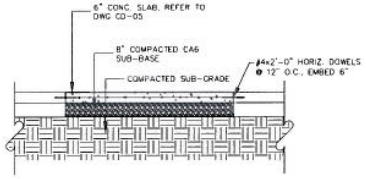
DETAIL C3A
PIPE BEDDING AND BACKFILL PD-01
SCALE: 3/8"=1'-0"



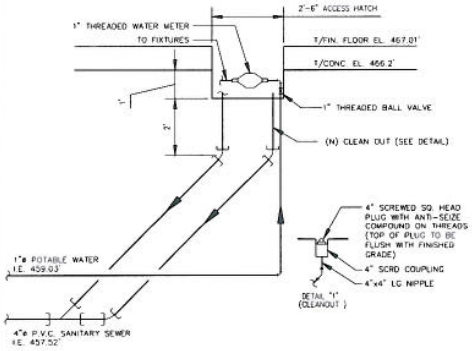
DETAIL C3B
PIPE BEDDING AND BACKFILL PD-01
SCALE: N.T.S.



DETAIL C4
MEDIUM DUTY PAVEMENT
SCALE: NTS



DETAIL C4A
CONCRETE SIDEWALK
SCALE: NTS



DETAIL C5
UTILITY TIE-IN @ ACCESS HATCH PD-01
SCALE: NTS

NOTES:

1. FOR GENERAL NOTES AND LEGEND SEE DRAWING.
2. ALL WORK SHALL CONFORM TO ALL LOCAL CODE AND ORDINANCES.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, CLEARANCES, ELEVATIONS, AND UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
4. PIPING MATERIALS SHALL BE PER SPECIFICATIONS AS LISTED BELOW PIPE FITTINGS BRANCH CONNECTIONS.
5. GRANULAR FILL SHALL BE A CA-6 COMPACTED TO 95% PROCTOR IN 6" LAYERS.
6. CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL UNDERGROUND UTILITIES.
7. CONTRACTOR SHALL DIG AROUND EXISTING UNDERGROUND SEWERS AND ELECTRICAL CONDUITS IN A CAUTIOUS MATTER SO THEY WILL NOT BE DISTURBED.
8. ALL SPOILS SHALL BE REMOVED IN AN APPROVED MANNER.
9. ANGLE OF REPOSE AS CALCULATED BY OSHA FOR SLOPING EXCAVATIONS IN VARIOUS TYPES OF SOIL (AVG. SOIL = 1:1 SLOPE) PORTABLE TRENCH BOXES OR SLIDING TRENCH SHIELDS MAY BE USED IN LIEU OF SLOPING.

LEGEND

(N) = NEW

(E) = EXISTING

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J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
760 S. Broadway, Coal City, IL 60416
(815) 634-2727 Fax (815) 634-2738

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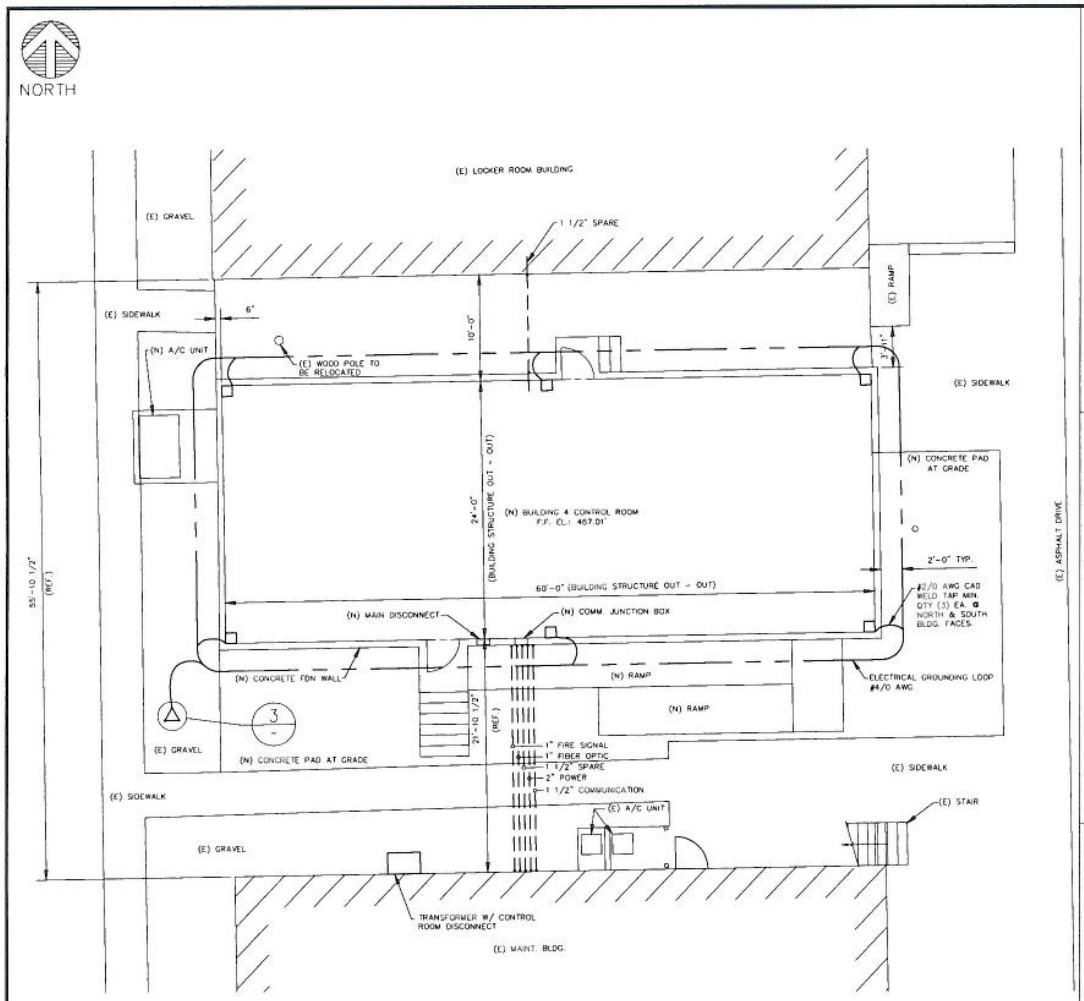
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/18/12	ISSUED FOR PERMIT	KS	RW

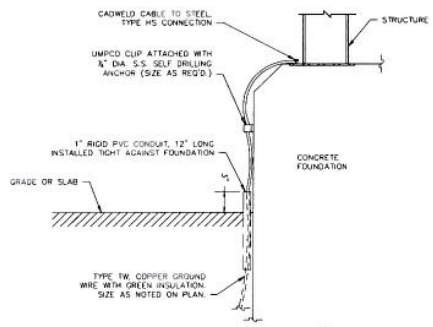
Drawn CJK
Checked RW
Approved MT
Scale VARIES
Plot Scale 1:1
Date 9/20/12
CAD File Name 2012-162-CD-07.dwg
DWG No 2012-162-CD-07
Rev. D

FLINT HILLS RESOURCES
CIVIL
CONCRETE/SITE WORK DETAILS
BUILDING 4 CONTROL ROOM SITE



BUILDING 4 CONTROL ROOM GROUNDING PLAN

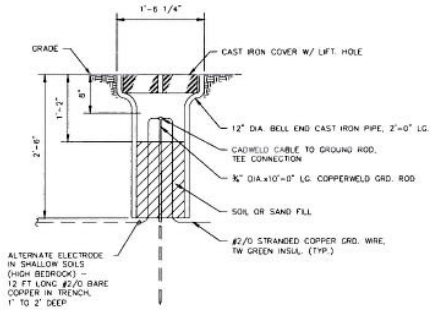
SCALE: 3/16"=1'-0"



DETAIL 1

GROUNDING CONNECTION

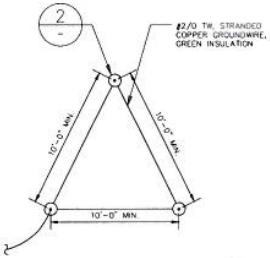
SCALE: 1 1/2"=1'-0"



DETAIL 2

GROUND WELL

SCALE: 1"=1'-0"



DETAIL 3

MULTIPLE GROUND WELL INSULATION

SCALE: 1 1/2"=1'-0"

NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES.
2. ELECTRICAL CONTRACTOR SHALL TEST ELECTRICAL GROUNDING SYSTEM & INSTALL ADD'L GROUND RODS AS NECESSARY TO MEET THE MOST STRINGENT OF PLANT, CITY, STATE AND FEDERAL (N.E.C.) CODES.

LEGEND

(N) = NEW

(E) = EXISTING

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Professional Engineers and Consultants
760 S. Broadway, Coal City, IL 60448
(815) 634-2727 Fax (815) 634-2739

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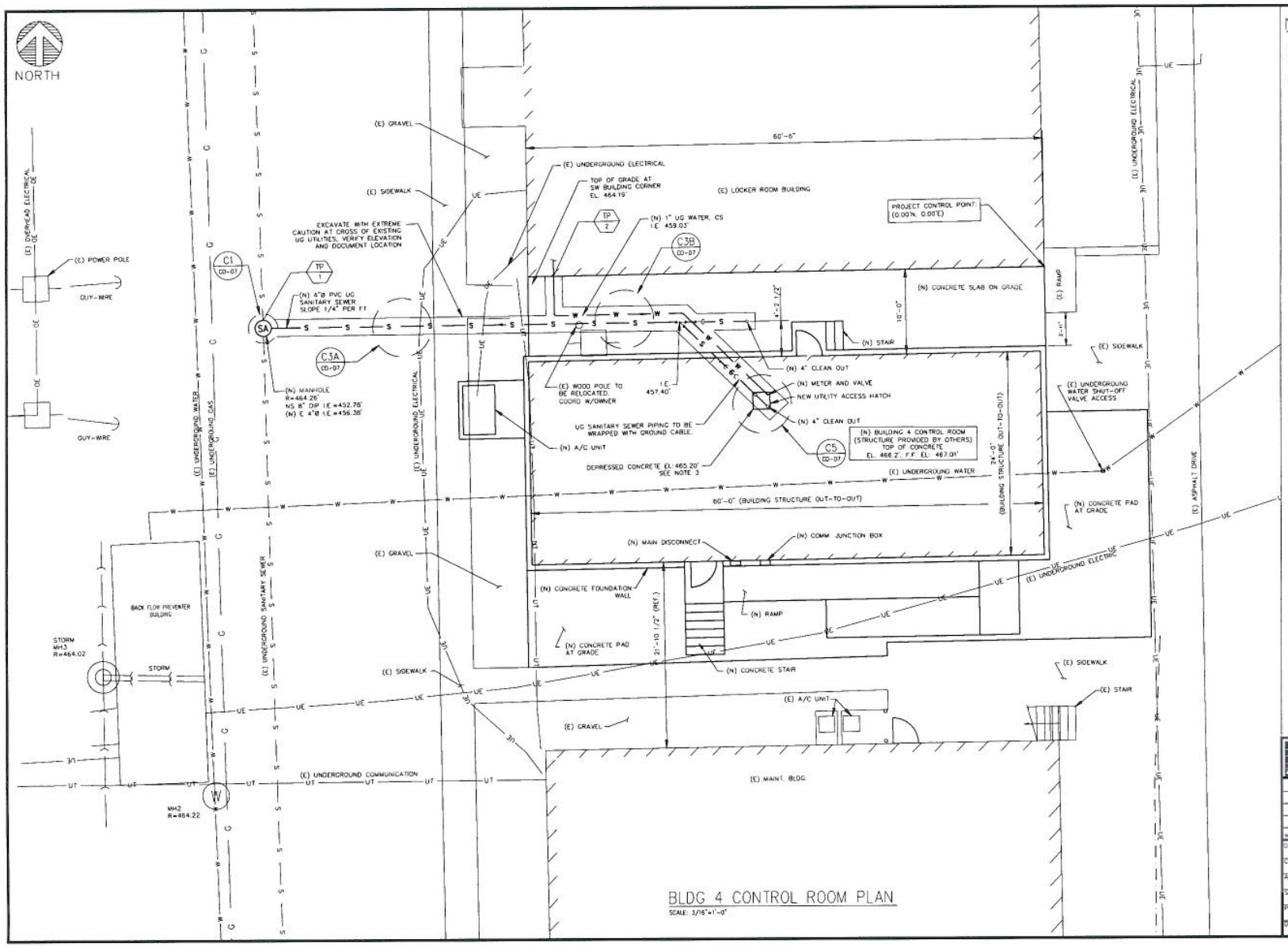
D	11/7/12	ISSUED FOR FOUNDATION PERMIT	DRB	RW
C	10/08/12	ISSUED FOR FLOOD PERMIT	KS	RW

Drawn: KS
Checked: RW
Approved: MT
Scale: VARIES
Plot Scale: 1:1
Date: 9/25/12
CAD File Name: 2012-162-ED-01.dwg
Dwg. No.: 2012-162-ED-01
Rev.: D

FLINT HILLS RESOURCES
ELECTRICAL
GROUNDING PLAN & DETAILS
BUILDING 4 CONTROL ROOM SITE



BLDG 4 CONTROL ROOM PLAN

SCALE: 3/16"=1'-0"

NOTES:

1. SEE SHEET 2012-162-CD-01 FOR GENERAL NOTES
2. ALL NON-CONDUCTIVE UNDERGROUND UTILITIES TO BE WRAPPED WITH ELECTRIC GROUND CABLE.
3. LOCATION AND SIZE OF CONCRETE DEPRESSION FOR UTILITY ACCESS HATCH TO BE CONFIRMED.

LEGEND

(N) = NEW

(E) = EXISTING

—— S —— = SANITARY SEWER (PVC)

—— W —— = POTABLE WATER (CS)

PRELIMINARY NOT FOR CONSTRUCTION

J.L. MEECE ENGINEERING, INC.
Professional Engineers and Consultants
780 S Broadway, Coal City, IL 60416
(815) 634-2727 Fax (815) 634-2728

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D	11/07/12	ISSUED FOR FOUNDATION PERMIT	KS	RW
C	10/08/12	ISSUED FOR FLOOD PERMIT	KS	RW

Drawn: OJR
Checked: RW
Approved: WF
Scale: 3/16" = 1'
Plot Scale: 1:1
Date: 9/20/12

FLINT HILLS RESOURCES
PIPING
UNDERGROUND PIPING PLAN
BUILDING 4 CONTROL ROOM

CAD File Name: 2012-162-PD-01.dwg
Dwg No: 2012-162-PD-01
Rev. D

HUNTER
BUILDINGS & MANUFACTURING, LP

LETTER OF TRANSMITTAL

November 1, 2012
Flint Hills Resources Chemical Intermediates, LLC
501 Brunner Street
Peru, IL 61354
Attn: Justin Cacciatori
Ref: PO# PEP14095
Sent Via E-mail: justin.cacciatori@fhr.com

Hunter Project No. 1341

Please be advised that we are sending to you attached:

___ Specifications
_X_ Plans

PAGE 1 OF 2

____ Shop Drawings
____ Samples

ITEM #	COPIES	DESCRIPTION	DWG. NO.
1	PDF	Drawing Index	G-01
2	PDF	General Specifications	G-02
3	PDF	General Specifications	G-03
4	PDF	Floor Plan	A-01
5	PDF	Floor Plan Dimensions	A-02
6	PDF	Architectural Elevations	A-03
7	PDF	Architectural Elevations	A-04
8	PDF	Cross Section Details	A-05
9	PDF	Mate Line Connection Details	A-06
10	PDF	Accessibility Architectural Details	A-07
11	PDF	Cabinet Details	A-08
12	PDF	Structural Floor Plan	S-01
13	PDF	Structural Elevations	S-02
14	PDF	Structural Penetration Locations	S-03
15	PDF	Structural Details	S-04
16	PDF	Plumbing Layout Dimensions	P-01
17	PDF	Plumbing Riser Diagrams	P-02
18	PDF	Electrical Panel Schematic/Load Analysis/Legend	E-01
19	PDF	Electrical Power Plan	E-02
20	PDF	Electrical Lighting Plan	E-03
21	PDF	Communication Layout	E-04
22	PDF	Reflected Ceiling Plan	E-05
23	PDF	Typical Electrical Crossover J-Box	E-06

FHRPRU001511

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BUILDINGS & MANUFACTURING, LP

24	PDF	Mechanical Ductwork and Register Layout	M-01
25	PDF	Mechanical Ductwork Cross Sections	M-02
26	PDF	Mechanical Ductwork Installation Details	M-03
27	PDF	Mechanical Ductwork Details and Schedules	M-04
28	PDF	Mechanical Ductwork Details and Schedules	M-05
29	PDF	Air Flow Diagram, Schedules and Sequence of Operations	M-06

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___ For Your Information
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Submitted by: Jose Barragan - Hunter Buildings

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FHRPRU001512

1341 DRAWING INDEX

DRAWING NUMBER	DRAWING NAME	DATE:	REVISION
G-01	DRAWING INDEX	11/01/12	B
G-02	GENERAL SPECIFICATIONS	11/01/12	B
G-03	GENERAL SPECIFICATIONS	11/01/12	B
A-01	FLOOR PLAN	11/01/12	B
A-02	FLOOR PLAN DIMENSIONS	11/01/12	B
A-03	ARCHITECTURAL ELEVATIONS	11/01/12	B
A-04	ARCHITECTURAL ELEVATIONS	11/01/12	B
A-05	CROSS SECTION DETAILS	11/01/12	B
A-06	MATE LINE CONNECTION DETAILS	11/01/12	B
A-07	ACCESSIBILITY ARCHITECTURAL DETAILS	11/01/12	A
A-08	CABINET DETAILS	11/01/12	A
S-01	STRUCTURAL FLOOR PLAN	11/01/12	B
S-02	STRUCTURAL ELEVATIONS	11/01/12	B
S-03	STRUCTURAL PENETRATION LOCATIONS	11/01/12	B
S-04	STRUCTURAL DETAILS	11/01/12	B
P-01	PLUMBING LAYOUT DIMENSIONS	11/01/12	B
P-02	PLUMBING RISER DIAGRAMS	11/01/12	B
E-01	ELECTRICAL PANEL SCHEMATIC/ LOAD ANALYSIS/ LEGEND	11/01/12	B
E-02	ELECTRCIAL POWER PLAN	11/01/12	B
E-03	ELECTRCIAL LIGHTING PLAN	11/01/12	B
E-04	COMMUNICATION LAYOUT	11/01/12	B
E-05	REFLECTED CEILING PLAN	11/01/12	B
E-06	TYPICAL ELECTRICAL CROSSOVER J-BOX	11/01/12	B
M-01	MECHANICAL DUCTWORK AND REGISTER LAYOUT	11/01/12	B
M-02	MECHANICAL DUCTWORK CROSS SECTIONS	11/01/12	B
M-03	MECHANICAL DUCTWORK INSTALLATION DETAILS	11/01/12	B
M-04	MECHANICAL DUCTWORK DETAILS AND SCHEDULES	11/01/12	B
M-05	MECHANICAL DUCTWORK DETAILS AND SCHEDULES	11/01/12	B
M-06	AIR FLOW DIAGRAM, SHEDULES AND SEQUENCE OF OPERATIONS	11/01/12	B

STRUCTURAL DESIGN CRITERIA

BLAST PRESSURE:	5.0 PSI FOR 200 MILLISECONDS
WIND DESIGN CONDITIONS	115 MPH, EXPOSURE "C"
WIND LOAD:	ASCE 7 (DETERMINED BY IBC 2012)
ROOF LIVE LOAD:	40 PSF
EARTHQUAKE:	ASCE 7 (DETERMINED BY IBC 2012)
SEISMIC DESIGN:	CATEGORY B
OCCUPANCY CATEGORY:	II
FLOOR LIVE LOAD: BUSINESS	75 PSF

DESIGN CODES
2012 INTERNATIONAL BUILDING CODE
2012 INTERNATIONAL PLUMBING CODE
2012 INTERNATIONAL MECHANICAL CODE
2011 NATIONAL ELECTRIC CODE

PROJECT NAME:	FLINT HILLS RESOURCES
PROJECT ADDRESS:	PERU IL.
PROJECT DESCRIPTION:	CONTROL ROOM
NEW BUILDING USE GROUP:	B=BUSINESS
ALLOWABLE SQ.FT.	B=1440 SQ.FT.
NEW BLDG. CONST. TYPE	V-B
NEW BUILDING FLOOR AREA & USE	NEW FIRST FLOOR=1440 SQ.FT.
AREA INCREASE FOR FRONTAGE:	NO
BUILDING FULLY SPRINKLED:	NO
AREA INCREASE FOR AUTO SPRINKLER	NO
ADA COMPLIANT	DUE TO BLAST RESISTANCE REQUIREMENTS, DOOR OPENING FORCE WILL EXCEED ADA CRITERIA
NEW USE GROUP B OCCUPANT LOAD:	1440 SQ.FT. @ 100 SQ.FT. /PERSON=14 PERSON

NOTES:
1. BUILDING SET BACK: GREATER THAN 20' FROM COMMON OR ASSUMED PROPERTY LINE.
2. WHEN BOTTLED DRINKING WATER IS REQUIRED IT SHALL BE PROVIDED ON SITE BY OTHERS
3. WHEN SERVICE SINK IS REQUIRED IT SHALL BE PROVIDED ON SITE BY OTHERS.

CUSTOMER APPROVAL
☐ APPROVED
☐ APPROVED EXCEPT AS NOTED
☐ REVISE AS NOTED AND RESUBMIT
☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____
DATE_____

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FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
DRAWING INDEX

	BY	DATE
DRAWN:	GGJR	08/07/12
CHECKED:	HGW	08/07/12
ENGINEER:		
APPROVED:		

SCALE: N.T.S
JOB. No. 1341
G-01
REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

Design Parameters: The structure will be designed to withstand a 5.0-PSI Peak Free Field overpressure and a 200 millisecond duration with the criteria for ASCE "High Response" in accordance with ASCE 2010 Publication "Design of Blast Resistant Buildings in Petrochemical Facilities". Second Edition.
Size: 24' Wide x 60' Deep x 12' 4" High (nominal). Structure consists of two (2) modules. Module "A" being 11' Wide x 60' Deep x 12' 4" High (nominal) and Module "B" being 13' Wide x 60' Deep x 12' 4" High (nominal) @ a total of 1440 Sq. Ft. complete with the following features:

Qty.	U/M	Description
		STEEL STRUCTURE:
		Base: Perimeter, HSS 6x6 tube, ASTM A500 Grade-B with HSS 6 x 2 joists @ 24" O.C.
		Columns: HSS 6 x 6 tube, ASTM A500 Grade-B.
		Roof: Perimeter, HSS 6 x 6 tube ASTM A500 Grade-B with C6 x 10.5 joists @ 24" O.C.
		Siding: 10 Gauge Plate, ASTM A1011-36 with 3 1/2" crimp profile
		Bottom: 12 Gauge Flat Plate, ASTM A1011-36.
		Roof: 12 Gauge Flat Plate. ASTM A1011-36.
4	EA	Top lifting padeyes each module
		Exterior finish as follows:
		• Commercial Blast
		• Prime coat of 2-4 mil epoxy
		• Top coat of 3-5 mil polyurethane, color TBD.
		Note: Paint color to match the maintenance building & guard house, per client's request previous job.
		FLOOR:
		Decking: Single layer of 1 1/8" plywood Sturd-I-Floor, installed perpendicular to the structural joist system
		Floor Insulation: R-19 Kraft faced fiberglass and 1 1/2" semi-rigid insulation for thermal break. Combined R-25.2
		Vapor Barrier: 6 mil polyethylene
		Covering: VCT 1/8" x 12" x 12" commercial grade floor tile, Armstrong No. 51904 "Sterling" **TBD**.
		Base: 4" vinyl cove base throughout. Color: "Dove Gray". **TBD**
1	EA	Floor Hatch: 24" x 24" x 1/4" Aluminum diamond tread plate with 2" x 2" x 3/16" angle frame, complete with recessed cam latch, locking arm and stalleners
		PERIMETER INTERIOR WALLS:
		Framing: Steel studs, 6" x 20 gauge @ 16" O.C. and 20 gauge, formed top and bottom track, 7' 11" ceiling height.
		Wall Covering: 5/8" vinyl covered gypsum with matching battens, type X. "Hampton Gray". **TBD**
		Wall Insulation: R-19 Kraft faced fiberglass
		Vapor Barrier: 6 mil polyethylene
		PARTITION WALLS:
		Framing: Steel studs, 3 5/8" x 20 gauge @ 16" O.C. and 20 gauge formed top and bottom track, 7' 11" ceiling height.
		Wall Covering: 5/8" vinyl covered gypsum with matching battens, type X. "Hampton Gray". **TBD**
		Interior Insulation: R-13 Kraft faced fiberglass.
		ROOF:
		Ceiling: Suspended acoustical, mineral fiber, fissure pattern, 2' x 2' grid, CertainTeed "Baroque".
		Roof Insulation: R-30, Rigid Foam Corning Formular 250 and 2" semi-rigid insulation board, combined R-38.3
		Sub Ceiling: 3/8" Gypsum
		Vapor Barrier: 6 mil polyethylene
		DOORS:
2	EA	Exterior: 36" x 80" Steel reinforced 5.0 PSI Blast Rated, with extra heavy duty hinges, keyed lever latchset, HD hydraulic door closer, panic push bar and drip cap. (ergonomic handle)
2	EA	Exterior Door Vision Panels: 7 1/2" x 7 1/2" 3/8" laminated safety glazing
2	EA	Nameplates: 4" x 6" engraved stainless steel mounted one at each exterior door
7	EA	Interior: 36" x 80", prefinished, solid core, metal frame
2	EA	Interior Door Vision Panel: 12"x12" Laminated Safety Glazing
1	EA	Hardware: Keyed lever locksets
1	EA	Hardware: Privacy lever latchsets
5	EA	Hardware: Passage lever latchsets
		WINDOWS:
3	EA	Exterior: 36" x 30" 5.0 PSI rated, fixed non operable
		PLUMBING:
		Supply: Cross-linked polyethylene (PEX) piping c/w crimped fittings and shut offs at all fixtures.
		DWV: PVC, Sch 40, multiple discharge points, External "MANIFOLDS BY OTHERS"
1	EA	Water Closets: Elongated tank type, w/open front seat. Kohler Model K3578 (or equal)
1	EA	Lavatory: 20" x 17" oval acrylic in vanity base cabinet, plastic laminate top and surface finish. Color: "Dove Gray".
1	EA	Sink: 33" x 22", double bowl, stainless steel, w/kitchen faucet
~~0~~	~~EA~~	~~Water Heater: 6 gallon 120 Volt electric with 2" high galvanized drain pan~~
1	EA	Water Heater: Point of use, 120 Volt, Eemax SP2412
1	EA	Water Heater: 6 gallon 120 Volt electric with 2" high galvanized drain pan
1	EA	Accessories: Mirror, 24" x 36" x 1/4" tempered glass channel framed, Bobrick No. B-165 2436
1	EA	Miscellaneous: Water valve for refrigerator ice maker
1	EA	Miscellaneous: Water valve for client use.
1	EA	Floor Drains: 2" PVC w/ trap guard. TG-63-HD.
		Note: Required plumbing fixtures are not ADA compliant
		ELECTRICAL:
1	EA	Service Entry Disconnect: 200 Amp non fused, 480 Volt, 3 Ø, 4 wire, 60 hertz service
1	EA	Transformers: 75 kVA, floor mounted with std. taps above and below, for 480 Volt, 3 Ø, 3 wire delta primary and 208/120 volt 3 Ø, 4 wire wye secondary, mounted on building exterior EI75T3H
		Note: Transformer to be shipped loose to prevent any damages during transportation.
1	EA	Lighting Panelboard: 200 Amp main breaker,42 Circuit, NEMA 1 surface mounted, 208/120 Volt, 3 Ø, 4 wire, 60 hertz service (Square D or equal)
		Raceway: #12-AWG (minimum) THHN, copper, in Type MC raceway with full ground, concealed.
21	EA	Lighting: Fluorescent, 2' x 4', two (2) tube lay-in troffers, 32 Watt T-8 lamps, electronic dimming ballasts and acrylic diffuser
3	EA	Lighting: Fluorescent, 2' x 2', two (2) tube lay-in troffers, 17 Watt T-8 lamps, electronic dimming ballasts and acrylic diffuser
2	EA	Lighting: Exterior weather resistant 150W LED located over the doors. Needs to be PhotoCell
~~0~~	~~EA~~	~~Lighting: Exterior weather resistant 60W incandescent located on each corner of the building.~~
2	EA	Lighting: Emergency/Exit combination, incandescent dual head lamps, lead-calcium 90 minute battery backup
76	EA	Receptacles: NEMA 5-20R, 120 Volt, 20 Amp, duplex with white cover plate
3	EA	Receptacles: NEMA 5-20R, 120 Volt, 20 Amp, GFCI duplex with white cover plate
		Note: All wall mounted convenience receptacles, except at counter tops, to be mounted at 18" AFF
~~0~~	~~EA~~	~~Receptacles: NEMA 5-20R, 120 Volt, 20 Amp, duplex with white cover plate inside Communications Cabinet at 59" AFF~~
1	EA	Receptacle: NEMA 5-20R, 120 Volt, 20 Amp, GFCI, weather proof, wall mounted adjacent to HVAC systems
1	EA	Water Heater Receptacle: NEMA L6-30R, 240 Volt, 30 Amp, single, with stainless steel cover plate
10	EA	Switches: Single pole toggle, 120 Volt, 20 Amp, with white cover plate
6	EA	Switches: Three way toggle, 120 Volt, 20Amp, with white cover plate.
		All switches to be mounted at 48" AFF
33	EA	Data/Phone boxes: 4" x 4" junction boxes w/3/4" EMT stubbed into the ceiling cavity, Mounted @ 18" AFF or as noted.
17	EA	Junction Box: 4" x 4" w/3/4" EMT stubbed into the ceiling cavity for client provided and install fire protection equipment. Mounted @ 80" AFF or as noted
1	EA	Bulkhead: 12" x 48" x 1/4" plate with 16-3/4", 6 - 1 1/2" & 6-2" NPT Couplings seal welded and capped. Note: Final Bulkhead and Coupling sizes **TBD**
2	EA	Grounding: 3" x 3" x 1/4" stainless steel pads welded to opposite corners for field connection for client grounding lugs.
		COMMUNICATIONS:
33	EA	Modtap RJ45-568B duplex jacks each with (1) jack for voice and (1) jacks for LAN wired with CAT 5e plenum rated cable
		Cable crossing mate lines will be coiled to nearest mate line with completion to main T/D box on site by others.
1	EA	Exterior Pull Box w/backplate, NEMA 4, 20" x 20" x 8" with seal to interior
~~0~~	~~EA~~	~~Interior Communications connection cabinet 30"x30" x 16" with hinged door and duplex receptacle with the following features:~~
		~~1 EA- Surge protector~~
		~~1 LT- Punch down blocks~~
		~~1 LT- 62.5/125 duplex fiber optic jumpers with ST connectors. Do not need.~~
		FIRE DETECTION/PROTECTION:
~~0~~	~~EA~~	~~Smoke Detectors: 120 Volt with audible alarm and battery back up.~~
~~0~~	~~EA~~	~~Strobes: Multi Candela, indoor wall mounted @ 80" AFF, Cooper/Wheelock Series ZRS-2-IMCW-FR. We will purchase and supply these units. Note: Client to specify location where wire will be pulled and coiled. Fault terminations @ site by others.~~
~~0~~	~~EA~~	~~Smoke Detector Relays: To shut down HVAC unit and exhaust fan.~~
~~0~~	~~EA~~	~~Fire Extinguishers: 1H, 3A, 40B C Badger No. 22135 with Amerex No. 867 wall bracket. We will need + keep these with the units we supply.~~
2	EA	Pull Station Juction Box: 2"x4" boxes w/3/4" emt stubbed into ceiling cavity, pull string and blank face plate. Pull station by others

CUSTOMER APPROVAL

☐ APPROVED
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☐ REVISE AS NOTED AND RESUBMIT
☐ SEE LETTER OF TRANSMITTAL

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DATE_____

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FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM GENERAL SPECIFICATIONS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			G-02	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

HVAC:

0 EA ~~Central A/C/Heat: 60,000 (nominal) BTU/10 kW electric heat, self contained, wall mounted with unclassified electrical condenser section.~~
~~System designed for 208-230 Volt 1/3, 60 Hz. Electrical service. Needs to be 480v (do not tie into electrical panel)~~
~~Unit includes the following features:~~
~~• R-410A Refrigerant~~
~~• Integral exterior disconnect~~
~~• Barometric Fresh Air Damper (unclassified environment only)~~
Exterior pad mounted self contained HVAC units. Pressurization and controls (if required), external ductwork, associated electrical wiring and controls to be client provided and site installed
1 EA Thermostat: Programmable, mounted @ 60" AFF, Honeywell TH6220D-002. (To mounted on inside wall)
2 EA Blast Dampers: Located at HVAC openings, Enertech series ICBL (or equal) size according to opening
1 Lot Supply Duct: Galvanized and insulated main trunk with flex drops to 2' x 2' high volume adjustable lay-in supply registers. Designed in accordance with SMACNA low pressure duct standards
Return: Via ceiling plenum and filter grill at A/C return throat
3 EA Exhaust Fan: 80 CFM, ceiling mounted and exhausted to exterior.

GAS DETECTION: (None Provided)

FURNISHINGS/EQUIPMENT:

58.3 LF Work Station Desk Top: 30" deep plastic laminate over plywood substrate, Color" Dove Gray" **TBD**
10 LF Kitchen Base Cabinets: Plywood Substrate with laminate surface finish with plastic laminate top, and utensil drawers, Color: "Dove Gray". **TBD**
10 LF Kitchen Wall Cabinets: Plywood Substrate with plastic laminate surface finish, Color: "Dove Gray". **TBD**
6 EA Overhead Cabinet Latches: Self latching cabinet door pulls, marine grade, chrome
18 EA Accessories: Wall Mounted Coat & Hat Hooks
10 EA Lockers, 12" wide x 12" deep x 78" high, double tier, with sloped tops and closed bases, Color: "Gray"

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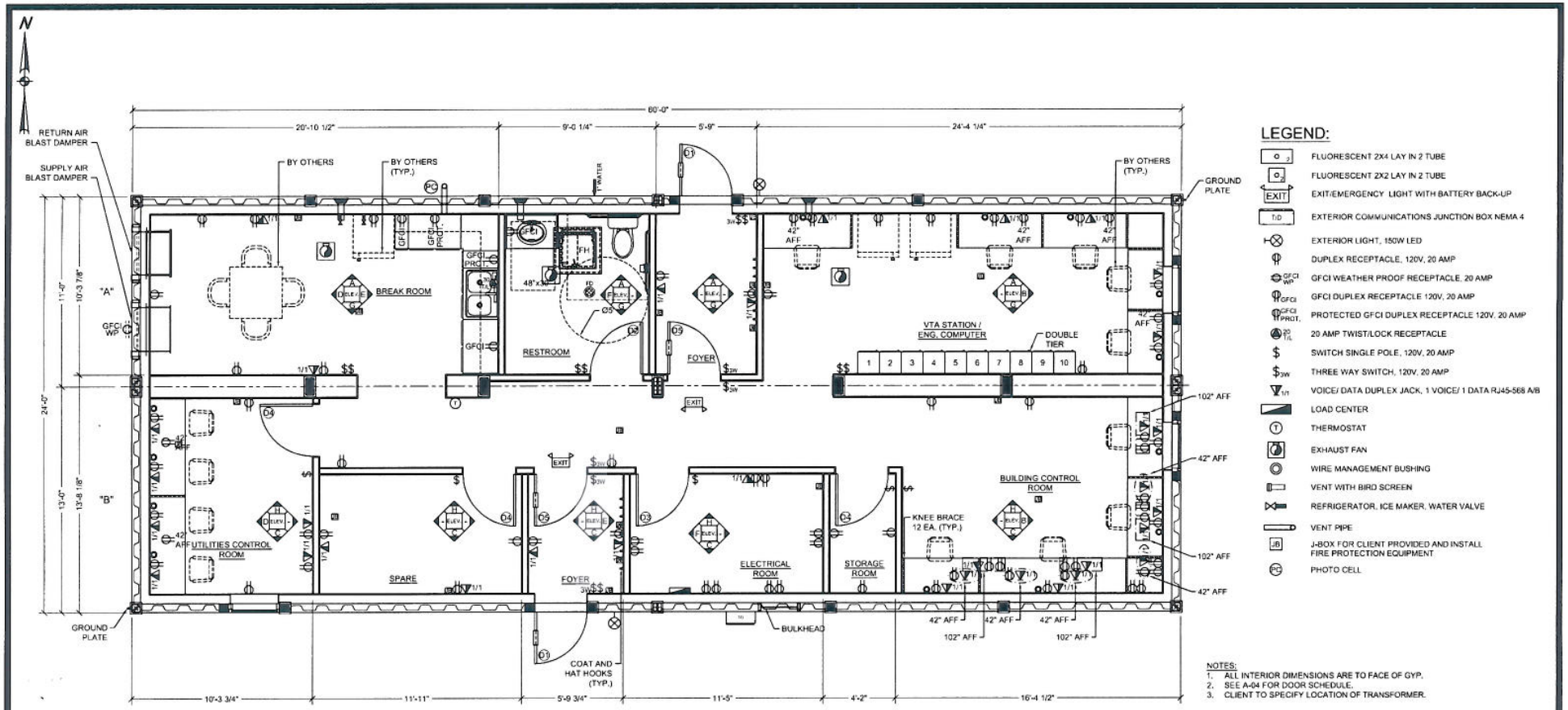
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
GENERAL SPECIFICATIONS

	BY	DATE
DRAWN:	GGJR	08/07/12
CHECKED:	HGW	08/07/12
ENGINEER:		
APPROVED:		

SCALE: N.T.S
JOB. No. 1341
G-03
REV B

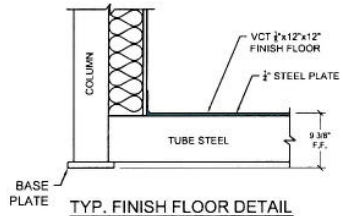
NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



LEGEND:

- FLUORESCENT 2X4 LAY IN 2 TUBE
- FLUORESCENT 2X2 LAY IN 2 TUBE
- EXIT/EMERGENCY LIGHT WITH BATTERY BACK-UP
- EXTERIOR COMMUNICATIONS JUNCTION BOX NEMA 4
- EXTERIOR LIGHT, 150W LED
- DUPLEX RECEPTACLE, 120V, 20 AMP
- GFCI WEATHER PROOF RECEPTACLE, 20 AMP
- GFCI DUPLEX RECEPTACLE 120V, 20 AMP
- PROTECTED GFCI DUPLEX RECEPTACLE 120V, 20 AMP
- 20 AMP TWIST/LOCK RECEPTACLE
- SWITCH SINGLE POLE, 120V, 20 AMP
- THREE WAY SWITCH, 120V, 20 AMP
- VOICE/ DATA DUPLEX JACK, 1 VOICE/ 1 DATA RJ45-568 A/B
- LOAD CENTER
- THERMOSTAT
- EXHAUST FAN
- WIRE MANAGEMENT BUSHING
- VENT WITH BIRD SCREEN
- REFRIGERATOR, ICE MAKER, WATER VALVE
- VENT PIPE
- J-BOX FOR CLIENT PROVIDED AND INSTALL FIRE PROTECTION EQUIPMENT
- PHOTO CELL

NOTES:
1. ALL INTERIOR DIMENSIONS ARE TO FACE OF GYP.
2. SEE A-04 FOR DOOR SCHEDULE.
3. CLIENT TO SPECIFY LOCATION OF TRANSFORMER.



TYP. FINISH FLOOR DETAIL

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FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM FLOOR PLAN

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-01	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
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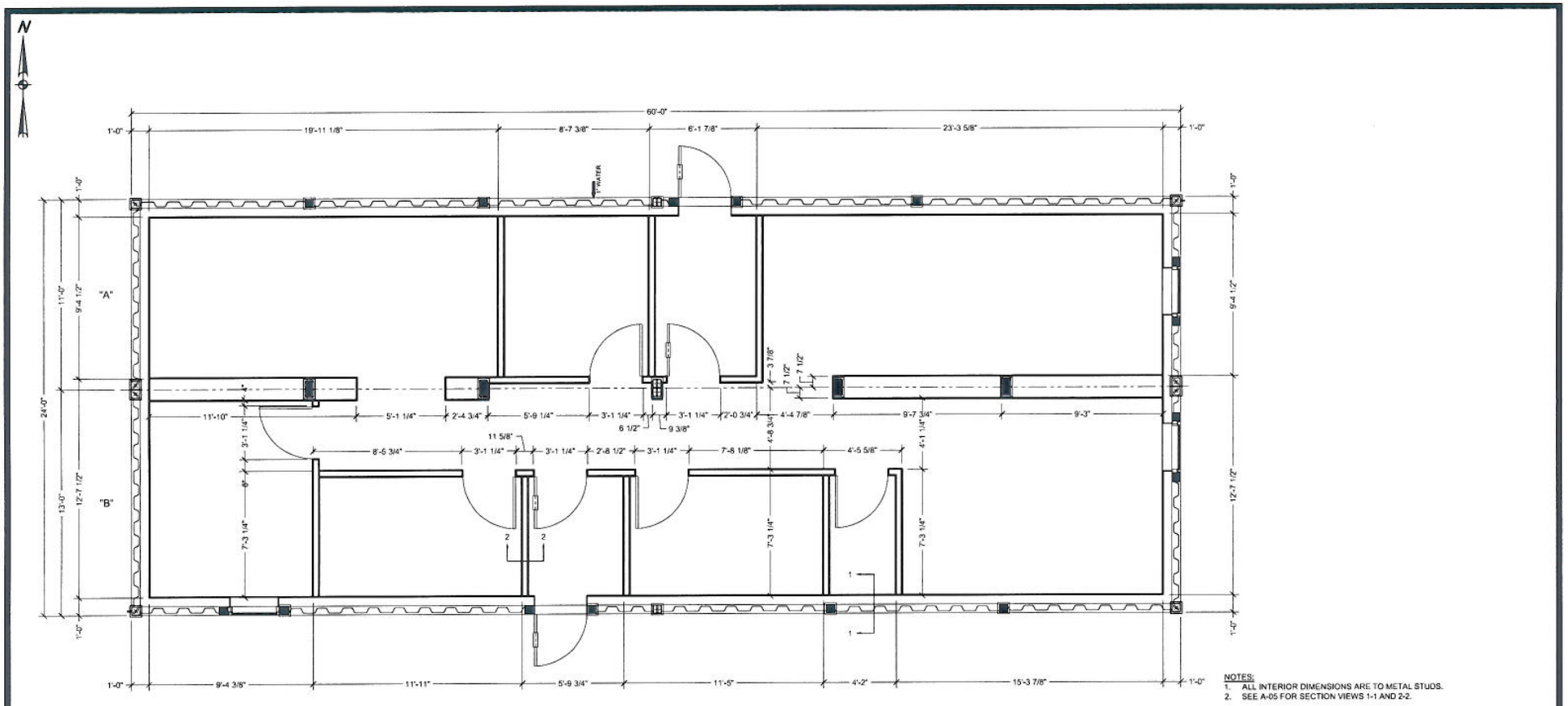

NOTES:
1. ALL INTERIOR DIMENSIONS ARE TO METAL STUDS.
2. SEE A-05 FOR SECTION VIEWS 1-1 AND 2-2.

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FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
FLOOR PLAN DIMENSIONS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-02	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
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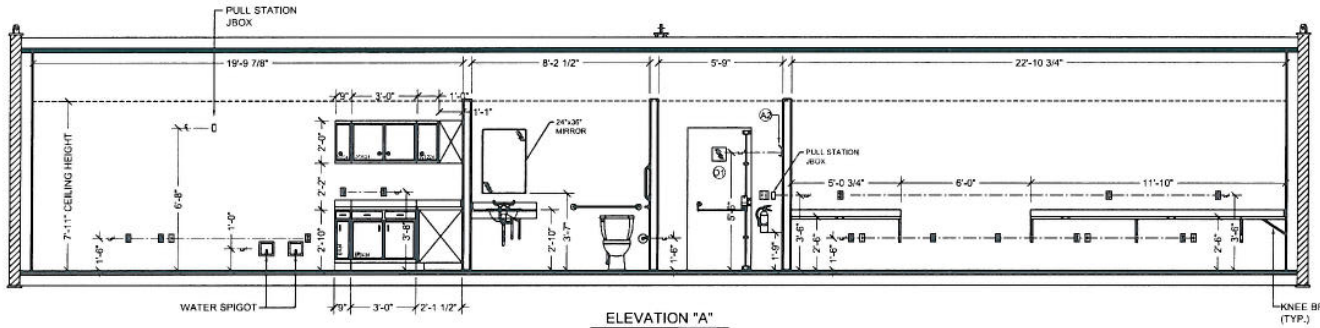
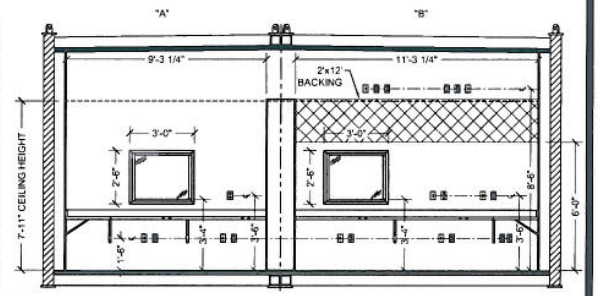


ELEVATION "A"
REFERENCE DRAWING A-01



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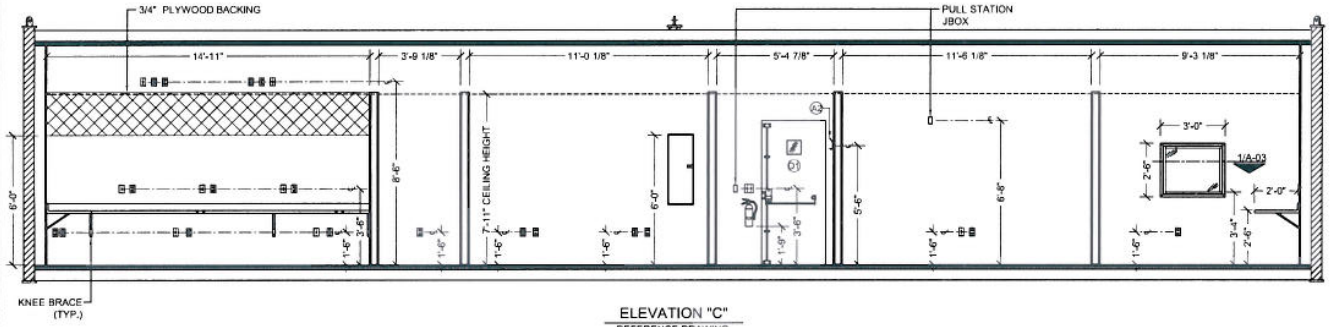
REFERENCE DRAWING A-01



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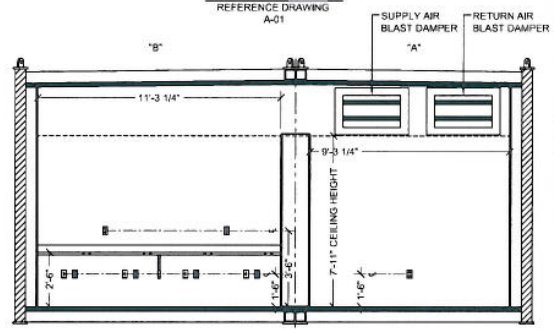
REFERENCE DRAWING A-01



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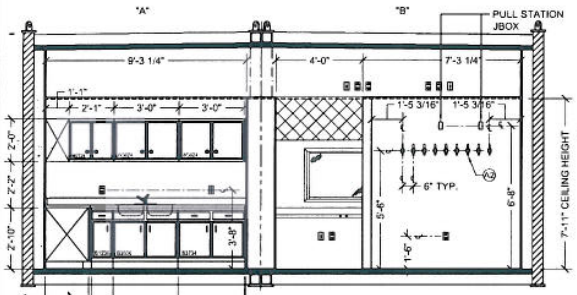

ELEVATION "E"
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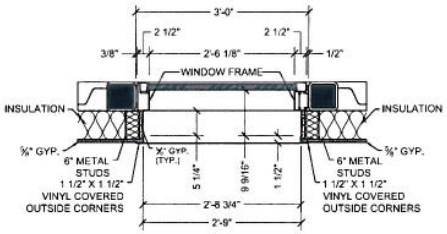

SECTION 1-1
3 EA. TYP.

NOTES:
1. ALL INTERIOR DIMENSIONS ARE TO FACE OF GYP.
2. SEE A-04 FOR DOOR SCHEDULE.
3. SEE A-04 FOR ACCESSORY SCHEDULE.
4. CLIENT TO SPECIFY LOCATION OF FIRE STROBES.

CUSTOMER APPROVAL

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- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

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FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
ARCHITECTURAL ELEVATIONS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-03	REV. B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
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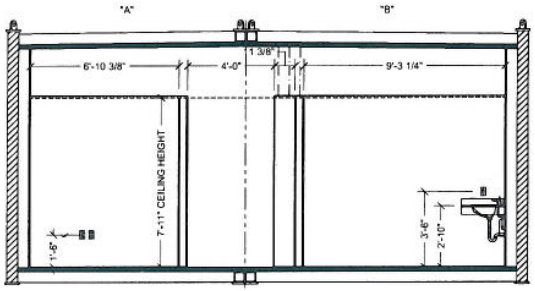
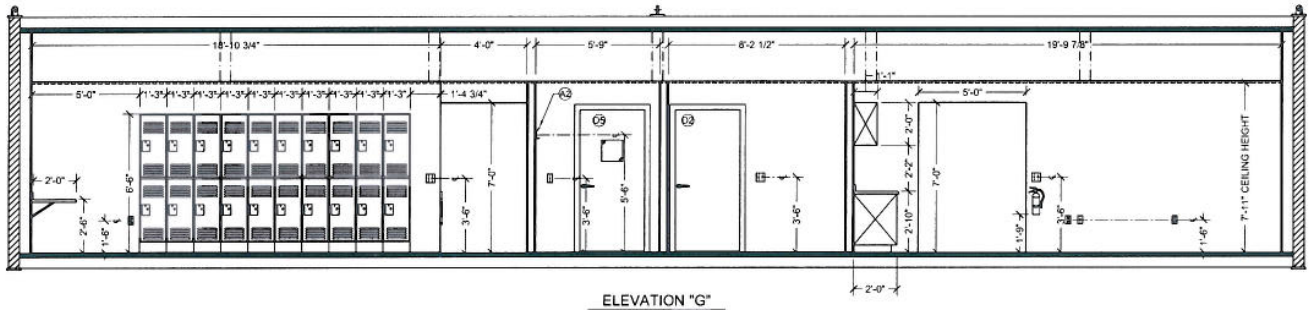
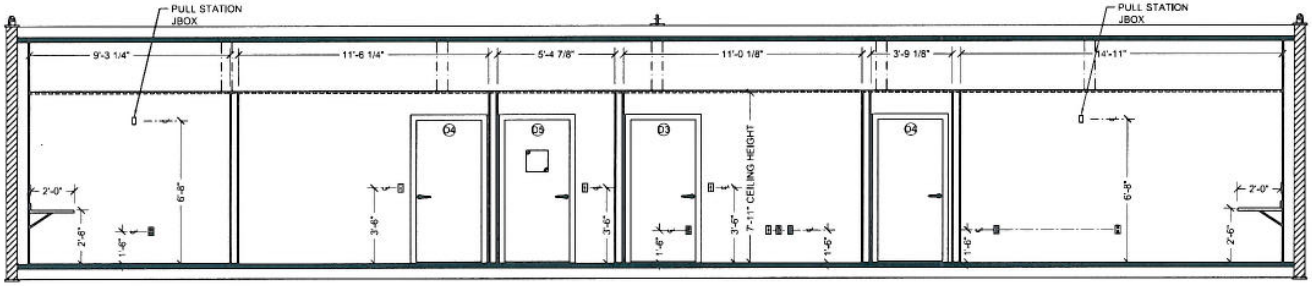


ELEVATION "F"
REFERENCE DRAWING
A-01



ELEVATION "G"
REFERENCE DRAWING
A-01



ELEVATION "H"
REFERENCE DRAWING
A-01

1341 ACCESSORY SCHEDULE			
ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
A1	MIRROR	BOBRICK	B-165 2436
A2	HAT AND COAT HOOK	BOBRICK	B-682
A3	TOILET TISSUE DISPENSER	BOBRICK	B-264

1341 CONTROL ROOM DOOR SCHEDULE		
TYPE	DESCRIPTION	QTY.
D1	EXTERIOR 36"x80" STEEL REINFORCED 5.0 PSI BLAST RATED, WITH EXTRA HEAVY DUTY HINGES, KEYED LEVER LATCH SET, HD HYDRAULIC DOOR CLOSER, PANIC PUSH BAR, DRIP CAP AND 7 1/2" x 7 1/2" x 3/8" VISION PANEL.	2
D2	INTERIOR 36"x80" PREFINISHED, SOLID CORE, METAL FRAME, WITH PRIVACY LEVER LATCH SET.	1
D3	INTERIOR 36"x80" PREFINISHED, SOLID CORE, METAL FRAME, WITH KEYED LEVER LATCH SET.	1
D4	INTERIOR 36"x80" PREFINISHED, SOLID CORE, METAL FRAME, WITH PASSAGE LEVER LATCH SET.	3
D5	INTERIOR 36"x80" PREFINISHED, SOLID CORE, METAL FRAME, WITH PASSAGE LEVER LATCH SET WITH 12"X12" VISION PANEL.	2

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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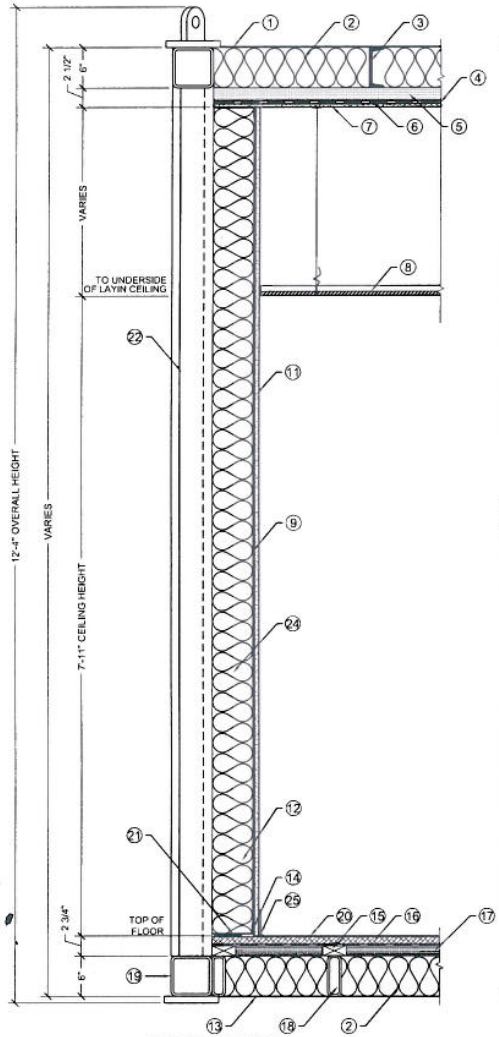
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM ARCHITECTURAL ELEVATIONS

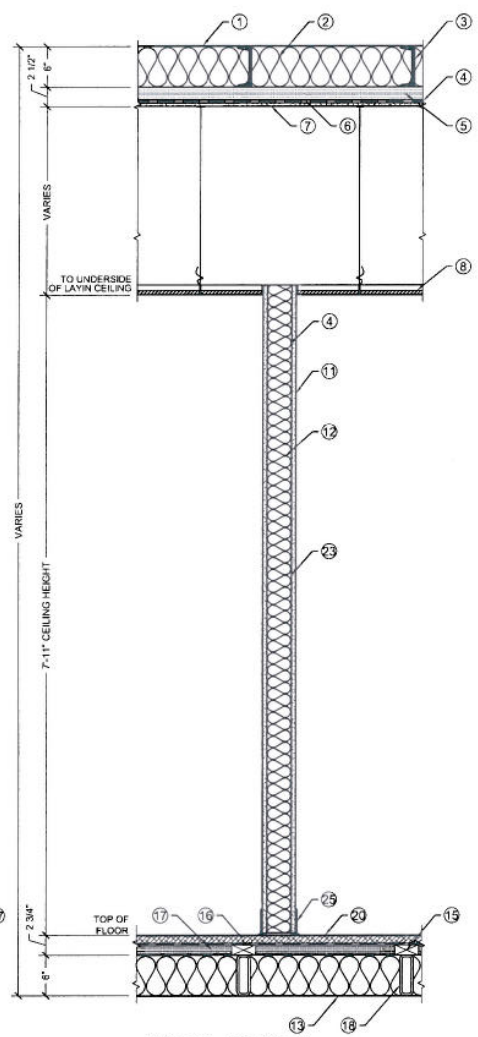
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-04	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



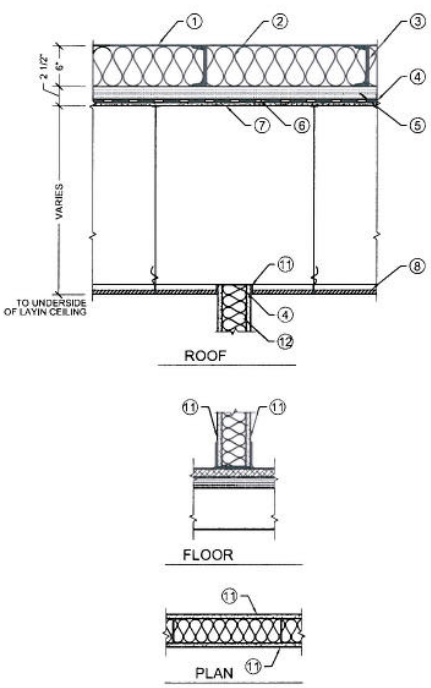
TYPICAL WALL TO FLOOR DETAIL 1-1

SCALE: N.T.S
REFERENCE DRAWING: A-02



TYPICAL PARTITION WALL DETAIL 2-2

SCALE: N.T.S
REFERENCE DRAWING: A-02



1341 TYP. INTERIOR/EXTERIOR WALL CALLOUT	
NO.	DESCRIPTION
1	ROOF STEEL PLATE
2	R19 FIBERGLASS INSULATION TIGHT FIT
3	6" CHANNEL ROOF JOIST AT 2'-0" O.C.
4	POLYETHYLENE VAPOR BARRIER
5	2" FIBERGLASS SEMI-RIGID INSULATION BETWEEN ANGLES
6	(2) 2"x2" ANGLE BARS @ 24" O.C.
7	3/8" GYPSUM BOARD SUBCEILING
8	LAYIN CEILING
9	6" STEEL STUDS AT 16" O.C.
10	NOT USED
11	5/8" VINYL COVERED GYPSUM BOARD
12	R19 KRAFT FACED FIBERGLASS INSULATION, SECURED TO STEEL STUDS
13	FLOOR STEEL PLATE
14	SEAL VAPOR BARRIER TO STEEL TRACK WITH ACOUSTICAL CAULKING
15	2X4 WOOD SLEEPER SCREWED TO FLOOR STEEL JOIST
16	1 1/8" PLYWOOD SUBFLOOR
17	1 1/2" FIBERGLASS SEMI-RIGID INSULATION
18	6"x2" HSS FLOOR JOISTS
19	6"x6" HSS
20	FINISH FLOOR, 12"x12"x1/8" VCT
21	SEAL SILL GASKET TO PLYWOOD AND UNDER STEEL STUD TRACK WITH ACOUSTICAL CAULKING
22	CORRUGATED EXTERIOR METAL SKIN
23	3 5/8" STEEL STUDS AT 16" O.C.
24	3 5/8" R13 KRAFT FACED FIBERGLASS INSULATION, SECURED TO STEEL STUDS
25	4" COVE BASE

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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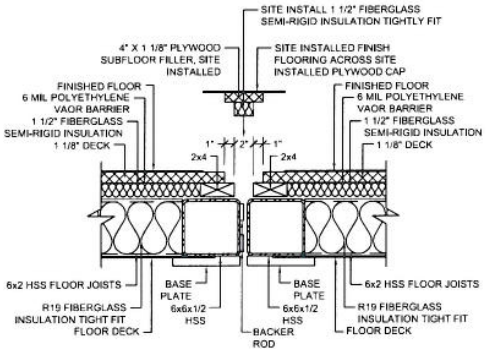
FLINT HILLS RESOURCES

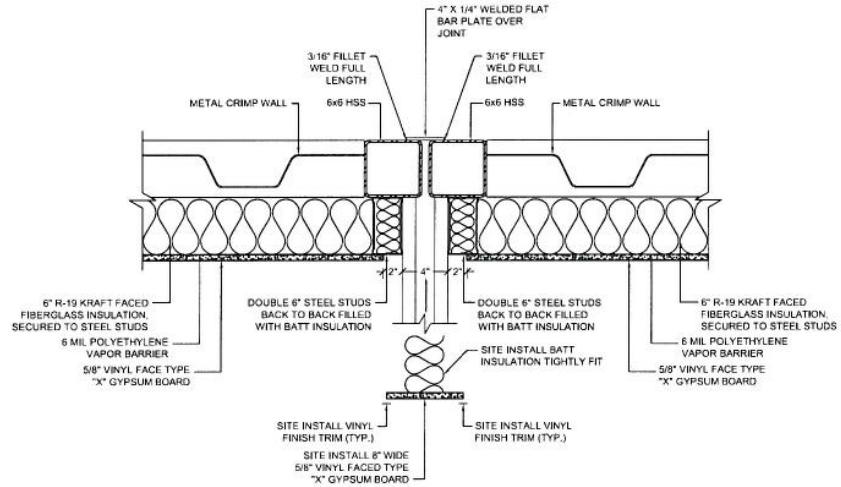
FLINT HILLS RESOURCES
CONTROL ROOM
CROSS SECTION DETAILS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-05	REV B

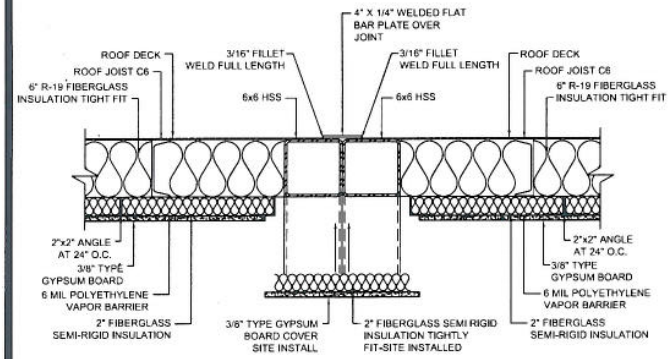
NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



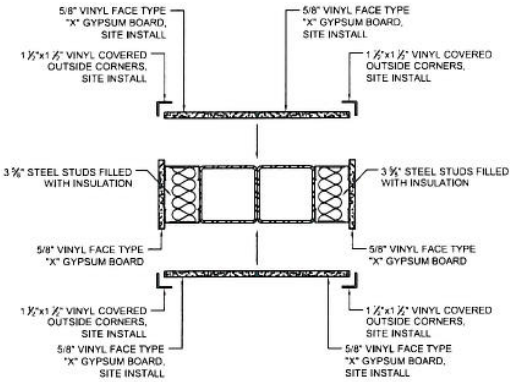
DETAIL 1
TYP @ FLOOR MATELINE CONNECTION



DETAIL 2
TYP @ WALL MATELINE CONNECTION



DETAIL 3
TYP @ ROOF MATELINE CONNECTION



DETAIL 4
TYP @ MATELINE COLUMN CONNECTION

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

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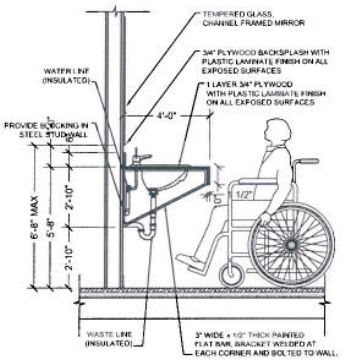
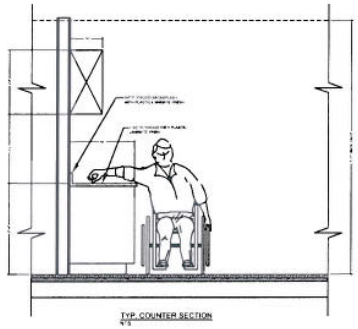
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
MATE LINE CONNECTION DETAILS

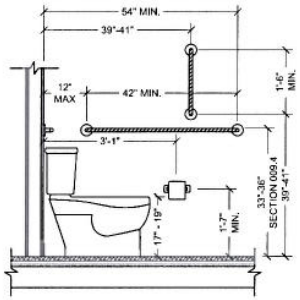
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-06	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

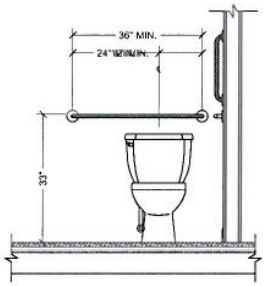




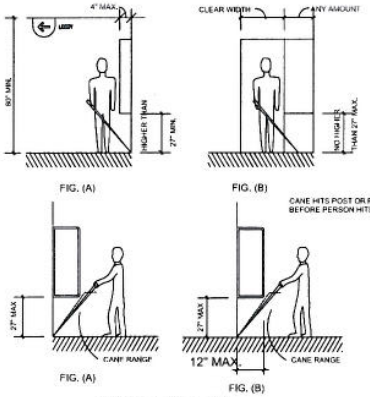
TYP. COUNTER SECTION
NTS



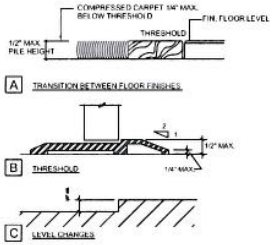
TYP. GRAB BAR DETAIL 1
NTS



TYP. GRAB BAR DETAIL 2
NTS



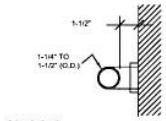
PROTRUDING OBJECTS
NTS



NOTES:

1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERTICAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

THRESHOLD/ LEVEL CHANGES
NTS



GRAB BAR
NTS

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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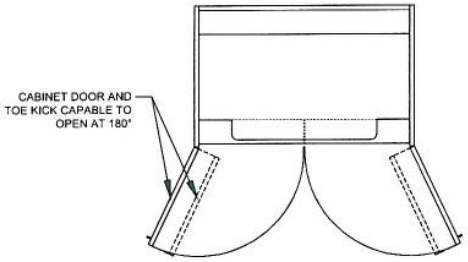
FLINT HILLS RESOURCES

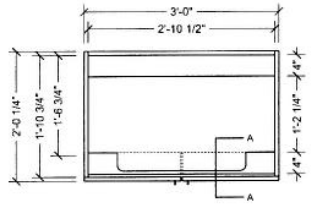
FLINT HILLS RESOURCES CONTROL ROOM

ACCESSIBILITY ARCHITECTURAL DETAILS

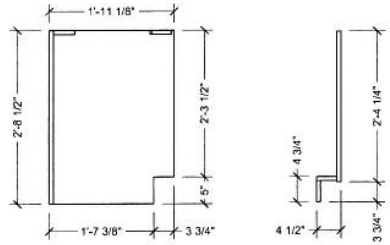
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-07	REV A

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	A	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD

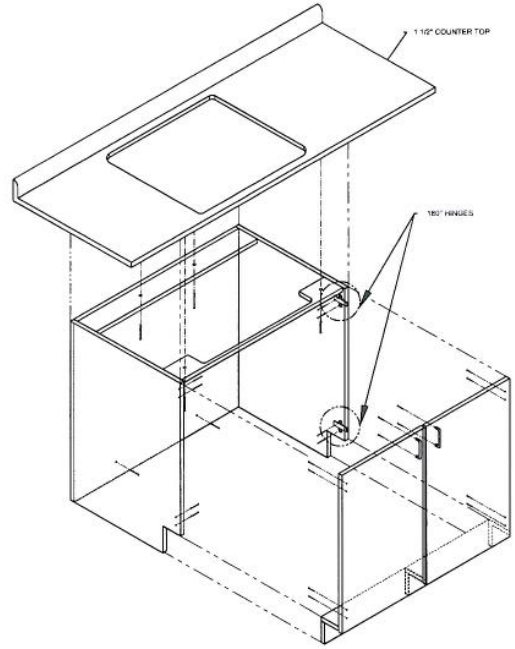


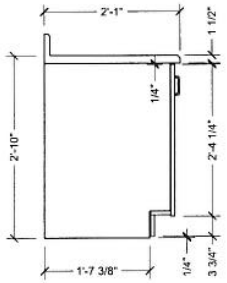


TOP VIEW

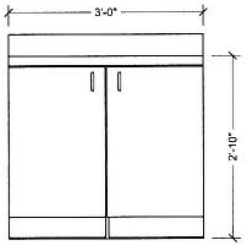


SECTION A-A

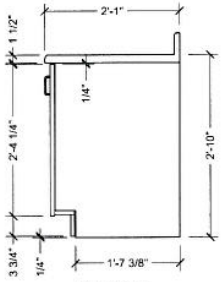




LEFT SIDE



FRONT VIEW



RIGHT SIDE

CUSTOMER APPROVAL

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- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

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DATE_____

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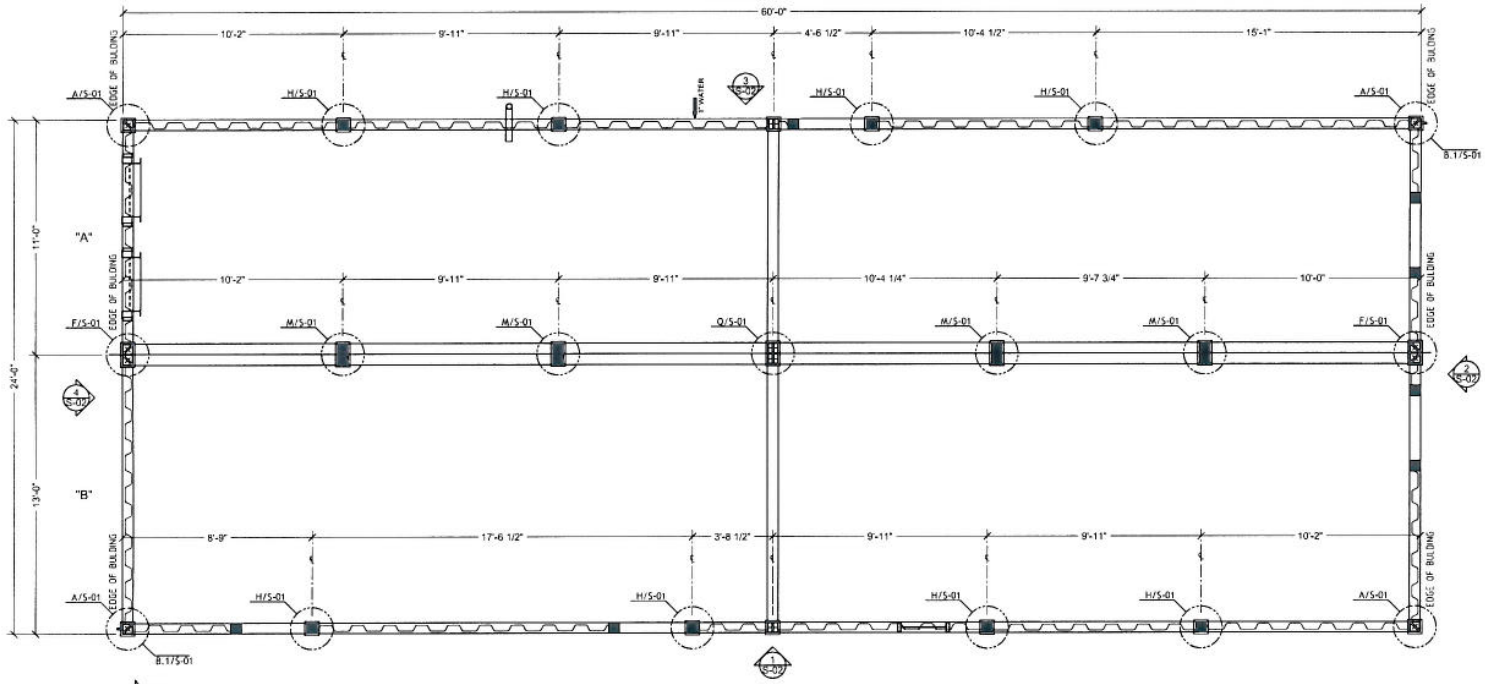
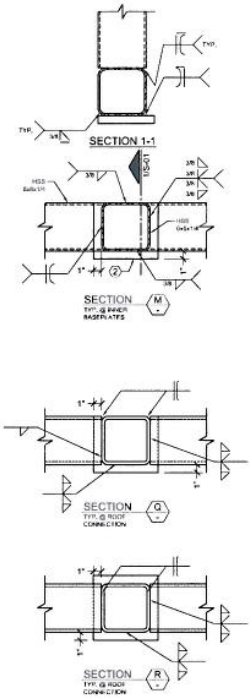
FLINT HILLS RESOURCES

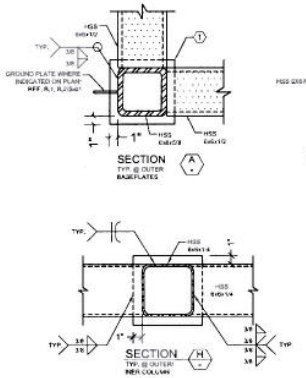
FLINT HILLS RESOURCES
CONTROL ROOM
CABINET DETAILS

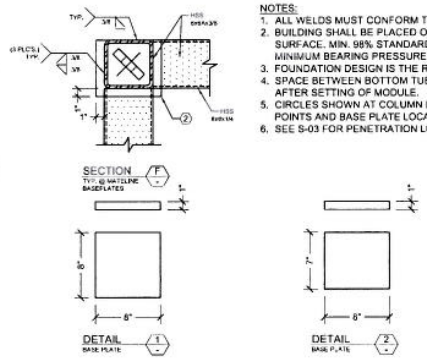
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			A-08	REV A

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	A	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD









NOTES:
1. ALL WELDS MUST CONFORM TO LATEST AWS D1.1 SPECIFICATION.
2. BUILDING SHALL BE PLACED ON A STABILIZED COMPACTED, LEVEL SURFACE. MIN. 98% STANDARD PROCTOR COMPACTION AND MINIMUM BEARING PRESSURE OF 2500 PSF.
3. FOUNDATION DESIGN IS THE RESPONSIBILITY OF THE CLIENT.
4. SPACE BETWEEN BOTTOM TUBE AND GRADE SHALL BE CLOSED AFTER SETTING OF MODULE.
5. CIRCLES SHOWN AT COLUMN LOCATIONS INDICATE LOAD BEARING POINTS AND BASE PLATE LOCATIONS.
6. SEE S-03 FOR PENETRATION LOCATIONS.

MODULE WEIGHT

MODULE	CALCULATED ESTIMATED WEIGHT	UNITS
A	46,971.85	Lbs.
B	49,171.17	Lbs.
TOTAL	96,143.02	Lbs.

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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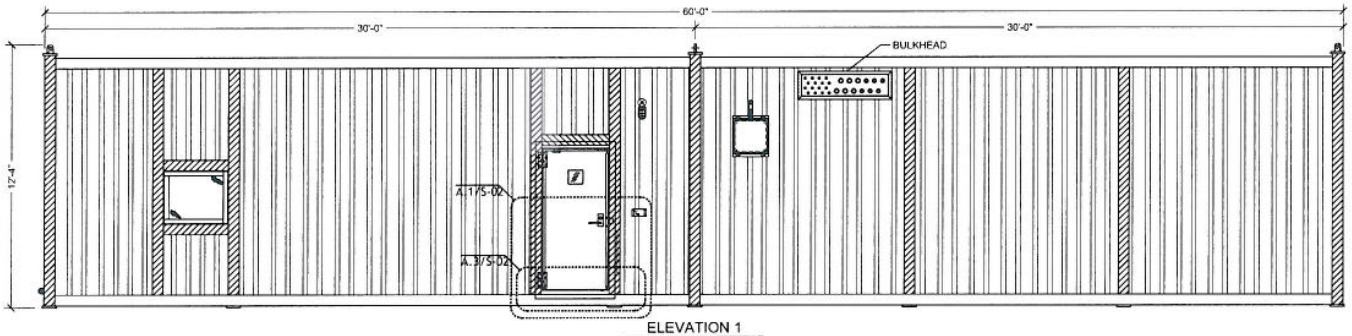
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM STRUCTURAL FLOOR PLAN

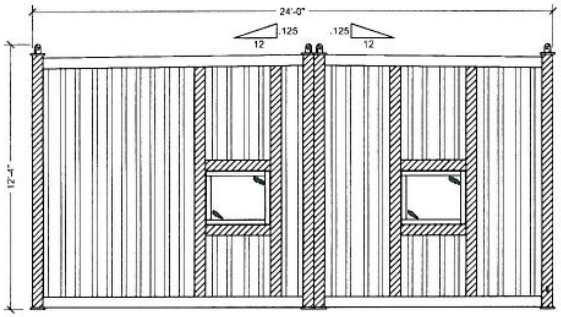
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			S-01	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

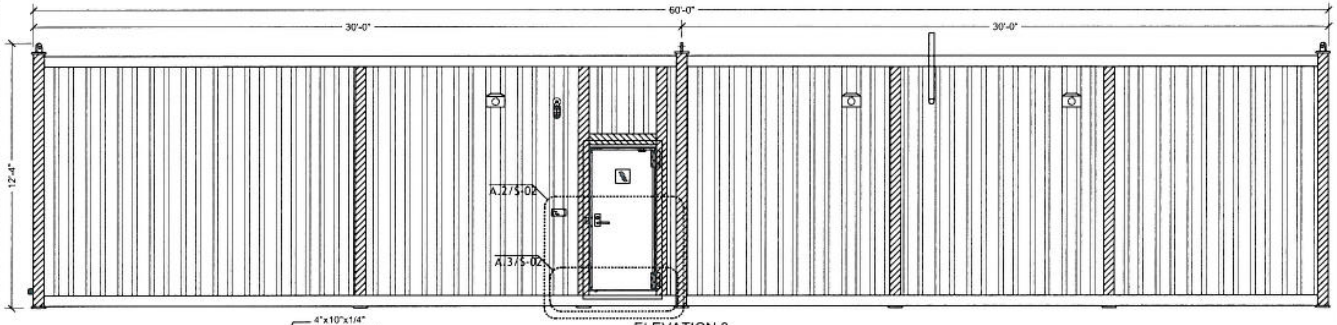


ELEVATION 1
REFERENCE DRAWING
S-01

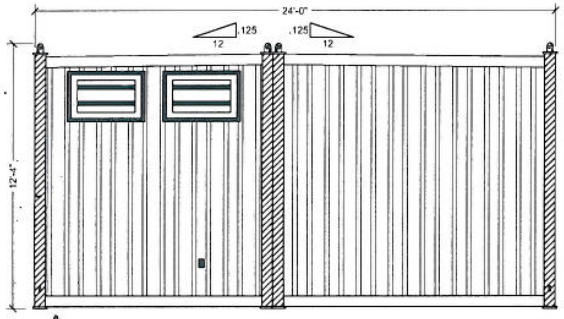
LOWER DOOR DETAIL A.3 S-02
(TYPICAL @ ALL EXTERIOR DOORS)



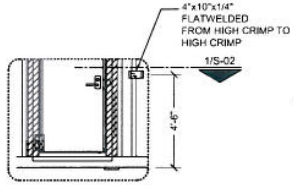
ELEVATION 2
REFERENCE DRAWING
S-01



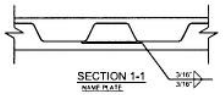
ELEVATION 3
REFERENCE DRAWING
S-01



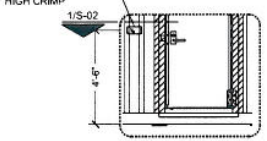
ELEVATION 4
REFERENCE DRAWING
S-01



NAME PLATE DETAIL A.1 S-02
(TYPICAL @ ALL EXTERIOR DOORS)



SECTION 1-1
NAME PLATE



NAME PLATE DETAIL A.2 S-02
(TYPICAL @ ALL EXTERIOR DOORS)

BULKHEAD DETAIL
NOTE: CLIENT TO SPECIFY COUPLING SIZES AND QUANTITIES

NOTES:
1. ALL WELDS MUST CONFORM TO LATEST AWS D1.1 SPECIFICATION.
2. BUILDING SHALL BE PLACED ON A STABILIZED COMPACTED, LEVEL SURFACE, MIN. 98% STANDARD PROCTOR COMPACTION AND MINIMUM BEARING PRESSURE OF 2500 PSF.
3. FOUNDATION DESIGN IS THE RESPONSIBILITY OF THE CLIENT.
4. SPACE BETWEEN BOTTOM TUBE AND GRADE SHALL BE CLOSED AFTER SETTING OF MODULE.
5. CIRCLES SHOWN AT COLUMN LOCATIONS INDICATE LOAD BEARING POINTS AND BASE PLATE LOCATIONS.
6. SEE S-03 FOR PENETRATION LOCATIONS.

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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HUNTER BUILDINGS & MANUFACTURING, LP

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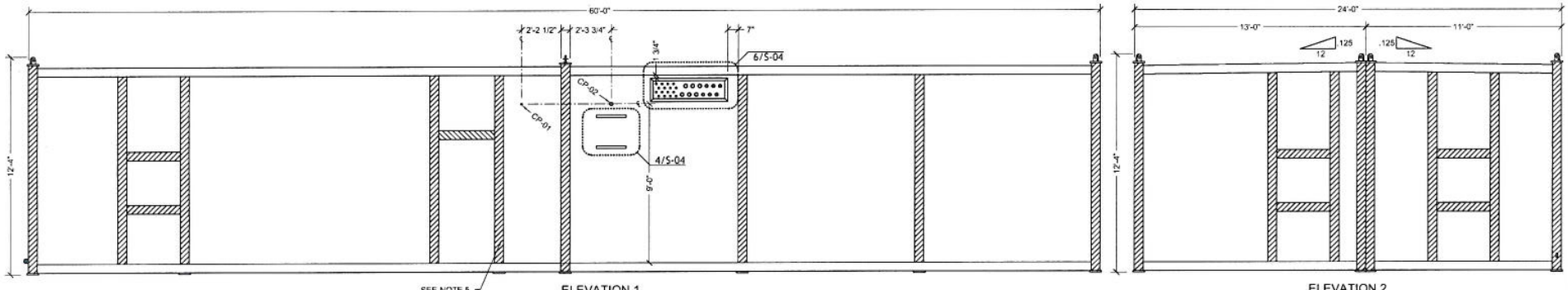
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
STRUCTURAL ELEVATIONS

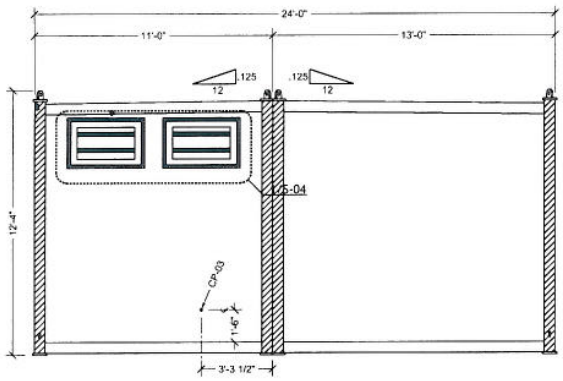
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			S-02	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

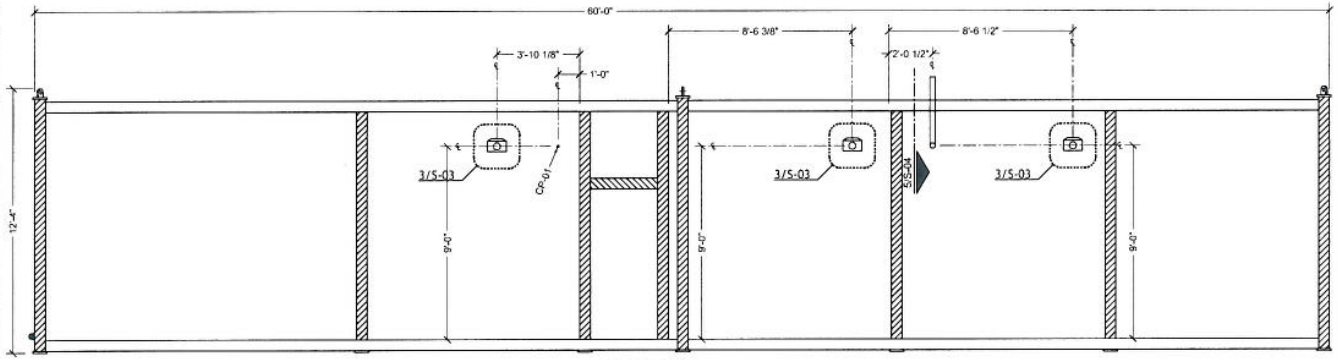


ELEVATION 1
REFERENCE DRAWING
S-01

ELEVATION 2
REFERENCE DRAWING
S-01



ELEVATION 4
REFERENCE DRAWING
S-01



ELEVATION 3
REFERENCE DRAWING
S-01

COUPLING SCHEDULE

NO.	DESCRIPTION	QTY.	SIZE
CP-01	STEEL COUPLING FOR EXTERIOR LIGHT	2	Ø3/4"
CP-02	STEEL COUPLING FOR T/D BOX	1	Ø1 1/2"
CP-03	STEEL COUPLING FOR EXTERIOR RECEPTACLE	1	Ø3/4"
CP-04	STAINLESS STEEL COUPLING FOR WATER INLET	1	Ø1"
CP-05	STAINLESS STEEL COUPLING FOR DRAIN	1	Ø2"
CP-06	STAINLESS STEEL COUPLING FOR DRAIN	1	Ø3"

NOTES:
1. ALL WELDS MUST CONFORM TO LATEST AWS D1.1 SPECIFICATION.
2. BUILDING SHALL BE PLACED ON A STABILIZED COMPACTED, LEVEL SURFACE. MIN. 98% STANDARD PROCTOR COMPACTION AND MINIMUM BEARING PRESSURE OF 2500 PSF.
3. FOUNDATION DESIGN IS THE RESPONSIBILITY OF THE CLIENT.
4. SPACE BETWEEN BOTTOM TUBE AND GRADE SHALL BE CLOSED AFTER SETTING OF MODULE.

CUSTOMER APPROVAL
- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____
DATE_____

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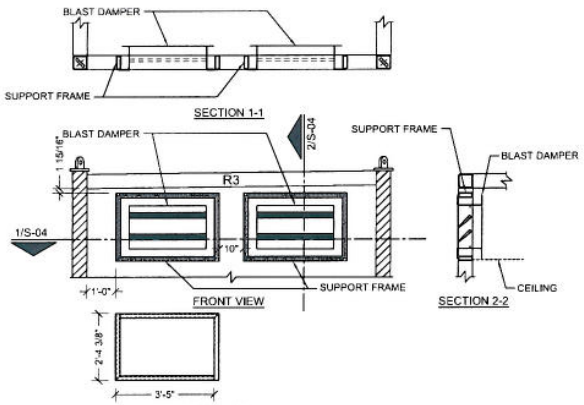
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
STRUCTURAL PENETRATION LOCATIONS

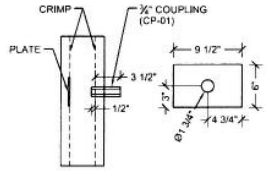
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			S-03	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

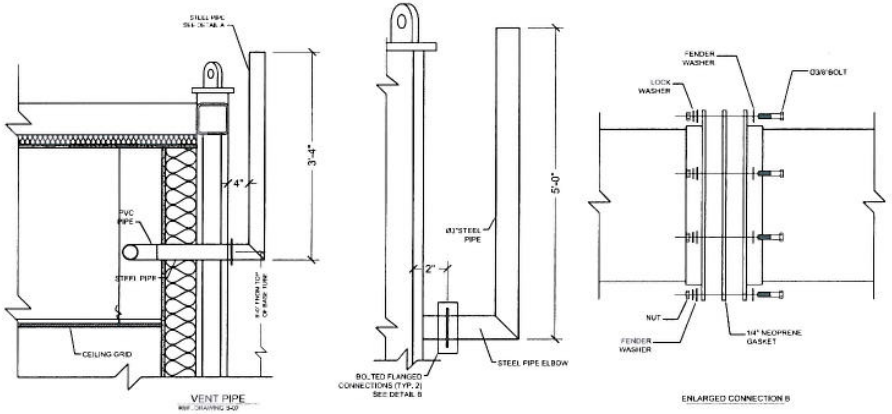


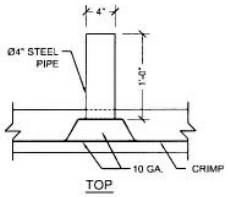
SUPPORT FRAME
6x2 HHS

DETAIL 1

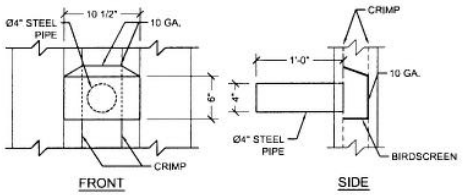


DETAIL 2
EXTERIOR LIGHT MOUNTING PLATE, QTY. 2



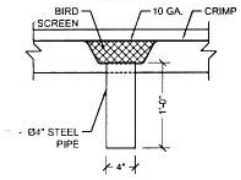


TOP



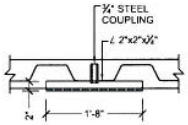
FRONT

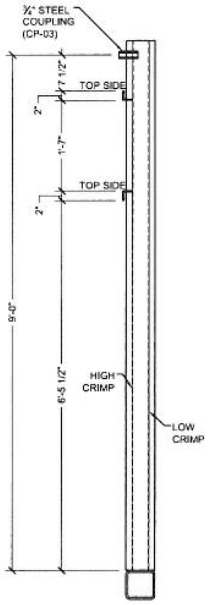
SIDE



BOTTOM

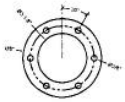
DETAIL 3
EXHAUST PIPE
QTY 3





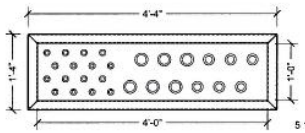
COUPLING ON HIGH CRIMP

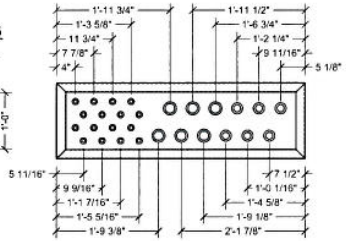
DETAIL 4
EXTERIOR COMMUNICATION BOX MOUNTING ANGLE, QTY. 2



FLANGE ELEVATION

DETAIL 5





DETAIL 6

NOTES:
1. ALL WELDS MUST CONFORM TO LATEST AWS D1.1 SPECIFICATION
2. BUILDING SHALL BE PLACED ON A STABILIZED COMPACTED, LEVEL SURFACE, MIN. 96% STANDARD PROCTOR COMPACTION AND MINIMUM BEARING PRESSURE OF 2500 PSF.
3. FOUNDATION DESIGN IS THE RESPONSIBILITY OF THE CLIENT
4. SPACE BETWEEN BOTTOM TUBE AND GRADE SHALL BE CLOSED AFTER SETTING OF MODULE.
5. REFERENCE SEE S-03.

CUSTOMER APPROVAL
- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____
DATE_____

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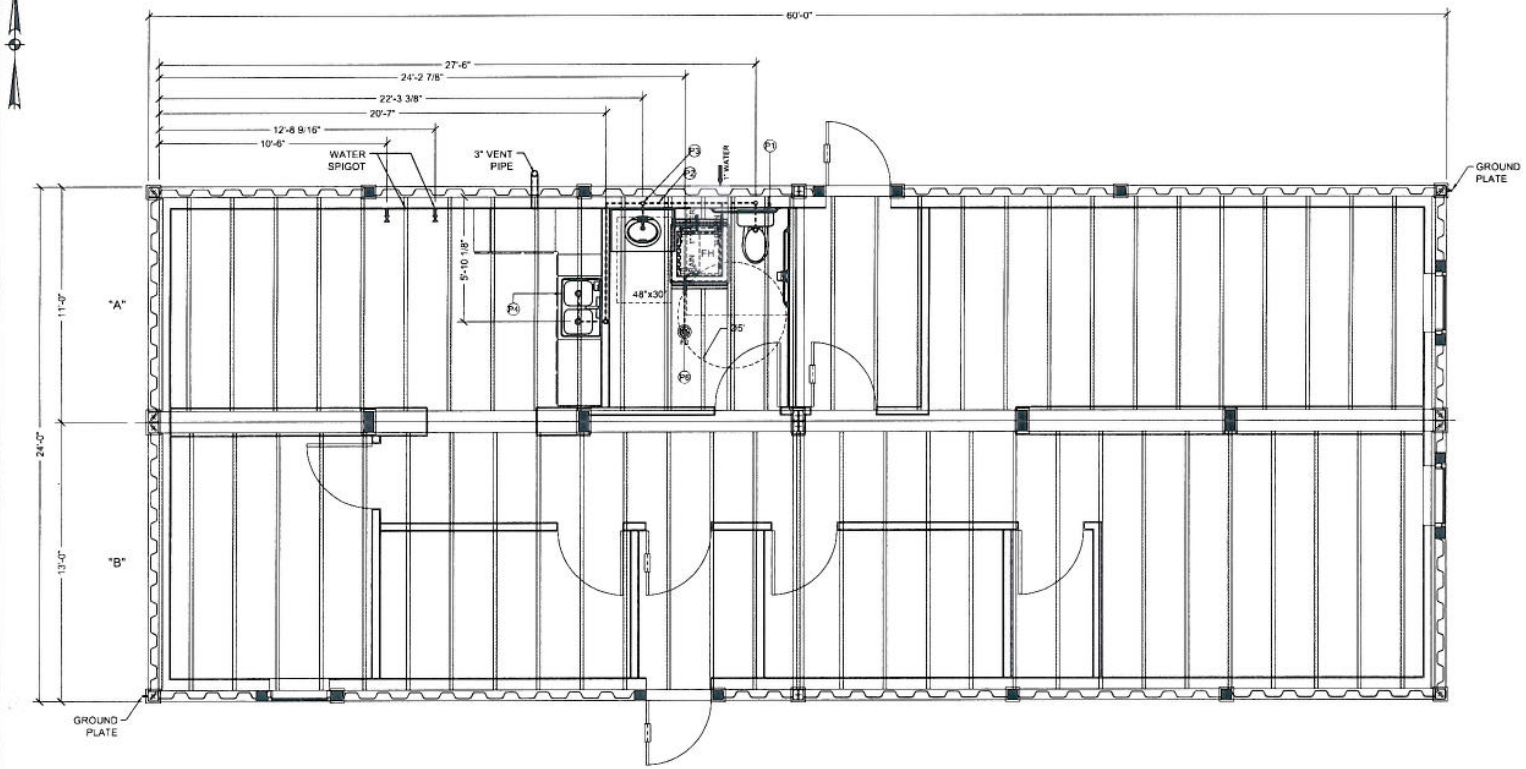
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
STRUCTURAL DETAILS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	1/4"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			S-04	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

FHRPRU001527



KEYNOTE:

(#) PLUMBING ISOMETRIC CALLOUT

MODULE WATER FIXTURE UNIT COUNT					
1341 CONTROL ROOM					
	FIXTURE TYPE	F.U. VALUE	QUANTITY	TOTAL F.U. FOR TYPE	TOTAL F.U. FOR
	LAVATORY	1.0	3	3.0	
	SINK	2.0	1	2.0	
	MODULE TOTAL				5

1341 PLUMBING SCHEDULE			
ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
P1	TOILET	VORTENS	3123-3464
P2	LAVATORY	VORTENS	3526
P3	LAVATORY FAUCET	MAINLINE	225-CP
P4	KITCHEN SINK	ELKY	K23322
P5	KITCHEN SINK FAUCET	MAINLINE	146-CP
P6	FLOOR DRAIN	MIFAB	F1000

CUSTOMER APPROVAL

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APPROVAL BY_____

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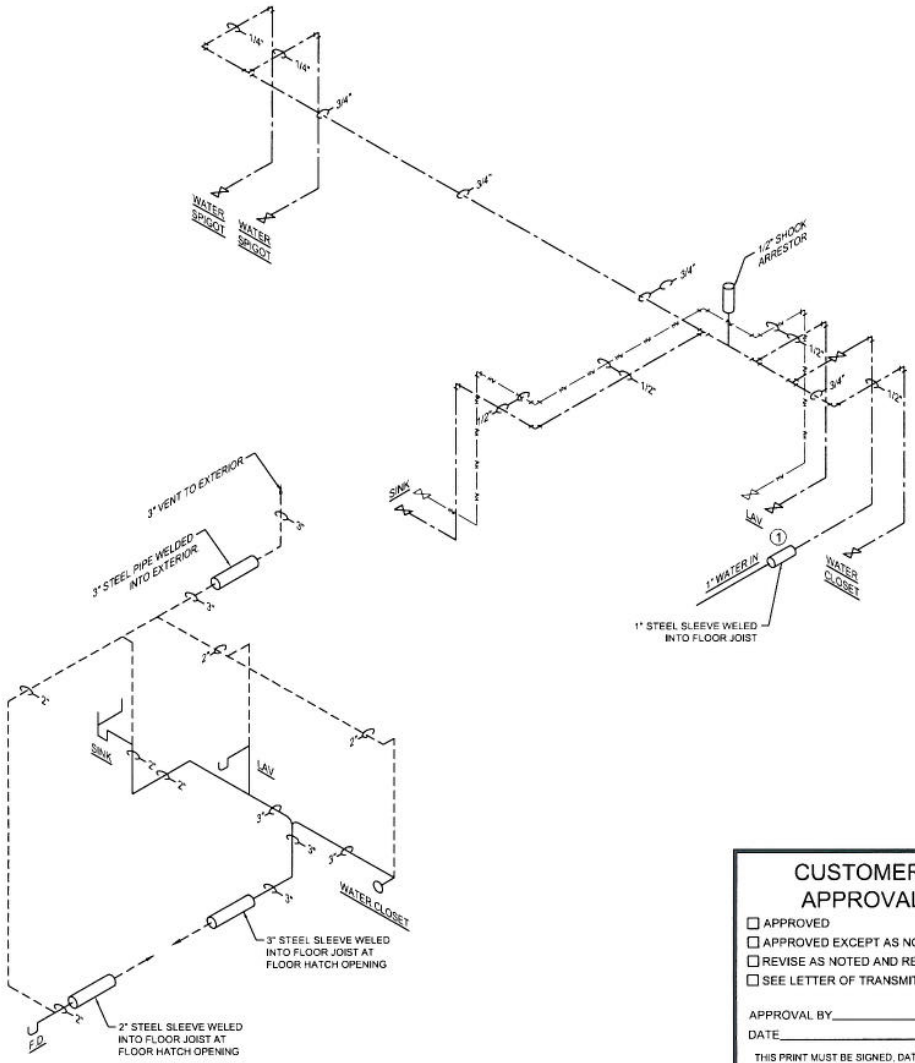
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM PLUMBING LAYOUT DIMENSIONS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			P-01	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



LEGEND

- SHUT OFF VALVE
- COLD WATER
- HOT WATER

KEYNOTE:

(#) PLUMBING ISOMETRIC CALLOUT

SHOCK ARRESTOR SCHEDULE	
Size	Fixture Unit Capacity
1/2"	1-11
3/4"	12-32
1"	33-60
1 1/4"	61-113
1 1/2"	114-154

MODULE WATER FIXTURE UNIT COUNT					
1341 CONTROL ROOM					
	FIXTURE TYPE	F.U. VALUE	QUANTITY	TOTAL F.U. FOR TYPE	TOTAL F.U. FOR
	LAVATORY	1.0	3	3.0	
	SINK	2.0	1	2.0	
	MODULE TOTAL				5

1341 PLUMBING COUPLING SCHEDULE			
NO.	DESCRIPTION	USE	SIZE
1	STAINLESS STEEL COUPLING (NPT)	WATER SUPPLY	Ø1"
2	STAINLESS STEEL COUPLING (NPT)	DRAIN LINE	Ø2"
3	STAINLESS STEEL COUPLING (NPT)	DRAIN LINE	Ø3"

1341 PLUMBING SCHEDULE			
ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.
P1	TOILET	VORTENS	3123-3464
P2	LAVATORY	VORTENS	3526
P3	LAVATORY FAUCET	MAINLINE	225-CP
P4	KITCHEN SINK	ELKY	K23322
P5	KITCHEN SINK FAUCET	MAINLINE	146-CP
P6	FLOOR DRAIN	MFAB	F1000

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM PLUMBING RISER DIAGRAMS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			P-02	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

PANEL SCHEMATIC

Service 120 / 240 Volt, 1Ø , 60 Hertz
Panel: Square D QO34MQ200 (or equal)

Wire	#	Circuit Description	Breaker	200 Amp	Breaker	Circuit Description	#	Wire
#12 THHN	1	Water Heater	30A-2P		20A-1P	GFCI Receptacles (2)	2	#12 MC
↓	3	↓	↓		20A-1P	GFCI Receptacles (3)	4	#12 MC
#12 MC	5	Receptacles (2)	20A-1P		20A-1P	Receptacles (3)	6	#12 MC
#12 MC	7	Refrigerator (Client Supplied)	20A-1P		20A-1P	Receptacles (2)	8	#12 MC
#12 MC	9	Refrigerator (Client Supplied)	20A-1P		20A-1P	Receptacles (3)	10	#12 MC
#12 MC	11	Refrigerator (Client Supplied)	20A-1P		20A-1P	Receptacles (4)	12	#12 MC
#12 MC	13	Receptacles (4)	20A-1P		20A-1P	Receptacles (5)	14	#12 MC
#12 MC	15	Receptacles (4)	20A-1P		20A-1P	Receptacles (5)	16	#12 MC
#12 MC	17	Receptacles (4)	20A-1P		20A-1P	Receptacles (5)	18	#12 MC
#12 MC	19	Receptacles (5)	20A-1P		20A-1P	Receptacles (4)	20	#12 MC
#12 MC	21	Receptacles (4)	20A-1P		20A-1P	Receptacles (4)	22	#12 MC
#12 MC	23	Receptacles (5)	20A-1P		20A-1P	Receptacles (4)	24	#12 MC
#12 MC	25	Receptacles (4)	20A-1P		GFCI 20A-1P	Exterior GFCI Receptacles (1)	26	#12 MC
#12 MC	27	Ltg. (8)(1)(1)/Fans (3)	20A-1P		20A-1P	Ltg. (14)(2)(1)/ Emer. Ltg (3)	28	#12 MC
	29	Spare	20A-1P			Space	30	
	31	Space				Space	32	
	33	Space				Space	34	
	35	Space				Space	36	
	37	Space				Space	38	
	39	Space				Space	40	
	41	Space				Space	42	

Load Analysis

Ckt. I.D.	Amp	Circuit Description	Connected Load	Calculated Load	Factor	Ckt. Load
1/3	30A	Water Heater	1,440w	1,440.0	1.0	1,440.0
2	20A	Receptacles (2)	2x180w	360.0	1.0	360.0
4	20A	Receptacles (3)	3x180w	540.0	1.0	540.0
5	20A	Receptacles (2)	2x180w	900.0	1.00	900.0
6	20A	Receptacles (3)	3x180w	900.0	1.0	900.0
7	20A	Refrigerator (Client Supplied)	1,440w	1,440.0	6.25	9,000.0
8	20A	Receptacles (2)	2x180w	360.0	1.0	360.0
9	20A	Refrigerator (Client Supplied)	1,440w	1,440.0	6.25	9,000.0
10	20A	Receptacles (3)	3x180w	540.0	1.0	540.0
11	20A	Refrigerator (Client Supplied)	1,440w	1,440.0	6.25	9,000.0
12	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
13	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
14	20A	Receptacles (5)	5x180w	900.0	1.0	900.0
15	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
16	20A	Receptacles (5)	5x180w	900.0	1.0	900.0
17	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
18	20A	Receptacles (5)	5x180w	900.0	1.0	900.0
19	20A	Receptacles (5)	5x180w	900.0	1.0	900.0
20	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
21	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
22	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
23	20A	Receptacles (5)	5x180w	900.0	1.0	900.0
24	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
25	20A	Receptacles (4)	4x180w	720.0	1.0	720.0
26	20A	GFCI Exterior Receptacles (1)	1x180w	180.0	1.0	180.0
27	20A	Ltg. (8)(1)(1)/Fans (3)	8x64w+1x34w+1x60w +3x48w	750.0	1.25	****
28	20A	Ltg. (14)(2)(1)/Emg. Ltg. (2)	14x64w+2x34w+1x60w+ 2x48w	1,040.8	1.25	****
NEC Tbl 220.12		Lighting 3.5 W / ft2	3.5 va x 1,440 sf	5,040.0	1.25	6,300.0
					Total	49,500.0

LOAD = 49,500.0 VA / 240 Volts = 206.3 Amps

LEGEND:

- FLUORESCENT 2X4 LAY IN 2 TUBE
- FLUORESCENT 2X2 LAY IN 2 TUBE
- EXIT/EMERGENCY LIGHT WITH BATTERY BACK-UP
- EXTERIOR COMMUNICATIONS JUNCTION BOX NEMA 4
- EXTERIOR LIGHT, 150W LED
- DUPLEX RECEPTACLE, 120V, 20 AMP
- GFCI WEATHER PROOF RECEPTACLE, 20 AMP
- GFCI DUPLEX RECEPTACLE 120V, 20 AMP
- PROTECTED GFCI DUPLEX RECEPTACLE 120V, 20 AMP
- 20 AMP TWIST/LOCK RECEPTACLE
- SWITCH SINGLE POLE, 120V, 20 AMP
- THREE WAY SWITCH, 120V, 20 AMP
- VOICE/ DATA DUPLEX JACK, 1 VOICE/ 1 DATA RJ45-568 A/B
- LOAD CENTER
- THERMOSTAT
- EXHAUST FAN
- WIRE MANAGEMENT BUSHING
- VENT WITH BIRD SCREEN
- REFRIGERATOR, ICE MAKER, WATER VALVE
- VENT PIPE
- J-BOX FOR CLIENT PROVIDED AND INSTALL FIRE PROTECTION EQUIPMENT
- PHOTO CELL

NOTES:
1. ALL XHHW WIRE TO BE RUN IN 3/4" EMT MINIMUM. MAXIMUM OF 4-20 AMP CIRCUITS INSTALLED IN EACH EMT CONDUIT. ALL OTHER CIRCUIT SIZES TO BE RUN SEPARATELY.

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____
DATE_____

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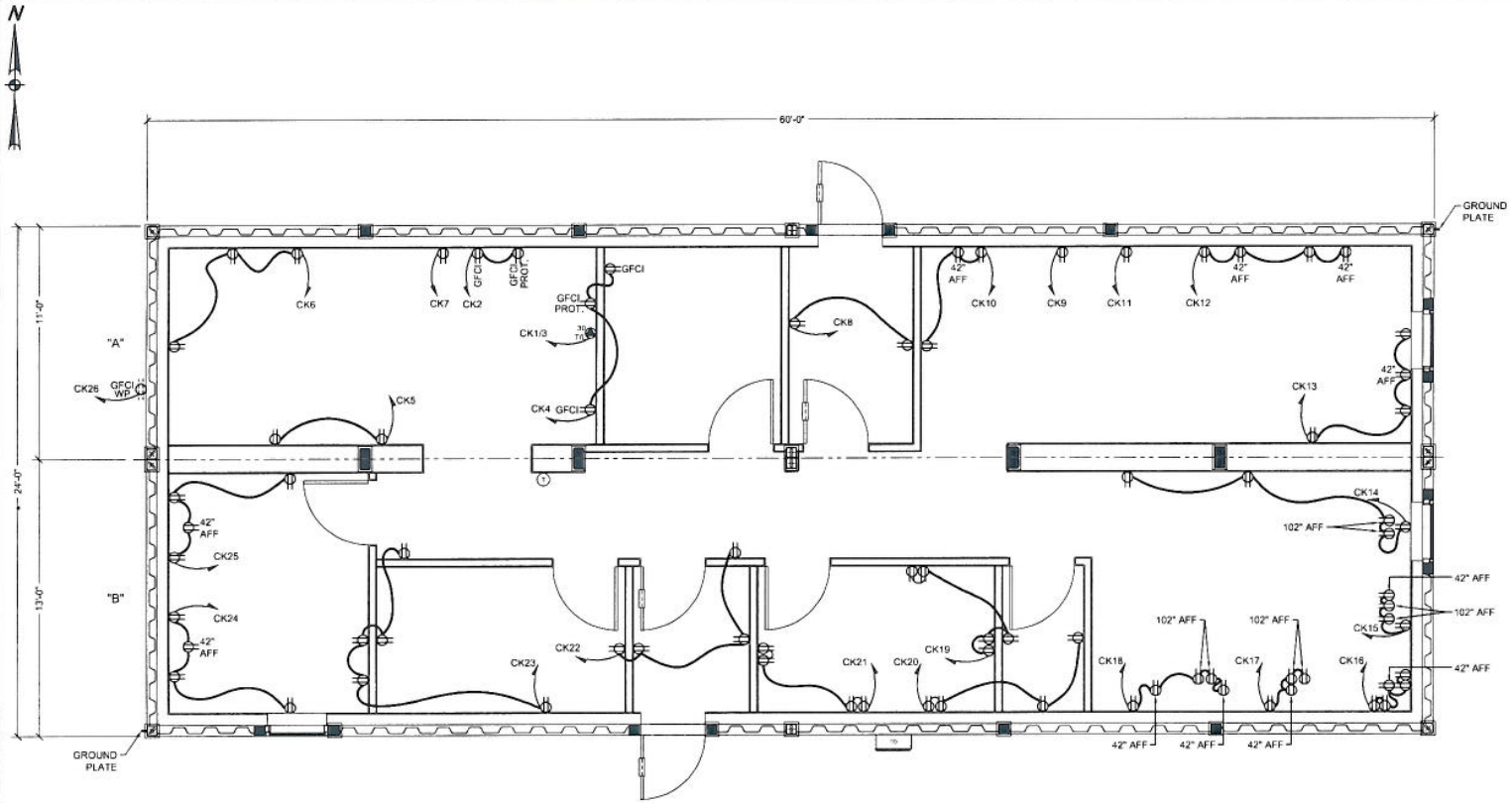
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
ELECTRICAL PANEL SCHEMATIC/
LOAD ANALYSIS/ LEGEND

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			E-01	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



LEGEND:

- - - - - - - SWITCH LEG
——— POWER LEG

CUSTOMER APPROVAL

☐ APPROVED
☐ APPROVED EXCEPT AS NOTED
☐ REVISE AS NOTED AND RESUBMIT
☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____
DATE_____

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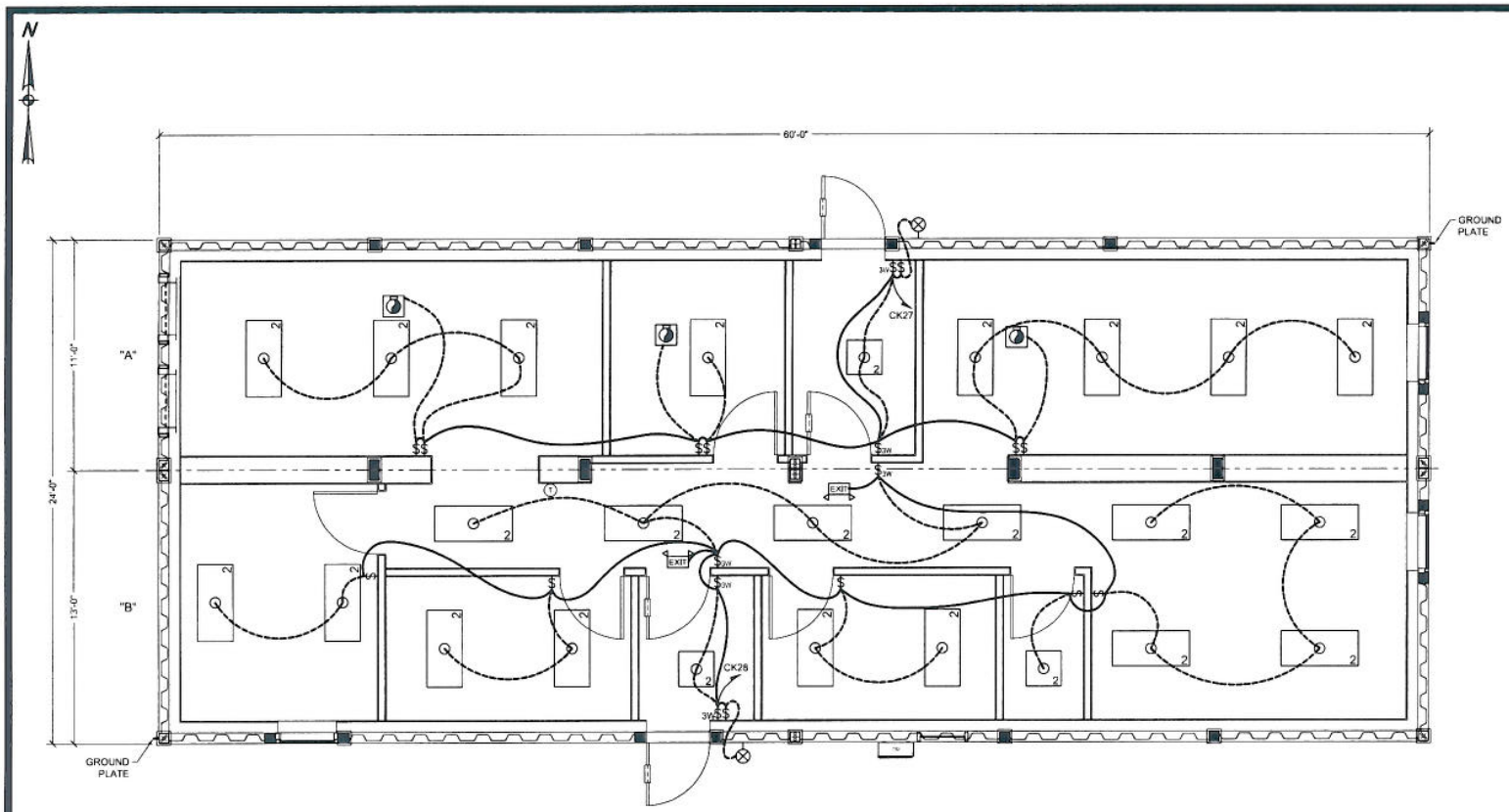
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
ELECTRICAL POWER PLAN

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			E-02	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



LEGEND:

- - - - - - SWITCH LEG

——— POWER LEG

CUSTOMER APPROVAL

☐ APPROVED
☐ APPROVED EXCEPT AS NOTED
☐ REVISE AS NOTED AND RESUBMIT
☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

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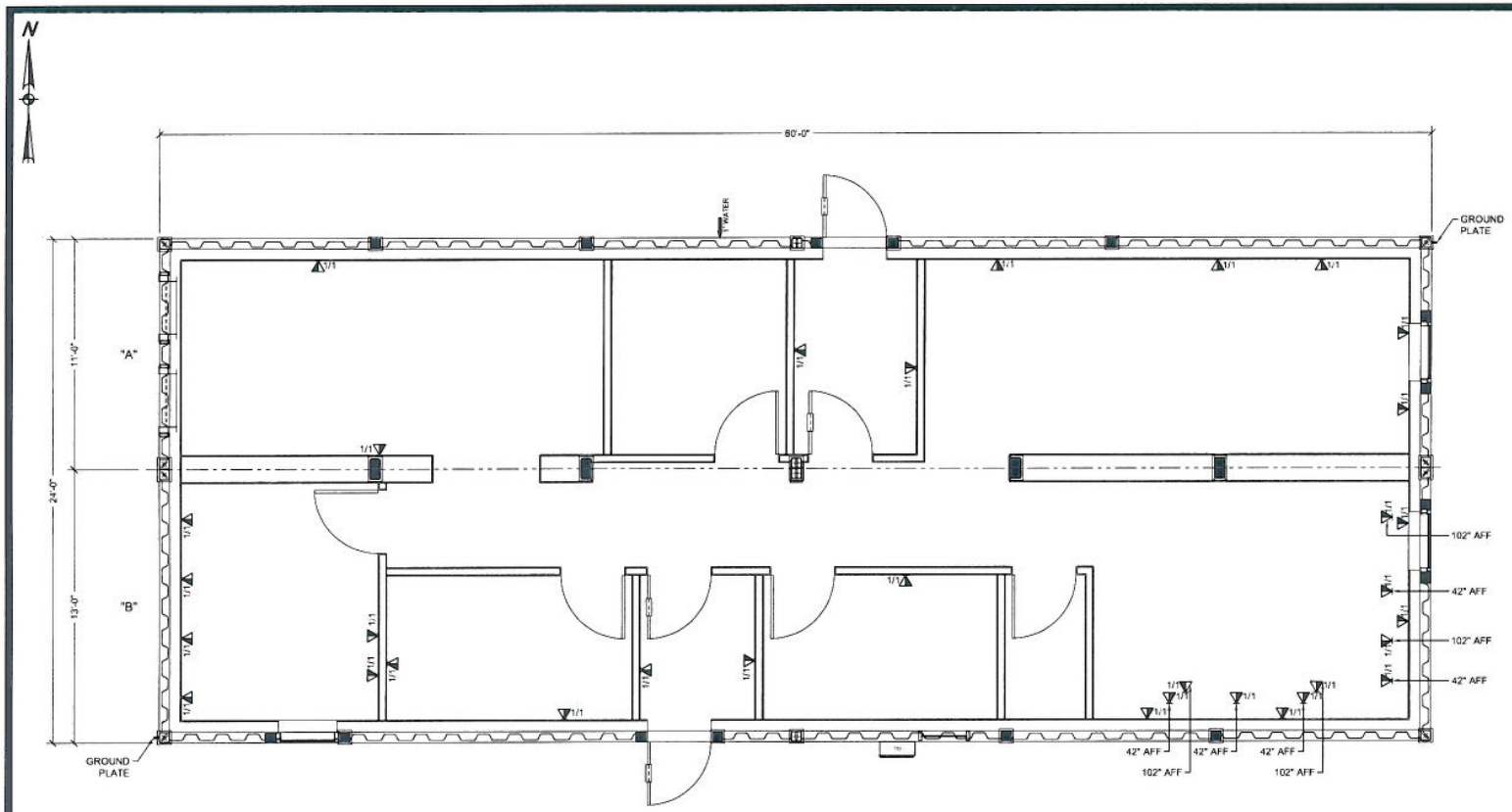
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
ELECTRICAL LIGHTING PLAN

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			E-03	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



LEGEND:

T/D	EXTERIOR COMMUNICATIONS JUNCTION BOX NEMA 4
1/1	VOICE/ DATA DUPLEX JACK, 1 VOICE/ 1 DATA RJ45-568 A/B

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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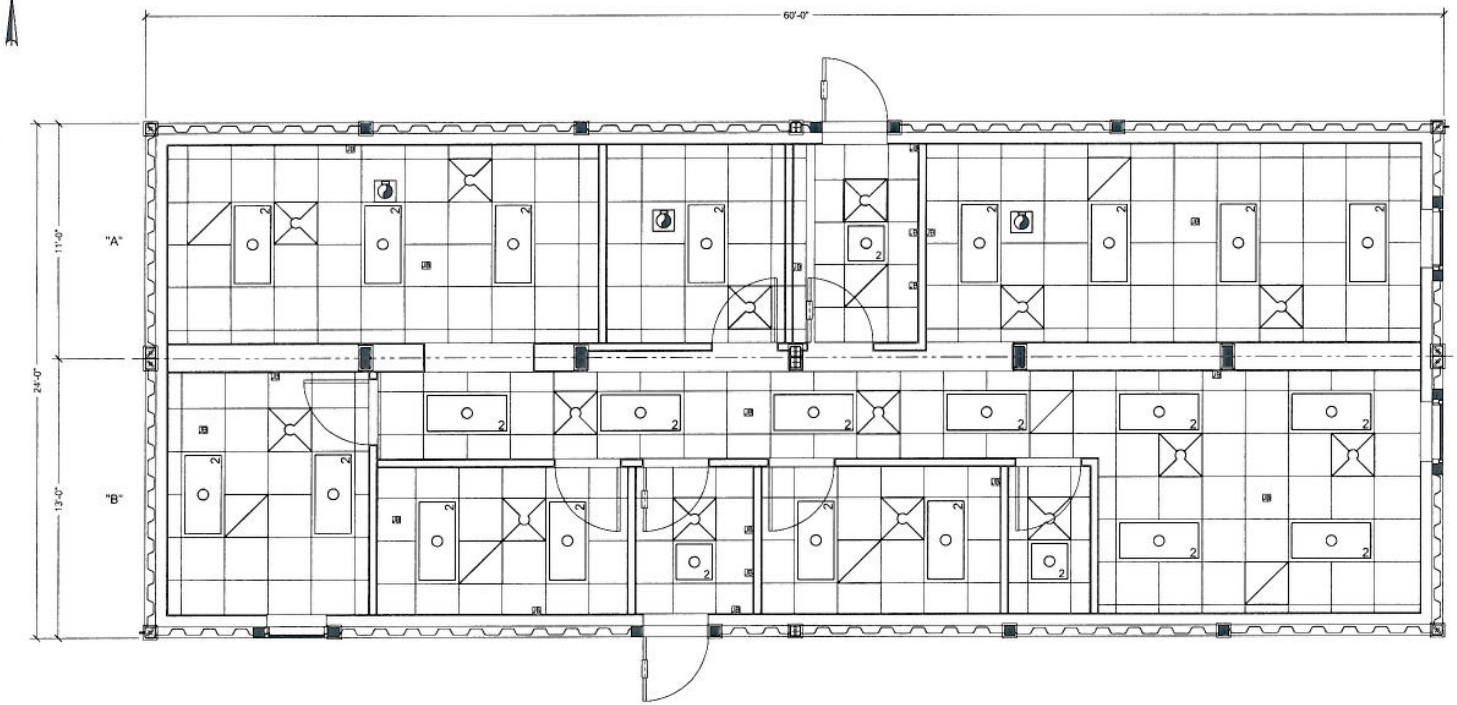
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM COMMUNICATION LAYOUT

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			E-04	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



LEGEND:

- FLUORESCENT 2X4 LAY IN 2 TUBE
- FLUORESCENT 2X2 LAY IN 2 TUBE
- EXIT/EMERGENCY LIGHT WITH BATTERY BACK-UP
- EXTERIOR COMMUNICATIONS JUNCTION BOX NEMA 4
- EXTERIOR LIGHT, 150W LED
- DUPLEX RECEPTACLE, 120V, 20 AMP
- GFCI WEATHER PROOF RECEPTACLE, 20 AMP
- GFCI DUPLEX RECEPTACLE 120V, 20 AMP
- PROTECTED GFCI DUPLEX RECEPTACLE 120V, 20 AMP
- 20 AMP TWIST/LOCK RECEPTACLE
- SWITCH SINGLE POLE, 120V, 20 AMP
- THREE WAY SWITCH, 120V, 20 AMP
- VOICE/ DATA DUPLEX JACK, 1 VOICE/ 1 DATA RJ45-568 A/B
- LOAD CENTER
- THERMOSTAT
- EXHAUST FAN
- WIRE MANAGEMENT BUSHING
- VENT WITH BIRD SCREEN
- REFRIGERATOR, ICE MAKER, WATER VALVE
- VENT PIPE
- J-BOX FOR CLIENT PROVIDED AND INSTALL FIRE PROTECTION EQUIPMENT
- PHOTO CELL
- RETURN REGISTER
- SUPPLY REGISTER

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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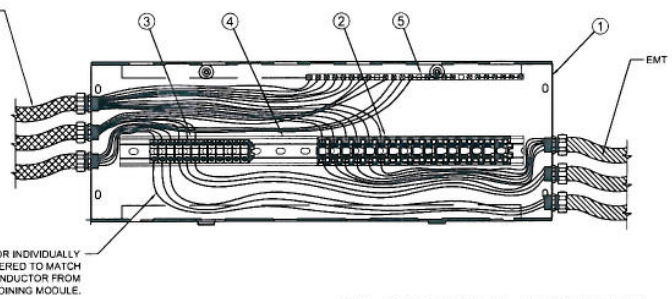
FLINT HILLS RESOURCES

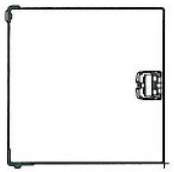
FLINT HILLS RESOURCES
CONTROL ROOM
REFLECTED CEILING PLAN

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			E-05	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

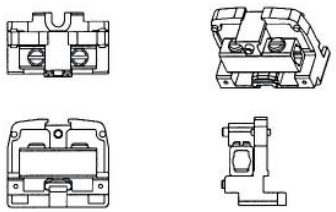
1341 FLINT HILLS TYP. CROSSOVER J-BOX				
ITEM	REF	TTL. QTY.	SIZE	DESCRIPTION
1		AS REQD	AS REQD	NEMA-1 ENCLOSURE
2		AS REQD	X	TYCO 200 - HVY DUTY TERMINAL BLOCK
3		AS REQD	X	TYCO 900 - MED DUTY TERMINAL BLOCK
4		AS REQD	X	MOUNTING BAR
5		AS REQD	X	GROUND BAR



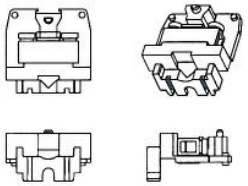


TYP. CROSSOVER J-BOX DETAIL

LOCATED • MODULE MATELINE CEILING CAVITY



C-3-1437390-3
200 SERIES PHENOLIC HEAVY DUTY BLOCK



C-1546234-01-3
900 SERIES MEDIUM DUTY BLOCK

NOTES:
1. TERMINAL STRIPS TO HAVE FINGER GUARDS.
2. NUMBER OF CIRCUITS GOING TO CROSSOVER JBOX TO BE DETERMINED BASED ON NUMBER OF CIRCUITS CROSSING THE MATELINES.

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

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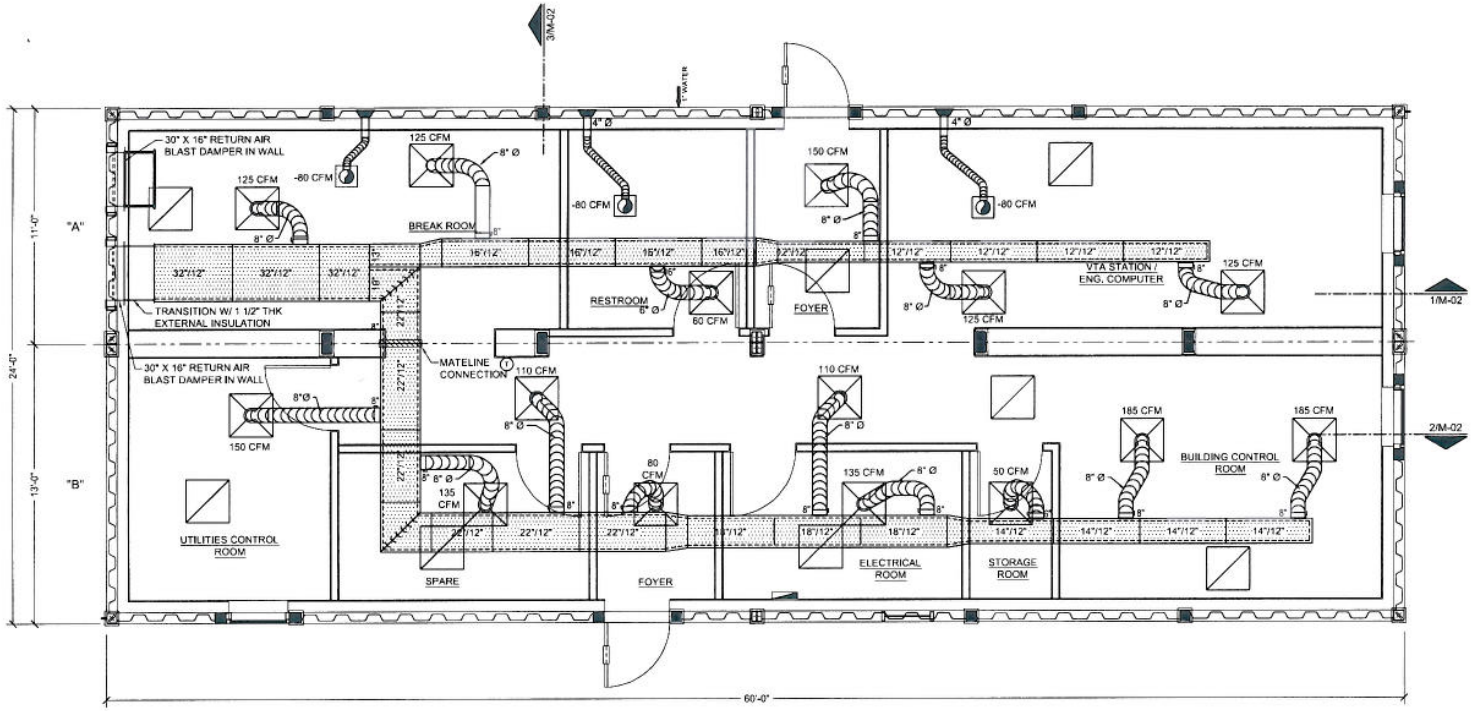
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES
CONTROL ROOM
TYPICAL ELECTRICAL
CROSSOVER J-BOX

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			E-06	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



LEGEND:

	RETURN REGISTER
	SUPPLY REGISTER
	WALL MOUNTED EXHAUST HOOD
-80 CFM	CEILING EXHAUST FAN
6" Ø	SPIN-IN WITH RIGID ROUND DUCT (SUPPLY AIR REGISTER TAKE-OFF)
8"	FLEXIBLE ROUND DUCT
8"	SUPPLY AIR DUCT SPIN-IN
T	THERMOSTAT

HVAC NOTES::

1. SEE M-02 FOR MECHANICAL DUCTWORK CROSS SECTION VIEWS.
2. FRICTION LOSS IS 0.10 INCH OF WATER PER 100 FT. OF DUCT. TOTAL AIR FLOW 1,550 CFM
3. SEE M-03 FOR DUCT WORK DETAILS.
4. SEE M-04 FOR DUCT AND DIFFUSER INSTALLATION DETAILS.
5. SEE M-05 FOR AIR FLOW DIAGRAM, SEQUENCE OF OPERATIONS AND EQUIPMENT SCHEDULES.
6. SEE S-03 FOR HVAC UNIT FRAME DETAILS.
7. SEE S-04 FOR HVAC UNIT WALL PENETRATION DETAILS.

CUSTOMER APPROVAL

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DATE_____

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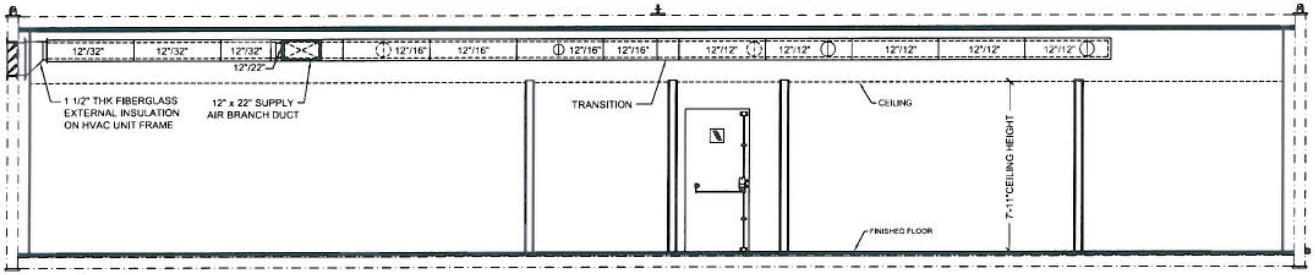
FLINT HILLS RESOURCES

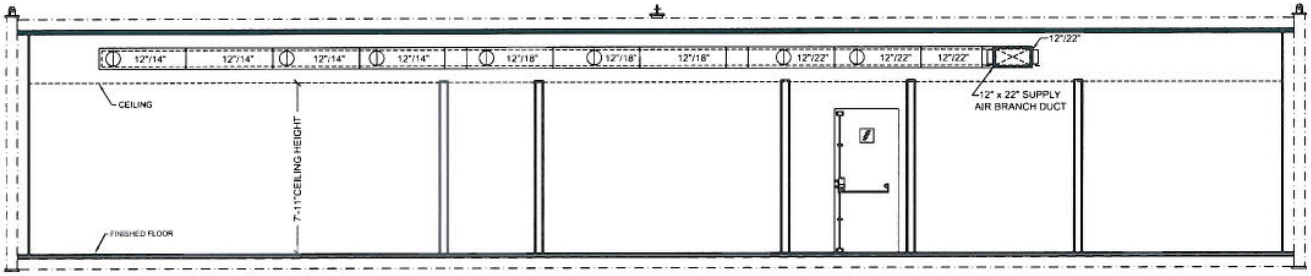
FLINT HILLS RESOURCES CONTROL ROOM MECHANICAL DUCTWORK AND REGISTER LAYOUT

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			M-01	REV B

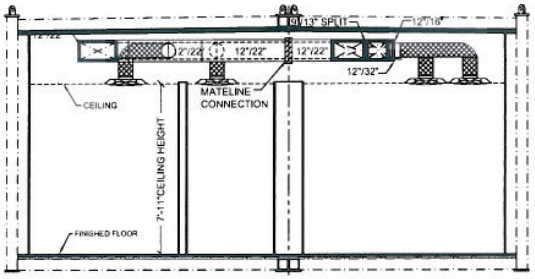
NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



SECTION 1-1
REF. DRAWING M-01



SECTION 2-2
REF. DRAWING M-01



SECTION 3-3
REF. DRAWING M-01

HVAC NOTES:

1. SEE M-03 FOR SUPPLY AIR DUCT DETAILS.
2. SEE S-04 FOR HVAC UNIT FRAME DETAILS.
3. SEE M-04 AND M-05 FOR MECHANICAL DUCTWORK INSTALLATION DETAILS.
4. SEE M-06 FOR AIR FLOW DIAGRAM, EQUIPMENT SCHDULES AND SEQUENCE OF OPERATION.
5. SEE DRAWING S-03 FOR HVAC UNIT WALL PENETRATIONS.
6. ALL INTERIOR SUPPLY DUCTWORK SHALL BE FABRICATED FROM 24 GA GALVANIZED SHEET METAL AND SHALL HAVE 1 1/2" THICK, R-6, FIBERGLAS INSULATION INTERNAL LINER.

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
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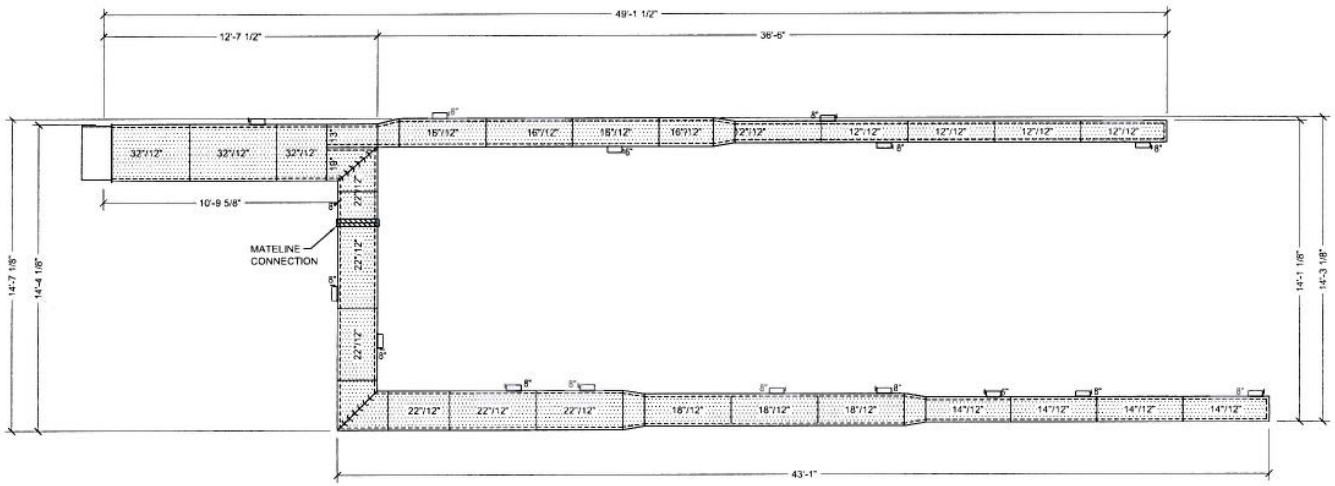
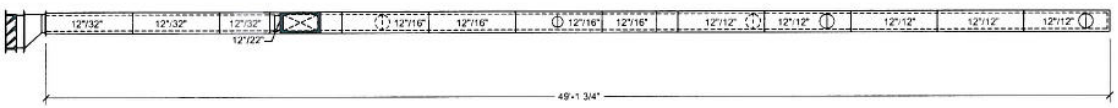
FLINT HILLS RESOURCES

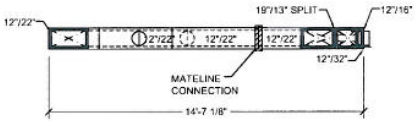
FLINT HILLS RESOURCES
CONTROL ROOM
MECHANICAL DUCTWORK
CROSS SECTIONS

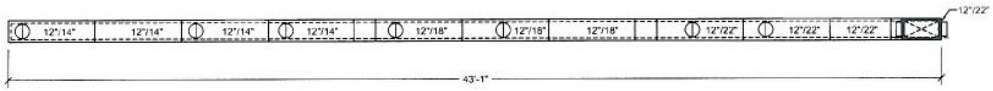
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			M-02	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD









SHEET METAL DUCTWORK GENERAL NOTES

1. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY DIRECTED OTHERWISE
2. SHEET METAL DUCT SIZES ARE OUTSIDE DIMENSIONS. LISTED SHEET METAL DUCT SIZES ALLOW FOR 1 1/2" R 6.0 DUCT LINER.
3. LOW PRESSURE ROUND FLEXIBLE DUCT TO HAVE A MINIMUM INSULATION VALUE OF R 6.0. ALL INSULATION TO MEET NFPA 90; UL 181-CLASS 1.
4. SHEET METAL SPIN-IN FITTINGS FOR DIFFUSERS SHALL BE CONICAL TYPE. SPIN-IN FITTINGS TO DIFFUSERS SHALL INCLUDE AN INTEGRAL MANUAL VOLUME DAMPER.
5. AFTER SYSTEM START-UP, BALANCE AIR DEVICES WITHIN 10% OF SCHEDULED AIR FLOW VALUES. PROVIDE OPERATION AND MAINTENANCE MANUALS TO BUILDING OWNER FOR ALL HVAC EQUIPMENT.

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

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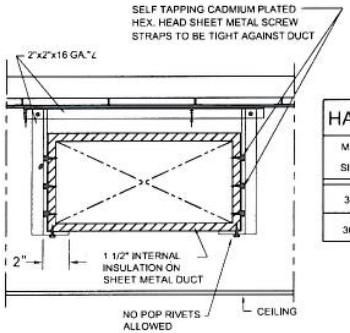
FLINT HILLS RESOURCES

FLINT HILLS RESOURCES CONTROL ROOM MECHANICAL DUCTWORK INSTALLATION DETAILS

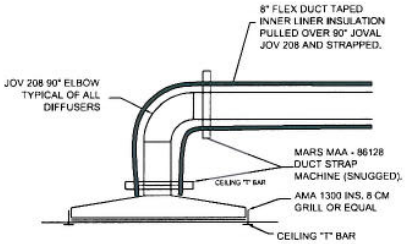
	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	3/16"=1'-0"
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			M-03	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

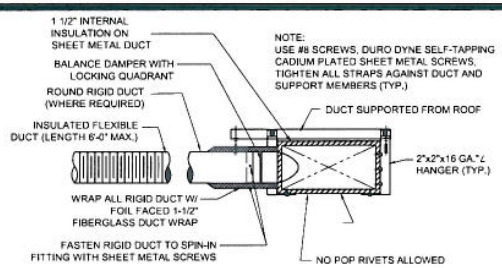


HANGER SIZES FOR RECTANGULAR DUCT			
MAX. SIDE	HANGER	HORIZONTAL SUPPORT ANGLE	MAXIMUM SPACING
30"	2" X 2" X 16 GAGE	2" X 2" X 16 GAGE	6'-0"
36"	2" X 2" X 16 GAGE OR 1/4" ROUND ROD	2" X 2" X 16 GAGE	6'-0"

1/1 DUCT HANGER SUPPORT DETAIL
NO SCALE



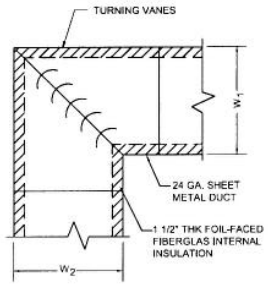
2/1 DIFFUSER DETAIL
NO SCALE



3/1 FLEX DUCT WITH SPIN IN FITTING DETAIL
NO SCALE

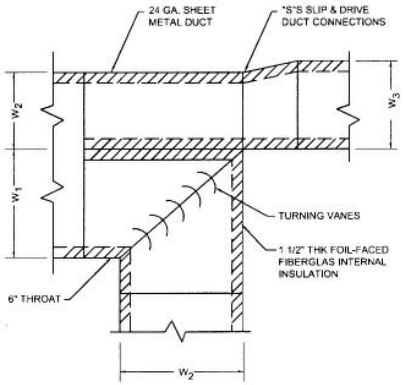
DUCT ELBOW & TEE NOTES:

1. ALL VANED ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W_1 DOES NOT EQUAL W_2 VANE SHALL BE SINGLE VANE TYPE REGARDLESS OF W_1 DIMENSION.
3. ALL SINGLE VANES SHALL HAVE A 2 INCH RADIUS, 1" MAXIMUM SPACE BETWEEN VANES AND A 3/4 INCH TRAILING EDGE.
4. WHEN W_1 EQUALS W_2 AND W_1 IS GREATER THAN 20 INCHES VANES SHALL BE DOUBLE VANE TYPE.



4/1 SQUARE VANED ELBOWS
NO SCALE

SELF TAPPING CADMIUM PLATED HEX. HEAD SHEET METAL SCREW STRAPS TO BE TIGHT AGAINST DUCT



5/1 SQUARE VANED SPLITTER DUCT
NO SCALE

SELF TAPPING CADMIUM PLATED HEX. HEAD SHEET METAL SCREW STRAPS TO BE TIGHT AGAINST DUCT

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

THIS PRINT MUST BE SIGNED, DATED AND RETURNED TO HUNTER PRIOR TO PRODUCTION RELEASE.

HUNTER BUILDINGS & MANUFACTURING, LP

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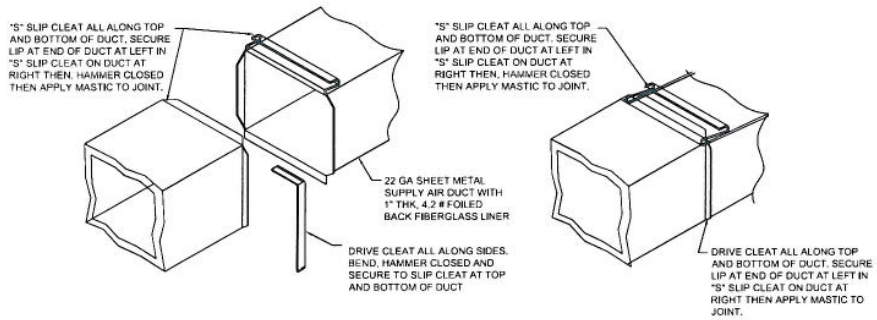
FLINT HILLS RESOURCES

FLINT HILLS
CONTROL BUILDING
MECHANICAL DUCTWORK
DETAILS AND SCHEDULES

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			M-04	REV B

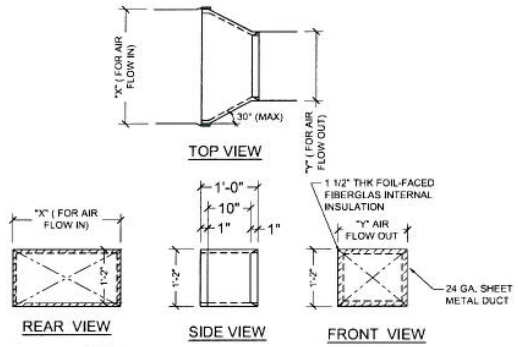
NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



6/1 SLIP & DRIVE CONNECTION DETAIL

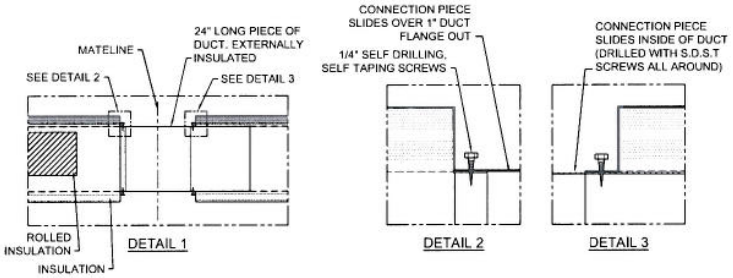
NO SCALE

REQUIRED FORALL INTERIOR SHEET METAL DUCTWORK



5/1 DUCT TRANSITION DETAIL

NO SCALE



4/1 TYPICAL FIELD CONNECTION AT MATELINE

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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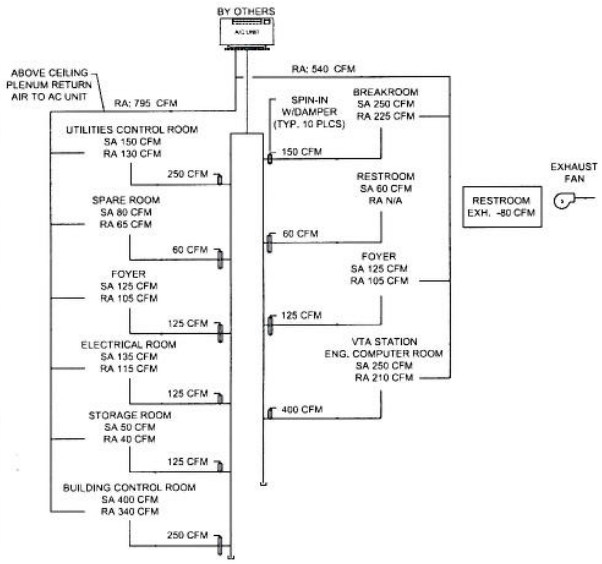
FLINT HILLS RESOURCES

FLINT HILLS
CONTROL BUILDING
MECHANICAL DUCTWORK
DETAILS AND SCHEDULES

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			M-05	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD



AIR FLOW SCHEMATIC

NOTE: RETURN AIR FLOW IS APPROXIMATELY 85 % OF DIFFERENCE BETWEEN THE SUPPLY AND EXHAUST AIR FLOW .

FAN SCHEDULE

MARK	MANUFACTURER & MODEL NO.	TYPE	LOCATION	CFM	STATIC PRESSURE IN.W.G.	MOTOR						ACCESORIES	REMARKS
						RPM	AMPS	HP	VOLTS	PH	HZ		
EF-1	BROAN MODEL 684	CEILING MOUNTED	RESTROOM	80	0.10	1280	0.50	1/10	115	1	60	CEILING EXH. GRILLE	CEILING MOUNTED EXHAUST GRILLE & 6" Ø FLEXIBLE ALUMINUM DUCT CONNECTED TO WALL HOOD

1341 DUCT SCHEDULE

AREA SERVED	DUCT SIZE (in.)	CFM	DUCT QTY.	TTL. DUCT CFM
BREAKROOM	8"Ø	125	2	250
RESTROOM	6"Ø	60	1	60
VTA STATION/ENG COMPUTER RM	8"Ø	125	2	250
FOYER	8"Ø	125	1	125
UTILITIES CONTROL ROOM	8"Ø	150	1	150
SPARE ROOM	6"Ø	80	1	80
HALLWAY	8"Ø	125	1	125
FOYER	8"Ø	125	1	125
ELECTRICAL ROOM	8"Ø	135	1	135
STORAGE	6"Ø	50	1	50
CONTROL ROOM	8"Ø	175	2	350
			TOTAL CFM	1,700

1341 EXHAUST FAN SCHEDULE

AREA SERVED	DUCT SIZE (in.)	CFM	EXH. FAN QTY.	TTL. EXH FAN CFM
RESTROOM	4"Ø	80	1	80
			TOTAL CFM	80

ABBREVIATIONS

AMPS	AMPERES
BTUH	BRITISH THERMAL UNITS/HOUR
CFM	CUBIC FEET PER MINUTE
E.S.P	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPERES
HP	HORSE POWER
HVAC-1	HEATING VENTILATING & AIR CONDITIONING (UNIT #1)
KW	KILOWATT
MCA	MAXIMUM CURRENT AMPERES
MOCP	MINIMUM OVER CURRENT PROTECTION
ODP	OPEN DRIP PROOF
RPM	REVOLUTIONS PER MINUTE
QTY	QUANTITY
T	THERMOSTAT
TTL	TOTAL
W.G	WATER GUAGE
Ø	DIAMETER

SEQUENCE OF OPERATION

HVAC-1

COOLING MODE:

THE COOLING WILL OPERATE WITH THE HVAC THERMOSTAT SET ON THE AUTO OR COOL POSITION. IN THE COOLING POSITION, ONLY THE COOLING WILL BE ALLOWED TO OPERATE. WHEN SET IN AUTO POSITION, EITHER THE COOLING OR HEATING MAY OPERATE DEPENDING ON THE BUILDING SET TEMPERATURE. THE COOLING AND HEATING SET POINT IS AN INDEPENDENT SET POINT DETERMINED BY THE CUSTOMER. WHEN THE BUILDING TEMPERATURE IS ABOVE THE SET POINT THE HVAC THERMOSTAT WILL TURN ON THE COOLING STAGE. ONCE ENERGIZED THE THERMOSTAT WILL BRING THE BUILDING TEMPERATURE TO ITS DESIRED SET POINT. HUNTER BUILDINGS SET THE TEMPERATURE AT 72 FAHRENHEIT (F) DEGREES FOR TESTING PURPOSES.

HEATING MODE:

THE HEATING WILL OPERATE WITH THE HVAC THERMOSTAT SET ON THE AUTO OR HEAT POSITION. IN THE HEATING POSITION, ONLY THE HEAT WILL BE ALLOWED TO OPERATE. WHEN SET IN AUTO POSITION, EITHER THE COOLING OR HEATING MAY OPERATE, DEPENDING ON THE BUILDING TEMPERATURE. THE COOLING AND HEATING SET POINT IS AN INDEPENDENT SET POINT SET BY THE CUSTOMER. WHEN THE BUILDING TEMPERATURE IS BELOW THE SET POINT THE HVAC THERMOSTAT WILL TURN ON THE HEATING STAGE. ONCE ENERGIZED THE THERMOSTAT WILL BRING THE BUILDING TEMPERATURE TO ITS DESIRED SET POINT. HUNTER BUILDINGS SET THE TEMPERATURE AT 72 FAHRENHEIT (F) DEGREES FOR TESTING PURPOSES.

FRESH AIR TO BUILDING:

A MANUAL BAROMETRIC DAMPER IS INSTALLED AT THE FRESH AIR INLET SO THAT THE FRESH AIR COMING TO THE BUILDING IS REGULATED TO A MAXIMUM OF 25% OF THE TOTAL AIR FLOW (CFM) OF THE HVAC UNIT TO MEET ASHRAE 62 FRESH AIR REQUIREMENT AND PROVIDE MAKE-UP FOR AIR BEING EXHAUSTED BY THE FANS OR ADJUSTED TO AS REQUIRED.

THE UNIT WILL CONSTANTLY BRING IN FRESH AIR AS LONG AS THE BLOWER IS RUNNING. THE DAMPER WILL ONLY OPEN AND CLOSE IF THE EVAPORATOR BLOWER IS ON OR OFF. IT WILL NOT SHUT DOWN IN ORDER TO ISOLATE HE INTERIOR OF THE BUILDING FROM THE EXTERIOR OF THE BUILDING UNLESS.

THE AMOUNT OF OUTSIDE AIR DRAWN INTO THE HVAC UNIT AND DISTRIBUTED INTO THE BUILDING IS DEPENDENT ON THE SETTING OF THE MANUAL DAMPER. TO INCREASE MANUAL DAMPER MUST BE OPEN FURTHER. TO DECREASE THE MANUAL DAMPER MUST BE CLOSED FURTHER.

AIR CONDITIONING START UP PROCEDURE:

1. DOUBLE CHECK THE VOLTAGE SUPPLIED TO ALL HVAC CIRCUITS TO CONFIRM THAT IT MATCHES THE NAMEPLATE REQUIREMENTS.
2. WITH THE SHUT DOWN CIRCUIT(S) CLOSED AND PRESSURIZATION CIRCUIT ON, TURN ON HVAC DISCONNECT SWITCHES.
3. TURN THE HVAC SYSTEM SWITCH TO THE "ON" POSITION.

CUSTOMER APPROVAL

- ☐ APPROVED
- ☐ APPROVED EXCEPT AS NOTED
- ☐ REVISE AS NOTED AND RESUBMIT
- ☐ SEE LETTER OF TRANSMITTAL

APPROVAL BY_____

DATE_____

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FLINT HILLS RESOURCES

ABERJORRO
CONTROL ROOM
AIR FLOW DIAGRAM, SCHEDULES
AND SEQUENCE OF OPERATIONS

	BY	DATE		
DRAWN:	GGJR	08/07/12	SCALE:	N.T.S
CHECKED:	HGW	08/07/12	JOB. No.	1341
ENGINEER:				
APPROVED:			M-06	REV B

NO.	DATE	DESCRIPTION	BY	CHKD.	NO.	DATE	DESCRIPTION	BY	CHKD.
-	-	-	-	-	B	11/01/12	REVISED PER CLIENT COMMENTS	JLG	JD
-	-	-	-	-	A	08/16/12	ISSUED FOR APPROVAL	GGJR	JD

ILLINOIS Environmental Protection Agency
2013 Hazardous Waste Report
Form GM -- Generation and Management

US EPA ID : **ILD087154555** IL. EPA ID : **0990850005**

SECTION 1. WASTE DESCRIPTION

A. Waste Description: **CONTAMINATED SOILS**

B. EPA Hazardous Waste Code(s) : **D006** **D008**

C. Source Code : **G31** D. Form Code : **W301** Management Method :

E. Waste Minimization Code: **X**

SECTION 2. QUANTITY GENERATED:

A. UOM : **3. Pounds (lbs)** Density : **9.00** lb/gal .

B. Quantity Generated in Current Reporting Year : **2,290,458.0**

SECTION 3: QUANTITY MANAGED ON-SITE:

Did this location manage some or all of this waste in RCRA or UIC regulated treatment, recycling, or disposal units at this location? (DO NOT include RCRA exempt processes.) **N**

On-Site System1:Management Method : Quantity managed on-site this year : **0.0**

On-Site System2:Management Method : Quantity managed on-site this year : **0.0**

SECTION 4. OFF-SITE SHIPMENT

A. Was any of this waste shipped off site this reporting year? **Y**

SITE 1.

B. U.S. EPA ID No. of facility waste was shipped to : **ILD000666206**

C.Management method shipped to : **H132**

D. Total quantity shipped in this reporting year : **2,290,458.0**

SITE 2.

B. U.S. EPA ID No. of facility waste was shipped to :

C. Management method shipped to :

D. Total quantity shipped in this reporting year : **0.0**

SITE 3.

B. U.S. EPA ID No. of facility waste was shipped to :

C. Management method shipped to :

D. Total quantity shipped in this reporting year : **0.0**

SITE 4.

B. U.S. EPA ID No. of facility waste was shipped to :

C. Management method shipped to :

D. Total quantity shipped in this reporting year : **0.0**

SITE 5.

B. U.S. EPA ID No. of facility waste was shipped to :

C. Management method shipped to :

D. Total quantity shipped in this reporting year : **0.0**

COMMENTS : **N**

(Form designed for use on elite (12-pitch) typewriter.)

HAZARDOUS WASTE MANIFEST

Form Approved. OMB No. 2050-0039

1. Generator ID Number: ILD087154555
2. Page 1 of 2
3. Emergency Response Phone: (800) 326-1221
4. Manifest Tracking Number: 000492713WAS

GENERATOR

Generator's Name and Mailing Address: FLINT HILLS RESOURCES / ROSS HUBBARD, 501 BRUNNER ST, PERU, IL 61354-3638, (815)224-1525

Generator's Site Address (if different than mailing address): FLINT HILLS RESOURCES / ROSS HUBBARD, 501 BRUNNER ST, PERU, IL 61354-3638, GEN: 2796

Generator's Phone:

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC-TS LEMONT — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: HERITAGE ENVIRONMENTAL SERVICES, 7901 W MORRIS ST, INDIANAPOLIS, IN 46231-3301, (317)243-0811 — U.S. EPA ID Number: IND093219012

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., 3, PGIII, (ETHYL BENZENE, POLYSTYRENE), (D018 F003), ERG#128 1X55DM	1	DM	55	G	F003 D018
X	2. NA2212, ASBESTOS, 9, PGIII, ERG#171 2X55DM	2	DM	200	P	
X	3. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (CADMIUM, LEAD), (D006 D008), ERG#171 9X55DM	9	DM	6750	P	D006 D008
X	4. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (CADMIUM, LEAD), (D006 D008), ERG#171 2X55DM	2	DM	400	P	D006 D008

14. Special Handling Instructions and Additional Information
1. W19_0456451_LDR 2. W16_0456450 3. W10_0385636_LDR 4. W69_0606104_LDR

ERI:HERITAGE (2932076)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koretke — Signature: Mary Koretke — Month 01 Day 07 Year 13

TRANSPORTER INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Rutilio Munoz — Signature: Rutilio Munoz — Month 1 Day 7 Year 13

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy — Month Day Year

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H111	H129

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: William Lewis — Signature — Month 01 Day 19 Year 13

Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001543

A134003EIL 54426 #336 P3

774904632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050857 ✓ FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22T	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY Koretke — Signature: Mary Koretke — Month 01 Day 14 Year 13

GENERATOR

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kramer — Signature: Les Kramer — Month 1 Day 14 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: LEONARD F STONE — Signature — Month 01 Day 14 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

774904632 A134003EIL SC PPW 3/3/2011 ~~1010~~ 54417

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050856 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RO, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22 Ton	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koritke — Signature: Mary Koritke — Month 01 Day 14 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson — Signature: [signature] — Month 01 Day 14 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H-111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steve Park — Signature: [signature] — Month 01 Day 14 Year 13

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001545

A134003EIL ~~10122~~ 54419

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 774904632 SC PPW 3/3/2011 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050855 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
(815) 224-5451
Generator's Phone:

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

(3)

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22 Ton	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY Koretke
Signature: Mary Koretke
Month 01 Day 14 Year 13

GENERATOR

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER INT'L

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WENDELL KELLER
Signature: Wendell Keller
Month 01 Day 14 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steve Parke
Signature:
Month 01 Day 14 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001546

TK 10122 A134003EIL 54425

774504632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ILD087154555	1	(800) 483-3718	006050850 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	PT	EST 21	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY Koretke — Signature: Mary Koretke — Month 01 Day 14 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WENDELL KELLER — Signature: Wendell Keller — Month 01 Day 14 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: LEONARD E STONE — Signature — Month 01 Day 14 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001547

A134003EIL TK ~~336~~ 5448

774904632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050849 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22 T est		D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koretke — Signature: Mary Koretke — Month 01 Day 14 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kramer — Signature: [signature] — Month 1 Day 14 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 11111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steven Pack — Signature: [signature] — Month 01 Day 14 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

#1010 A134003EIL 5424 x1

774904632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050848 ✓ FLE

GENERATOR

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 21	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE — Signature: Mary Koretke — Month 01 Day 14 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson — Signature: [signature] — Month 01 Day 14 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: LEONARD E STORY — Signature: [signature] — Month 01 Day 14 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001549

10122 774904632 SC PPW 3/3/2011 A134003EIL 54479

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050871 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	PT	22 EST	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE — Signature: Mary Koretke — Month 01 Day 17 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WENDELL KELLER — Signature: Wendell Keller — Month 01 Day 17 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H-111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steve Parke — Signature: [signature] — Month 01 Day 17 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

774904632 SG PPW 3/3/2011 A134003EIL # 336 54480

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050872 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 17 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kramer
Signature: Les Kramer
Month 1 Day 17 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H-111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steve Poole
Signature: Steve Poole
Month 01 Day 17 Year 13

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001551

#1010 774904632 A134H003EIL SC PPW 3/3/2011 54495 v1

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050873 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5461

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 17 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson
Signature:
Month 01 Day 17 Year 13

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leonard K Stay
Signature:
Month Day Year

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001552

774904632 A134003EIL SCPPW 3/3/2011 # 54496

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050874 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
US Bulk Transport Inc
U.S. EPA ID Number
PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number
ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD CADMIUM), 9, PG III (D006, D008)	001	DT	21	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 17 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WENDELL KELLER
Signature: Wendell Keller
Month 01 Day 17 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H111			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leonard F. Stony
Signature:
Month 01 Day 17 Year 13

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001553

A134003EIL 54497

774904632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050875 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
(815) 224-6451
Generator's Phone:

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D009)	001	DT	22	T	D006 D009
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 17 Year 13

GENERATOR

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kramer
Signature
Month 1 Day 17 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: LEONARD F ITONY
Signature
Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001554

#1010 774904632 A134003EL SC PPW 3/3/2011 54481

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154556
2. Page 1 of 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050870 FLE

GENERATOR

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000000200

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
NA3900EIC ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 17 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson
Signature:
Month 01 Day 17 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H-111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sean Poole
Signature:
Month 01 Day 17 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

774904632 SC PPW 3/3/2011 L134003EIL # 336 54471

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050869 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE — Signature: Mary Koretke — Month 01 Day 16 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kramer — Signature: Les Kramer — Month 1 Day 16 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. Hill 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leonard F Gony — Signature: [signature] — Month 01 Day 16 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001556

774904632 SC PPW 3/3/2011 L134003EIL #10122 54090

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050868 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
15435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000656206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD CADMIUM), 9, PG III (D006, D008)	001	DT	EST 21	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 16 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WENDELL KELLER
Signature: Wendell Keller
Month 01 Day 16 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: GERALD E. STORY
Signature:
Month 01 Day 16 Year 13

GENERATOR / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001557

#1010 774904632 L134003EIL SC FPW 3/3/2011 54469

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087194555
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050867 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. L134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE — Signature: Mary Koretke — Month 01 Day 16 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson — Signature: [signature] — Month 01 Day 16 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leonard E Fary — Signature: [signature] — Month 01 Day 16 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001558

774904632 A134003EIL SC PPW 3/3/2011 # ~~336~~ 54458

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050866 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 16 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kromer
Signature: Les Kromer
Month 1 Day 16 Year 13

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

18b. Alternate Facility (or Generator)
Manifest Reference Number:
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H-111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steve Pack
Signature: Steve Pack
Month 01 Day 16 Year 13

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

A134003EIL 54460

774904632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050865 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD CADMIUM), 9, PG III (D006, D008)	001	DT	EST 21	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY Koretke — Signature: Mary Koretke — Month 01 Day 16 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WENDELL KELLER — Signature: Wendell Keller — Month 01 Day 16 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H-111			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steve Park — Signature: Steve Park — Month 01 Day 16 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001560

#1010 A134003EIL 54459

774504632 SCPPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050864 FLE

GENERATOR

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-6451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1 A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koretke — Signature: Mary Koretke — Month 01 Day 16 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson — Signature: [signature] — Month 01 Day 16 Year 13
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sheri Pack — Signature: [signature] — Month 01 Day 16 Year 13

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001561

A134003EIL ~~5~~ # 336 ✓ #3 54446

774904632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050863 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
x	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koretke
Signature: Mary Koretke
Month 01 Day 15 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kramer
Signature: Les Kramer
Month 1 Day 14 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H111			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leonard Estony
Signature: [signature]
Month 01 Day 15 Year 13

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001562

TK / 0122 A134003EIL 774904632 SC PPW 3/3/2011 54445 V2

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050862 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RO. NA3077. HAZARDOUS WASTE. SOLID. N.O.S.. (LEAD. CADMIUM), 9, PG III (D006, D008)	001	DT	EST 21	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koretke — Signature: Mary Koretke — Month 01 Day 15 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Wendell Keller — Signature: Wendell Keller — Month 01 Day 15 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. Hill 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Leonard Estany — Signature: [signature] — Month 01 Day 15 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001563

#1010 774904632 A134003EIL SC PPW 3/3/2011 54444 #1

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050861 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22 EST	T	D006	D008	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1 A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koretke
Signature: Mary Koretke
Month 01 Day 15 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson
Signature:
Month 01 Day 15 Year 13
Transporter 2 Printed/Typed Name
Signature
Month 01 Day 15 Year 13

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: LEONARD E STORY
Signature:
Month 01 Day 15 Year 13

GENERATOR INT'L TRANSPORTER DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001564

A124003EIL TK# 336 54434

774904632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ILD087154555	1	(800) 483-3718	006050860 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
US Bulk Transport Inc
U.S. EPA ID Number
PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number
ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RO, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY Koretke
Signature: Mary Koretke
Month 01 Day 15 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Les Kramer
Signature: Les Kramer
Month 1 Day 15 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H-111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sherm Paule
Signature: [signature]
Month 01 Day 15 Year 13

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001565

10122 A134003EIL 54433

774904632 SC PPW 3/3/2011

ase print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ILD087154555	1	(800) 483-3718	006050859 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 21	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171 Permit 20324756

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY Koretke — Signature: Mary Koretke — Month 01 Day 15 Year 13

GENERATOR

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

INT'L

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: WENDELL KELLER — Signature: Wendell Keller — Month 01 Day 15 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

TRANSPORTER

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Shen Pack — Signature: Shen Pack — Month 01 Day 15 Year 13

DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001566

#1010 774904632 SC PPW 3/3/2011 54432 A134003EIL 54432

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of: 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050858 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22	T	D006	D008	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1. A134003EIL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Koretke
Signature: Mary Koretke
Month 01 Day 15 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson
Signature:
Month 01 Day 15 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sherm Parks
Signature:
Month 01 Day 15 Year 13

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

FHRPRU001567

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ILD097164555	1	(800) 483-3718	006050929 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
Generator's Phone: (815) 224-5451

Generator's Site Address (if different than mailing address): SAME

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: FAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number: ILD000666206

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. X1340028ILL ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE — Signature: Mary Koretke — Month 01 Day 18 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Leo Plomer — Signature: Leo Plomer — Month 1 Day 18 Year 13
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H-11 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Sherry Parker — Signature: Sherry Parker — Month 01 Day 19 Year 13

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001568

#1010 774904632 A134003EIL SC PPW 3/3/2011 54513

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
IL D087154555	1	(800) 483-3718	006050876 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
(815) 224-5451
Generator's Phone:

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
US Bulk Transport Inc
U.S. EPA ID Number
PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7040
U.S. EPA ID Number
ILD000599208

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 48	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL 2. EPG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE
Signature: Mary Koretke
Month 01 Day 18 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson
Signature:
Month 01 Day 18 Year 13
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Steve Parke
Signature:
Month 01 Day 15 Year 13

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001569

A134003EIL # 54511

774504632 SC PPW 3/3/2011

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: ILD087154555
2. Page 1 of 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006050877 FLE

5. Generator's Name and Mailing Address
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
(815) 224-5451

Generator's Site Address (if different than mailing address): SAME

Generator's Phone:

6. Transporter 1 Company Name: US Bulk Transport Inc — U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426

U.S. EPA ID Number: ILD000666206

Facility's Phone: (708) 596-7040

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (LEAD, CADMIUM), 9, PG III (D006, D008)	001	DT	EST 22	T	D006 D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. A134003EIL 2. ERG#171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: MARY KORETKE — Signature: Mary Koretke — Month 01 Day 18 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: WENDELL KELLER — Signature: Wendell Keller — Month 01 Day 18 Year 13

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H-111 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Stacy Parke — Signature: Stacy Parke — Month 01 Day 18 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

FHRPRU001570

3-223

774904632 SCPPW 3/3/2011

...orm designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

...AZARDOUS ...MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ILD087164966	1	(800) 409-3718	006050864 FLE

...erator's Name and Mailing Address
Alnal Hills Resources
801 Sumner Street
Penn, IL 61364
Generator's Phone: (815) 734-4451

Generator's Site Address (if different than mailing address)
SAME

6. Transporter 1 Company Name
US Bulk Transport Inc
U.S. EPA ID Number: PAD987347616

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EQ - Illinois
16435 South Center Avenue
Harvey, IL 60426
Facility's Phone: (708) 596-7060
U.S. EPA ID Number: ILD000666486

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN 3077, HAZARDOUS WASTE, SOLID, N.O.S. (LEAD CADMIUM), 9, PG III (D008, D006)	001	DT	E37 22	T	D008	D006	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
NONE

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Mary Kordic
Signature: Mary Kordic
Month: 01 Day: 16 Year: 13

GENERATOR

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kelly Johnson
Signature:
Month: 01 Day: 16 Year: 13
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month: Day: Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. TRANSPORTER'S COPY

FHRPRU001571

3-208 1414 #1

...nt or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. Manifest Tracking Number
	[illegible]		(800) [illegible]	006050861 FLE

5. Generator's Name and Mailing Address
[illegible]
Generator's Site Address (if different than mailing address)
SAME
Generator's Phone:

6. Transporter 1 Company Name
[illegible]
U.S. EPA ID Number
[illegible]

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
[illegible]
U.S. EPA ID Number
[illegible]
Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. [illegible]	001	DT	22 EST	T	D001	D001	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] Signature: [illegible] Month 01 Day 15 Year 13

GENERATOR

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

INT'L

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Keith Johnson Signature: [illegible] Month 01 Day 15 Year 13

Transporter 2 Printed/Typed Name: Signature: Month 01 Day 15 Year 13

TRANSPORTER

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. TRANSPORTER'S COPY

FHRPRU001572

Friday, December 14, 2012

Michael Schmidt

Flint Hills Resources
501 Brunner Street
Peru, IL 61354

TEL: (815) 224-5451

FAX: NA

RE: Special Waste Requirements 8-14-12 PAS WO: 12L0102

Prairie Analytical Systems, Inc. received 9 sample(s) on 12/5/2012 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:** 12/14/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 1 **Lab ID:** 12L0102-01
Collection Date: 12/5/12 8:30 **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	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/7/12 15:56	12/7/12 21:07	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 18:55	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.0		µg/Kg	1	12/6/12 11:09	12/6/12 16:24	SW 8082	BDP
*Aroclor 1221	U	32.0		µg/Kg	1	12/6/12 11:09	12/6/12 16:24	SW 8082	BDP
*Aroclor 1232	U	32.0		µg/Kg	1	12/6/12 11:09	12/6/12 16:24	SW 8082	BDP
*Aroclor 1242	U	32.0		µg/Kg	1	12/6/12 11:09	12/6/12 16:24	SW 8082	BDP
*Aroclor 1248	U	32.0		µg/Kg	1	12/6/12 11:09	12/6/12 16:24	SW 8082	BDP
*Aroclor 1254	U	32.0		µg/Kg	1	12/6/12 11:09	12/6/12 16:24	SW 8082	BDP
*Aroclor 1260	U	32.0		µg/Kg	1	12/6/12 11:09	12/6/12 16:24	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 13:56	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 13:56	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 13:41	SW 6010B	JHN
***Barium**	**0.230**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:41	SW 6010B	JHN
***Cadmium**	**2.04**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:36	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:41	SW 6010B	JHN
***Lead**	**1.79**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:36	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 13:41	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/14/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 1 **Lab ID:** 12L0102-01
Collection Date: 12/5/12 8:30 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.214		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**6.89**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:09	SW 9045C	CCD
*Phenolics	U	5.00		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.35		mg/Kg	1	12/14/12 9:50	12/14/12 14:48	SW 9034	RSR
Percent Solids	**91.5**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 2 **Lab ID:** 12L0102-02
Collection Date: 12/5/12 9:30 **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	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/10/12 11:28	12/10/12 13:42	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:27	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 16:46	SW 8082	BDP
*Aroclor 1221	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 16:46	SW 8082	BDP
*Aroclor 1232	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 16:46	SW 8082	BDP
*Aroclor 1242	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 16:46	SW 8082	BDP
*Aroclor 1248	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 16:46	SW 8082	BDP
*Aroclor 1254	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 16:46	SW 8082	BDP
*Aroclor 1260	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 16:46	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 14:32	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 14:32	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 13:44	SW 6010B	JHN
***Barium**	**0.0595**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:44	SW 6010B	JHN
***Cadmium**	**1.65**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:40	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:44	SW 6010B	JHN
***Lead**	**2.29**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:40	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 13:44	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/14/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 2 **Lab ID:** 12L0102-02
Collection Date: 12/5/12 9:30 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.243		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**6.08**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:12	SW 9045C	CCD
*Phenolics	U	4.95		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.19		mg/Kg	1	12/14/12 9:50	12/14/12 14:48	SW 9034	RSR
Percent Solids	**86.3**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 3 **Lab ID:** 12L0102-03
Collection Date: 12/5/12 10:30 **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	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/10/12 11:28	12/10/12 14:15	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 19:59	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.7		µg/Kg	1	12/6/12 11:09	12/6/12 17:08	SW 8082	BDP
*Aroclor 1221	U	32.7		µg/Kg	1	12/6/12 11:09	12/6/12 17:08	SW 8082	BDP
*Aroclor 1232	U	32.7		µg/Kg	1	12/6/12 11:09	12/6/12 17:08	SW 8082	BDP
*Aroclor 1242	U	32.7		µg/Kg	1	12/6/12 11:09	12/6/12 17:08	SW 8082	BDP
*Aroclor 1248	U	32.7		µg/Kg	1	12/6/12 11:09	12/6/12 17:08	SW 8082	BDP
*Aroclor 1254	U	32.7		µg/Kg	1	12/6/12 11:09	12/6/12 17:08	SW 8082	BDP
*Aroclor 1260	U	32.7		µg/Kg	1	12/6/12 11:09	12/6/12 17:08	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 14:42	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 14:42	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 13:48	SW 6010B	JHN
***Barium**	**0.118**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:48	SW 6010B	JHN
***Cadmium**	**0.822**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:48	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:48	SW 6010B	JHN
***Lead**	**0.922**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:48	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 13:48	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/14/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 3 **Lab ID:** 12L0102-03
Collection Date: 12/5/12 10:30 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.227		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**6.64**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:15	SW 9045C	CCD
*Phenolics	U	5.00		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.22		mg/Kg	1	12/14/12 9:50	12/14/12 14:48	SW 9034	RSR
Percent Solids	**89.6**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 4 **Lab ID:** 12L0102-04
Collection Date: 12/5/12 11:00 **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	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/10/12 11:28	12/10/12 14:48	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 20:31	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 17:30	SW 8082	BDP
*Aroclor 1221	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 17:30	SW 8082	BDP
*Aroclor 1232	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 17:30	SW 8082	BDP
*Aroclor 1242	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 17:30	SW 8082	BDP
*Aroclor 1248	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 17:30	SW 8082	BDP
*Aroclor 1254	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 17:30	SW 8082	BDP
*Aroclor 1260	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 17:30	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 15:19	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 15:19	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 13:52	SW 6010B	JHN
***Barium**	**0.177**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:52	SW 6010B	JHN
***Cadmium**	**0.868**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:52	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:52	SW 6010B	JHN
***Lead**	**10.3**	0.200		mg/L	20	12/7/12 11:20	12/8/12 14:44	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 13:52	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 4 **Lab ID:** 12L0102-04
Collection Date: 12/5/12 11:00 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.250		mg/Kg	1	12/13/12 13:11	12/13/12 16:12	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**6.92**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:15	SW 9045C	CCD
*Phenolics	U	4.90		mg/Kg	1	12/7/12 9:05	12/7/12 13:13	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.42		mg/Kg	1	12/14/12 9:50	12/14/12 14:48	SW 9034	RSR
Percent Solids	**92.7**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 5 **Lab ID:** 12L0102-05
Collection Date: 12/5/12 11:26 **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	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/10/12 11:28	12/10/12 15:22	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:03	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 17:52	SW 8082	BDP
*Aroclor 1221	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 17:52	SW 8082	BDP
*Aroclor 1232	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 17:52	SW 8082	BDP
*Aroclor 1242	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 17:52	SW 8082	BDP
*Aroclor 1248	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 17:52	SW 8082	BDP
*Aroclor 1254	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 17:52	SW 8082	BDP
*Aroclor 1260	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 17:52	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 15:28	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 15:28	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 13:56	SW 6010B	JHN
***Barium**	**0.274**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:56	SW 6010B	JHN
***Cadmium**	**0.424**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:56	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:56	SW 6010B	JHN
***Lead**	**0.983**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:56	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 13:56	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 5 **Lab ID:** 12L0102-05
Collection Date: 12/5/12 11:26 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.231		mg/Kg	1	12/13/12 13:11	12/13/12 16:12	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**7.27**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:22	SW 9045C	CCD
*Phenolics	U	5.00		mg/Kg	1	12/7/12 9:05	12/7/12 13:13	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.28		mg/Kg	1	12/14/12 9:50	12/14/12 14:48	SW 9034	RSR
Percent Solids	**93.6**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 6 **Lab ID:** 12L0102-06
Collection Date: 12/5/12 11:51 **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	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/11/12 17:00	12/11/12 19:30	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 21:35	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.2		µg/Kg	1	12/6/12 11:09	12/6/12 18:14	SW 8082	BDP
*Aroclor 1221	U	32.2		µg/Kg	1	12/6/12 11:09	12/6/12 18:14	SW 8082	BDP
*Aroclor 1232	U	32.2		µg/Kg	1	12/6/12 11:09	12/6/12 18:14	SW 8082	BDP
*Aroclor 1242	U	32.2		µg/Kg	1	12/6/12 11:09	12/6/12 18:14	SW 8082	BDP
*Aroclor 1248	U	32.2		µg/Kg	1	12/6/12 11:09	12/6/12 18:14	SW 8082	BDP
*Aroclor 1254	U	32.2		µg/Kg	1	12/6/12 11:09	12/6/12 18:14	SW 8082	BDP
*Aroclor 1260	U	32.2		µg/Kg	1	12/6/12 11:09	12/6/12 18:14	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 15:37	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 15:37	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 13:59	SW 6010B	JHN
***Barium**	**0.524**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:59	SW 6010B	JHN
***Cadmium**	**0.705**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:59	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 13:59	SW 6010B	JHN
***Lead**	**1.26**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:48	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 13:59	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 6 **Lab ID:** 12L0102-06
Collection Date: 12/5/12 11:51 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.236		mg/Kg	1	12/13/12 13:11	12/13/12 16:12	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**7.36**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:24	SW 9045C	CCD
*Phenolics	U	4.76		mg/Kg	1	12/7/12 9:05	12/7/12 13:13	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.05		mg/Kg	1	12/14/12 11:00	12/14/12 14:48	SW 9034	RSR
Percent Solids	**85.5**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 7 **Lab ID:** 12L0102-07
Collection Date: 12/5/12 13:04 **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	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/11/12 17:00	12/11/12 20:03	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:07	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.3		µg/Kg	1	12/6/12 11:09	12/6/12 18:36	SW 8082	BDP
*Aroclor 1221	U	32.3		µg/Kg	1	12/6/12 11:09	12/6/12 18:36	SW 8082	BDP
*Aroclor 1232	U	32.3		µg/Kg	1	12/6/12 11:09	12/6/12 18:36	SW 8082	BDP
*Aroclor 1242	U	32.3		µg/Kg	1	12/6/12 11:09	12/6/12 18:36	SW 8082	BDP
*Aroclor 1248	U	32.3		µg/Kg	1	12/6/12 11:09	12/6/12 18:36	SW 8082	BDP
*Aroclor 1254	U	32.3		µg/Kg	1	12/6/12 11:09	12/6/12 18:36	SW 8082	BDP
*Aroclor 1260	U	32.3		µg/Kg	1	12/6/12 11:09	12/6/12 18:36	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 15:47	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 15:47	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 14:03	SW 6010B	JHN
***Barium**	**0.246**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:03	SW 6010B	JHN
***Cadmium**	**0.962**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:03	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:03	SW 6010B	JHN
***Lead**	**7.55**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:51	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 14:03	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/14/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 7 **Lab ID:** 12L0102-07
Collection Date: 12/5/12 13:04 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.248		mg/Kg	1	12/13/12 13:11	12/13/12 16:12	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**6.88**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:26	SW 9045C	CCD
*Phenolics	U	4.95		mg/Kg	1	12/11/12 10:45	12/11/12 14:30	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.50		mg/Kg	1	12/14/12 11:00	12/14/12 14:48	SW 9034	RSR
Percent Solids	**87.6**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 8 **Lab ID:** 12L0102-08
Collection Date: 12/5/12 13:38 **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	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/11/12 17:00	12/11/12 20:36	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 22:39	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 18:58	SW 8082	BDP
*Aroclor 1221	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 18:58	SW 8082	BDP
*Aroclor 1232	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 18:58	SW 8082	BDP
*Aroclor 1242	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 18:58	SW 8082	BDP
*Aroclor 1248	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 18:58	SW 8082	BDP
*Aroclor 1254	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 18:58	SW 8082	BDP
*Aroclor 1260	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 18:58	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 15:56	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 15:56	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 14:07	SW 6010B	JHN
***Barium**	**0.103**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:07	SW 6010B	JHN
***Cadmium**	**0.258**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:07	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:07	SW 6010B	JHN
***Lead**	**9.45**	0.200		mg/L	20	12/7/12 11:20	12/8/12 14:55	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 14:07	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/14/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 8 **Lab ID:** 12L0102-08
Collection Date: 12/5/12 13:38 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
***Cyanide**	**0.228**	0.225		mg/Kg	1	12/13/12 13:11	12/13/12 16:12	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**5.90**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:27	SW 9045C	CCD
*Phenolics	U	4.67		mg/Kg	1	12/11/12 10:45	12/11/12 14:30	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.13		mg/Kg	1	12/14/12 11:00	12/14/12 14:48	SW 9034	RSR
Percent Solids	**89.4**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD

Precision Petroleum Labs, Inc

Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 9 **Lab ID:** 12L0102-09
Collection Date: 12/5/12 14:49 **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	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/11/12 17:00	12/11/12 21:09	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/7/12 13:48	12/7/12 23:11	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 19:20	SW 8082	BDP
*Aroclor 1221	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 19:20	SW 8082	BDP
*Aroclor 1232	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 19:20	SW 8082	BDP
*Aroclor 1242	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 19:20	SW 8082	BDP
*Aroclor 1248	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 19:20	SW 8082	BDP
*Aroclor 1254	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 19:20	SW 8082	BDP
*Aroclor 1260	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 19:20	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/7/12 11:20	12/12/12 16:05	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	12/7/12 11:20	12/12/12 16:05	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/7/12 11:20	12/8/12 14:11	SW 6010B	JHN
***Barium**	**0.106**	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:11	SW 6010B	JHN
***Cadmium**	**1.17**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:59	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/7/12 11:20	12/8/12 14:11	SW 6010B	JHN
***Lead**	**6.06**	0.100		mg/L	10	12/7/12 11:20	12/8/12 14:59	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/7/12 11:20	12/8/12 14:11	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/14/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102
Client Sample ID: Load 9 **Lab ID:** 12L0102-09
Collection Date: 12/5/12 14:49 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.243		mg/Kg	1	12/14/12 12:13	12/14/12 15:50	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/6/12 10:00	12/6/12 10:30	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/6/12 10:00	12/6/12 10:30	SW 9095A	CCD
***pH**	**6.78**	0.0100		pH Units	1	12/6/12 9:53	12/6/12 11:30	SW 9045C	CCD
*Phenolics	U	4.76		mg/Kg	1	12/11/12 10:45	12/11/12 14:30	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.42		mg/Kg	1	12/14/12 11:00	12/14/12 14:48	SW 9034	RSR
Percent Solids	**90.7**	0.100		%	1	12/6/12 10:35	12/7/12 8:20	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Special Waste Requirements 8-14-12 **Lab Order:** 12L0102

Notes and Definitions

S1	Analyte exceeds the laboratory control sample acceptance criteria, but there is no observable concentration in the sample.
S	Spike recovery outside acceptance limits.
R	RPD outside acceptance limits.
P1	Pass
E	Result above quantitation range.
*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

FHRPRU001593

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 St
City, State, Zip Code	Peru, IL 61354
Phone / Facsimile	815-224-5431
Project Name / Number	Excavation
Project Location	Peru / FH
P.O. # or Invoice To	FH
Contact Person	R. Hubbard / M. Catiatorri

Analysis and/or Method Requested: Special West Parameters RCRA

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	Special West Parameters RCRA	Sampler Comments
Load #1	12-5-12	8:30am	S	0	2	X		X	
Load #2	12-5-12	9:30am	S	0	2	X		X	
Load #3	12-5-12	10:30	S	0	2	X		X	
Load #4	12-5-12	11:00am	S	0	2	X		X	
Load #5	12-5-12	11:26	S	0	2	X		X	
Load #6	12/5/12	11:51	S	0	2	X		X	
Load #7	12/5/12	13:04	S	0	2	X		X	
Load #8	12/5/12	13:38	S	0	2	X		X	
Load #9	12/5/12	14:49	S	0	2	X		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]	12/5/12	5:46pm	PAS	12/5/12	5:46pm	HAND

Special Instructions: 6-40 z jars per composite

Turnaround Time: Standard ☐ Rush ☑
Date Required: 4 to 5 TAT

QC Level: 1 ☑ 2 ☐ 3 ☐ 4 ☐

On wet ice? Yes No

Temperature (°C): 2.2°C

Monday, December 10, 2012

Michael Schmidt

Flint Hills Resources
501 Brunner Street
Peru, IL 61354

TEL: (815) 224-5451

FAX: NA

RE: Excavation Trailer Soil/FH Peru PAS WO: 12K0562

Prairie Analytical Systems, Inc. received 2 sample(s) on 11/30/2012 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:** 12/10/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Excavation Trailer Soil/FH Peru **Lab Order:** 12K0562
Client Sample ID: Trailer 1 **Lab ID:** 12K0562-01
Collection Date: 11/30/12 8:00 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*2-Butanone	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*Carbon tetrachloride	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*Chlorobenzene	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*Chloroform	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*1,4-Dichlorobenzene	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*1,2-Dichloroethane	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*1,1-Dichloroethene	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*Tetrachloroethene	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*Trichloroethene	U	125		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
*Vinyl chloride	U	100		µg/L	5	12/4/12 13:05	12/5/12 8:46	SW 8260B Re	BDP
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*2,4-Dinitrotoluene	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*Hexachlorobenzene	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*Hexachlorobutadiene	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*Hexachloroethane	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*2-Methylphenol	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
3 & 4-Methylphenol	U	19.0		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*Nitrobenzene	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*Pentachlorophenol	U	47.6		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
Pyridine	U	47.6		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	9.52		µg/L	1	12/4/12 13:42	12/4/12 16:35	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.7		µg/Kg	1	12/3/12 10:27	12/4/12 11:28	SW 8082	BDP
*Aroclor 1221	U	32.7		µg/Kg	1	12/3/12 10:27	12/4/12 11:28	SW 8082	BDP
*Aroclor 1232	U	32.7		µg/Kg	1	12/3/12 10:27	12/4/12 11:28	SW 8082	BDP
*Aroclor 1242	U	32.7		µg/Kg	1	12/3/12 10:27	12/4/12 11:28	SW 8082	BDP
*Aroclor 1248	U	32.7		µg/Kg	1	12/3/12 10:27	12/4/12 11:28	SW 8082	BDP
*Aroclor 1254	U	32.7		µg/Kg	1	12/3/12 10:27	12/4/12 11:28	SW 8082	BDP
*Aroclor 1260	U	32.7		µg/Kg	1	12/3/12 10:27	12/4/12 11:28	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 15:53	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 15:53	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 13:29	SW 6010B	JHN
***Barium**	**0.110**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:29	SW 6010B	JHN
***Cadmium**	**0.942**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:29	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:29	SW 6010B	JHN
***Lead**	**7.40**	0.100		mg/L	10	12/5/12 9:59	12/5/12 15:03	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 13:29	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/10/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Excavation Trailer Soil/FH Peru **Lab Order:** 12K0562
Client Sample ID: Trailer 1 **Lab ID:** 12K0562-01
Collection Date: 11/30/12 8:00 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.286		mg/Kg	1	12/4/12 12:33	12/4/12 17:07	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/3/12 10:00	12/3/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/3/12 10:00	12/3/12 10:00	SW 9095A	CCD
***pH**	**6.64**	0.0100		pH Units	1	12/3/12 9:20	12/3/12 13:36	SW 9045C	CCD
*Phenolics	U	4.03		mg/Kg	1	12/5/12 13:27	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	7.94		mg/Kg	1	12/4/12 10:32	12/5/12 17:15	SW 9034	RSR
Percent Solids	**91.8**	0.100		%	1	12/3/12 10:00	12/3/12 15:51	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Excavation Trailer Soil/FH Peru **Lab Order:** 12K0562
Client Sample ID: Trailer 2 **Lab ID:** 12K0562-02
Collection Date: 11/30/12 10:15 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Volatile Organic Compounds by GC-MS									
*Benzene	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*2-Butanone	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*Carbon tetrachloride	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*Chlorobenzene	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*Chloroform	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*1,4-Dichlorobenzene	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*1,2-Dichloroethane	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*1,1-Dichloroethene	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*Tetrachloroethene	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*Trichloroethene	U	125		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
*Vinyl chloride	U	100		µg/L	5	12/4/12 13:05	12/5/12 9:16	SW 8260B Re	BDP
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*Hexachlorobenzene	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*Hexachlorobutadiene	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*Hexachloroethane	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*2-Methylphenol	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
3 & 4-Methylphenol	U	20.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*Nitrobenzene	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*Pentachlorophenol	U	50.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
Pyridine	U	50.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/4/12 13:42	12/4/12 17:07	SW 8270C	BDP
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.3		µg/Kg	1	12/3/12 10:27	12/4/12 12:01	SW 8082	BDP
*Aroclor 1221	U	32.3		µg/Kg	1	12/3/12 10:27	12/4/12 12:01	SW 8082	BDP
*Aroclor 1232	U	32.3		µg/Kg	1	12/3/12 10:27	12/4/12 12:01	SW 8082	BDP
*Aroclor 1242	U	32.3		µg/Kg	1	12/3/12 10:27	12/4/12 12:01	SW 8082	BDP
*Aroclor 1248	U	32.3		µg/Kg	1	12/3/12 10:27	12/4/12 12:01	SW 8082	BDP
*Aroclor 1254	U	32.3		µg/Kg	1	12/3/12 10:27	12/4/12 12:01	SW 8082	BDP
*Aroclor 1260	U	32.3		µg/Kg	1	12/3/12 10:27	12/4/12 12:01	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 16:59	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 16:59	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 13:44	SW 6010B	JHN
***Barium**	**0.397**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:44	SW 6010B	JHN
***Cadmium**	**0.341**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:44	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:44	SW 6010B	JHN
***Lead**	**23.1**	1.00		mg/L	100	12/5/12 9:59	12/5/12 15:07	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 13:44	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/10/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Excavation Trailer Soil/FH Peru **Lab Order:** 12K0562
Client Sample ID: Trailer 2 **Lab ID:** 12K0562-02
Collection Date: 11/30/12 10:15 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.273		mg/Kg	1	12/4/12 12:33	12/4/12 17:07	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/3/12 10:00	12/3/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/3/12 10:00	12/3/12 10:00	SW 9095A	CCD
***pH**	**7.30**	0.0100		pH Units	1	12/3/12 9:20	12/3/12 13:36	SW 9045C	CCD
*Phenolics	U	4.67		mg/Kg	1	12/5/12 13:27	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	8.35		mg/Kg	1	12/4/12 10:32	12/5/12 17:15	SW 9034	RSR
Percent Solids	**90.0**	0.100		%	1	12/3/12 10:00	12/3/12 15:51	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/10/12 0:00	12/10/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Excavation Trailer Soil/FH Peru **Lab Order:** 12K0562

Notes and Definitions

S	Spike recovery outside acceptance limits.
R	RPD outside acceptance limits.
P1	Pass
I	Matrix interference.
E	Result above quantitation range.
B	Analyte detected in the associated method blank.
*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

FHRPRU001600

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 Street
City, State, Zip Code	Peru, IL 61354
Phone / Facsimile	815-224-5451
Project Name / Number	Excavation
Project Location	F. Hills / Peru
P.O. # or Invoice To	FH
Contact Person	R. Hubbard / M Cantu

Analysis and/or Method Requested: Special Waste Parameter List

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	Special Waste Parameter List	Sampler Comments
Trailer #1	11-30-12	8:00 AM	S	0	1	✓		✓	
Trailer #2	11-30-12	10:15 AM	S	0	1	✓		✓	

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]	11/30/12	4:45 pm	PAS	11/30/12	4:45 pm	HAND

Special Instructions: 4-oz jars
5 grabs per trailer / composited in the field / FH staff
to 6 grabs

Turnaround Time: Standard ☑ Rush ☐
Date Required: 7 Day

QC Level: 1 ☑ 2 ☐ 3 ☐ 4 ☐

On wet ice? Yes No

Temperature (°C): 9.9°C

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

Monday, December 10, 2012

Michael Schmidt

Flint Hills Resources
501 Brunner Street
Peru, IL 61354

TEL: (815) 224-5451

FAX: NA

RE: Trailer Excavtion Soil - FHR/Peru PAS WO: 12L0026

Prairie Analytical Systems, Inc. received 6 sample(s) on 12/3/2012 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

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 3 **Lab ID:** 12L0026-01
Collection Date: 12/3/12 11:00 **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	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/5/12 17:39	12/5/12 21:49	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 19:27	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.9		µg/Kg	1	12/4/12 10:44	12/5/12 11:25	SW 8082	BDP
*Aroclor 1221	U	32.9		µg/Kg	1	12/4/12 10:44	12/5/12 11:25	SW 8082	BDP
*Aroclor 1232	U	32.9		µg/Kg	1	12/4/12 10:44	12/5/12 11:25	SW 8082	BDP
*Aroclor 1242	U	32.9		µg/Kg	1	12/4/12 10:44	12/5/12 11:25	SW 8082	BDP
*Aroclor 1248	U	32.9		µg/Kg	1	12/4/12 10:44	12/5/12 11:25	SW 8082	BDP
*Aroclor 1254	U	32.9		µg/Kg	1	12/4/12 10:44	12/5/12 11:25	SW 8082	BDP
*Aroclor 1260	U	32.9		µg/Kg	1	12/4/12 10:44	12/5/12 11:25	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 17:56	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 17:56	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 13:56	SW 6010B	JHN
***Barium**	**0.0975**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:56	SW 6010B	JHN
***Cadmium**	**1.77**	0.100		mg/L	10	12/5/12 9:59	12/5/12 15:15	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:56	SW 6010B	JHN
***Lead**	**40.8**	1.00		mg/L	100	12/5/12 9:59	12/5/12 15:11	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 13:56	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/10/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 3 **Lab ID:** 12L0026-01
Collection Date: 12/3/12 11:00 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.229		mg/Kg	1	12/7/12 10:44	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/4/12 9:00	12/4/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/4/12 9:00	12/4/12 10:00	SW 9095A	CCD
***pH**	**6.47**	0.0100		pH Units	1	12/4/12 9:15	12/4/12 12:14	SW 9045C	CCD
*Phenolics	U	4.59		mg/Kg	1	12/5/12 13:27	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	7.88		mg/Kg	1	12/4/12 10:32	12/5/12 17:15	SW 9034	RSR
Percent Solids	**85.1**	0.100		%	1	12/4/12 9:50	12/4/12 15:07	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 4 **Lab ID:** 12L0026-02
Collection Date: 12/3/12 12:54 **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	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/5/12 17:39	12/5/12 22:22	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 20:00	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.4		µg/Kg	1	12/4/12 10:44	12/5/12 11:58	SW 8082	BDP
*Aroclor 1221	U	32.4		µg/Kg	1	12/4/12 10:44	12/5/12 11:58	SW 8082	BDP
*Aroclor 1232	U	32.4		µg/Kg	1	12/4/12 10:44	12/5/12 11:58	SW 8082	BDP
*Aroclor 1242	U	32.4		µg/Kg	1	12/4/12 10:44	12/5/12 11:58	SW 8082	BDP
*Aroclor 1248	U	32.4		µg/Kg	1	12/4/12 10:44	12/5/12 11:58	SW 8082	BDP
*Aroclor 1254	U	32.4		µg/Kg	1	12/4/12 10:44	12/5/12 11:58	SW 8082	BDP
*Aroclor 1260	U	32.4		µg/Kg	1	12/4/12 10:44	12/5/12 11:58	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 18:05	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 18:05	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 13:59	SW 6010B	JHN
***Barium**	**0.203**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:59	SW 6010B	JHN
***Cadmium**	**0.584**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:59	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 13:59	SW 6010B	JHN
***Lead**	**2.77**	0.100		mg/L	10	12/5/12 9:59	12/5/12 15:19	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 13:59	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/10/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 4 **Lab ID:** 12L0026-02
Collection Date: 12/3/12 12:54 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.243		mg/Kg	1	12/7/12 10:44	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/4/12 9:00	12/4/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/4/12 9:00	12/4/12 10:00	SW 9095A	CCD
***pH**	**7.11**	0.0100		pH Units	1	12/4/12 9:15	12/4/12 12:14	SW 9045C	CCD
*Phenolics	U	4.67		mg/Kg	1	12/5/12 13:27	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	7.98		mg/Kg	1	12/4/12 10:32	12/5/12 17:15	SW 9034	RSR
Percent Solids	**85.5**	0.100		%	1	12/4/12 9:50	12/4/12 15:07	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 5 **Lab ID:** 12L0026-03
Collection Date: 12/3/12 13:42 **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	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/5/12 17:39	12/5/12 22:55	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/7/12 2:02	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 12:31	SW 8082	BDP
*Aroclor 1221	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 12:31	SW 8082	BDP
*Aroclor 1232	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 12:31	SW 8082	BDP
*Aroclor 1242	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 12:31	SW 8082	BDP
*Aroclor 1248	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 12:31	SW 8082	BDP
*Aroclor 1254	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 12:31	SW 8082	BDP
*Aroclor 1260	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 12:31	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 18:15	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 18:15	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 14:03	SW 6010B	JHN
***Barium**	**0.174**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:03	SW 6010B	JHN
***Cadmium**	**0.653**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:03	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:03	SW 6010B	JHN
***Lead**	**7.16**	0.100		mg/L	10	12/5/12 9:59	12/5/12 15:22	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 14:03	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/10/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 5 **Lab ID:** 12L0026-03
Collection Date: 12/3/12 13:42 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
***Cyanide**	**0.261**	0.238		mg/Kg	1	12/7/12 10:44	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/4/12 9:00	12/4/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/4/12 9:00	12/4/12 10:00	SW 9095A	CCD
***pH**	**6.89**	0.0100		pH Units	1	12/4/12 9:15	12/4/12 12:14	SW 9045C	CCD
*Phenolics	U	4.67		mg/Kg	1	12/5/12 13:27	12/6/12 9:39	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.48		mg/Kg	1	12/7/12 9:13	12/7/12 12:00	SW 9034	RSR
Percent Solids	**84.9**	0.100		%	1	12/4/12 9:50	12/4/12 15:07	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 6 **Lab ID:** 12L0026-04
Collection Date: 12/3/12 14:04 **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	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/5/12 17:39	12/5/12 23:29	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:04	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.5		µg/Kg	1	12/4/12 10:44	12/5/12 13:05	SW 8082	BDP
*Aroclor 1221	U	32.5		µg/Kg	1	12/4/12 10:44	12/5/12 13:05	SW 8082	BDP
*Aroclor 1232	U	32.5		µg/Kg	1	12/4/12 10:44	12/5/12 13:05	SW 8082	BDP
*Aroclor 1242	U	32.5		µg/Kg	1	12/4/12 10:44	12/5/12 13:05	SW 8082	BDP
*Aroclor 1248	U	32.5		µg/Kg	1	12/4/12 10:44	12/5/12 13:05	SW 8082	BDP
*Aroclor 1254	U	32.5		µg/Kg	1	12/4/12 10:44	12/5/12 13:05	SW 8082	BDP
*Aroclor 1260	U	32.5		µg/Kg	1	12/4/12 10:44	12/5/12 13:05	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 18:24	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 18:24	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 14:18	SW 6010B	JHN
***Barium**	**0.141**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:18	SW 6010B	JHN
***Cadmium**	**0.500**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:18	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:18	SW 6010B	JHN
***Lead**	**5.67**	0.100		mg/L	10	12/5/12 9:59	12/5/12 15:26	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 14:18	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 6 **Lab ID:** 12L0026-04
Collection Date: 12/3/12 14:04 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.243		mg/Kg	1	12/7/12 10:44	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/4/12 9:00	12/4/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/4/12 9:00	12/4/12 10:00	SW 9095A	CCD
***pH**	**6.54**	0.0100		pH Units	1	12/4/12 9:15	12/4/12 12:14	SW 9045C	CCD
*Phenolics	U	4.95		mg/Kg	1	12/6/12 9:00	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.44		mg/Kg	1	12/7/12 9:13	12/7/12 12:00	SW 9034	RSR
Percent Solids	**87.2**	0.100		%	1	12/4/12 9:50	12/4/12 15:07	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 7 **Lab ID:** 12L0026-05
Collection Date: 12/3/12 14:33 **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	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/6/12 17:40	12/6/12 21:11	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 21:36	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 13:38	SW 8082	BDP
*Aroclor 1221	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 13:38	SW 8082	BDP
*Aroclor 1232	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 13:38	SW 8082	BDP
*Aroclor 1242	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 13:38	SW 8082	BDP
*Aroclor 1248	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 13:38	SW 8082	BDP
*Aroclor 1254	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 13:38	SW 8082	BDP
*Aroclor 1260	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 13:38	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 18:33	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 18:33	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 14:22	SW 6010B	JHN
***Barium**	**0.160**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:22	SW 6010B	JHN
***Cadmium**	**1.32**	0.100		mg/L	10	12/5/12 9:59	12/5/12 15:34	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:22	SW 6010B	JHN
***Lead**	**41.8**	1.00		mg/L	100	12/5/12 9:59	12/5/12 15:30	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 14:22	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 7 **Lab ID:** 12L0026-05
Collection Date: 12/3/12 14:33 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
***Cyanide**	**0.252**	0.214		mg/Kg	1	12/7/12 10:44	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/4/12 9:00	12/4/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/4/12 9:00	12/4/12 10:00	SW 9095A	CCD
***pH**	**6.56**	0.0100		pH Units	1	12/4/12 9:15	12/4/12 12:23	SW 9045C	CCD
*Phenolics	U	5.00		mg/Kg	1	12/6/12 9:00	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.48		mg/Kg	1	12/7/12 9:13	12/7/12 12:00	SW 9034	RSR
Percent Solids	**87.2**	0.100		%	1	12/4/12 9:50	12/4/12 15:07	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 8 **Lab ID:** 12L0026-06
Collection Date: 12/3/12 15:11 **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	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/6/12 17:40	12/6/12 21:44	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/5/12 13:59	12/5/12 22:08	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 14:12	SW 8082	BDP
*Aroclor 1221	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 14:12	SW 8082	BDP
*Aroclor 1232	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 14:12	SW 8082	BDP
*Aroclor 1242	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 14:12	SW 8082	BDP
*Aroclor 1248	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 14:12	SW 8082	BDP
*Aroclor 1254	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 14:12	SW 8082	BDP
*Aroclor 1260	U	32.8		µg/Kg	1	12/4/12 10:44	12/5/12 14:12	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/5/12 9:59	12/5/12 18:43	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/5/12 9:59	12/5/12 18:43	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/5/12 9:59	12/5/12 14:26	SW 6010B	JHN
***Barium**	**0.105**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:26	SW 6010B	JHN
***Cadmium**	**0.601**	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:26	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/5/12 9:59	12/5/12 14:26	SW 6010B	JHN
***Lead**	**35.9**	1.00		mg/L	100	12/5/12 9:59	12/5/12 15:37	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/5/12 9:59	12/5/12 14:26	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026
Client Sample ID: Trailer 8 **Lab ID:** 12L0026-06
Collection Date: 12/3/12 15:11 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
***Cyanide**	**0.242**	0.221		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/4/12 9:00	12/4/12 10:00	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/4/12 9:00	12/4/12 10:00	SW 9095A	CCD
***pH**	**6.89**	0.0100		pH Units	1	12/4/12 9:15	12/4/12 12:23	SW 9045C	CCD
*Phenolics	U	5.00		mg/Kg	1	12/6/12 9:00	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.13		mg/Kg	1	12/7/12 9:13	12/7/12 12:00	SW 9034	RSR
Percent Solids	**90.8**	0.100		%	1	12/4/12 9:50	12/4/12 15:07	ASTM D2216	CCD

Precision Petroleum Labs, Inc

Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer Excavtion Soil - FHR/Peru **Lab Order:** 12L0026

Notes and Definitions

S1	Analyte exceeds the laboratory control sample acceptance criteria, but there is no observable concentration in the sample.
S	Spike recovery outside acceptance limits.
R	RPD outside acceptance limits.
P1	Pass
E	Result above quantitation range.
*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

FHRPRU001615

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 Street
City, State, Zip Code	Peru, IL 61354
Phone / Facsimile	815-224-5451
Project Name / Number	Excavation Project
Project Location	Peru, FH
P.O. # or Invoice To	F. Hills
Contact Person	R. Hubbard / J. Cadmian

Analysis and/or Method Requested: Special/Waste Parameter List

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	Special/Waste Parameter List	Sampler Comments
Trailer #3	12/3/12	11:00	S	O	1	X		X	
Trailer #4	12/3/12	12:54	S	O	1	X		X	
Trailer #5	12/3/12	13:42	S	O	1	X		X	
Trailer #6	12/3/12	14:04	S	O	1	X		X	
Trailer #7	12/3/12	14:33	S	O	1	X		X	
Trailer #8	12/3/12	15:11	S	O	1	X		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]	12/3/12	5:45	PAS	12/3/12	5:45	HAND

Special Instructions: 6-4oz jars per Composite / Infrared field cooling begun.

Turnaround Time: Standard ☑ Rush ☐
Date Required: 4 to 5 Day

QC Level: 1☑ 2☐ 3☐ 4☐

On wet ice? Yes No

Temperature (°C): 10.2°C

PAS COC Rev. 3

Page 1 of 1

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

Tuesday, December 11, 2012

Michael Schmidt

Flint Hills Resources
501 Brunner Street
Peru, IL 61354

TEL: (815) 224-5451

FAX: NA

RE: Trailer and Stock Pile Soil - FH/Peru PAS WO: 12L0075

Prairie Analytical Systems, Inc. received 5 sample(s) on 12/4/2012 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

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 9 **Lab ID:** 12L0075-01
Collection Date: 12/4/12 9:00 **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	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/6/12 17:40	12/6/12 22:18	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 19:37	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 14:34	SW 8082	BDP
*Aroclor 1221	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 14:34	SW 8082	BDP
*Aroclor 1232	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 14:34	SW 8082	BDP
*Aroclor 1242	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 14:34	SW 8082	BDP
*Aroclor 1248	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 14:34	SW 8082	BDP
*Aroclor 1254	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 14:34	SW 8082	BDP
*Aroclor 1260	U	32.1		µg/Kg	1	12/6/12 11:09	12/6/12 14:34	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/6/12 10:01	12/7/12 1:27	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/6/12 10:01	12/7/12 1:27	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/6/12 10:01	12/6/12 15:04	SW 6010B	JHN
***Barium**	**0.125**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:04	SW 6010B	JHN
***Cadmium**	**0.757**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:04	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:04	SW 6010B	JHN
***Lead**	**0.800**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:04	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/6/12 10:01	12/6/12 15:04	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/11/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 9 **Lab ID:** 12L0075-01
Collection Date: 12/4/12 9:00 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.243		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/5/12 10:00	12/5/12 10:50	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/5/12 10:00	12/5/12 10:50	SW 9095A	CCD
***pH**	**6.70**	0.0100		pH Units	1	12/5/12 10:40	12/5/12 12:04	SW 9045C	CMH
*Phenolics	U	4.95		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.24		mg/Kg	1	12/10/12 9:29	12/10/12 16:28	SW 9034	RSR
Percent Solids	**88.0**	0.100		%	1	12/5/12 10:30	12/5/12 14:31	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 10 **Lab ID:** 12L0075-02
Collection Date: 12/4/12 10:15 **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	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/6/12 17:40	12/6/12 22:51	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 20:09	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 14:56	SW 8082	BDP
*Aroclor 1221	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 14:56	SW 8082	BDP
*Aroclor 1232	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 14:56	SW 8082	BDP
*Aroclor 1242	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 14:56	SW 8082	BDP
*Aroclor 1248	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 14:56	SW 8082	BDP
*Aroclor 1254	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 14:56	SW 8082	BDP
*Aroclor 1260	U	32.5		µg/Kg	1	12/6/12 11:09	12/6/12 14:56	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/6/12 10:01	12/7/12 2:05	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/6/12 10:01	12/7/12 2:05	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/6/12 10:01	12/6/12 15:19	SW 6010B	JHN
***Barium**	**0.176**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:19	SW 6010B	JHN
***Cadmium**	**0.438**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:19	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:19	SW 6010B	JHN
***Lead**	**0.154**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:19	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/6/12 10:01	12/6/12 15:19	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/11/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 10 **Lab ID:** 12L0075-02
Collection Date: 12/4/12 10:15 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.240		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/5/12 10:00	12/5/12 10:50	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/5/12 10:00	12/5/12 10:50	SW 9095A	CCD
***pH**	**6.86**	0.0100		pH Units	1	12/5/12 10:40	12/5/12 12:07	SW 9045C	CMH
*Phenolics	U	4.95		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.42		mg/Kg	1	12/10/12 9:29	12/10/12 16:28	SW 9034	RSR
Percent Solids	**85.7**	0.100		%	1	12/5/12 10:30	12/5/12 14:31	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 11 **Lab ID:** 12L0075-03
Collection Date: 12/4/12 13:15 **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	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/7/12 15:56	12/7/12 19:27	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*2,4-Dinitrotoluene	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*Hexachlorobenzene	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*Hexachlorobutadiene	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*Hexachloroethane	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*2-Methylphenol	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
3 & 4-Methylphenol	U	19.0		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*Nitrobenzene	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*Pentachlorophenol	U	47.6		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
Pyridine	U	47.6		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	9.52		µg/L	1	12/6/12 14:19	12/6/12 20:41	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	31.5		µg/Kg	1	12/6/12 11:09	12/6/12 15:18	SW 8082	BDP
*Aroclor 1221	U	31.5		µg/Kg	1	12/6/12 11:09	12/6/12 15:18	SW 8082	BDP
*Aroclor 1232	U	31.5		µg/Kg	1	12/6/12 11:09	12/6/12 15:18	SW 8082	BDP
*Aroclor 1242	U	31.5		µg/Kg	1	12/6/12 11:09	12/6/12 15:18	SW 8082	BDP
*Aroclor 1248	U	31.5		µg/Kg	1	12/6/12 11:09	12/6/12 15:18	SW 8082	BDP
*Aroclor 1254	U	31.5		µg/Kg	1	12/6/12 11:09	12/6/12 15:18	SW 8082	BDP
*Aroclor 1260	U	31.5		µg/Kg	1	12/6/12 11:09	12/6/12 15:18	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/6/12 10:01	12/7/12 2:14	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/6/12 10:01	12/7/12 2:14	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/6/12 10:01	12/6/12 15:23	SW 6010B	JHN
***Barium**	**0.0966**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:23	SW 6010B	JHN
***Cadmium**	**0.980**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:23	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:23	SW 6010B	JHN
***Lead**	**16.6**	1.00		mg/L	100	12/6/12 10:01	12/6/12 15:48	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/6/12 10:01	12/6/12 15:23	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 11 **Lab ID:** 12L0075-03
Collection Date: 12/4/12 13:15 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.227		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/5/12 10:00	12/5/12 10:50	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/5/12 10:00	12/5/12 10:50	SW 9095A	CCD
***pH**	**6.58**	0.0100		pH Units	1	12/5/12 10:40	12/5/12 12:09	SW 9045C	CMH
*Phenolics	U	4.72		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.35		mg/Kg	1	12/10/12 9:29	12/10/12 16:28	SW 9034	RSR
Percent Solids	**90.7**	0.100		%	1	12/5/12 10:30	12/5/12 14:31	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 12 **Lab ID:** 12L0075-04
Collection Date: 12/4/12 14:31 **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	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/7/12 15:56	12/7/12 20:00	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:13	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 15:40	SW 8082	BDP
*Aroclor 1221	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 15:40	SW 8082	BDP
*Aroclor 1232	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 15:40	SW 8082	BDP
*Aroclor 1242	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 15:40	SW 8082	BDP
*Aroclor 1248	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 15:40	SW 8082	BDP
*Aroclor 1254	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 15:40	SW 8082	BDP
*Aroclor 1260	U	32.9		µg/Kg	1	12/6/12 11:09	12/6/12 15:40	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/6/12 10:01	12/9/12 8:59	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/6/12 10:01	12/7/12 2:24	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/6/12 10:01	12/6/12 15:27	SW 6010B	JHN
***Barium**	**0.180**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:27	SW 6010B	JHN
***Cadmium**	**12.8**	1.00		mg/L	100	12/6/12 10:01	12/6/12 15:52	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:27	SW 6010B	JHN
***Lead**	**14.0**	1.00		mg/L	100	12/6/12 10:01	12/6/12 15:52	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/6/12 10:01	12/6/12 15:27	SW 6010B	JHN

Conventional Chemistry Parameters

Prairie Analytical Systems, Inc. **Date:** 12/11/2012

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 12 **Lab ID:** 12L0075-04
Collection Date: 12/4/12 14:31 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
*Cyanide	U	0.248		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/5/12 10:00	12/5/12 10:50	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/5/12 10:00	12/5/12 10:50	SW 9095A	CCD
***pH**	**6.31**	0.0100		pH Units	1	12/5/12 10:40	12/5/12 12:11	SW 9045C	CMH
*Phenolics	U	4.85		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.44		mg/Kg	1	12/10/12 9:29	12/10/12 16:28	SW 9034	RSR
Percent Solids	**85.6**	0.100		%	1	12/5/12 10:30	12/5/12 14:31	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 13 **Lab ID:** 12L0075-05
Collection Date: 12/4/12 15:05 **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	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*2-Butanone	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*Carbon tetrachloride	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*Chlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*Chloroform	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*1,4-Dichlorobenzene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*1,2-Dichloroethane	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*1,1-Dichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*Tetrachloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*Trichloroethene	U	250		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
*Vinyl chloride	U	200		µg/L	10	12/7/12 15:56	12/7/12 20:33	SW 8260B Re	JKA
TCLP Semi-Volatile Organic Compounds by GC-MS									
*1,4-Dichlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*2,4-Dinitrotoluene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*Hexachlorobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*Hexachlorobutadiene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*Hexachloroethane	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*2-Methylphenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
3 & 4-Methylphenol	U	20.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*Nitrobenzene	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*Pentachlorophenol	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
Pyridine	U	50.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*2,4,5-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
*2,4,6-Trichlorophenol	U	10.0		µg/L	1	12/6/12 14:19	12/6/12 21:46	SW 8270C	JKA
Polychlorinated Biphenyls by GC-ECD									
*Aroclor 1016	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 16:02	SW 8082	BDP
*Aroclor 1221	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 16:02	SW 8082	BDP
*Aroclor 1232	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 16:02	SW 8082	BDP
*Aroclor 1242	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 16:02	SW 8082	BDP
*Aroclor 1248	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 16:02	SW 8082	BDP
*Aroclor 1254	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 16:02	SW 8082	BDP
*Aroclor 1260	U	32.8		µg/Kg	1	12/6/12 11:09	12/6/12 16:02	SW 8082	BDP
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	12/6/12 10:01	12/7/12 2:34	SW 6020A	JHN
*Silver	U	0.0150		mg/L	3	12/6/12 10:01	12/7/12 2:34	SW 6020A	JHN
TCLP Metals by ICP									
*Arsenic	U	0.100		mg/L	1	12/6/12 10:01	12/6/12 15:30	SW 6010B	JHN
***Barium**	**0.184**	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:30	SW 6010B	JHN
***Cadmium**	**4.10**	0.100		mg/L	10	12/6/12 10:01	12/6/12 15:59	SW 6010B	JHN
*Chromium	U	0.0100		mg/L	1	12/6/12 10:01	12/6/12 15:30	SW 6010B	JHN
***Lead**	**19.3**	1.00		mg/L	100	12/6/12 10:01	12/6/12 15:55	SW 6010B	JHN
*Selenium	U	0.0500		mg/L	1	12/6/12 10:01	12/6/12 15:30	SW 6010B	JHN

Conventional Chemistry Parameters

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075
Client Sample ID: Trailer 13 **Lab ID:** 12L0075-05
Collection Date: 12/4/12 15:05 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
***Cyanide**	**0.315**	0.250		mg/Kg	1	12/7/12 13:43	12/10/12 10:20	SW 9014	RSR
*Ignitability (Flash Point)	>200	50.0		°F	1	12/5/12 10:00	12/5/12 10:50	SW 1010 (M)	CCD
*Paint Filter	Pass			P/F	1	12/5/12 10:00	12/5/12 10:50	SW 9095A	CCD
***pH**	**6.69**	0.0100		pH Units	1	12/5/12 10:40	12/5/12 12:14	SW 9045C	CMH
*Phenolics	U	4.72		mg/Kg	1	12/6/12 13:06	12/7/12 9:52	SW 9065 (M)	CMH
*Reactive Sulfide	U	9.19		mg/Kg	1	12/10/12 9:29	12/10/12 16:28	SW 9034	RSR
Percent Solids	**83.1**	0.100		%	1	12/5/12 10:30	12/5/12 14:31	ASTM D2216	CCD
Precision Petroleum Labs, Inc									
Extractable Organic Halides	U	1		mg/Kg	1	12/7/12 0:00	12/7/12 0:00	SW 9023	SUB

LABORATORY RESULTS

Client: Flint Hills Resources
Project: Trailer and Stock Pile Soil - FH/Peru **Lab Order:** 12L0075

Notes and Definitions

S	Spike recovery outside acceptance limits.
R	RPD outside acceptance limits.
P1	Pass
E	Result above quantitation range.
*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

FHRPRU001628

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 Street
City, State, Zip Code	Peru, IL 61354
Phone / Facsimile	815-224-5451
Project Name / Number	Excavation
Project Location	Peru, FH
P.O. # or Invoice To	FH
Contact Person	R. Hubbard

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	Analysis and/or Method Requested: Special Waste Profile Report	Sampler Comments
Trailer #9	12/4/12	9:00	S	0	1	X		X	
Trailer #10	12/4/12	10:15	S	0	1	X		X	
Trailer #11	12/4/12	13:15	S	0	1	X		X	
SP Trailer #12	12/4/12	14:31	S	0	1	X		X	
Trailer #13	12/4/12	15:05	S	0	1	X		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]	12/4/12	5:45 pm	PAS	12/4/12	5:45	HAND

Special Instructions: 6-4oz jars per composite

Turnaround Time: Standard ☑ Rush ☐ Date Required: 4 to 5

QC Level: 1☐ 2☐ 3☐ 4☐

On wet ice? Yes No

Temperature (°C): 3.2°C

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