ILLINOIS Environmental Protection Agency
2010 Hazardous Waste Report
Form GM -- Generation and Management

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

SECTION 1. WASTE DESCRIPTION

A. Waste Description **SOIL & ASPHALT FROM EXCAVATION ACTIVITIES**

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

C. Source Code: **G19** Management Method:

D. Form Code: **W301** Waste Minimization Code X

SECTION 2. QUANTITY GENERATED

A. UOM: **3. Pounds (lbs)** Density: **19.20** lb/gal.

B. Quantity Generated in Current reporting year: **88,220.0**

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 System 1: Management Method: Quantity managed on-site this year: **0.0**

On-Site System 2: 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: **IND093219012**

C. Management method shipped to: **H129**

D. Total quantity shipped in this reporting year: **88,220.00**

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: **0.00**

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: **0.00**

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: **0.00**

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: **0.00**

COMMENTS: **Y**

FLINT HILLS resources

MANAGEMENT OF CHANGE FORM

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

PROCESS UNIT/AREA: Buildings 1, 2, 3 MOC #: _____

ORIGINATOR: Don Gens DATE: _____

SECTION A - TECHNICAL BASIS FOR PROPOSED CHANGE

Purpose and Technical Basis:	Construct a new pipe rack starting south side of building 1, north side of building 2 and along buildings 2 & 3 to the north tank farm wall. This will re-support piping, conduit and cabling presently supported off supports attached to building 1, 2, 3 scheduled for demolition.
Description: *Attach additional paper if necessary*	New structural steel supports will be constructed bearing on new concrete foundations or drilled piers. Existing piping will bear on new supports. Some piping rework is required for clearance and uniformity of supports.
Impact of change On Environmental Health / Safety:	The new supports will improve the overall pipe support integrity. The impact on roadway accessibility should be minimal.

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	
☐ 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 Team Leader	☒ Engineering	☐ Regulatory Entities
☒ Mechanics/Welders	☐ Contractor(s) River Valley	☐ Corporate _____
☒ Electricians	☐ Office Personnel	☐ Other _____

SECTION C - Is Change Permanent?

☒ YES — Proposed Project Start Date: 11/30/2008

☐ NO — Proposed Project Completion Date: 9/30/2009

SECTION D - Is Change Temporary ?

☐ YES From: ____/____/____

☒ NO To: ____/____/____

Returned To Original Service: ____/____/____

Area Manager/Designee Signature: _____

Extended To: ____/____/____*

Plant Managers Approval: _____

Signature *Date*

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

SECTION E - Is Change Emergency ?

☐ Yes

☒ NO Start: ____/____/____

Approval Received From:

☐ Area Mgr/Designee

☐ Eng/Mnt.Mgr/Designee

☐ EHS Mgr/Designee

☐ Plant Mgr./ Designee

Approval Received By: _____

Signature *Date*

FHRPRU001087

SECTION F - DESIGN SAFETY REVIEW

Does this change affect documentation only? ☐ YES ☒ NO

If yes, skip to section 'G. Affects on Procedures, Training and Documentation'

1. RELIEF AND BLOWDOWN

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

2. AREA CLASSIFICATION

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

3. SAFETY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Require any additional safety equipment or layers of protection?		X
2. Alter or affect existing safety equipment or means of egress?		X
3. Require changes to the function or independence of existing equipment or layers of protection?		X
4. Alter or affect critical safety instrumented functions (SIF's)?		X
5. Alter the noise level in the surrounding area?		X
6. Increase the potential for exposure to any chemicals?		X
7. Introduce a new or previously unused chemical/raw material?		X
8. Affect de-energization? (able to lock-out, drain materials)		X
9. Create any ergonomic concerns?		X
10. Affect the Battery Limit Valves (BLV)?		X
11. Affect security targets, vulnerabilities studied in the Security Vulnerability Analysis?		X
12. Does this increase the risk of potential impact to plant personnel (employees and contractors)?	X	
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?		X
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?	X	

4. ENVIRONMENTAL AND QUALITY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Alter the composition or amount of a process water?		X
2. Increase the emissions of any regulated pollutant?		X
3. Require a new or modified operating/construction permit?		X
4. Affect the control of the process?		X
5. Affect the composition or physical properties of the final product?		X
6. Impact any Pentane/Styrene components in the Leak Detection and Repair (LDAR) Program?		X
7. Increase risk of off-site residential & environmental receptors?		X
8. Have new materials/chemicals being introduced been reviewed and approved by EHS Personnel?		X
9. Does an evaluation of chemical compatibility need to be conducted?		X
10. Involve decommissioning/demolition of equipment or structures?	X	
11. If answered YES to question 10, do NESHAP or decontamination requirements apply? **		X

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

FHRPRU001088

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? (Re-work B4 waste water, N2, potable water, air)	X	
2. Affect access to process or equipment/controls for personnel?		X
3. Introduce any new or affect existing interlocks or alarms systems?		X
4. Affect manpower or qualified personnel?		X
5. Affect the loads/strengths of existing foundations, structures, vessels, or pipe racks?	X	
6. Impact requirements of existing or proposed piping supports? *(Needs to be adequately designed for expected stresses due to pressure and thermal loadings.)*	X	
7. Alter the DCS/Software logic of process operations?		X
8. Affect process chemistry? (reactivity/compatibility)		X
9. Affect maximum intended inventory, that would require updating maximum inventory tables?		X
10. Affect safe upper/lower limits for such items as temperature, process flows or compositions?		X
11. Affect material/energy balances?		X
12. Affect plant utility resources? (i.e. steam, water, electricity, etc.) (Re-work lines in Item 1)	X	
13. Affect equipment with heat-up/cool-down cycling requiring bolt retightening after start-up?		X
14. Is an exception/revision to design codes or standards (CHEM-GEMS, etc.) required?		X

SECTION G - AFFECTS ON PROCEDURES, TRAINING, AND DOCUMENTATION

Will the Proposed Change:	YES	NO
1. Introduce new or impact existing operational procedures? *		X
2. Introduce new or impact existing maintenance procedures? * (Inspect supports)	X	
3. Add or Remove process equipment/instrumentation? *(Contact ETA to assign Equipment/Instrumentation Location Numbers, and Update databases.)*		X
4. Revise equipment preventative maintenance/inspection frequency? (Inspect supports)	X	
5. Require additional training and/or notification for operational or maintenance personnel? *(Define a training strategy, which includes roles, responsibilities, required overtime, outside courses required)*		X
6. Require a Process Hazard Analysis? (What-If/Checklist or HAZOP technique)	X	
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)* (Pipe support as-builts, grounding)	X	
8. Require updating equipment files? *(Engineering, Maintenance, Manufacturers Inspect/Test results)*	X	
9. Require a spare parts list and inventory to be developed?		X
10. Require major project spare equipment to be turned over to maintenance?		X
11. Require equipment labeling in the field?	X	
12. Require updating of Alarm Response Tables? *		X
13. Require a new/modification of existing energy control plans? *		X
14. Cause any PSM/RMP applicability issues?		X
15. Cause a change in PSM/RMP program level?		X
16. Will this change have any effect on the overall plant facility siting issues?		X
17. Increase or decrease the impact contour for worst-case scenario by a factor of two or more?		X
18. Will this MOC supercede /interfere with any other Temporary/Emergency/Permanent MOC's?		X
19. Is there a need to update the EPS-I-004, Chemical Compatibility Matrix?		X
20. Is A LOPA study required?		X
21. Will this affect the Interlock Matrix?		X

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

FHRPRU001089

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-5-1	Rework piping for clearance and uniformity of new supports	D. Gens	3/31/2009
F-5-5	None. Existing support load removed.	None	
F-5-6	Complete design for new supports	D. Gens	12/31/2008
F-5-12	Coordinate shutdown of lines needing rework.	D. Gens J. Vittone	3/31/2009
G-2	Add supports to equipment inspection schedule.	D. Gens D. Tostovarsnik	9/30/2009
G-4	Add supports to equipment inspection schedule.	D. Gens D. Tostovarsnik	9/30/2009
G-6	Complete PHA Items	D. Gens	9/30/2009
G-7	Complete documentation & as-builts	D. Gens	9/30/2009
G-8	Update engineering files	D. Gens L. Grant	9/30/2009
G-10	Paint or label lines (some N/A)	D. Gens J. Vittone	9/30/2009

FHRPRU001090

MOC APPROVAL FORM

Originator: _____ **MOC No.** _____

MOC Packet Completeness Verification Review

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

Signatures required Prior To Implementation of MOC.

Title/Position	Authorizing Signatures	PHA (Check One)		Date
Area Manager, or Designee (Operations Representative Assignee: _____)		___ Managerial Consent ___ What if / Checklist ___ Hazop		
		PSSR (Yes or No)		
		Y / N	PSSR Required? **(Mandatory if involves DCS Interface)**	
Maintenance/Engineering (Electrical Engineering Review: _____)		**PHA** (Check One)		
		___ Managerial Consent ___ What if / Checklist ___ Hazop		
		PSSR (Yes or No)		
		Y / N	PSSR Required? **(Mandatory if involves DCS interface)**	
Health and Safety Rep.		**PHA** (Check One)		
		___ Managerial Consent ___ What if / Checklist ___ Hazop		
		PSSR (Yes or No)		
		Y / N	PSSR Required? **(Mandatory if involves DCS interface)**	
Environment Rep.		**PHA** (Check One)		
		___ Managerial Consent ___ What if / Checklist ___ Hazop		
		PSSR (Yes or No)		
		Y / N	PSSR Required? **(Mandatory if involves DCS interface)**	

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 the 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:_____

FHRPRU001091

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, Managerial Consensus)

- ☐ **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:**_____

VOID

FLINT HILLS resources

MANAGEMENT OF CHANGE FORM

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

PROCESS UNIT/AREA: UTILITY MOC #: 08042

ORIGINATOR: J. KOCWBA DATE: 10-07-08

SECTION A - TECHNICAL BASIS FOR PROPOSED CHANGE

Purpose and Technical Basis:	STRUCTURAL EVALUATION OF PIPE SUPPORTS FROM TANK FARM ALONG BUILDINGS 3, 2 AND 1 WERE FOUND TO BE INADEQUATE. THE DESIGN OF THE EXISTING SUPPORTS IS OKAY FOR SHORT TERM USE BUT SHOULD BE REPLACED. THE 20' SPACING IS ALSO INSUFFICIENT.
Description: *Attach additional paper if necessary*	THIS PROJECT WILL INSTALL NEW PIPE SUPPORTS. THE NEW SUPPORTS WILL BE ON 10' SPACING AND STRUCTURALLY DESIGNED TO HANDLE EXISTING AND FUTURE LOADS.
Impact of change On Environmental Health / Safety:	IMPROVED PIPE SUPPORTS.

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	
[ ] MSDS Information	[ ] Energy Control Plans	[ ] PFD's	
[ ] Training/Communication	[ ] Floor Plans	[ ] LDAR	
[ ] Quality Issues	[ ] Mechanical Integrity DWGS	[X] 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

[X] Operations	[ ] I/E Technicians	[ ] Community
[X] Production Team Leader	[ ] Engineering	[ ] Regulatory Entities
[ ] Mechanics/Welders	[ ] Contractor(s) _____	[ ] Corporate _____
[ ] Electricians	[ ] Office Personnel	[ ] Other _____

SECTION C - Is Change Permanent?

[X] YES Proposed Project Start Date 10/18/08

[ ] NO Proposed Project Completion Date 08/31/09

SECTION D - Is Change Temporary ?

[ ] YES From: ____/____/____

[X] NO To: ____/____/____

Returned To Original Service: ____/____/____

Area Manager/Designee Signature: _____

Extended To: ____/____/____*

Plant Managers Approval:

_____

Signature *Date*

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

SECTION E - Is Change Emergency ?

[ ] Yes

[X] NO Start: ____/____/____

Approval Received From:

[ ] Area Mgr/Designee
[ ] Eng/Mnt.Mgr/Designee
[ ] EHS Mgr/Designee
[ ] Plant Mgr./ Designee

Approval Received By:

_____

Signature *Date*

FHRPRU001093

SECTION F - DESIGN SAFETY REVIEW

Does this change affect documentation only? ☐ YES ☒ NO

If yes, skip to section 'G. Affects on Procedures, Training and Documentation'

1. RELIEF AND BLOWDOWN

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

2. AREA CLASSIFICATION

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

3. SAFETY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Require any additional safety equipment or layers of protection?		X
2. Alter or affect existing safety equipment or means of egress?		X
3. Require changes to the function or independence of existing equipment or layers of protection?		X
4. Alter or affect critical safety instrumented functions (SIF's)?		X
3. Alter the noise level in the surrounding area?		X
5. Increase the potential for exposure to any chemicals? MTS	X	
6. Introduce a new or previously unused chemical/raw material?		X
7. Affect de-energization? (able to lock-out, drain materials)		X
8. Create any ergonomic concerns?		X
9. Affect the Battery Limit Valves (BLV)?		X
10. Affect security targets, vulnerabilities studied in the Security Vulnerability Analysis?		X
11. Does this increase the risk of potential impact to plant personnel (employees and contractors)?		X
12. 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?		X

4. ENVIRONMENTAL AND QUALITY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Alter the composition or amount of a process water?		X
2. Increase the emissions of any regulated pollutant?		X
3. Require a new or modified operating/construction permit?		X
4. Affect the control of the process?		X
5. Affect the composition or physical properties of the final product?		X
6. Impact any Pentane/Styrene components in the Leak Detection and Repair (LDAR) Program?		X
7. Increase risk of off-site residential & environmental receptors?		X
8. Have new materials/chemicals being introduced been reviewed and approved by EHS Personnel?		X
9. Does an evaluation of chemical compatibility need to be conducted?		X
10. Involve decommissioning/demolition of equipment or structures?	X	
11. If answered YES to question 10, do NESHAP or decontamination requirements apply? **		X

** 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?		X
2. Affect access to process or equipment/controls for personnel?		X
3. Introduce any new or affect existing interlocks or alarms systems?		X
4. Affect manpower or qualified personnel?		X
5. Affect the loads/strengths of existing foundations, structures, vessels, or pipe racks?	X	
6. Impact requirements of existing or proposed piping supports? *(Needs to be adequately designed for expected stresses due to pressure and thermal loadings.)*	X	
7. Alter the DCS/Software logic of process operations?		X
8. Affect process chemistry? (reactivity/compatibility)		X
9. Affect maximum intended inventory, that would require updating maximum inventory tables?		X
10. Affect safe upper/lower limits for such items as temperature, process flows or compositions?		X
11. Affect material/energy balances?		X
12. Affect plant utility resources? (i.e. steam, water, electricity, etc.)		X
13. Affect equipment with heat-up/cool-down cycling requiring bolt retightening after start-up?		X
14. Is an exception/revision to design codes or standards (CHEM-GEMS, etc.) required?		X

SECTION G - AFFECTS ON PROCEDURES, TRAINING, AND DOCUMENTATION

Will the Proposed Change:	YES	NO
1. Introduce new or impact existing operational procedures? *		X
2. Introduce new or impact existing maintenance procedures? *		X
3. Add or Remove process equipment/instrumentation? *(Contact ETA to assign Equipment/Instrumentation Location Numbers, and Update databases.)*		X
4. Revise equipment preventative maintenance/inspection frequency?		X
5. Require additional training and/or notification for operational or maintenance personnel? *(Define a training strategy, which includes roles, responsibilities, required overtime, outside courses required)*		X
6. Require a Process Hazard Analysis? (What-If/Checklist or HAZOP technique)	X	
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)*	X	
8. Require updating equipment files? *(Engineering, Maintenance, Manufacturers Inspect/Test results)*		X
9. Require a spare parts list and inventory to be developed?		X
10. Require major project spare equipment to be turned over to maintenance?		X
11. Require equipment labeling in the field?		X
12. Require updating of Alarm Response Tables? *		X
13. Require a new/modification of existing energy control plans? *		X
14. Cause any PSM/RMP applicability issues?		X
15. Cause a change in PSM/RMP program level?		X
16. Will this change have any effect on the overall plant facility siting issues?		X
17. Increase or decrease the impact contour for worst-case scenario by a factor of two or more?		X
18. Will this MOC supercede /interfere with any other Temporary/Emergency/Permanent MOC's?		X
19. Is there a need to update the EPS-I-004, Chemical Compatibility Matrix?		X
20. Is A LOPA study required?		X
21. Will this affect the Interlock Matrix?		X

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

FHRPRU001095

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
4.10	DECOMMISSION PIPE	J. KOCIUBA	10-31-09
	RACKS AS PER DRAWINGS.		
5.5	IMPROVE LOADS/STRENGTHS	J. KOCIUBA	10-31-09
	OF PIPE RACKS PER		
	DRAWINGS.		
5.6	STRUCTURALLY ENGINEER	J. KOCIUBA	10-31-09
A	PIPE SUPPORTS		
G.6	PERFORM WHAT-IF /	J. KOCIUBA	06-01-09
	CHECKLIST		
F.3.5	EXCAVATION of soil could expose workers to	J. KOCIUBA	10-31-08
	lead, cadmium, zinc, and/or mercury contam.		
	Perform core sampling and testing to determine		
	if PPE is required and/or hazardous		
	waste disposal is necessary		
5.6	GIVE HUNTSMAN 45 DAY NOTICE	STEINBACH	10/31/08
B	ON INTENTION TO DIG		
G7	Update drawings	L. Grant	10-31-09

MOC APPROVAL FORM

Originator: J. KOCIUBA **MOC No.** 08042

MOC Packet Completeness Verification Review

Title/Position	Verification Review Signatures	Date
Drafting Tech, or Designee	Lisa Krantz	10-9-08
MI Coordinator, or Designee	Glen Tolles	10-9-08
Maintenance Tech from appropriate area		
Operator from affected area		
Area Training Contact, or Designee		

Signatures required Prior To Implementation of MOC.

Title/Position	Authorizing Signatures	PHA (Check One)	PSSR (Yes or No)	Date
Area Manager, or Designee (Operations Representative Assignee: _____)	10/9/08	[ ] Managerial Consent [X] What if / Checklist [ ] Hazop	Y / N — PSSR Required? **(Mandatory if involves DCS Interface)**	10/9/08
Maintenance/Engineering (Electrical Engineering Review: _____)		[ ] Managerial Consent [ ] What if / Checklist [ ] Hazop	Y / N — PSSR Required? **(Mandatory if involves DCS interface)**	10/9/08
Health and Safety Rep.	J Baitcho	[ ] Managerial Consent [X] What if / Checklist [ ] Hazop	Y / N — PSSR Required? **(Mandatory if involves DCS interface)**	10-10-08
Environment Rep.	Mary Steinbach	[ ] Managerial Consent [X] What if / Checklist [ ] Hazop	Y / N — PSSR Required? **(Mandatory if involves DCS interface)**	10-9-08

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 the 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:_____

FHRPRU001097

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: J. KOCIUBA **MOC No.** 08042

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, Managerial Consensus)

- ☐ **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**

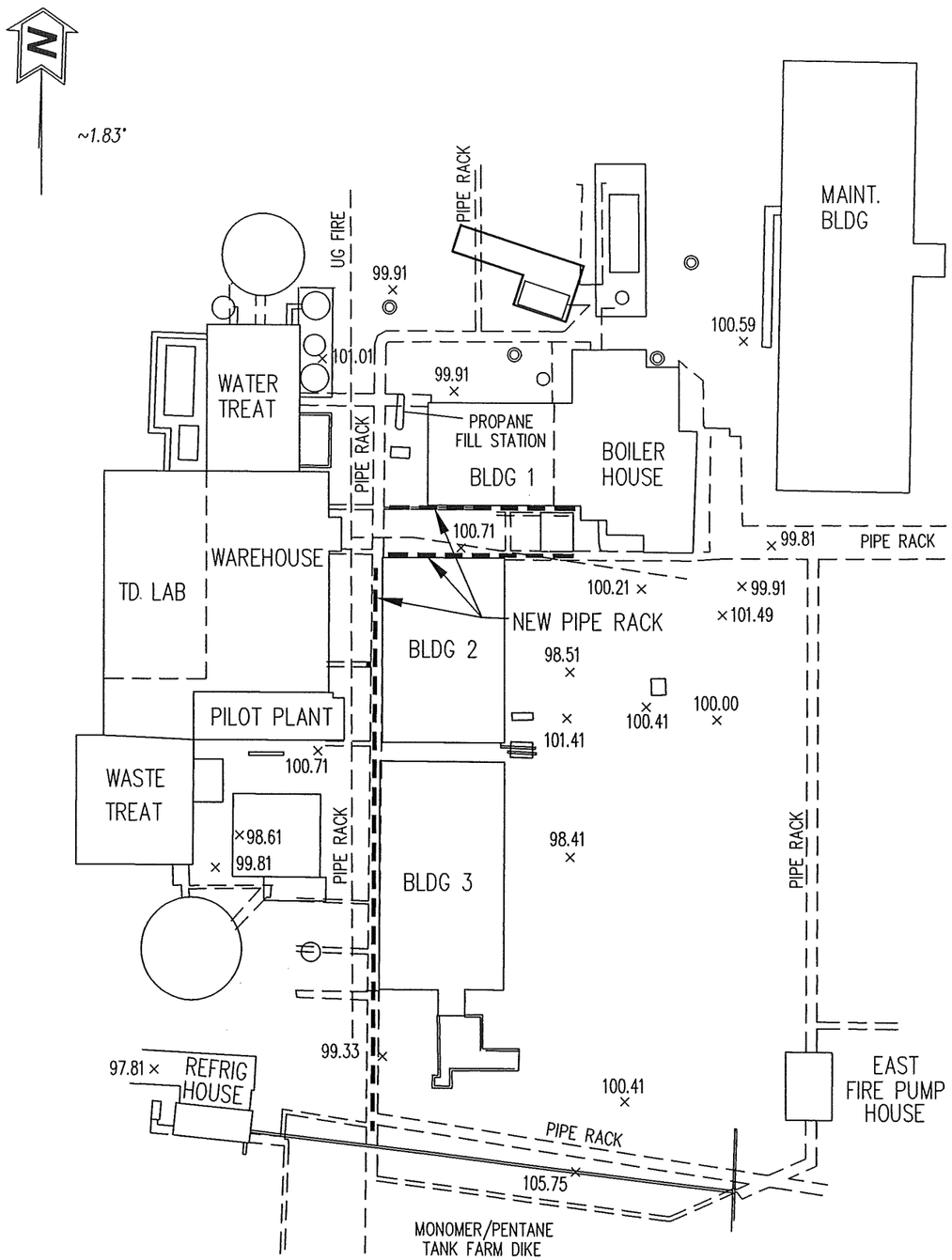
7. All training has been completed.

- ☐ **YES**
- ☐ **NO**
- ☐ **N/A**

'Management of Change' Audited By:

Title: _____

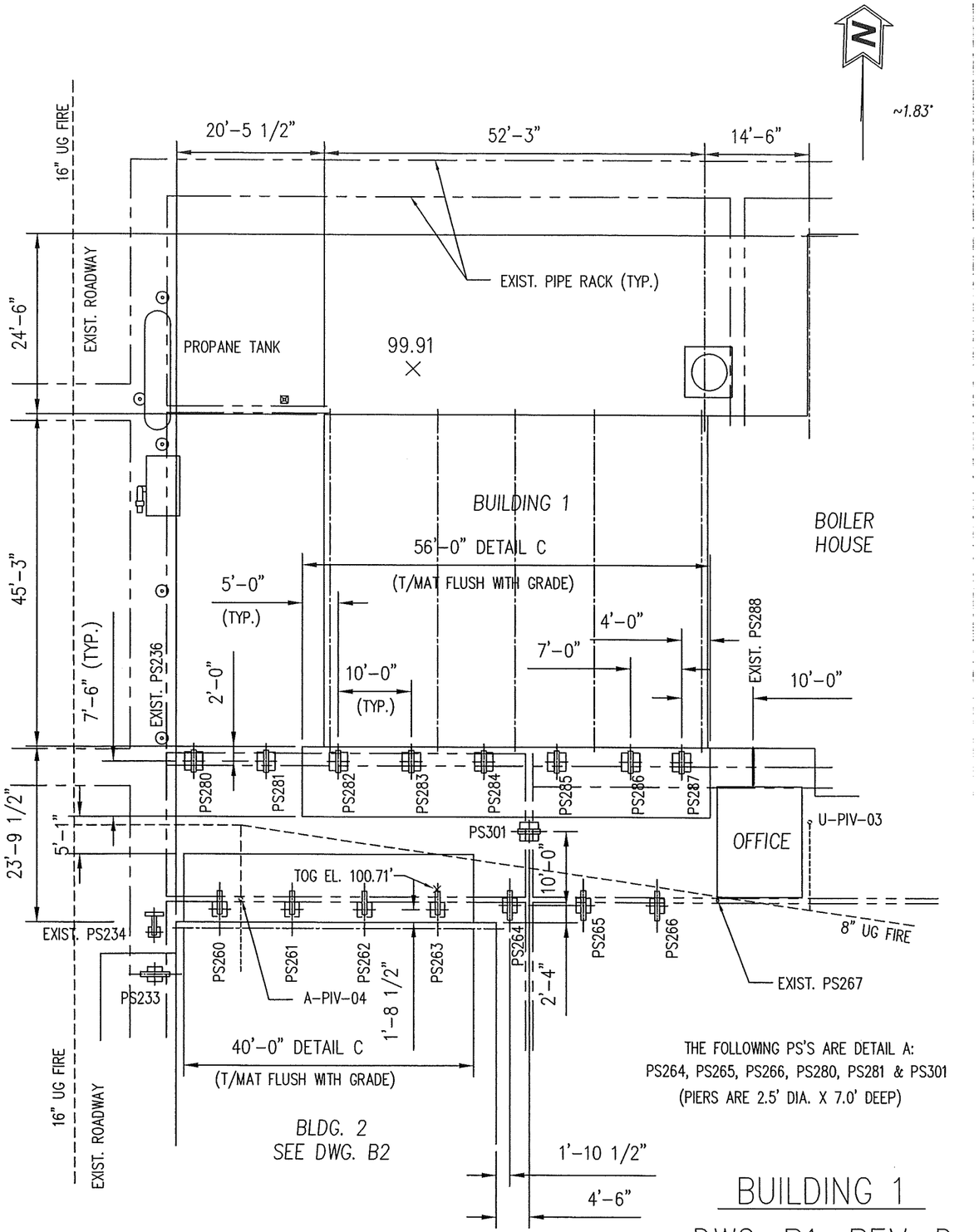
Signature: _____ **Date:** _____

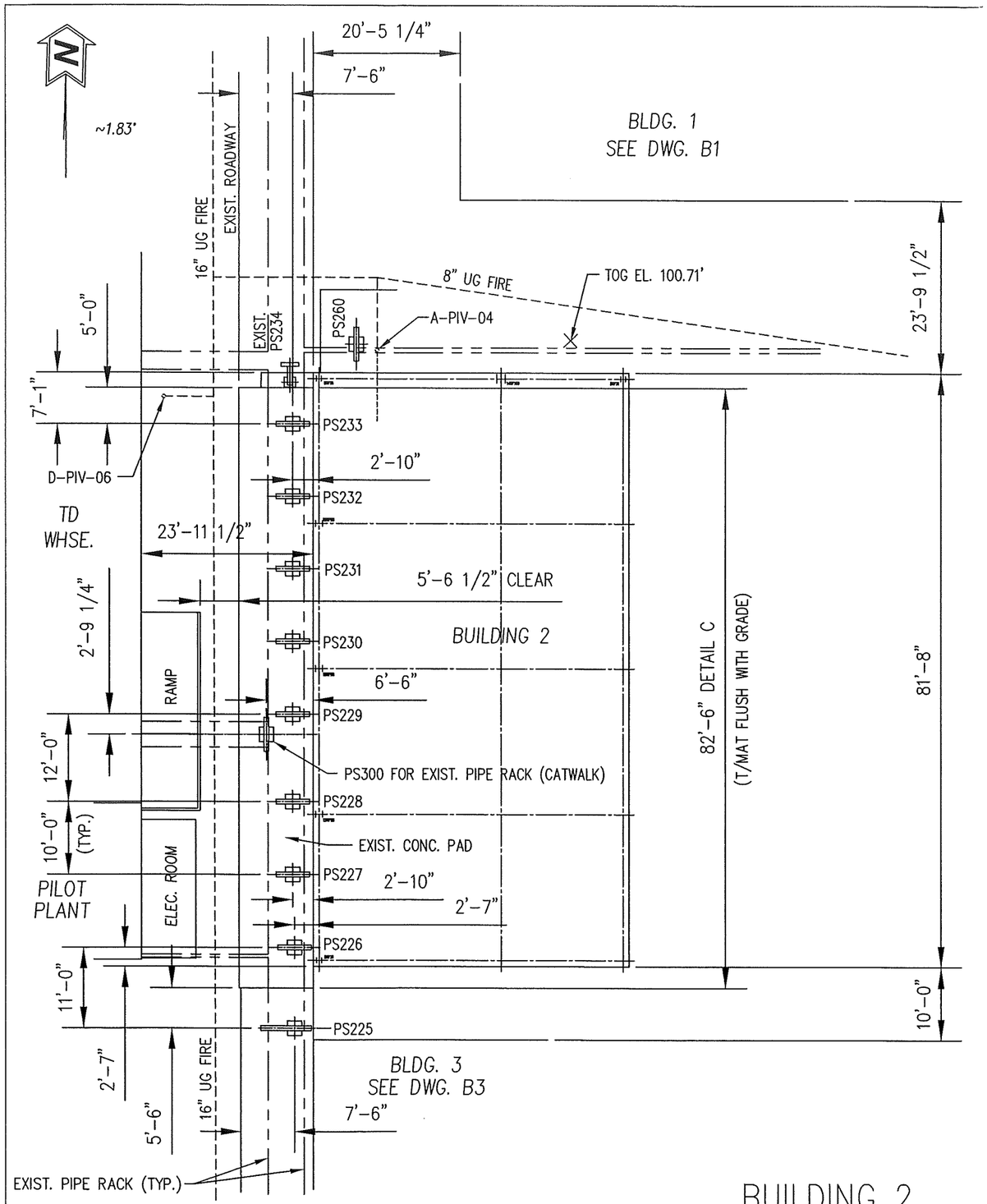


JEK 07-07-08

SCALE: 60' = 1"

N-S PIPE RACK
DWG. PLAN. REV. A


N
~1.83°
16" UG FIRE
20'-5 1/2"
52'-3"
14'-6"
EXIST. PIPE RACK (TYP.)
24'-6"
EXIST. ROADWAY
PROPANE TANK
99.91
BUILDING 1
BOILER HOUSE
56'-0" DETAIL C
(T/MAT FLUSH WITH GRADE)
5'-0"
(TYP.)
45'-3"
7'-6" (TYP.)
EXIST. PS236
2'-0"
10'-0"
(TYP.)
4'-0"
7'-0"
EXIST. PS288
10'-0"
PS280
PS281
PS282
PS283
PS284
PS285
PS286
PS287
23'-9 1/2"
5'-1"
PS301
U-PIV-03
OFFICE
TOG EL. 100.71'
10'-0"
EXIST. PS234
PS260
PS261
PS262
PS263
PS264
PS265
PS266
8" UG FIRE
PS233
A-PIV-04
1'-8 1/2"
2'-4"
EXIST. PS267
40'-0" DETAIL C
(T/MAT FLUSH WITH GRADE)
THE FOLLOWING PS'S ARE DETAIL A:
PS264, PS265, PS266, PS280, PS281 & PS301
(PIERS ARE 2.5' DIA. X 7.0' DEEP)
16" UG FIRE
EXIST. ROADWAY
BLDG. 2
SEE DWG. B2
1'-10 1/2"
4'-6"
BUILDING 1
DWG. B1. REV. D
JEK 10-07-08
SCALE: 1/16" = 1'-0"

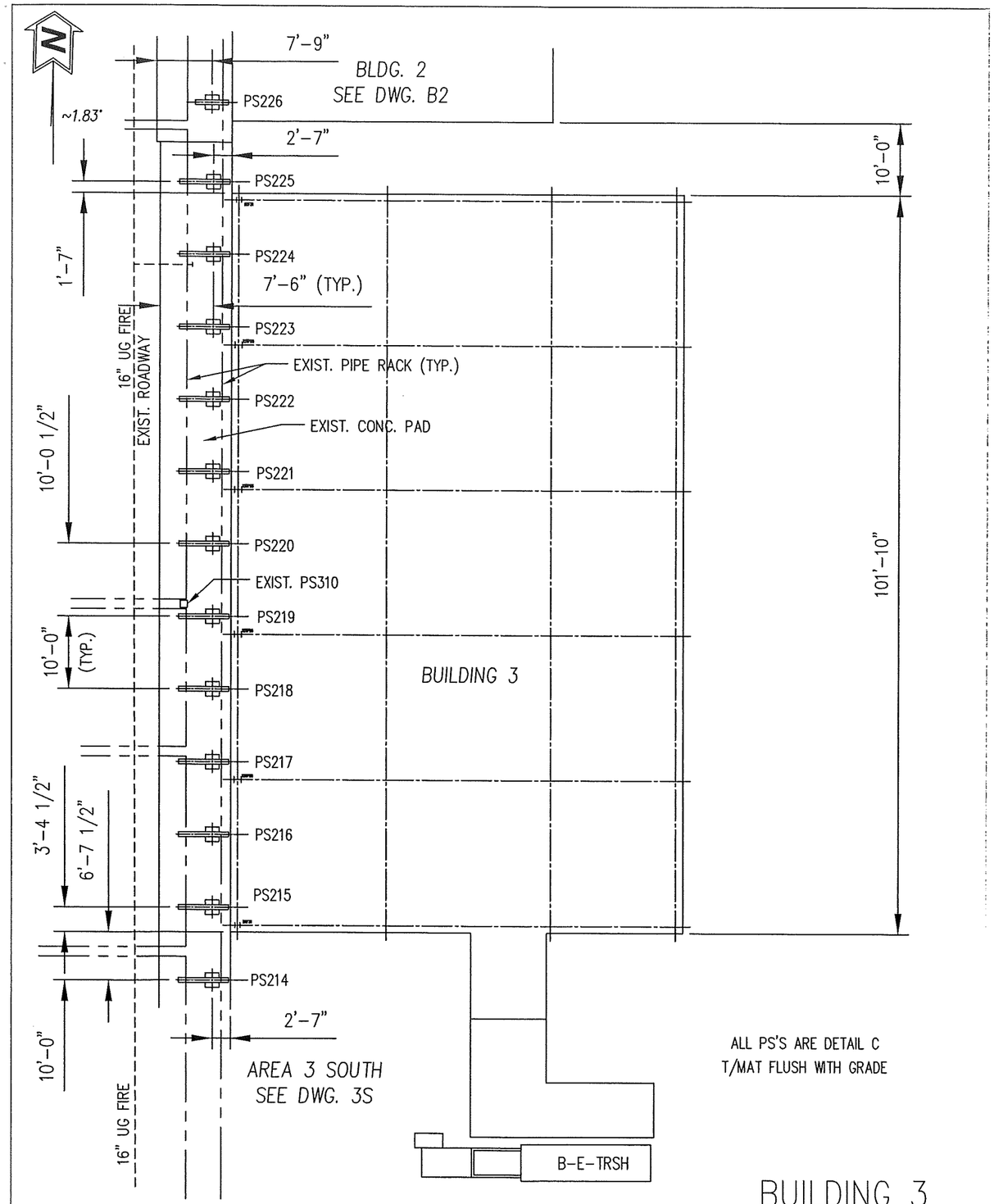


BUILDING 2

DWG. B2. REV. C

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

JEK 10-06-08

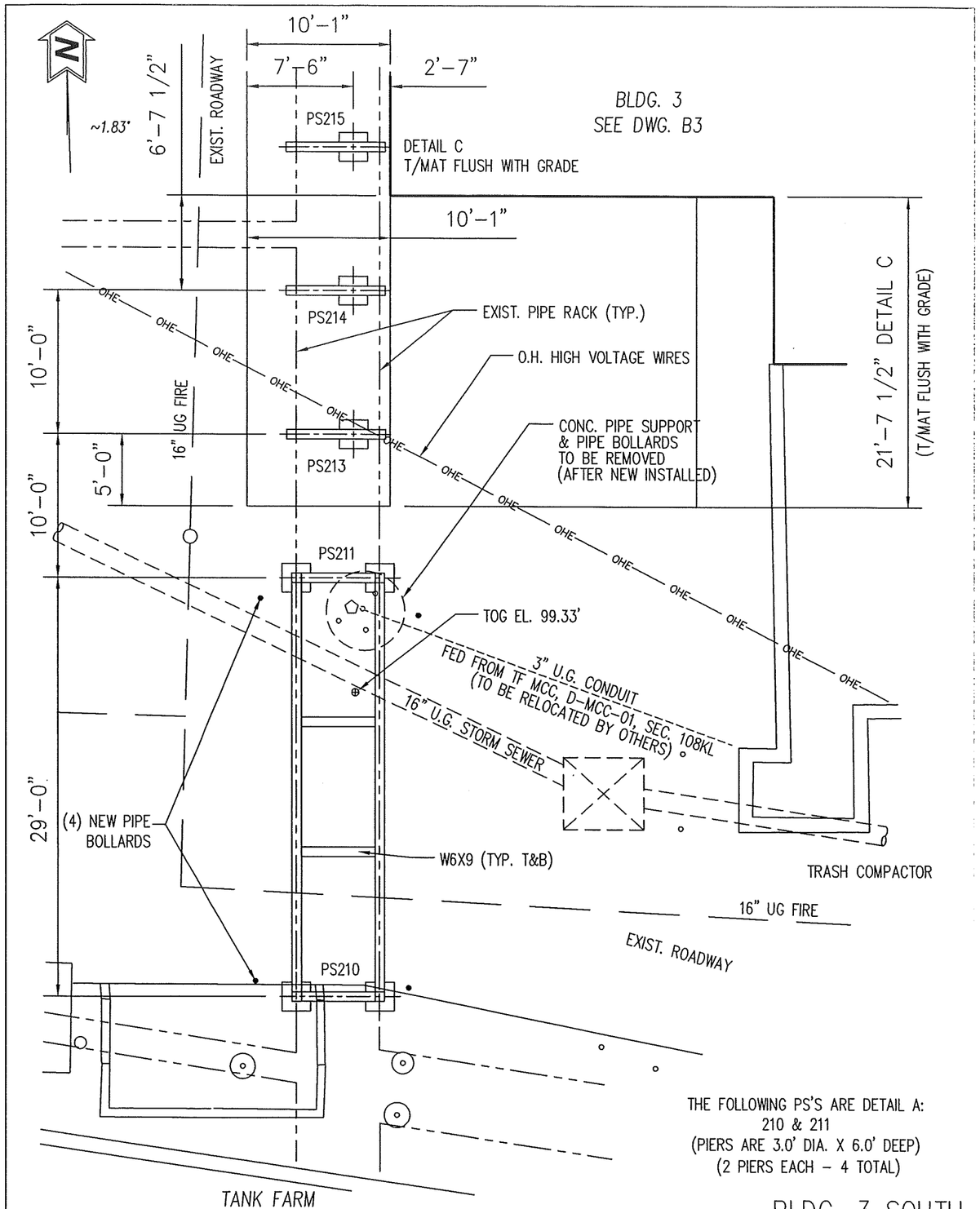


BUILDING 3

DWG. B3. REV. C

JEK 10-06-08

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



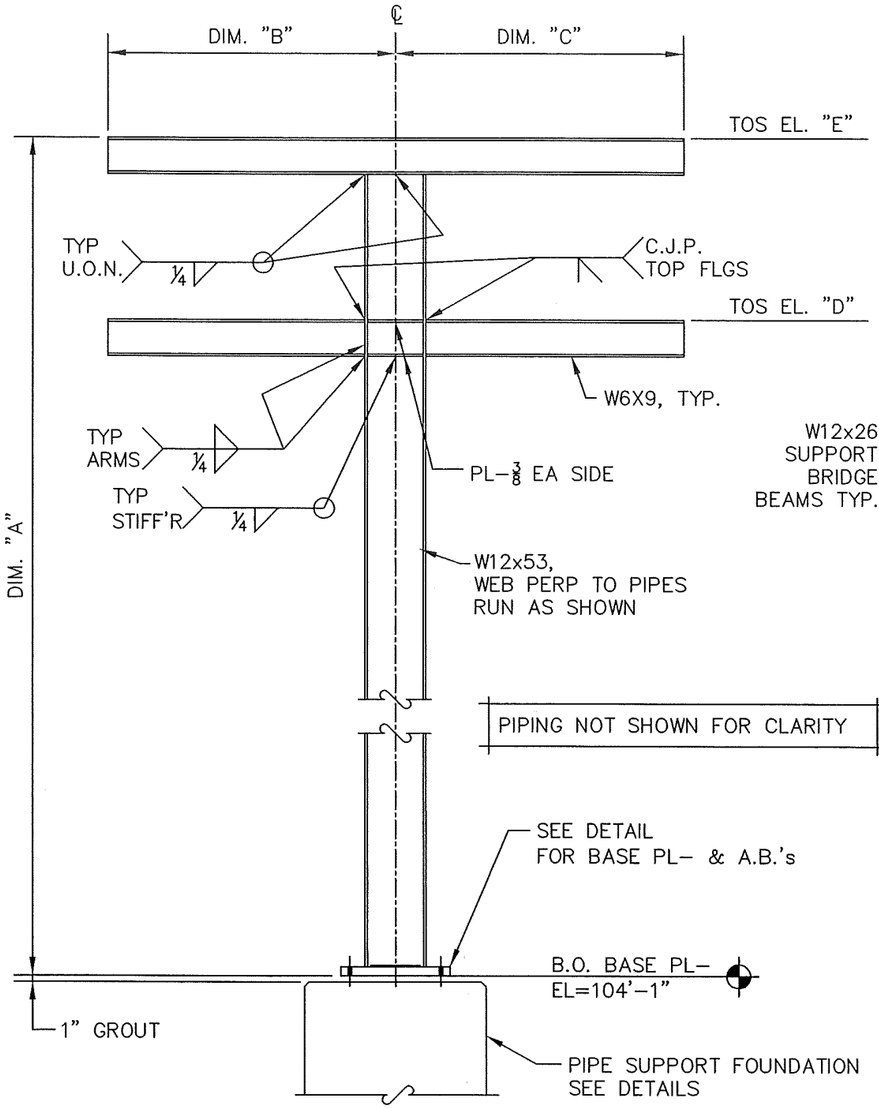
THE FOLLOWING PS'S ARE DETAIL A:
210 & 211
(PIERS ARE 3.0' DIA. X 6.0' DEEP)
(2 PIERS EACH – 4 TOTAL)

BLDG. 3 SOUTH

DWG. 3S. REV. C

JEK 10-06-08

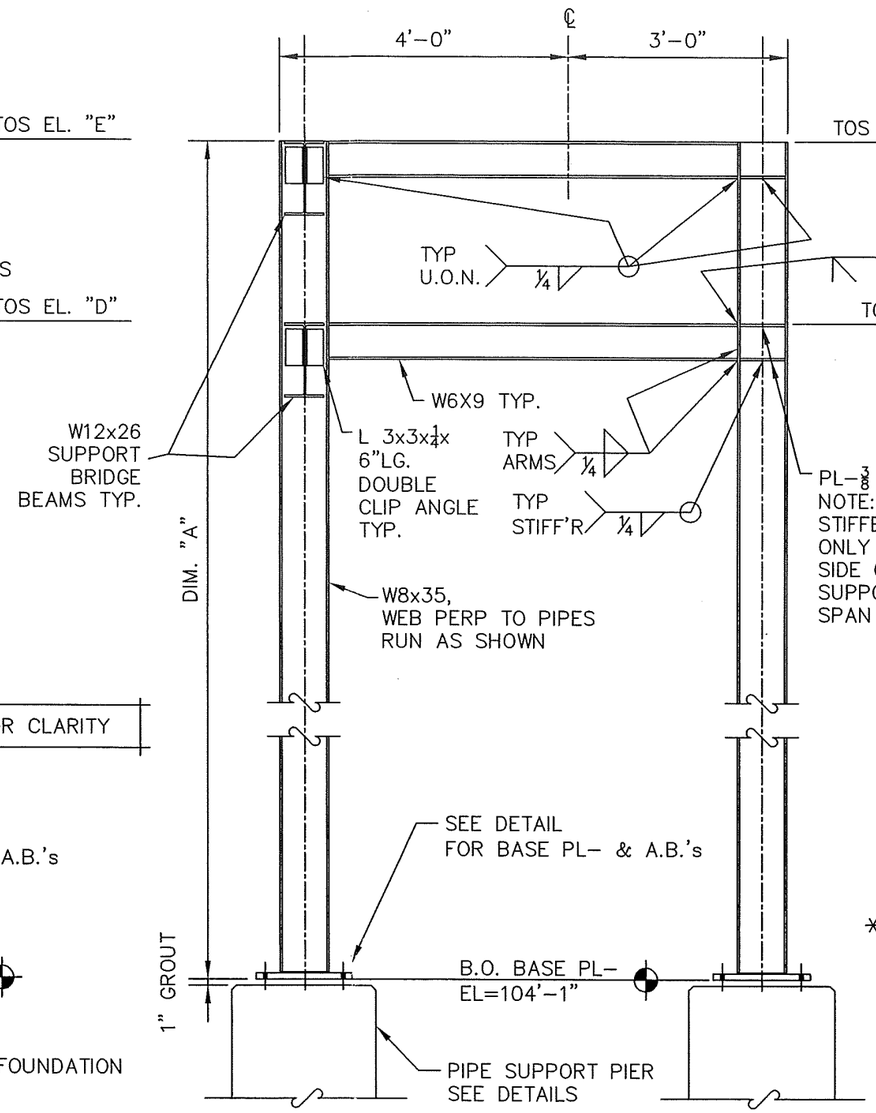
SCALE: 1/8" = 1'-0"



DETAIL

TYP. PS213-310 PIPE SUPPORT

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



DETAIL

TYP. PS210-PS211 PIPE SUPPORT BRIDGE

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

STRUCTURAL NOTES:

STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A 572 GRADE 50 (MIN.).

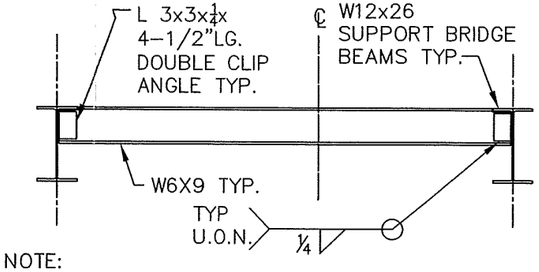
STRUCTURAL STEEL PLATE SHALL CONFORM TO ASTM A36 (MIN.).

FASTENERS SHALL BE A-325 MIN. GRADE STRUCTURAL BOLTS (UNLESS NOTED OTHERWISE).

STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED ACCORDING TO THE LATEST AISC SPECIFICATIONS AND STANDARD PRACTICES.

WELDING SHALL BE IN ACCORDANCE WITH AWS STANDARDS USING E-70 ELECTRODES.

THESE PLAN SHEETS SHALL BE USED IN CONJUCTION WITH SUPPLEMENTAL FLINT HILLS RESOURCES PROJECT DETAIL SHEETS.



✳ NOTE:
INTERMEDIATE BRIDGE STRINGERS SHALL BE SPACED EVENLY AT A MAX. SPACING OF 10' ON BOTH PIPE RACK LEVELS ALONG PIPE SUPPORT BRIDGE.

DETAIL

TYP. PS210-PS211 INTERMEDIATE BRIDGE STRINGER

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

date

JORGE L. SANCHEZ
LICENSED STRUCTURAL ENGINEER NO. 081-006073
STATE OF ILLINOIS

expires 11-30-2008

signature

PROFESSIONAL DESIGN FIRM LICENSE NO. 184-001717

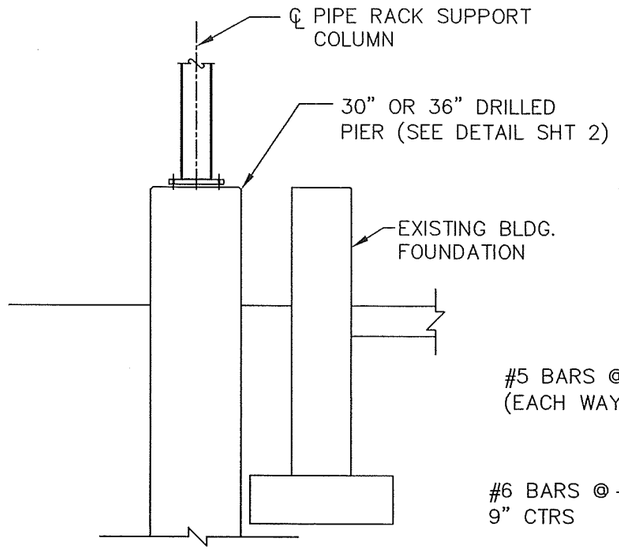
CHAMLIN & ASSOCIATES
PERU ILLINOIS MORRIS

11/11828-00 FLINT HILL

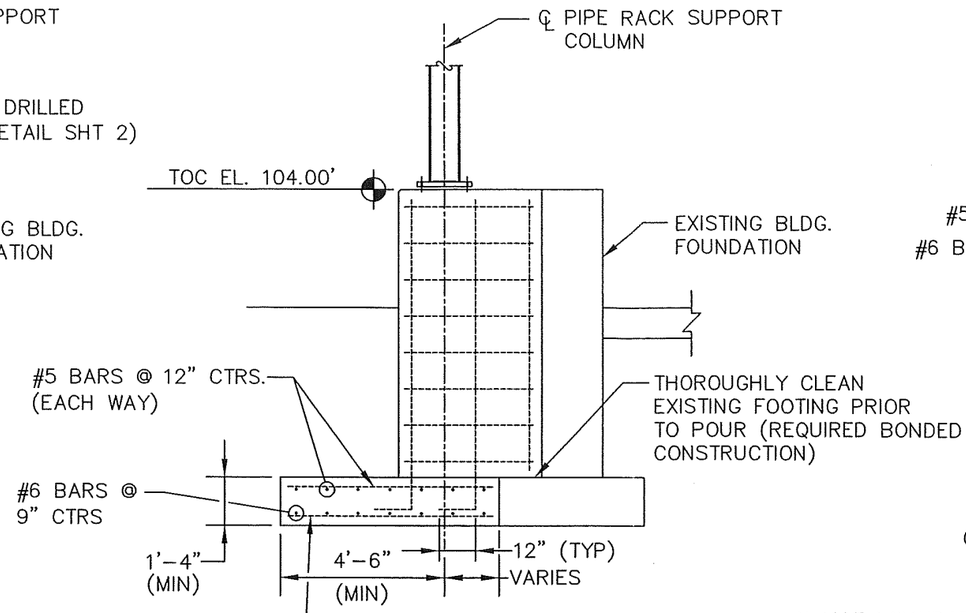
FLINT HILLS RESOURCES
PERU, ILLINOIS PLANT
NORTH-SOUTH
PIPE RACK PLAN

SHEET 1 OF 3

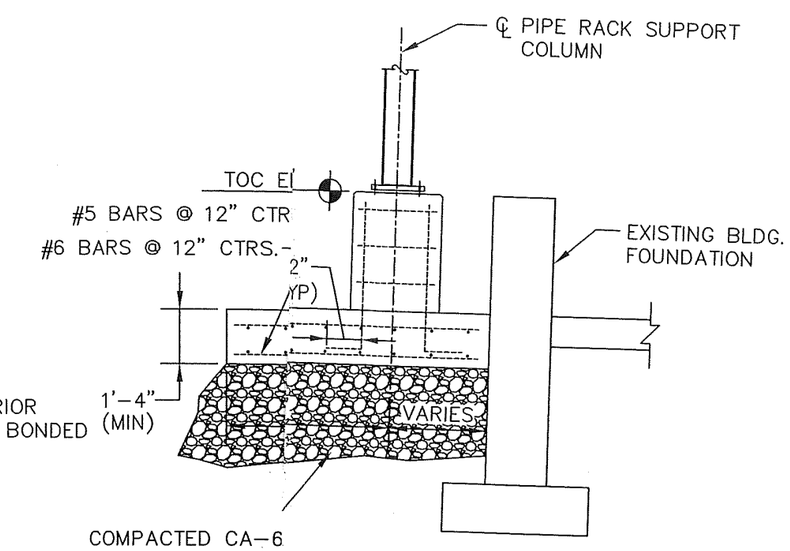
FHRPRU001104



SECTION

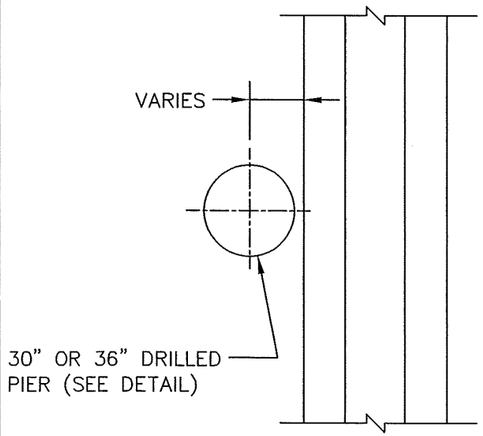


SECTION



SECTION

* MAT FOUNDATIONS MAY BE PO CONTINUOUS WITH ADJACENT SOLUMN.

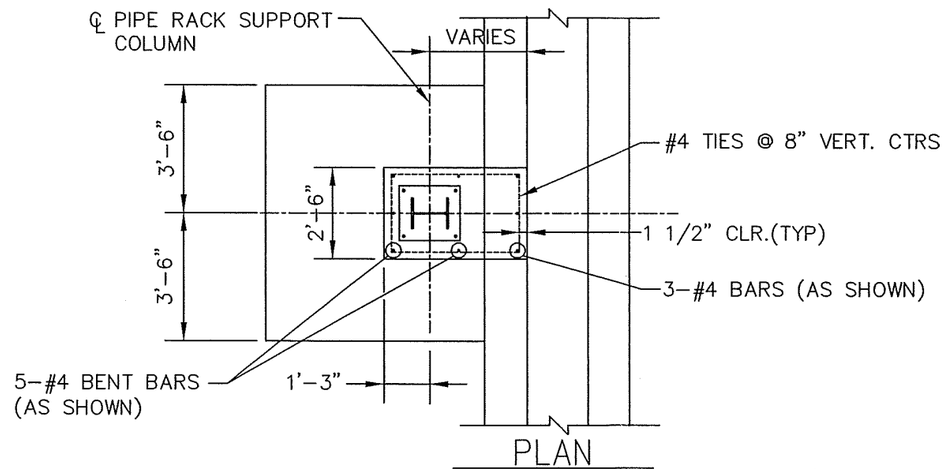


PLAN

DETAIL "A"

OPTION No. 1

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

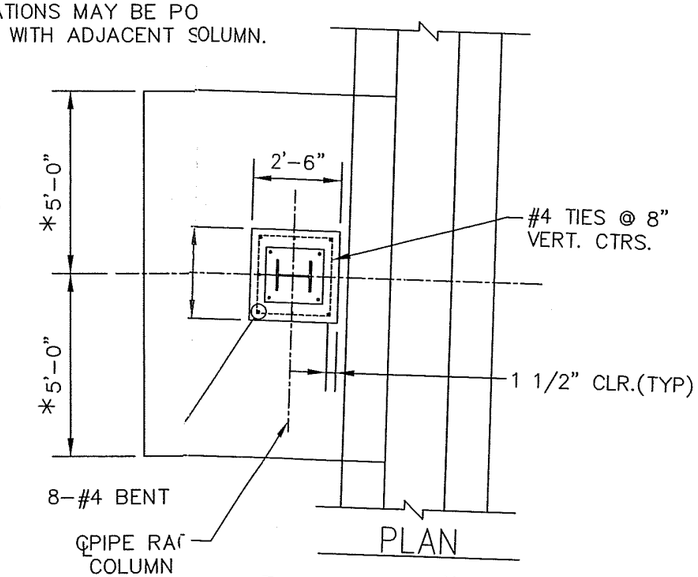


PLAN

DETAIL "B"

OPTION No. 2a

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



PLAN

DETAIL "C"

OPTION No. 2b

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

CHAMLIN & ASSOCIATES

PERU ILLINOIS MORRIS

11/11828-00 FLINT HILL

PIPE SUPPORT FOUNDATIONS @ EXISTING BUILDINGS

FLINT HILLS RESOURCES
PERU, ILLINOIS PLANT
NORTH-SOUTH
PIPE RACK PLAN

SHEET 3 OF 3

FHRPRU001105

NORTH-SOUTH PIPE RACK

Nominal TOG EL. 100'-0". TO New Ftg. EL. 104'-0". Verify all dimensions.

PS NO.	LOC.	A	B	C	D (ELEV.)	E (ELEV.)
210	N OF TF	16'-8 1/2"	4'-9"	2'-3"	118'-2 1/2"	120'-9 1/2"
211	N OF TF	16'-8 1/2"	4'-9"	2'-3"	118'-2 1/2"	120'-9 1/2"
213	N OF TF	16'-8 1/2"	4'-9"	2'-3"	118'-2 1/2"	120'-9 1/2"
214	N OF TF	16'-8 1/2"	4'-9"	2'-3"	118'-2 1/2"	120'-9 1/2"
215	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
216	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
217	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
218	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
219	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
220	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
221	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
222	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
223	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
224	W OF 3	14'-6 3/4"	4'-9"	2'-3"	117'-5"	118'-7 3/4"
225	NW OF 3	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
226	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
227	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
228	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
229	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
230	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
231	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
232	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
233	W OF 2	14'-6 3/4"	2'-4"	2'-4"	117'-5"	118'-7 3/4"
234	NW OF 2	Existing				
236	W OF 1	Existing				
260	N OF 2	15'-2 3/4"	3'-0"	1'-2"	0'-0"	119'-3 3/4"
261	N OF 2	15'-2 3/4"	3'-0"	1'-2"	0'-0"	119'-3 3/4"
262	N OF 2	15'-2 3/4"	3'-0"	1'-2"	0'-0"	119'-3 3/4"
263	N OF 2	15'-2 3/4"	3'-0"	1'-2"	0'-0"	119'-3 3/4"
264	NE OF 2	17'-7 1/2"	2'-0"	2'-0"	118'-10 1/2"	121'-8 1/2"
265	NE OF 2	17'-7 1/2"	2'-0"	2'-0"	118'-10 1/2"	121'-8 1/2"
266	NE OF 2	17'-7 1/2"	2'-0"	2'-0"	118'-10 1/2"	121'-8 1/2"
267	NE OF 2	Existing				
280	SW OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
281	SW OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
282	S OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
283	S OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
284	S OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
285	S OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
286	S OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
287	S OF 1	11'-1 1/2"	1'-6"	1'-6"	0'-0"	115'-2 1/2"
288	S OF 1	Existing				
300	W OF 2	17'-11"	1'-9"	1'-9"	0'-0"	122'-0"
301	S OF 1	15'-2 1/2"	1'-6"	1'-6"	0'-0"	119'-3 1/2"
310	W OF 3	Existing				

Revised 10-01-08

Location	sf		
SOUTH OF B1	532.00		
NORTH OF B2	368.33		
WEST OF B2	852.50		
WEST OF B3	1,098.24		
SW OF B3	218.05		
Total sf	3,069.12		
Mat Depth	1.50		
Total cf	4,603.68		
		Qty.	sf each
2.5' x 7.0' piers cf	206.17	6	34.36
3.0' x 6.0' piers cf	169.65	4	42.41
Sub-total cf	**4,979.50**		
cf vs cy	27		
	184.43		
15 cy truck	15		
number of trucks	12.30		
adjusted number of trucks	13		

TABLE 1
Summary of Soil Analytical Results
Flint Hills Resources
September 10-11, 2008

	CADMIUM		LEAD		MERCURY		ZINC	
Sample Identification	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**
PS-210	0.108	4.41	0.029	39.0	<0.0002	<0.108	NA	1240
PS-213	0.339	13.7	0.345	141	0.0004	**0.196**	NA	6690
PS-214	**1.61**	76.3	4.34	**1410**	0.003	**0.286**	NA	16800
PS-217	0.451	14.6	**25.6**	**1930**	0.0002	**0.208**	NA	7830
PS-219	0.583	27.8	0.603	377	0.0002	**0.139**	NA	7080
PS-221	0.143	10.0	0.118	309	<0.0002	<0.113	NA	4440
PS-223	0.375	25.9	2.41	**1480**	0.0002	<0.116	NA	9330
PS-225	0.102	11.4	<0.005	73.3	<.0002	<0.120	NA	1230
PS-227	**1.72**	57.3	**5.32**	**1070**	<0.0002	<0.116	NA	11200
PS-229	**3.41**	88.1	0.564	356	0.0002	**0.115**	NA	12800
PS-231	**2.75**	69.1	0.194	**851**	<0.0002	<0.115	NA	17000
PS-233	0.145	8.49	<0.005	76.2	<0.0002	<0.122	NA	1800
PS-260	0.0124	0.426	<0.005	8.39	<0.0002	<0.103	NA	74.0
PS-262	0.0741	11.5	<0.005	61.1	<0.0002	<0.103	NA	1480
PS-264	0.130	7.74	<0.005	39.2	<0.0002	<0.110	NA	634
PS-266	0.0201	0.528	<0.005	44.5	<0.0002	<0.129	NA	164
PS-280	**2.76**	72.8	3.12	**1250**	<0.0002	**0.325**	NA	17600
PS-282	**1.78**	112	4.38	**2680**	<0.0002	**0.273**	NA	28900
PS-284	**2.83**	133	1.00	**1190**	<0.0002	<0.112	NA	15600
PS-286	**7.90**	**443**	0.441	**1100**	<0.0002	<0.111	NA	21900
RCRA Thresholds for Characteristic Hazardous Waste (mg/L)	**1.0**	*	**5.0**	*	**0.2**	*	*	*
Tier I Construction Worker Ingestion Objective (mg/Kg)	*	**200**	*	**700 [1]**	*	**61**	*	**61,000**
Tier I Construction Worker Inhalation Objective (mg/Kg)	*	**59,000**	*	*	*	**0.1 [1]**	*	*

[1] = Exposure limits recently revised (updated February 23, 2007)
All Tier I Construction Worker limits taken from Illinois Pollution Control Board, Chapter II, Subchapter F, Part 742 - Tiered-Approach to Corrective Action (updated February 23, 2007)
All total metal results reported in mg/kg (dry-weight)
NA = Not Analyzed.
* = No level set for specified constituent
RCRA = Resource Conservation and Recovery Act
BOLD Above respective RCRA regulatory limit
BOLD Above respective Tier I Construction Worker Ingestion Objective
BOLD Above respective Tier I Construction Worker Inhalation Objective

DRAFT

TABLE 1
Summary of Soil Analytical Results
Flint Hills Resources
September 10-11, 2008

	CADMIUM		LEAD		MERCURY		ZINC	
Sample Identification	TCLP (mg/L)	Total (mg/kg)	TCLP (mg/L)	Total (mg/kg)	TCLP (mg/L)	Total (mg/kg)	TCLP (mg/L)	Total (mg/kg)
PS-210 ok	0.108	4.41	0.029	39.0	<0.0002	<0.108	NA	1240
PS-213	0.339	13.7	0.345	141	0.0004	**0.196**	NA	6690
PS-214	**1.61**	76.3	4.34	**1410**	0.003	**0.286**	NA	16800
PS-217	0.451	14.6	**25.6**	**1930**	0.0002	**0.208**	NA	7830
PS-219	0.583	27.8	0.603	377	0.0002	**0.139**	NA	7080
PS-221 OK	0.143	10.0	0.118	309	<0.0002	<0.113	NA	4440
PS-223	0.375	25.9	2.41	**1480**	0.0002	<0.116	NA	9330
PS-225 ok	0.102	11.4	<0.005	73.3	<.0002	<0.120	NA	1230
PS-227	**1.72**	57.3	**5.32**	**1070**	<0.0002	<0.116	NA	11200
PS-229	**3.41**	88.1	0.564	356	0.0002	**0.115**	NA	12800
PS-231	**2.75**	69.1	0.194	**851**	<0.0002	<0.115	NA	17000
PS-233 OK	0.145	8.49	<0.005	76.2	<0.0002	<0.122	NA	1800
PS-260 ok	0.0124	0.426	<0.005	8.39	<0.0002	<0.103	NA	74.0
PS-262 ok	0.0741	11.5	<0.005	61.1	<0.0002	<0.103	NA	1480
PS-264 OK	0.130	7.74	<0.005	39.2	<0.0002	<0.110	NA	634
PS-266 OK	0.0201	0.528	<0.005	44.5	<0.0002	<0.129	NA	164
PS-280	**2.76**	72.8	3.12	**1250**	<0.0002	**0.325**	NA	17600
PS-282	**1.78**	112	4.38	**2680**	<0.0002	**0.273**	NA	28900
PS-284	**2.83**	133	1.00	**1190**	<0.0002	<0.112	NA	15600
PS-286	**7.90**	**443**	0.441	**1100**	<0.0002	<0.111	NA	21900
RCRA Thresholds for Characteristic Hazardous Waste (mg/L)	**1.0**	*	**5.0**	*	**0.2**	*	*	*
Tier I Construction Worker Ingestion Objective (mg/Kg)	*	**200**	*	**700** [1]	*	**61**	*	**61,000**
Tier I Construction Worker Inhalation Objective (mg/Kg)	*	**59,000**	*	*	*	**0.1** [1]	*	*

[1] = Exposure limits recently revised (updated February 23, 2007)
All Tier I Construction Worker limits taken from Illinois Pollution Control Board, Chapter II, Subchapter F, Part 742 - Tiered-Approach to Corrective Action (updated February 23, 2007)
All total metal results reported in mg/kg (dry-weight)
NA = Not Analyzed.
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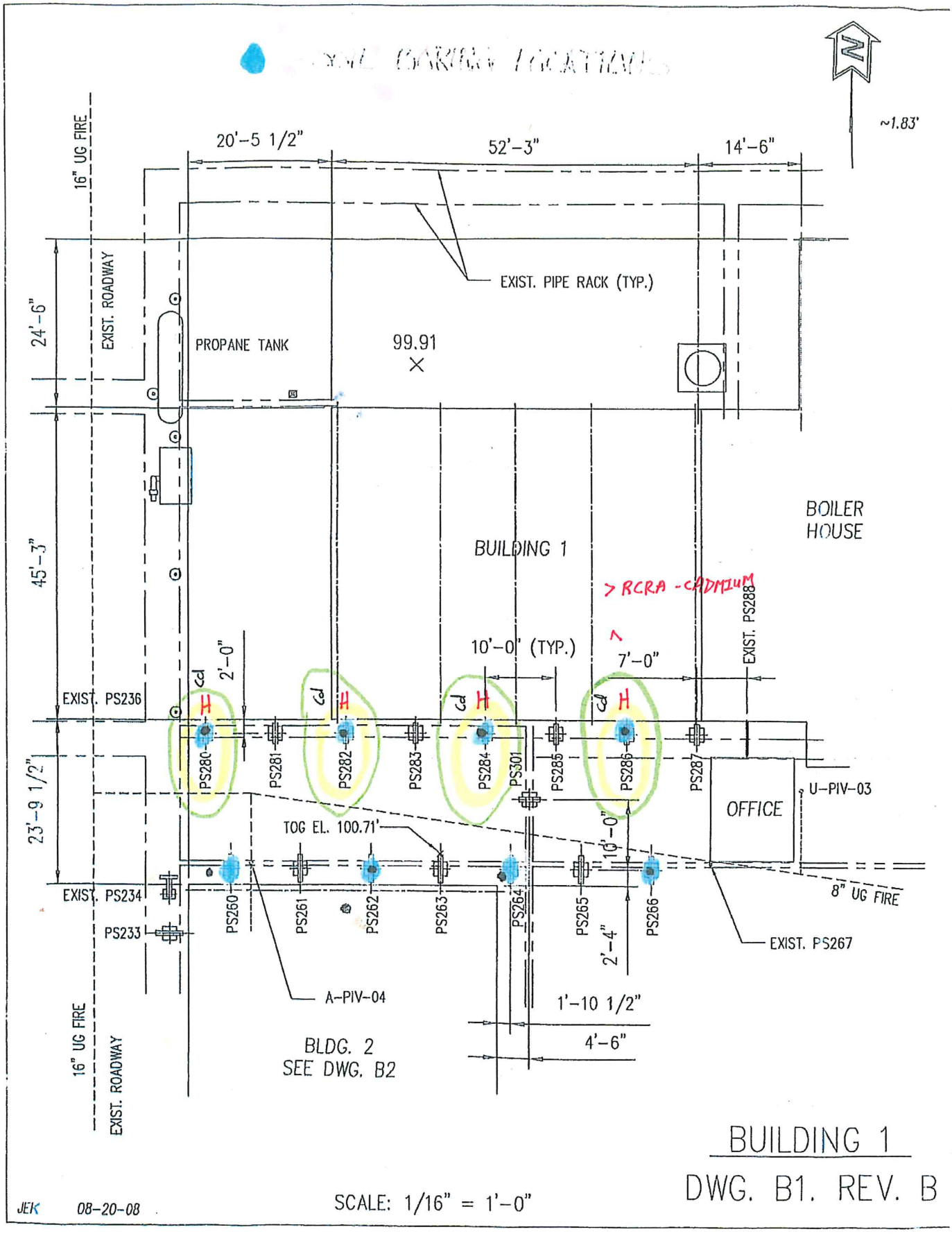
RCRA = Resource Conservation and Recovery Act
BOLD Above respective RCRA regulatory limit
BOLD Above respective Tier I Construction Worker Ingestion Objective
BOLD Above respective Tier I Construction Worker Inhalation Objective

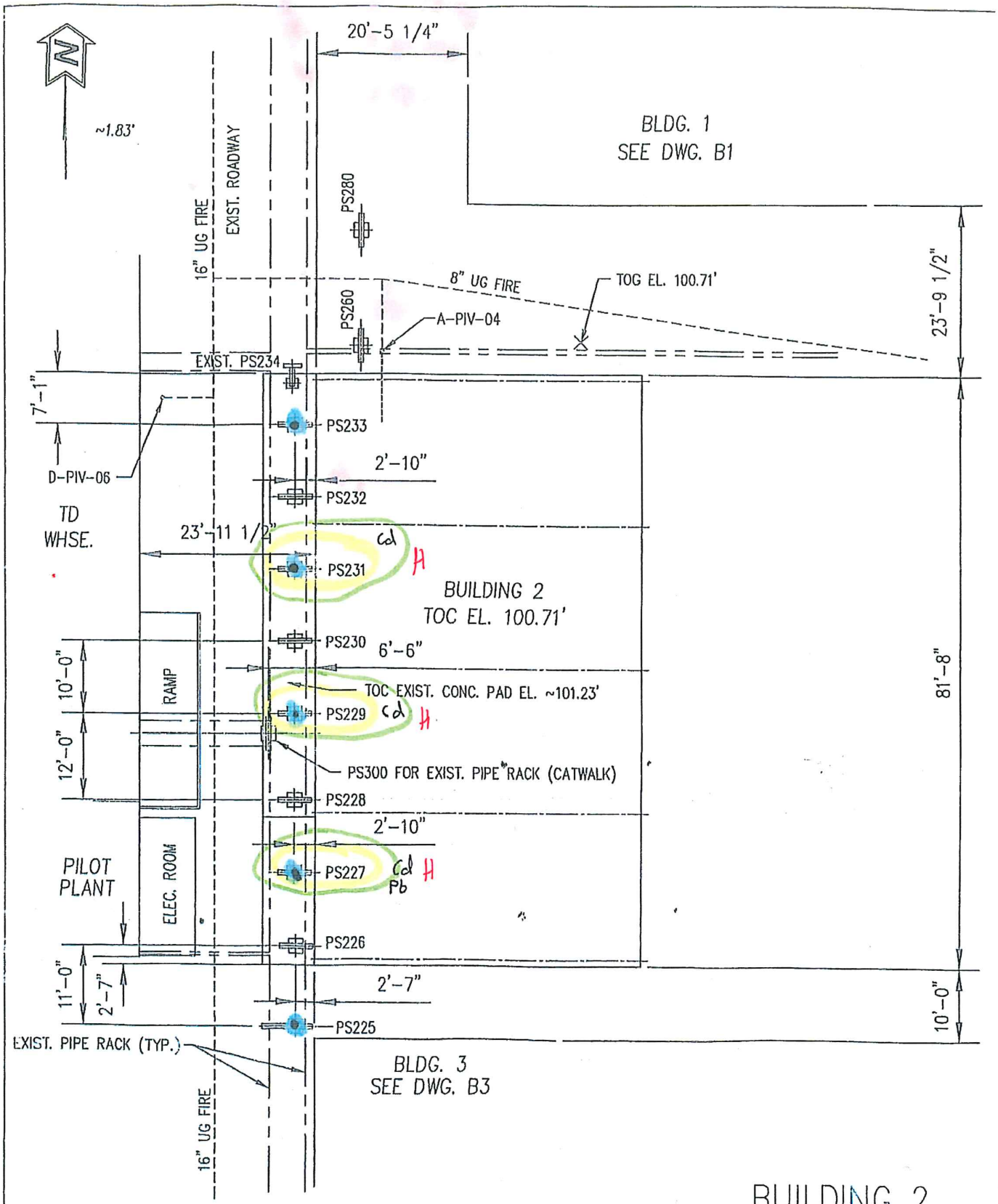


BUILDING 1

DWG. B1. REV. B

JEK 08-20-08

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

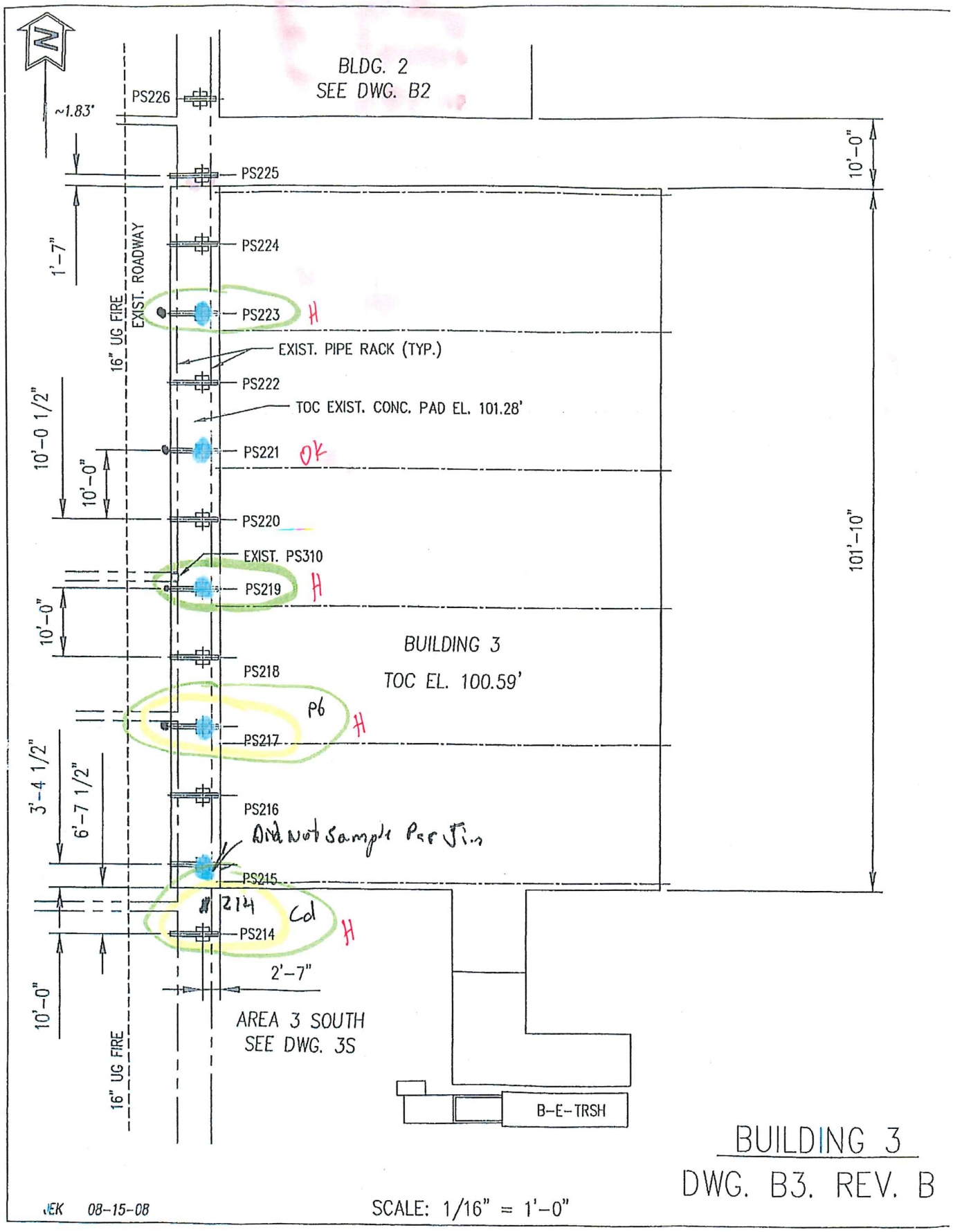


BUILDING 2

DWG. B2. REV. B

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

JEK 08-20-08

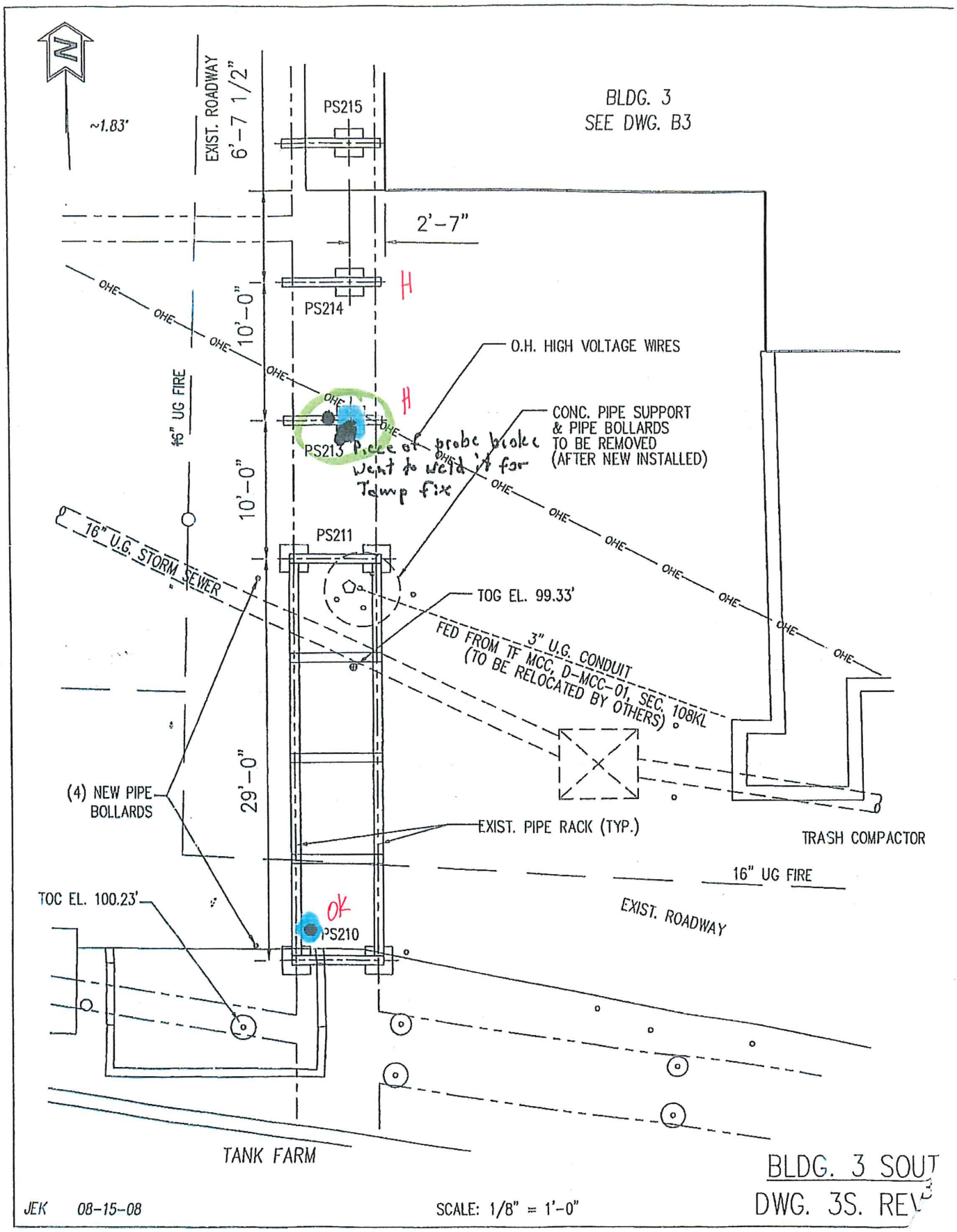


BUILDING 3

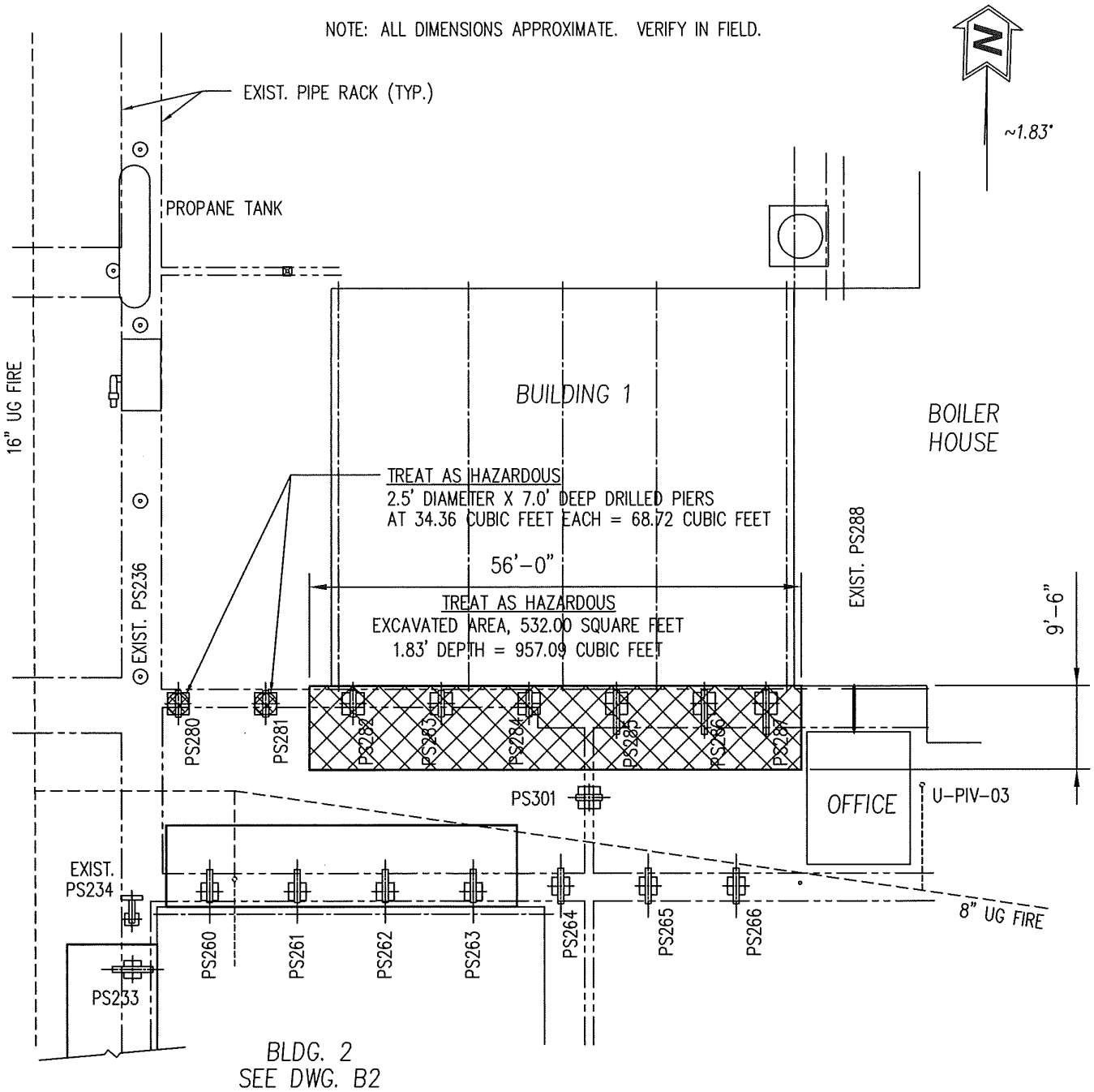
DWG. B3. REV. B

EK 08-15-08

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


N
~1.83'
EXIST. ROADWAY
6'-7 1/2"
PS215
BLDG. 3
SEE DWG. B3
2'-7"
PS214
H
10'-0"
OHE
O.H. HIGH VOLTAGE WIRES
16" UG FIRE
PS213
H
Piece of probe broke
Went to weld it for
Temp fix
CONC. PIPE SUPPORT
& PIPE BOLLARDS
TO BE REMOVED
(AFTER NEW INSTALLED)
10'-0"
16" U.G. STORM SEWER
PS211
TOG EL. 99.33'
3" U.G. CONDUIT
FED FROM TF MCC, D-MCC-01, SEC. 108KL
(TO BE RELOCATED BY OTHERS)
29'-0"
(4) NEW PIPE
BOLLARDS
EXIST. PIPE RACK (TYP.)
TRASH COMPACTOR
16" UG FIRE
EXIST. ROADWAY
TOC EL. 100.23'
OK
PS210
TANK FARM
JEK 08-15-08
SCALE: 1/8" = 1'-0"
BLDG. 3 SOUT
DWG. 3S. REV

HAZ AREAS



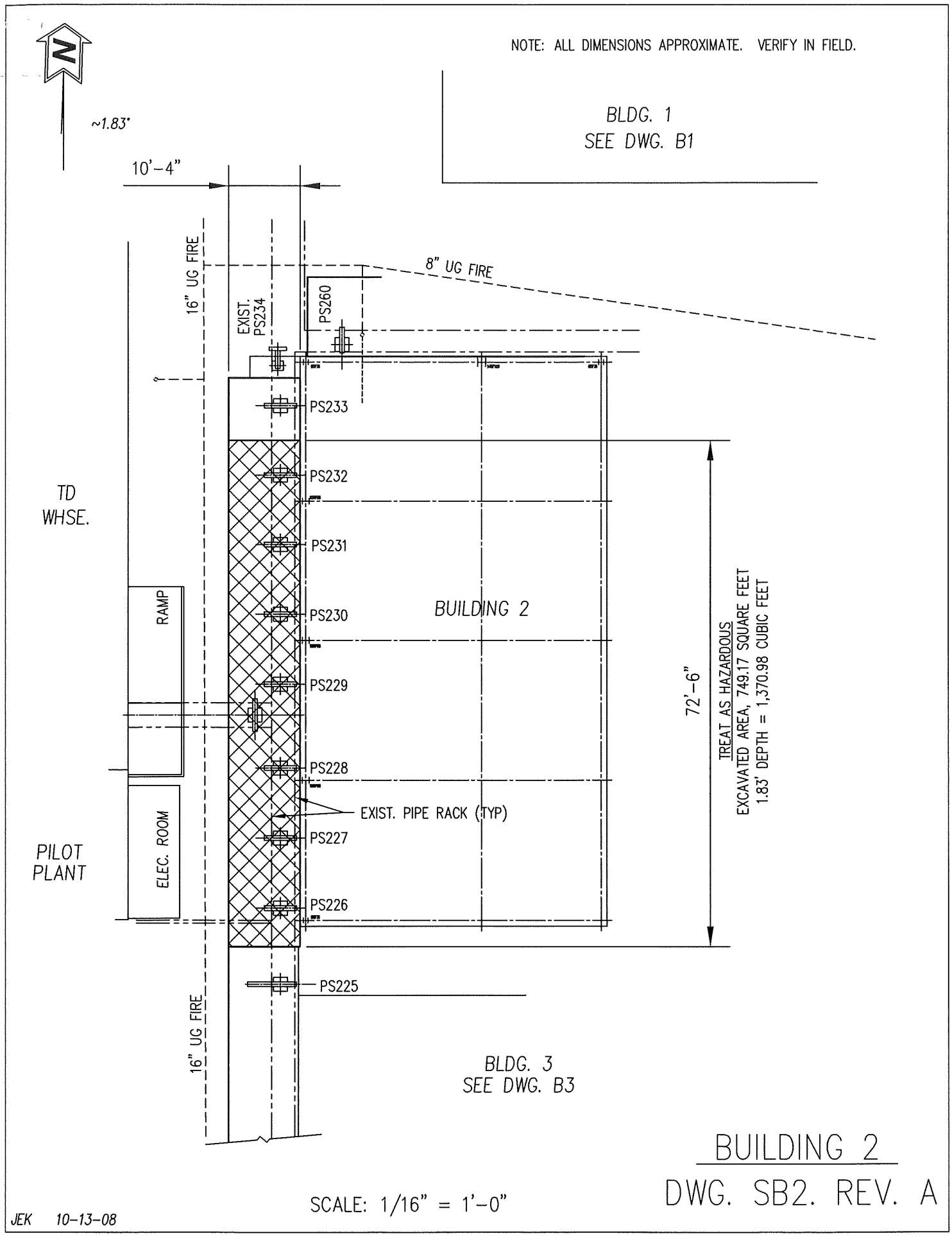
BUILDING 1

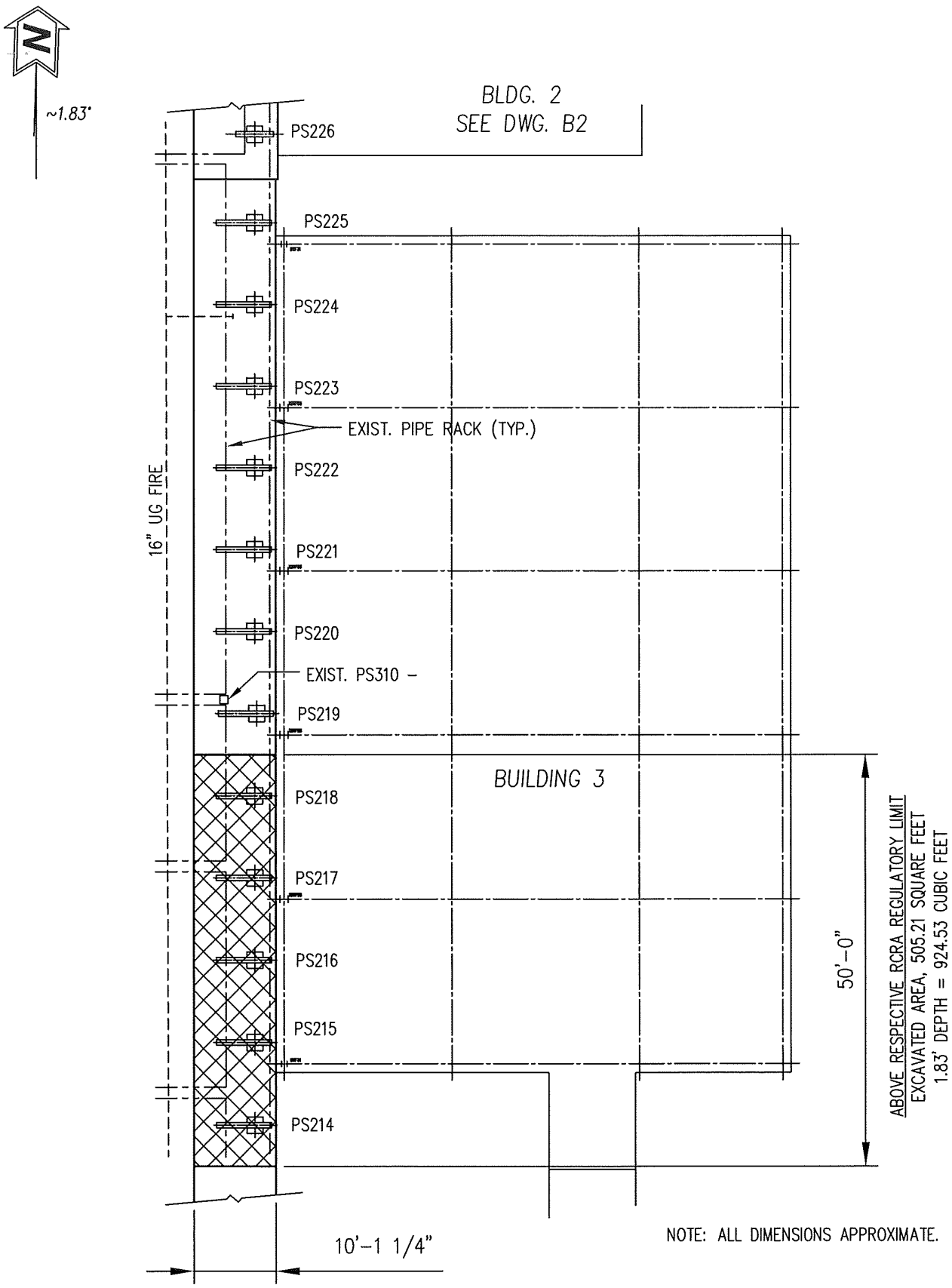
DWG. SB1. REV. A

JEK 10-29-08

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

FHRPRU001114


NOTE: ALL DIMENSIONS APPROXIMATE. VERIFY IN FIELD.
N
~1.83°
BLDG. 1
SEE DWG. B1
10'-4"
16" UG FIRE
8" UG FIRE
EXIST. PS234
PS260
PS233
PS232
PS231
PS230
PS229
PS228
PS227
PS226
PS225
TD WHSE.
RAMP
ELEC. ROOM
PILOT PLANT
BUILDING 2
EXIST. PIPE RACK (TYP)
72'-6"
TREAT AS HAZARDOUS
EXCAVATED AREA, 749.17 SQUARE FEET
1.83' DEPTH = 1,370.98 CUBIC FEET
16" UG FIRE
BLDG. 3
SEE DWG. B3
BUILDING 2
DWG. SB2. REV. A
SCALE: 1/16" = 1'-0"
JEK 10-13-08



NOTE: ALL DIMENSIONS APPROXIMATE. VERIFY IN FIELD.

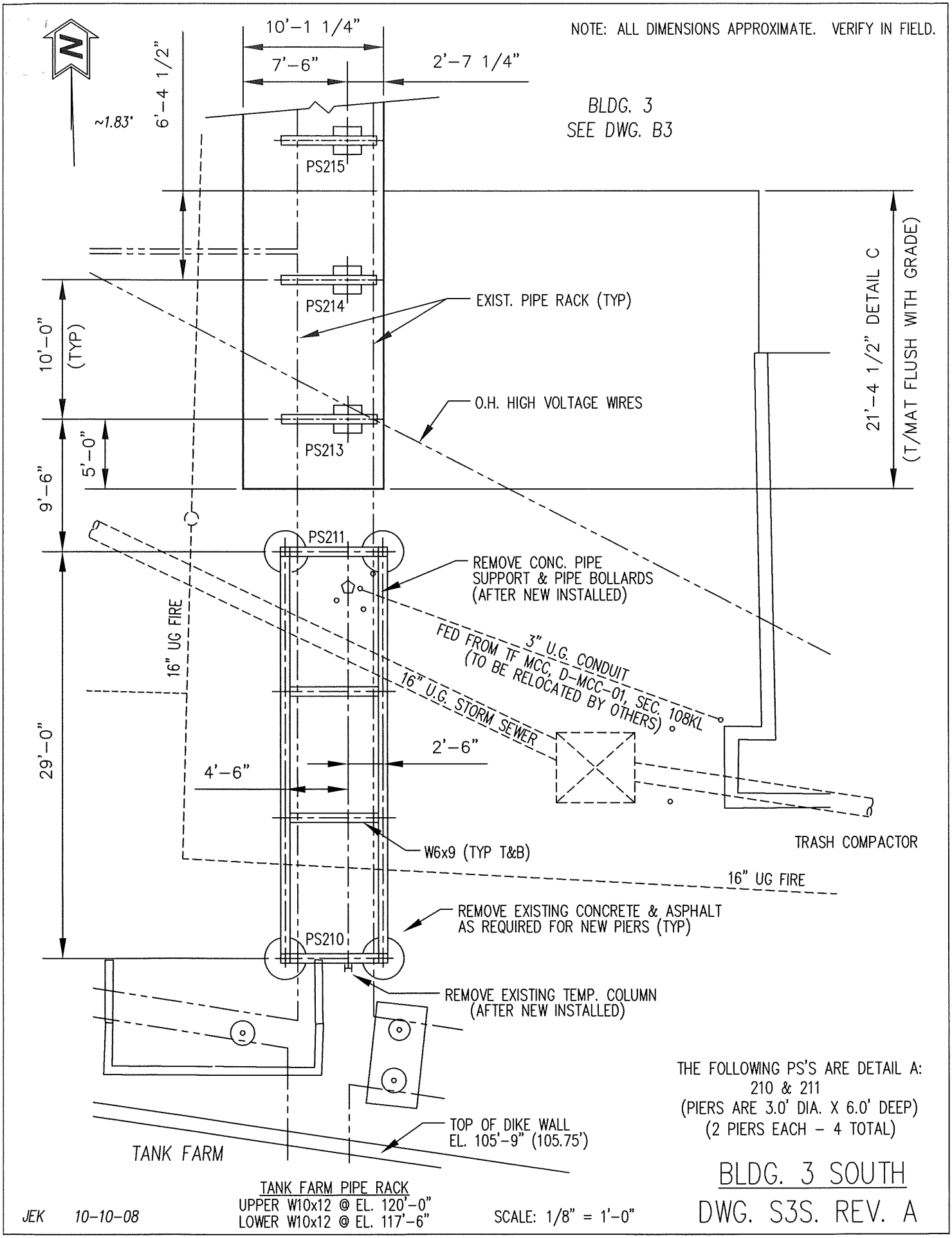
AREA 3 SOUTH
SEE DWG. 3S

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

BUILDING 3

DWG. SB3. REV. A

JEK 10-10-08


NOTE: ALL DIMENSIONS APPROXIMATE. VERIFY IN FIELD.
N
~1.83°
10'-1 1/4"
7'-6"
2'-7 1/4"
6'-4 1/2"
BLDG. 3
SEE DWG. B3
PS215
PS214
PS213
PS211
PS210
EXIST. PIPE RACK (TYP)
O.H. HIGH VOLTAGE WIRES
10'-0" (TYP)
5'-0"
9'-6"
29'-0"
21'-4 1/2" DETAIL C
(T/MAT FLUSH WITH GRADE)
REMOVE CONC. PIPE SUPPORT & PIPE BOLLARDS (AFTER NEW INSTALLED)
16" UG FIRE
3" U.G. CONDUIT FED FROM TF MCC, D-MCC-01, SEC. 108KL (TO BE RELOCATED BY OTHERS)
16" U.G. STORM SEWER
2'-6"
4'-6"
W6x9 (TYP T&B)
TRASH COMPACTOR
16" UG FIRE
REMOVE EXISTING CONCRETE & ASPHALT AS REQUIRED FOR NEW PIERS (TYP)
REMOVE EXISTING TEMP. COLUMN (AFTER NEW INSTALLED)
TOP OF DIKE WALL EL. 105'-9" (105.75')
TANK FARM
THE FOLLOWING PS'S ARE DETAIL A:
210 & 211
(PIERS ARE 3.0' DIA. X 6.0' DEEP)
(2 PIERS EACH - 4 TOTAL)
TANK FARM PIPE RACK
UPPER W10x12 @ EL. 120'-0"
LOWER W10x12 @ EL. 117'-6"
JEK 10-10-08
SCALE: 1/8" = 1'-0"
BLDG. 3 SOUTH
DWG. S3S. REV. A

Total Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	532.00	*5 support columns*	
NORTH OF B2	368.33	*4 support columns*	
WEST OF B2	842.17	*8 support columns*	
WEST OF B3	1,101.35	*11 support columns*	
SW OF B3	216.02	*2 support columns*	
Total SF	3,059.88		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	5,609.78		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	206.17	6	34.36
3.0' x 6.0' piers - CF	169.65	4	42.41
Total CF	**5,985.59**		
CF vs CY	27		
Total CY	**221.69**		
15 CY truck	15		
Number of Trucks	14.78		
Adjusted number of Trucks	15		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	3,059.88		
Nominal Fill Depth in Feet	0.50		
Total CF	1,529.94		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

Above RCRA - Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	476.75		
NORTH OF B2	-		
WEST OF B2	537.33		
WEST OF B3	406.17		
SW OF B3	-		
Total SF	1,420.25		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	2,603.79		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	34.36	1	34.36
3.0' x 6.0' piers - CF	-	0	42.41
Total CF	**2,638.15**		
CF vs CY	27		
Total CY	**97.71**		
15 CY truck	15		
Number of Trucks	6.51		
Adjusted number of Trucks	7		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	1,420.25		
Nominal Fill Depth in Feet	0.50		
Total CF	710.12		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

Non Hazardous - Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	55.25		
NORTH OF B2	368.33		
WEST OF B2	304.83		
WEST OF B3	695.19		
SW OF B3	216.02		
Total SF	1,639.63		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	3,005.99		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	171.81	5	34.36
3.0' x 6.0' piers - CF	169.65	4	42.41
Total CF	**3,347.44**		
CF vs CY	27		
Total CY	**123.98**		
15 CY truck	15		
Number of Trucks	8.27		
Adjusted number of Trucks	9		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

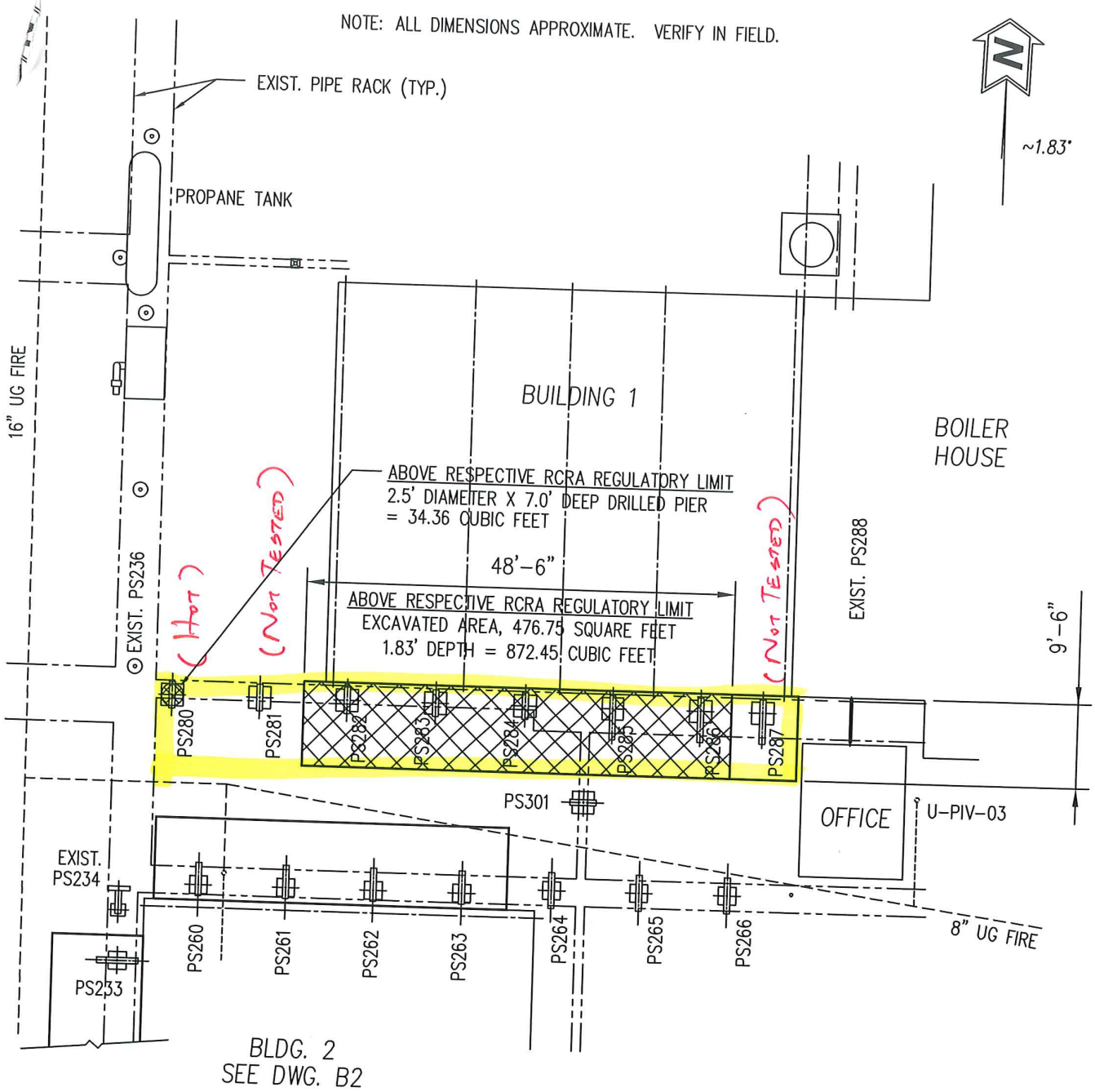
Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	1,639.63		
Nominal Fill Depth in Feet	0.50		
Total CF	819.81		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

TABLE 1
Summary of Soil Analytical Results
Flint Hills Resources
September 10-11, 2008

	CADMIUM		LEAD		MERCURY		ZINC	
Sample Identification	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**
PS-210	0.108	4.41	0.029	39.0	<0.0002	<0.108	NA	1240
PS-213	0.339	13.7	0.345	141	0.0004	**0.196**	NA	6690
PS-214	**1.61**	76.3	4.34	**1410**	0.003	**0.286**	NA	16800
PS-217	0.451	14.6	**25.6**	**1930**	0.0002	**0.208**	NA	7830
PS-219	0.583	27.8	0.603	377	0.0002	**0.139**	NA	7080
PS-221	0.143	10.0	0.118	309	<0.0002	<0.113	NA	4440
PS-223	0.375	25.9	2.41	**1480**	0.0002	<0.116	NA	9330
PS-225	0.102	11.4	<0.005	73.3	<.0002	<0.120	NA	1230
PS-227	**1.72**	57.3	**5.32**	**1070**	<0.0002	<0.116	NA	11200
PS-229	**3.41**	88.1	0.564	356	0.0002	**0.115**	NA	12800
PS-231	**2.75**	69.1	0.194	**851**	<0.0002	<0.115	NA	17000
PS-233	0.145	8.49	<0.005	76.2	<0.0002	<0.122	NA	1800
PS-260	0.0124	0.426	<0.005	8.39	<0.0002	<0.103	NA	74.0
PS-262	0.0741	11.5	<0.005	61.1	<0.0002	<0.103	NA	1480
PS-264	0.130	7.74	<0.005	39.2	<0.0002	<0.110	NA	634
PS-266	0.0201	0.528	<0.005	44.5	<0.0002	<0.129	NA	164
PS-280	**2.76**	72.8	3.12	**1250**	<0.0002	**0.325**	NA	17600
PS-282	**1.78**	112	4.38	**2680**	<0.0002	**0.273**	NA	28900
PS-284	**2.83**	133	1.00	**1190**	<0.0002	<0.112	NA	15600
PS-286	**7.90**	**443**	0.441	**1100**	<0.0002	<0.111	NA	21900
RCRA Thresholds for Characteristic Hazardous Waste (mg/L)	**1.0**	*	**5.0**	*	**0.2**	*	*	*
Tier I Construction Worker Ingestion Objective (mg/Kg)	*	**200**	*	**700 [1]**	*	**61**	*	**61,000**
Tier I Construction Worker Inhalation Objective (mg/Kg)	*	**59,000**	*	*	*	**0.1 [1]**	*	*

[1] = Exposure limits recently revised (updated February 23, 2007)
All Tier I Construction Worker limits taken from Illinois Pollution Control Board, Chapter II, Subchapter F, Part 742 - Tiered-Approach to Corrective Action (updated February 23, 2007)
All total metal results reported in mg/kg (dry-weight)
NA = Not Analyzed.
* = No level set for specified constituent
RCRA = Resource Conservation and Recovery Act
BOLD Above respective RCRA regulatory limit
BOLD Above respective Tier I Construction Worker Ingestion Objective
BOLD Above respective Tier I Construction Worker Inhalation Objective



10-29-08
REVISIONS
PER GANESH K.

JEK 10-07-08

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

BUILDING 1
DWG. B1. REV. E

FHRPRU001120

Total Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	532.00	*5 support columns*	
NORTH OF B2	368.33	*4 support columns*	
WEST OF B2	842.17	*8 support columns*	
WEST OF B3	1,101.35	*11 support columns*	
SW OF B3	216.02	*2 support columns*	
Total SF	3,059.88		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	5,609.78		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	206.17	6	34.36
3.0' x 6.0' piers - CF	169.65	4	42.41
Total CF	**5,985.59**		
CF vs CY	27		
Total CY	**221.69**		
15 CY truck	15		
Number of Trucks	14.78		
Adjusted number of Trucks	15		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	3,059.88		
Nominal Fill Depth in Feet	0.50		
Total CF	1,529.94		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

Above RCRA - Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	476.75		
NORTH OF B2	-		
WEST OF B2	537.33		
WEST OF B3	406.17		
SW OF B3	-		
Total SF	1,420.25		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	2,603.79		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	34.36	1	34.36
3.0' x 6.0' piers - CF	-	0	42.41
Total CF	**2,638.15**		
CF vs CY	27		
Total CY	**97.71**		
15 CY truck	15		
Number of Trucks	6.51		
Adjusted number of Trucks	7		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	1,420.25		
Nominal Fill Depth in Feet	0.50		
Total CF	710.12		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

Non Hazardous - Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	55.25		
NORTH OF B2	368.33		
WEST OF B2	304.83		
WEST OF B3	695.19		
SW OF B3	216.02		
Total SF	1,639.63		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	3,005.99		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	171.81	5	34.36
3.0' x 6.0' piers - CF	169.65	4	42.41
Total CF	**3,347.44**		
CF vs CY	27		
Total CY	**123.98**		
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Number of Trucks	8.27		
Adjusted number of Trucks	9		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
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Total SF	1,639.63		
Nominal Fill Depth in Feet	0.50		
Total CF	819.81		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

← To Be Revised →

Kociuba, James

From: Kociuba, James
Sent: Tuesday, October 07, 2008 9:23 AM
To: Moran, Jeffrey; Steinbach, Mary; Newton, Gale

Attachments: 1of3.pdf; 2of3.pdf; 3of3.pdf; B1-C.pdf; B2-C.pdf; B3-C.pdf; 3S-C.pdf; Volumes.pdf; Soil Analytical Results.pdf; Boring Locations Map.pdf

Based on the drawings from Chamlin & Associates, the mat design is an acceptable method for supporting the new pipe supports, minimizes the amount of soil removed and would be the easiest to install. I am using the cored pier design where traffic aisles need to be maintained during construction. The mat design calls for a 1.5' thick mat that starts at the building foundation and extends 7.5' out off the center of the columns. Because of the 7.5', this severely restricts the roadways between Buildings 1 and 2 and between Buildings 2 and 3 to the TD Warehouse area. For this reason, the mat design will need to be flush or level with the surrounding grade and not on top of grade. Although there is concrete under the asphalt between Buildings 1 and 2 I have included that soil in the amount removed. Attached are the drawings showing the work. Based on these drawings, the total amount of soil removed would be about 4,942 cubic feet or 13 trucks.

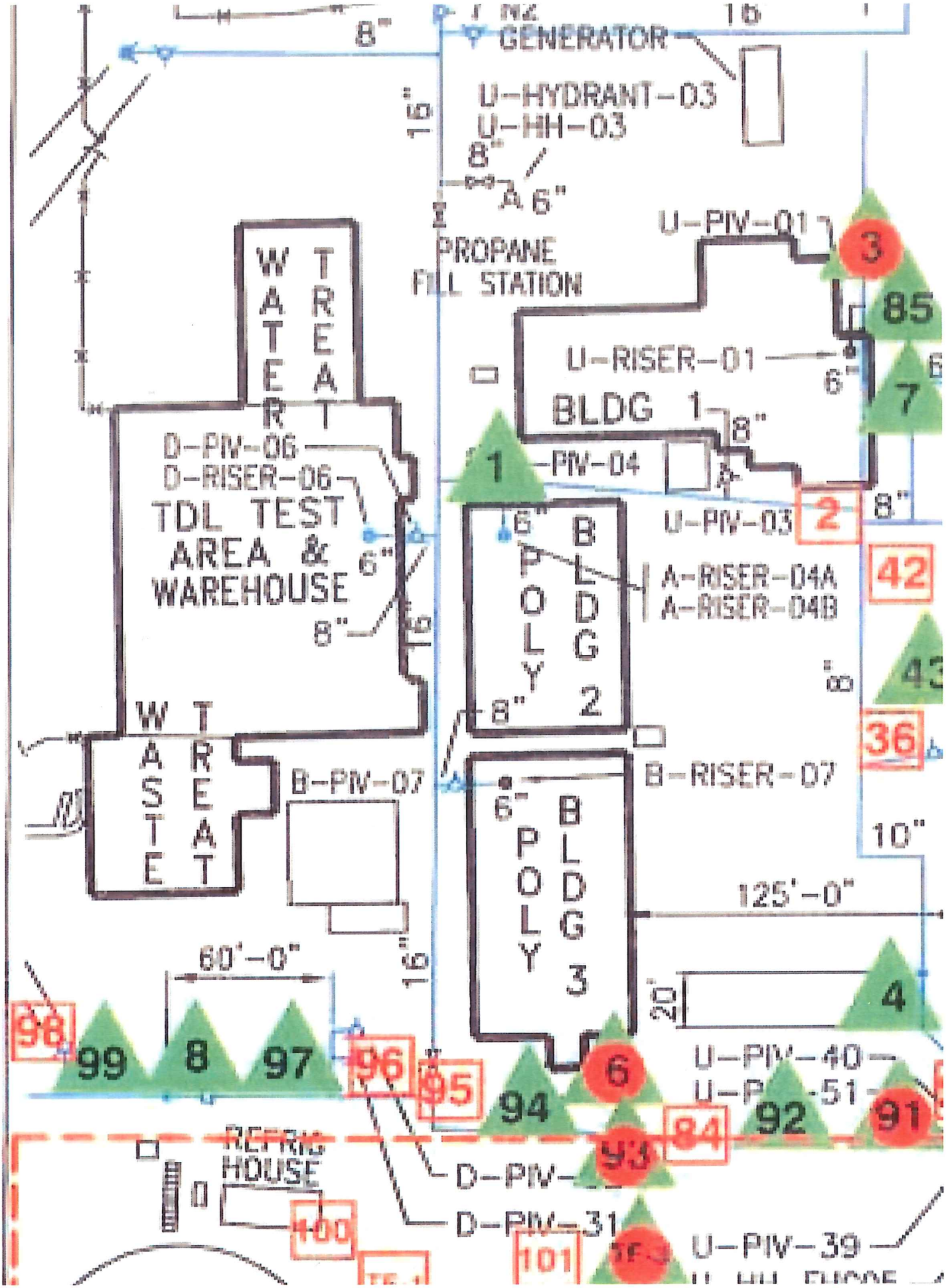
1of3.pdf (75 KB) 2of3.pdf (74 KB) 3of3.pdf (76 KB) B1-C.pdf (35 KB) B2-C.pdf (29 KB) B3-C.pdf (24 KB) 3S-C.pdf (33 KB)

Volumes.pdf (12 KB) Soil Analytical Results.pdf (3... Boring Locations Map.pdf (990 ...

Location	sf		
SOUTH OF B1	532.00		
NORTH OF B2	343.33		
WEST OF B2	852.50		
WEST OF B3	1,098.24		
SW OF B3	218.05		
Total sf	3,044.12		
Mat Depth	1.50		
Total cf	4,566.18		
		Qty.	sf each
2.5' x 7.0' piers cf	206.17	6	34.36
3.0' x 6.0' piers cf	169.65	4	42.41
Sub-total cf	**4,941.99**		
cf vs cy	27		
	183.04		
15 cy truck	15		
number of trucks	12.20		
adjusted number of trucks	13		

368.33

A


GENERATOR
U-HYDRANT-03
U-HH-03
PROPANE
FILL STATION
U-PIV-01
WATER TREAT
U-RISER-01
BLDG 1
PIV-04
U-PIV-03
D-PIV-06
D-RISER-06
TDL TEST
AREA &
WAREHOUSE
POLY BLDG 2
A-RISER-04A
A-RISER-04B
WASTE TREAT
B-PIV-07
B-RISER-07
POLY BLDG 3
125'-0"
60'-0"
U-PIV-40
U-PIV-51
REFRIG
HOUSE
D-PIV-31
U-PIV-39

Kociuba, James

From: Kociuba, James
Sent: Wednesday, September 03, 2008 10:32 AM
To: Gens, Donald
Cc: Moran, Jeffrey; Steinbach, Mary; Krish, Ganesh
Subject: N-S soils volumes

Here are various estimates for the amount of soil to be removed. Understand that the original pier design '0' is no longer a viable option. The piers south of building 3 will still follow the drilled pier design. The amount of material excavated for a MAT design or full excavation is based on a 7.25' width. The actual thickness of the MAT has yet to be determined so I provided 1.5' and 2.0' depths for reference. A MAT is a extra-thick and heavily-reinforced concrete pad or strip. Gravel is 105 pounds per cubic foot or 2,835 pounds per cubic yard.

0. The original pier design would have yielded 1,475 cubic feet or 54.65 cubic yards of waste. 4 T

1. A MAT design on existing grade will yield the least amount of waste. It is only where the MAT needs to be even with the grade (roadway) where soil needs to be removed. A 2.0' thick MAT there would yield 609.00 cubic feet or 22.56 cubic yards of waste. 2 T

2. A MAT design that is 1.5' thick where the MAT is level with the existing grade would yield 3,990 cubic feet or 147.80 cubic yards of waste. 10 T

3. A MAT design that is 2.0' thick where the MAT is level with the existing grade would yield 4,950.09 cubic feet or 183.38 cubic yards of waste. 13 T

4. A full excavation down to the building foundations would yield 10,243 cubic feet or 379.41 cubic yards of waste. 26 T

5. Other pipe support designs pending.

Jim

.037037 / 27

120# / C.F. OR 3,240 # / C.Y.

15 CU. YD. / TRUCK

FLINT HILLS
resources®

c/o Huntsman Corporation
500 Huntsman Way
Salt Lake City, UT 84108
Attn: John R. Heskett

c/o Huntsman Corporation
500 Huntsman Way
Salt Lake City, UT 84108
Attn: Legal Department

Dear Mr. Heskett,

Flint Hills Resources, LP ("FHR") is providing you with this letter as a courtesy notification. Under Section 6(e) of that certain Ground Lease at the Peru, Illinois facility (the "Peru Facility") between Huntsman Expandable Polymers Company, LLC ("Huntsman") and FHR, dated as of the 1st day of August, 2007 (the "Lease"), FHR is required to provide notice to Huntsman at least 45 days prior to initiation of any Installation, Demolition or Construction activities at the Peru Facility. Installation, Demolition or Construction is defined in the Lease as installation, demolition or construction activities to the extent that such activities involve significant removal, disturbance, or excavation of soil on the leased premises.

Over the next two-year period (11/1/08-7/1/10), FHR is planning to demolish Buildings #1, #2 and #3 located at the Peru Facility. FHR intends to demolish the buildings to grade and not disturb the surrounding or underlying soil and/or pavement. Therefore, FHR does not believe that the planned building demolition activities involve Installation, Demolition or Construction as contemplated by the Lease and that it is not required to provide Huntsman with the 45 day notice as described above.

In addition, a pipe rack is currently attached to Building #2. In order to demolish Building #2, FHR must remove the pipe rack from Building #2 and install a pipe support structure to support the pipes. The installation of the pipe support structure will require the boring/digging of forty-two (42) holes for the installation of footings that will stabilize the legs of the pipe support structure. It is expected that each hole will be approximately 30" in diameter and 7 feet deep. Given the relatively small number and magnitude of the holes that are required to construct the pipe support structure, FHR does not believe that the planned construction of

– 501 Brunner Street – Peru, Illinois 61354 – 815-224-1525 – Fax 815-224-5278 –

the pipe support structure involves Installation, Demolition or Construction as contemplated by the Lease and that it is not required to provide Huntsman with the 45 day notice as described above.

Notwithstanding the previous two paragraphs, as a courtesy, FHR is providing Huntsman with this courtesy notification regarding the project described herein.

Please do not hesitate to contact me with any questions or comments.

Regards,

for BM 8/28/08

Brian Marcinkus
Plant Manager

FOR REF. ONLY

FHRPRU001128

Loading on pipe bridge west of Building 4

Row	Qty.	Size	Type	Cover	Product	Length (ft.)	Pipe/Cond lbs/ft	Total Weight	Product lbs/ft	Total Weight	Insulation lbs/ft	Total Weight	**Total Weight**	
C	8	3/4"	Conduit	Bare	Wiring	20	1.09	174.40	1.090	174.40	0.000	0.00	**348.80**	
C	3	3/4"	Pipe	Yellow		20	1.13	67.80	0.231	13.86	0.000	0.00	**81.66**	
C	1	1"	Conduit	Bare	Wiring	20	1.61	32.20	1.610	32.20	0.000	0.00	**64.40**	
C	1	1"	Pipe	Insulated		20	1.68	33.60	0.374	7.48	1.880	37.60	**78.68**	
B	1	2"	Pipe	Bare - rusty		20	3.65	73.00	1.454	29.08	0.000	0.00	**102.08**	***675.62***
A	1	2"	Pipe	Bare	Nitrogen	20	3.65	73.00	0.000	0.00	0.000	0.00	**73.00**	
A	1	6"	Pipe	Insulated	Steam	20	28.55	571.00	3.130	62.59	4.890	97.80	**731.39**	
A	1	6"	Pipe	Insulated	Water	20	28.55	571.00	12.518	250.36	4.890	97.80	**919.16**	
A	1	3"	Pipe	Bare	Empty - Dead	20	7.58	151.60	0.000	0.00	0.000	0.00	**151.60**	***1875.15***
													2550.77	

Data from Dow Chemical

Size	Water lbs/ft	Insul lbs/ft
3/4"	0.231	1.080
1"	0.374	1.880
2"	1.454	2.480
3"	3.203	3.120
6"	12.518	4.890

Data from Tyco

Size	Per 100'	Per foot
3/4"	109	1.09
1"	161	1.61
1 1/2"	263	2.63
2"	350	3.50
3"	727	7.27
4"	1030	10.30

Kociuba, James

From: Kociuba, James
Sent: Friday, May 23, 2008 2:50 PM
To: Moran, Jeffrey
Subject: Pipe Rack 1-2-3

Attachments: PLAN-A.pdf; 3S-A.pdf; B1-A.pdf; B2-A.pdf; B3-A.pdf

Jeff, here are the plans for pipe racks along buildings 1, 2 and 3 for your review.

Here are some of my thoughts. I am using a nominal 10' spacing to keep the size of the pipe supports small - a small 6" or 8" single post and two horizontal beams. This is also the simplest of the foundation and support types to install. I am not touching any existing supports north and west of Building 1. I am keeping the new pipe supports 6" away from the walls of the building.

B1-A
1. The conduits along the north side of Building 1 are on the building wall. It seems impractical to add 7 pipe racks to support 3 conduits when there is a pipe rack 30' north of the building. To minimize the down time, I would replace these by running new wires and conduits and then do the switch over at the ends. It appears that these are some of the original runs so it might make sense to replace them anyway.
2. Pipe support PS265 and PS266, west of the Office. There is a concrete passageway between the Office and Building 2 that is used mostly for fork trucks. PS267 isn't much of an existing support so I really do not want to start a bridge there. If I move PS266 east, I would then need an additional support west of PS260. I can remove PS265 and put a 20' bridge from PS264 to PS266. A bridge usually costs more than a single support so this needs to be discussed since 10' would be enough for fork truck traffic.
3. Pipe support PS301 between Building 1 and 2. There is a 6" potable water line that goes up and then back down. A straight 6" pipe can span 27' feet so this support is necessary if this line remains.
4. There are conduits along the south side of Building 1, on the building wall. We should be able to add some steel to support these.

B2-A
1. Pipe support PS234 is the existing support at the northwest corner of Building 2. It is in a good position and in good shape and really does not need to be replaced. It seems to fit perfectly with the new pipe support spacing.
2. Pipe support PS300 is for the lines that are currently supported by the catwalk between the TD Warehouse and Building 2. This seems to be the only place for this support so that it does not block the existing roadway. I don't like being over the 16" fire water line but its' location is questionable anyway.
3. The distance between PS225 and PS226 is 12'. This is the area where many lines change elevations and cross over. PS226 had to be off the lines running over to the Pilot Plant. PS225 might be able to move a little but this seemed to be about the only spot that was clear for a new support.

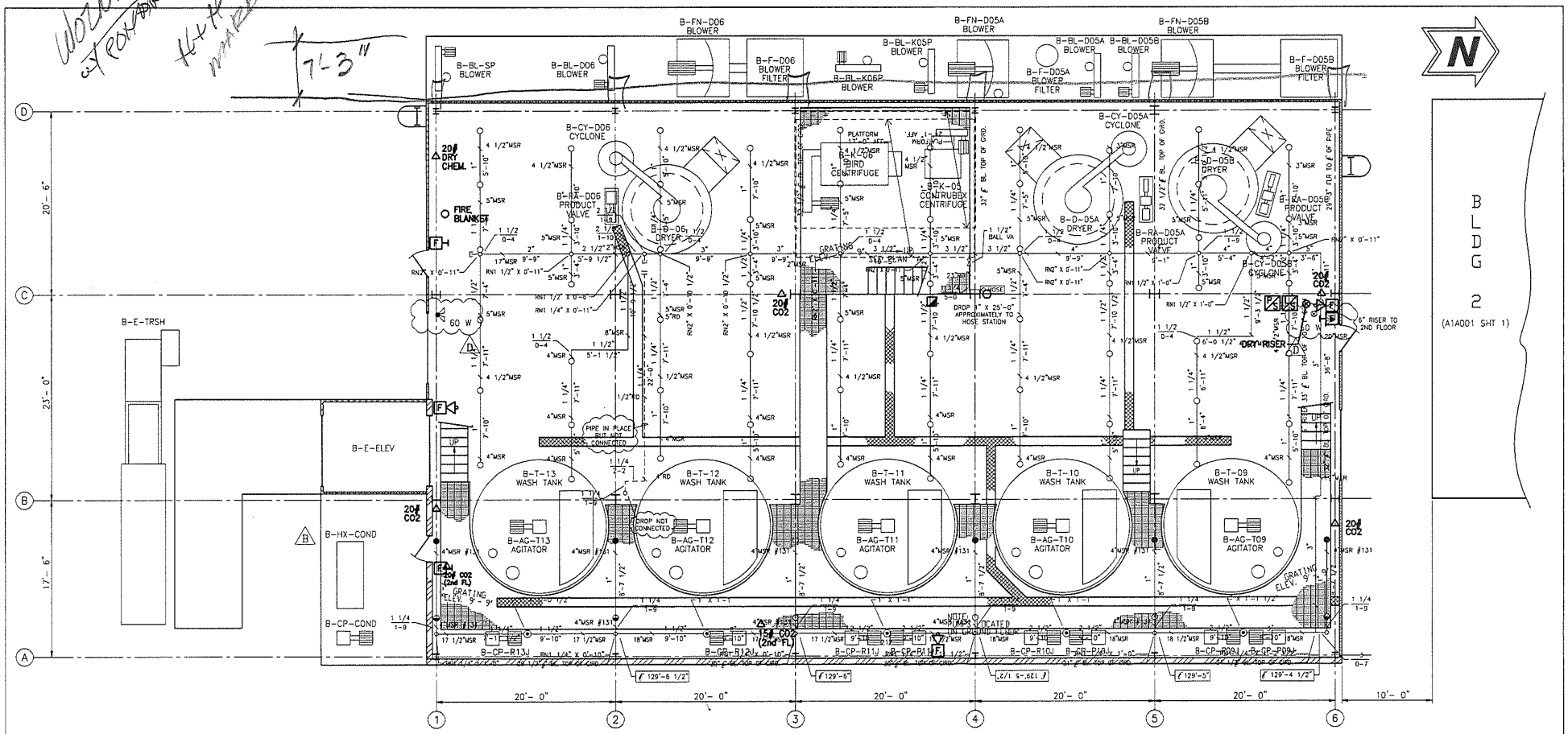
B3-A
1. The horizontal beams off the center post are shown correctly - they are not even or equal. This is because the single post would be placed through the opening there. This is a carryover from the concrete electrical light pole support.
2. PS219 could not be 10' here because of the 4" and 6" waste lines supported by PS310.

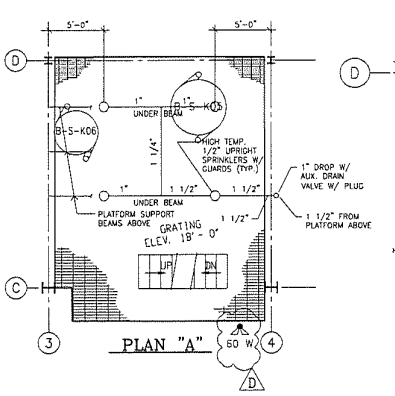
B3S-A
1. PS210 and PS211 were moved south slightly so PS211 clears the 16" storm sewer. The sewer location isn't confirmed so this pipe bridge might shorten or move slightly.

PLAN-A.pdf (28 KB) 3S-A.pdf (31 KB) B1-A.pdf (30 KB) B2-A.pdf (25 KB) B3-A.pdf (21 KB)

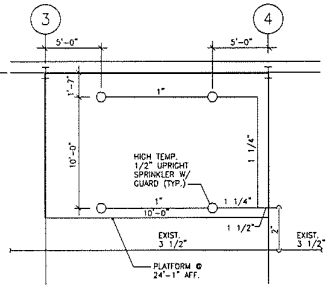
WORKING STRUCTURE

7'-3"

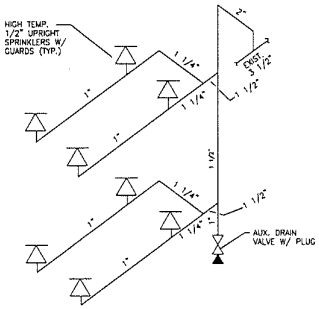




PLAN "A"



SPRINKLER PIPING UNDER PLATFORM @ 24'-1" AFF.



SPRINKLER PIPING @ PLATFORMS

NOT TO SCALE

BLDG 3 – 1st FLOOR PLAN

FINISHED FLOOR : ELEV. 99'-1"
T.O.S. : 132'-0"

SYMBOL KEY

- BRASS HORIZONTAL SIDEWALL – 1/2" ORIF. – 212° F
- PLUG
- DURASPEED – 286°
- DURASPEED – 212°
- PENDANT WITH RISER
- DURASPEED – 165°
- RISER
- ELEVATION
- PIPE HANGER
- HOSE — INTERIOR HOSE STATION
- AFF — ABOVE FINISH FLOOR

GENERAL NOTES

1. ALL DIMENSIONS ARE CENTER TO CENTER
2. SEE SHEET BFP001 SHEET 1 FOR DETAILS, INCLUDING RISERS
3. SEE DRAWING 012016 SHEET 1 FOR PLANT WIDE FIRE LOOP KEY PLAN
4. SEE GRINNELL DRAWING 13FP5334 SHEET 1 FOR REF.
5. SEE B1P001 SHEET 1 FOR REF.

FIRE ALARM SYMBOLS

- PRESSURE SWITCH
- LOW TEMP. SWITCH
- FLOW SWITCH
- MANUAL PULL STATION
- HORN/STROBE
- FIRE HOSE
- EYE WASH & SHOWER
- FIRE EXTINGUISHER
- SPRINKLER RISER

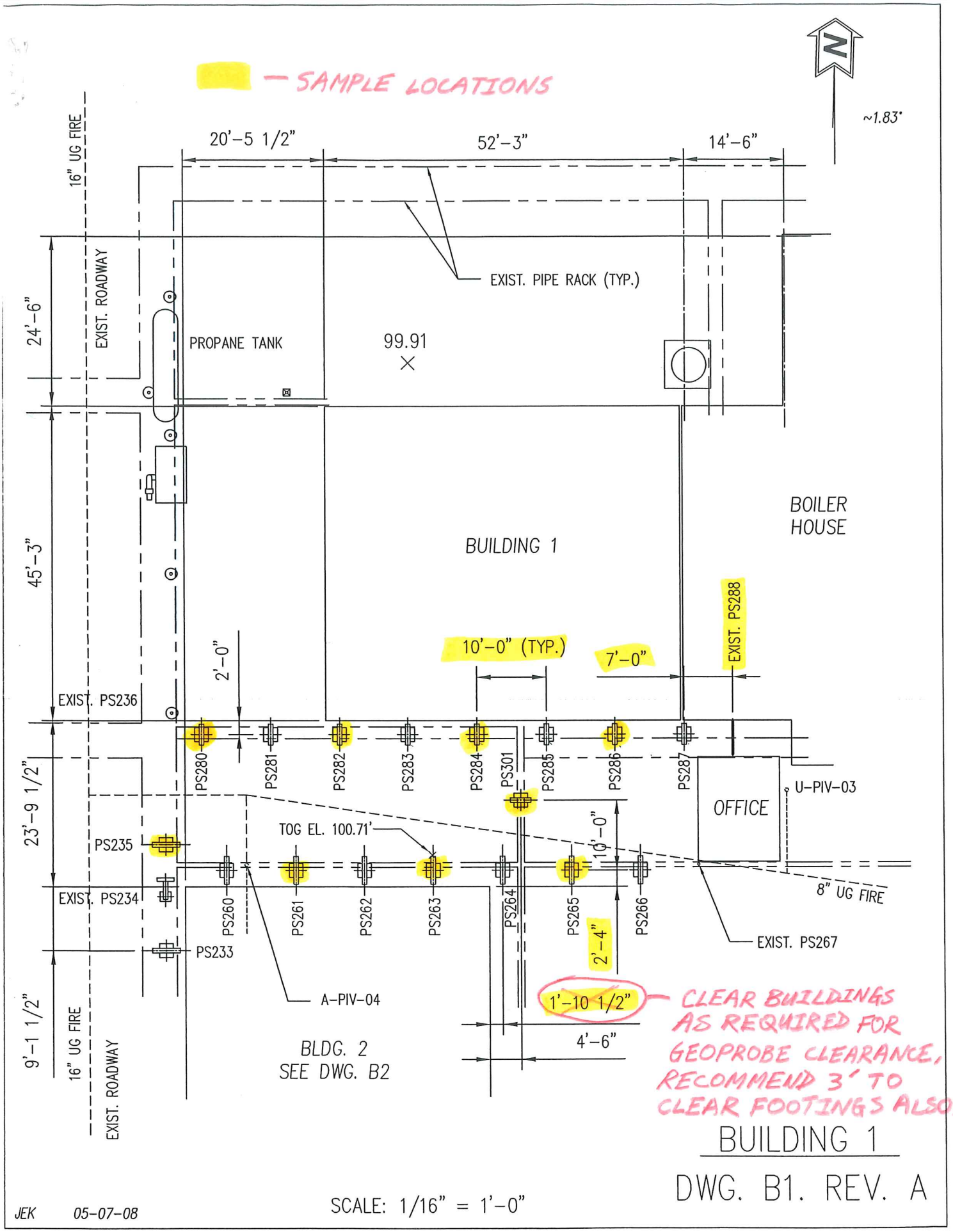
Flint Hills Resources

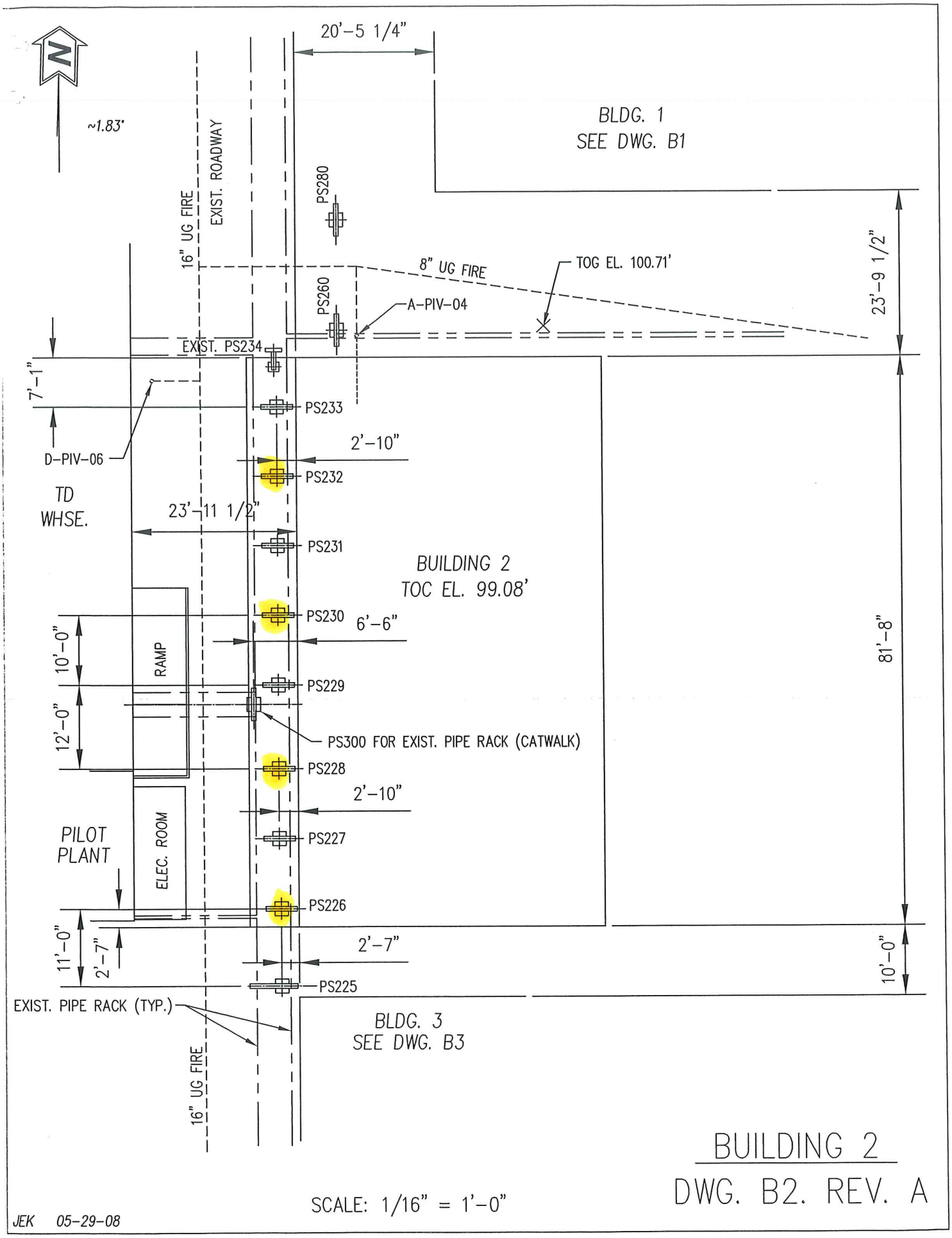
PERU, ILLINOIS PLANT

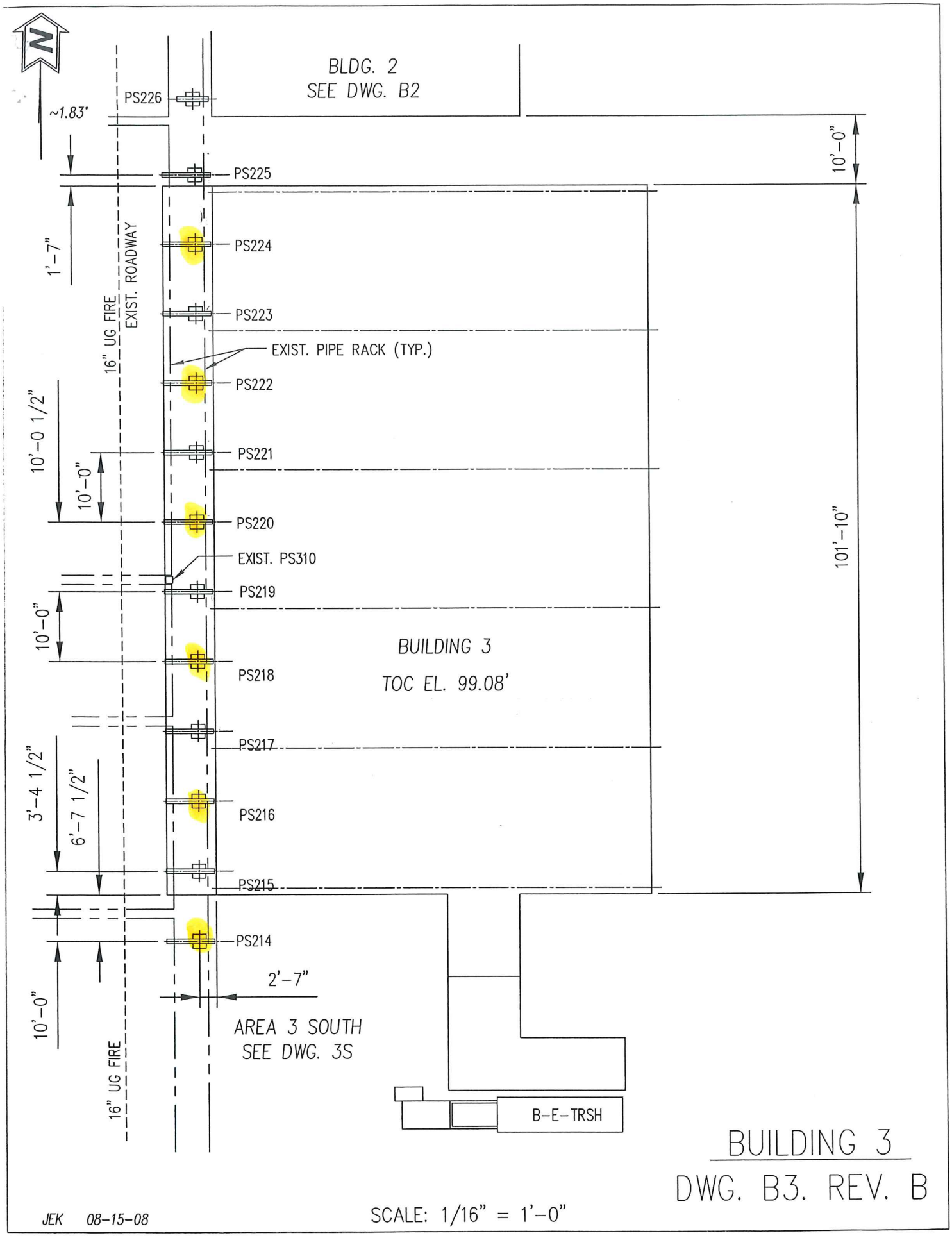
REV	DATE	DESCRIPTION
D	12/02	DCR# 2002-051
C	11/00	AEM AS-BUILT
B	11/99	ASBESTOS ABATEMENT
A	6/94	PROJECT SAFETY MANAGEMENT

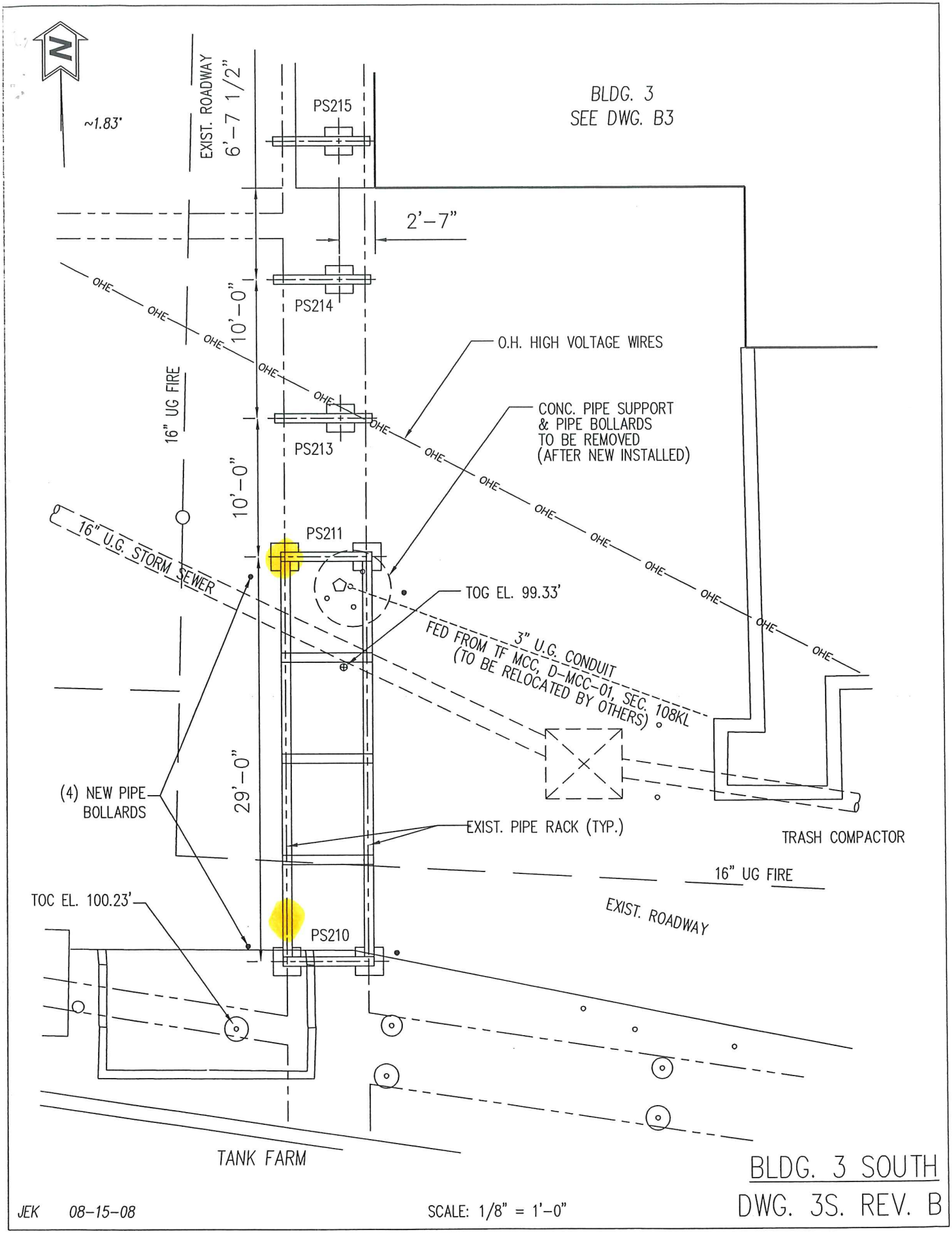
THE INFORMATION, DATA, AND DESIGNS SHOWN HEREON ARE THE CONFIDENTIAL PROPERTY OF FLINT HILLS RESOURCES, LP. NO USE OR DISCLOSURE MAY BE MADE WITHOUT SPECIFIC WRITTEN AUTHORIZATION OF FLINT HILLS RESOURCES, LP.

NAME: BLDG 3 1st FLOOR PLAN
DRAWN BY: TJB
CONTROLLED: N/A
DATE: 6/14/90
N/A
SCALE: 3/16"=1'-0"
PLOT SCALE: 1=64
VERSION: A
SHT# 1
REV# D
B1A001


— SAMPLE LOCATIONS
N
~1.83°
20'-5 1/2"
52'-3"
14'-6"
16" UG FIRE
EXIST. ROADWAY
24'-6"
EXIST. PIPE RACK (TYP.)
PROPANE TANK
99.91
BOILER HOUSE
BUILDING 1
45'-3"
EXIST. PS288
10'-0" (TYP.)
7'-0"
2'-0"
EXIST. PS236
PS280
PS281
PS282
PS283
PS284
PS301
PS285
PS286
PS287
23'-9 1/2"
OFFICE
U-PIV-03
TOG EL. 100.71'
10'-0"
PS235
EXIST. PS234
PS260
PS261
PS262
PS263
PS264
PS265
PS266
8" UG FIRE
2'-4"
EXIST. PS267
PS233
A-PIV-04
1'-10 1/2"
CLEAR BUILDINGS AS REQUIRED FOR GEOPROBE CLEARANCE, RECOMMEND 3' TO CLEAR FOOTINGS ALSO.
4'-6"
9'-1 1/2"
16" UG FIRE
EXIST. ROADWAY
BLDG. 2
SEE DWG. B2
BUILDING 1
DWG. B1. REV. A
JEK
05-07-08
SCALE: 1/16" = 1'-0"


N
~1.83'
20'-5 1/4"
BLDG. 1
SEE DWG. B1
EXIST. ROADWAY
16" UG FIRE
PS280
8" UG FIRE
TOG EL. 100.71'
23'-9 1/2"
PS260
A-PIV-04
EXIST. PS234
7'-1"
PS233
D-PIV-06
2'-10"
PS232
TD
WHSE.
23'-11 1/2"
PS231
BUILDING 2
TOC EL. 99.08'
PS230
6'-6"
81'-8"
10'-0"
RAMP
PS229
12'-0"
PS300 FOR EXIST. PIPE RACK (CATWALK)
PS228
2'-10"
PILOT
PLANT
ELEC. ROOM
PS227
PS226
11'-0"
2'-7"
2'-7"
10'-0"
PS225
EXIST. PIPE RACK (TYP.)
BLDG. 3
SEE DWG. B3
16" UG FIRE
BUILDING 2
DWG. B2. REV. A
SCALE: 1/16" = 1'-0"
JEK 05-29-08


N
BLDG. 2
SEE DWG. B2
PS226
~1.83'
PS225
10'-0"
1'-7"
PS224
16" UG FIRE
EXIST. ROADWAY
PS223
EXIST. PIPE RACK (TYP.)
PS222
10'-0 1/2"
PS221
10'-0"
PS220
EXIST. PS310
PS219
101'-10"
10'-0"
BUILDING 3
TOC EL. 99.08'
PS218
PS217
3'-4 1/2"
6'-7 1/2"
PS216
PS215
PS214
2'-7"
10'-0"
AREA 3 SOUTH
SEE DWG. 3S
16" UG FIRE
B-E-TRSH
BUILDING 3
DWG. B3. REV. B
JEK 08-15-08
SCALE: 1/16" = 1'-0"


N
~1.83'
EXIST. ROADWAY
6'-7 1/2"
PS215
BLDG. 3
SEE DWG. B3
2'-7"
PS214
10'-0"
OHE
O.H. HIGH VOLTAGE WIRES
16" UG FIRE
PS213
CONC. PIPE SUPPORT
& PIPE BOLLARDS
TO BE REMOVED
(AFTER NEW INSTALLED)
10'-0"
16" U.G. STORM SEWER
PS211
TOG EL. 99.33'
3" U.G. CONDUIT
FED FROM TF MCC, D-MCC-01, SEC. 108KL
(TO BE RELOCATED BY OTHERS)
29'-0"
(4) NEW PIPE
BOLLARDS
EXIST. PIPE RACK (TYP.)
TRASH COMPACTOR
16" UG FIRE
EXIST. ROADWAY
TOC EL. 100.23'
PS210
TANK FARM
BLDG. 3 SOUTH
DWG. 3S. REV. B
JEK 08-15-08
SCALE: 1/8" = 1'-0"

August Mack
ENVIRONMENTAL

1200 N. Meridian St., Suite 400
Indianapolis, IN 46204
ph: 317.916.8000 | f: 317.916.8001
www.augustmack.com

DRAFT

November 4, 2008

Ms. Mary Steinbach
Environmental Health and Safety Manager
Flint Hills Resources
501 Brunner Street
Peru, Illinois 61354

Re: *DRAFT* **- Subsurface Investigation**
Flint Hills Resources
501 Brunner Street
Peru, Illinois
August Mack Project Number JI0689.320

Dear Ms. Steinbach:

August Mack Environmental, Inc. (August Mack) has completed additional soil sampling activities along the north side of Poly Building 2 and west of Poly Building 2 and Poly Building 3 at the Flint Hills Resources (Flint Hills) facility located in Peru, Illinois. The objective of this project was to characterize soils in the vicinity of the buildings and pipe rack areas to determine appropriate management options for excavated soils during future pipe rack construction activities.

August Mack advanced soil borings at twenty (20) locations and collected one (1) composite soil sample from each boring location for specific metals analysis. The following report describes the work performed and presents the findings and conclusions relative to the investigation.

SUBSURFACE INVESTIGATION

Field sampling activities were performed at the Flint Hills site on September 10-11, 2008. Drilling and sampling activities were conducted using a truck-mounted Geoprobe® Direct-Push Sampling Unit (Geoprobe®) provided and operated by Paramount Environmental Services (Paramount) of Portage, Indiana under the direct supervision of August Mack. A total of twenty (20) soil borings were advanced to a maximum depth of eight (8) feet below-grade (ft bg) on the north side of Poly Building 2 and west of Poly Buildings 2 and 3 at locations selected by Flint Hills personnel. A Site Plan showing an updated layout of the site is provided as Figure 1, and detailed

maps showing the September 2008 sampling locations are provided as Figures 2 through 5 in Attachment A.

Soil Sampling and Analysis

A total of twenty (20) soil borings were advanced to a maximum depth of eight (8) ft bg in selected locations within the Poly Buildings area. Final sampling locations were optimized in the field to ensure maximum representativeness, as well as to ensure that utilities and other structures of the plant were not damaged. All sampling locations were selected by Flint Hills prior to advancing the borings. Specific field sampling procedures are provided in Attachment B.

In accordance with our previous sampling procedures and as requested by Flint Hills personnel, one (1) composite soil sample from each boring location was collected for the following laboratory analysis:

- Total cadmium, lead, mercury and zinc using U.S. EPA SW-846 Method 6010; and
- U.S. EPA Resource Conservation and Recovery Act (RCRA) TCLP for cadmium, lead, and mercury using U.S. EPA SW-846 Method 1311.

All soil samples were analyzed by Prairie Analytical Systems, Inc. (PAS) from Springfield, Illinois.

Soil Lithology

Soils from each boring were lithologically classified and field screened for odors, staining, and/or the presence of organic vapors using a photoionization detector (PID). Based on observations during sampling activities, the soil in proximity to the Poly Buildings consists of crushed stone overlying sand/gravel fill that contains trace silt and intermittent slag and brick fragments. Based on the very low PID responses, no substantial organic impacts were identified in soils. Boring logs from this investigation, which describe soil lithology and field screening results, are provided in Attachment C.

Soil Analytical Results

Soil samples submitted from the following locations contained cadmium and lead concentrations above RCRA TCLP concentrations:

- Borings PS-280, PS-282, PS-284, and PS-286 advanced south of Building 1 contained cadmium concentrations above the associated TCLP concentration;

- Borings PS-227, PS-229, and PS-231 west of Poly Building 2 contained cadmium levels above the associated TCLP concentration;
- Boring PS-214 near the southwest corner of Poly Building 3 contained cadmium levels above the associated TCLP concentration;
- Boring PS-227 west of Poly Building 2 contained lead levels above the associated TCLP concentration; and
- Boring PS-217 west of Poly Building 3 contained lead levels above the associated TCLP concentration.

Soil samples submitted from the following locations contained cadmium and lead concentrations above Illinois Environmental Protection Agency (IEPA) Tier 1 Industrial Construction Worker Ingestion Remediation Objectives (ROs):

- Boring PS-286 drilled south of Building 1 contained cadmium concentrations above Tier 1 Industrial ROs;
- Borings PS-280, PS-282, PS-284, and PS-286 south of Building 1 contained lead concentrations above the Tier 1 Industrial ROs;
- Borings PS-223, PS-227, and PS-231 west of Poly Building 2 contained lead levels above Tier 1 Industrial ROs; and
- Borings PS-214 and PS-217 west of Poly Building 3 contained lead levels above Tier 1 Industrial ROs.

Soil samples submitted from the following locations contained metals concentrations above IEPA Tier 1 Industrial Construction Worker Inhalation RO:

- Borings PS-280 and PS-282 south of Building 1 contained mercury concentrations above the Tier 1 Construction Worker RO;
- Boring PS-229 west of Poly Building 2 contained mercury levels above the Tier 1 Construction Worker RO; and
- Borings PS-213, PS-214, PS-217, and PS-219 west and southwest of Poly Building 3 contained mercury levels above the Tier 1 Construction Worker RO.

A summary of the analytical results is provided in Table 1 in Attachment D. A copy of the laboratory report for the September 2008 sampling event is included as Attachment E.

SUMMARY AND CONCLUSIONS

August Mack conducted additional requested soil sampling at the Flint Hills Resources facility in Peru, Illinois. Twenty (20) soil borings were advanced at locations approved by Flint Hills. A composite soil sample collected from each boring was analyzed for

total metal analysis of lead, cadmium, mercury, and zinc and for RCRA TCLP analysis for lead, cadmium, and mercury.

The investigation revealed the following:

- A total of nine (9) samples contained either lead or cadmium above RCRA TCLP concentrations;
- A total of nine (9) samples contained either lead or cadmium concentrations above the IEPA Tier 1 Construction Worker Ingestion ROs; and
- A total of seven (7) samples contained mercury concentrations above the IEPA Tier 1 Construction Worker Inhalation RO.

Based on these results, August Mack recommends that any soil removed from the locations identified above that contained lead or cadmium above RCRA hazardous waste thresholds be handled and disposed off-site as hazardous waste. August Mack recommends that construction personnel take appropriate precautions, such as engineering controls (e.g., dust suppression) and personnel protective equipment (coveralls, respiratory protection, etc.) to minimize exposure to soils in locations with lead, cadmium, and/or mercury concentrations above IEPA Tier 1 Construction Worker Ingestion ROs.

We trust this submittal is responsive to your needs. Please contact us at (317) 916-8000 if you have any questions or comments regarding this submittal.

Sincerely,

Jim Wegener
Staff Chemist

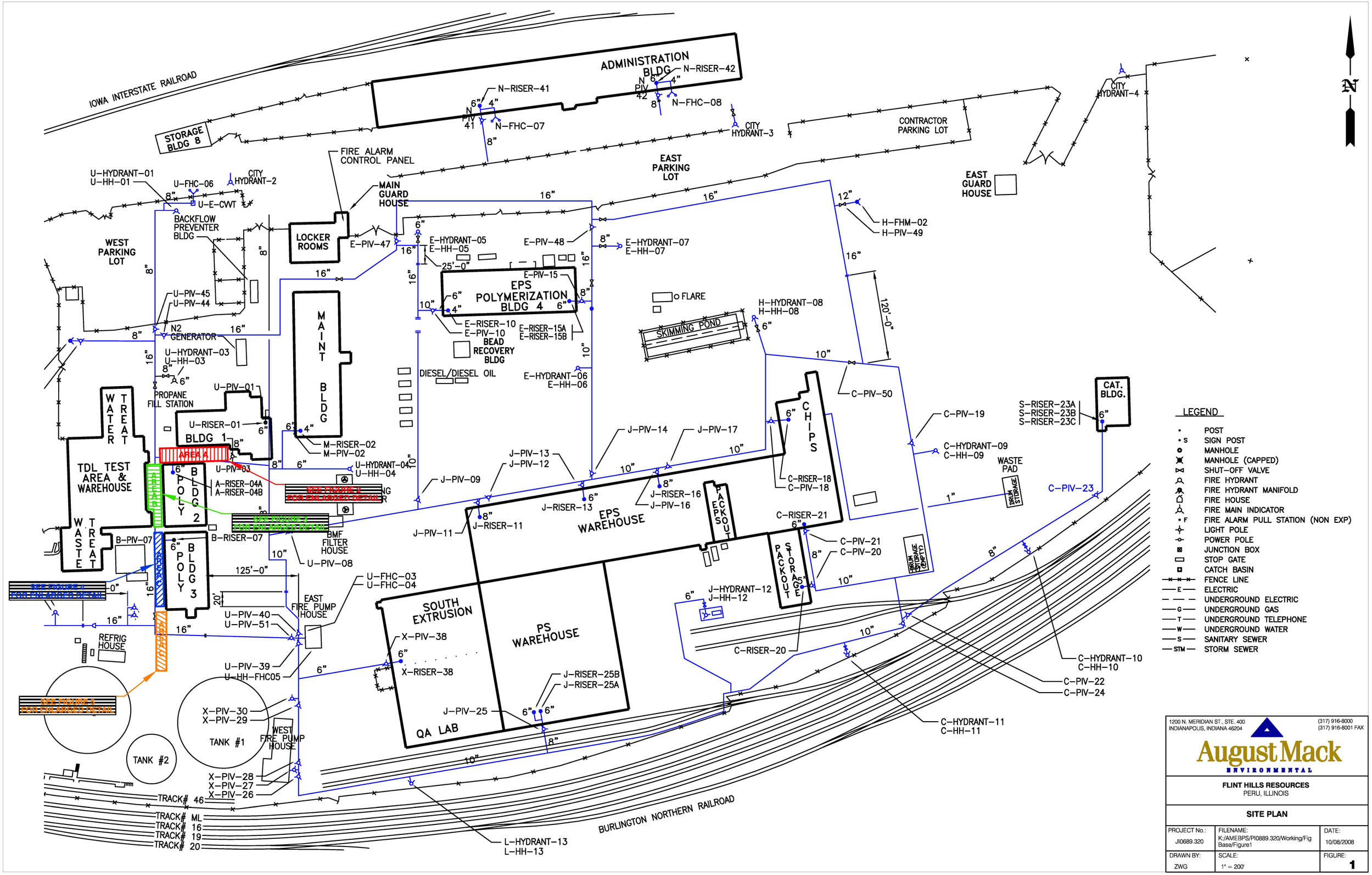
Dave Zbieszkowski, LPG
Senior Manager

cc: Mr. Don Gens, Mr. Ganesh Krish, Mr. James Kociuba, Mr. Jeffrey Moran

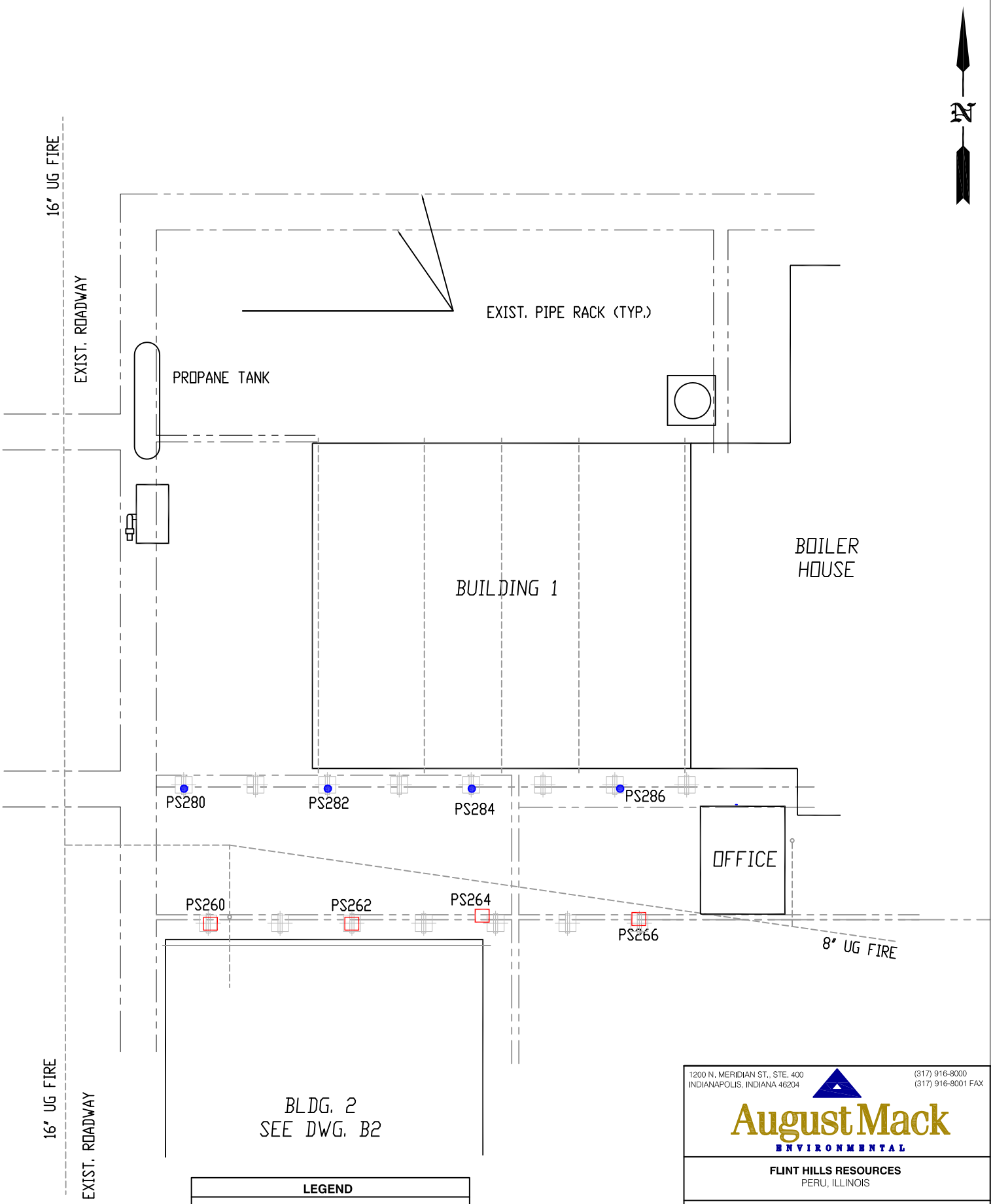
Attachments

ATTACHMENT A

Figure 1 – Site Plan
Figure 2 – "Area A" Site Plan Showing Boring Locations
Figure 3 – "Area B" Site Plan Showing Boring Locations
Figure 4 – "Area C" Site Plan Showing Boring Locations
Figure 5 – "Area D" Site Plan Showing Boring Locations



FHRPRU001140



LEGEND

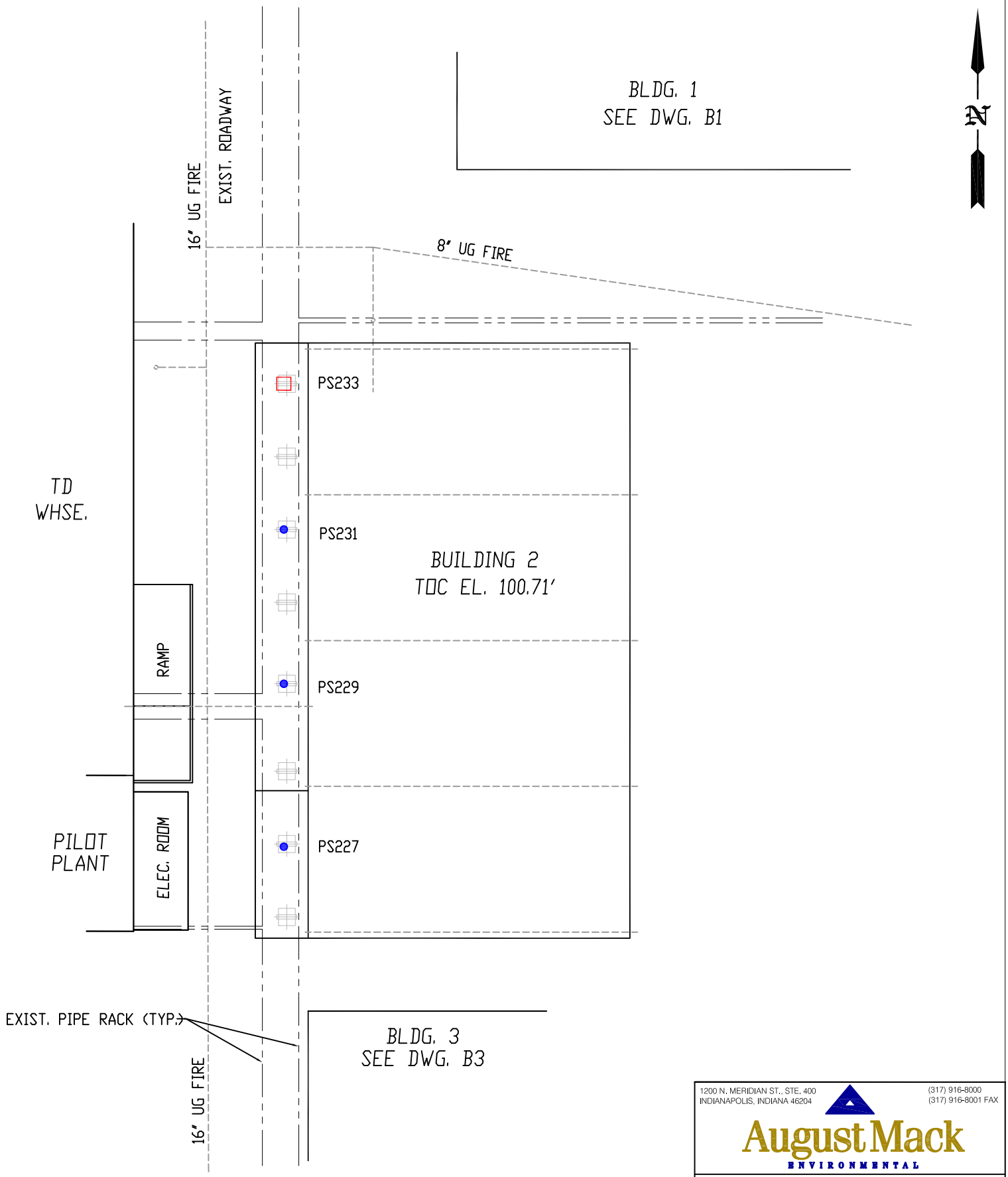
- ABOVE IEPA TIER I CONSTRUCTION WORKER INGESTION OR INHALATION OBJECTIVE
- ABOVE RCRA HAZARDOUS WASTE THRESHOLD
- ABOVE IEPA TIER I CONSTRUCTION WORKER OBJECTIVE & RCRA HAZARDOUS WASTE THRESHOLD
- BELOW REGULATORY LIMITS

1200 N. MERIDIAN ST., STE. 400
INDIANAPOLIS, INDIANA 46204
(317) 916-8000
(317) 916-8001 FAX
August Mack ENVIRONMENTAL

FLINT HILLS RESOURCES
PERU, ILLINOIS

"AREA A"
SITE PLAN SHOWING BORING LOCATIONS

PROJECT No.:	FILENAME:	DATE:
JI0689.320	K:/AMEBPS/PI0889.320/Working/Fig Base/Figure2	10/08/2008
DRAWN BY: ZWG	SCALE: 1" = 40'	FIGURE: 2



LEGEND

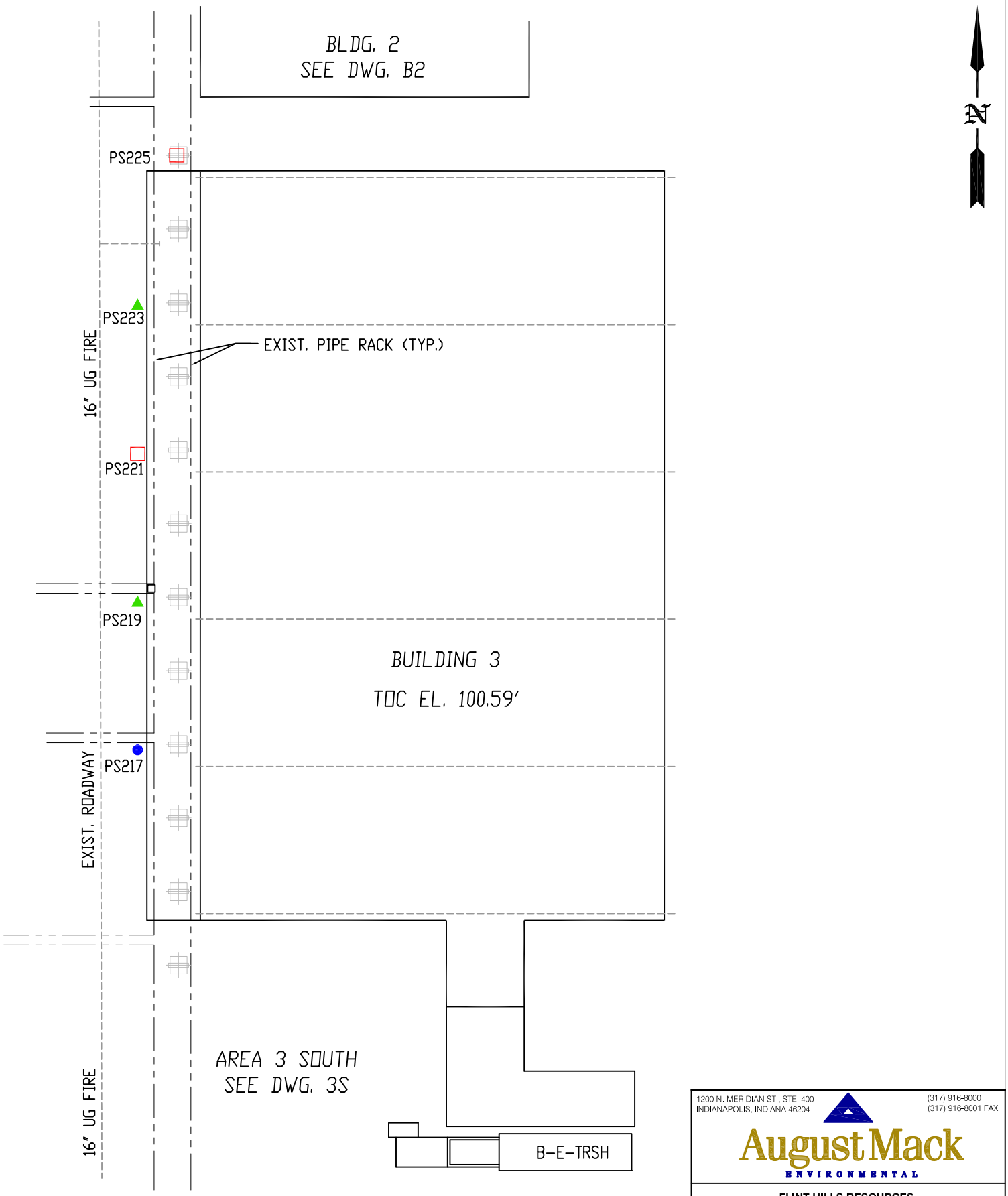
- ABOVE IEPA TIER I CONSTRUCTION WORKER INGESTION OR INHALATION OBJECTIVE
- ABOVE RCRA HAZARDOUS WASTE THRESHOLD
- ABOVE IEPA TIER I CONSTRUCTION WORKER OBJECTIVE & RCRA HAZARDOUS WASTE THRESHOLD
- BELOW REGULATORY LIMITS

1200 N. MERIDIAN ST., STE. 400
INDIANAPOLIS, INDIANA 46204
(317) 916-8000
(317) 916-8001 FAX
August Mack ENVIRONMENTAL

FLINT HILLS RESOURCES
PERU, ILLINOIS

"AREA B"
SITE PLAN SHOWING BORING LOCATIONS

PROJECT No.:	FILENAME:	DATE:
JI0689.320	K:/AMEBPS/PI0889.320/WorkIng/Flg Base/Figure3	10/08/2008
DRAWN BY: ZWG	SCALE: 1" = 40'	FIGURE: 3



LEGEND

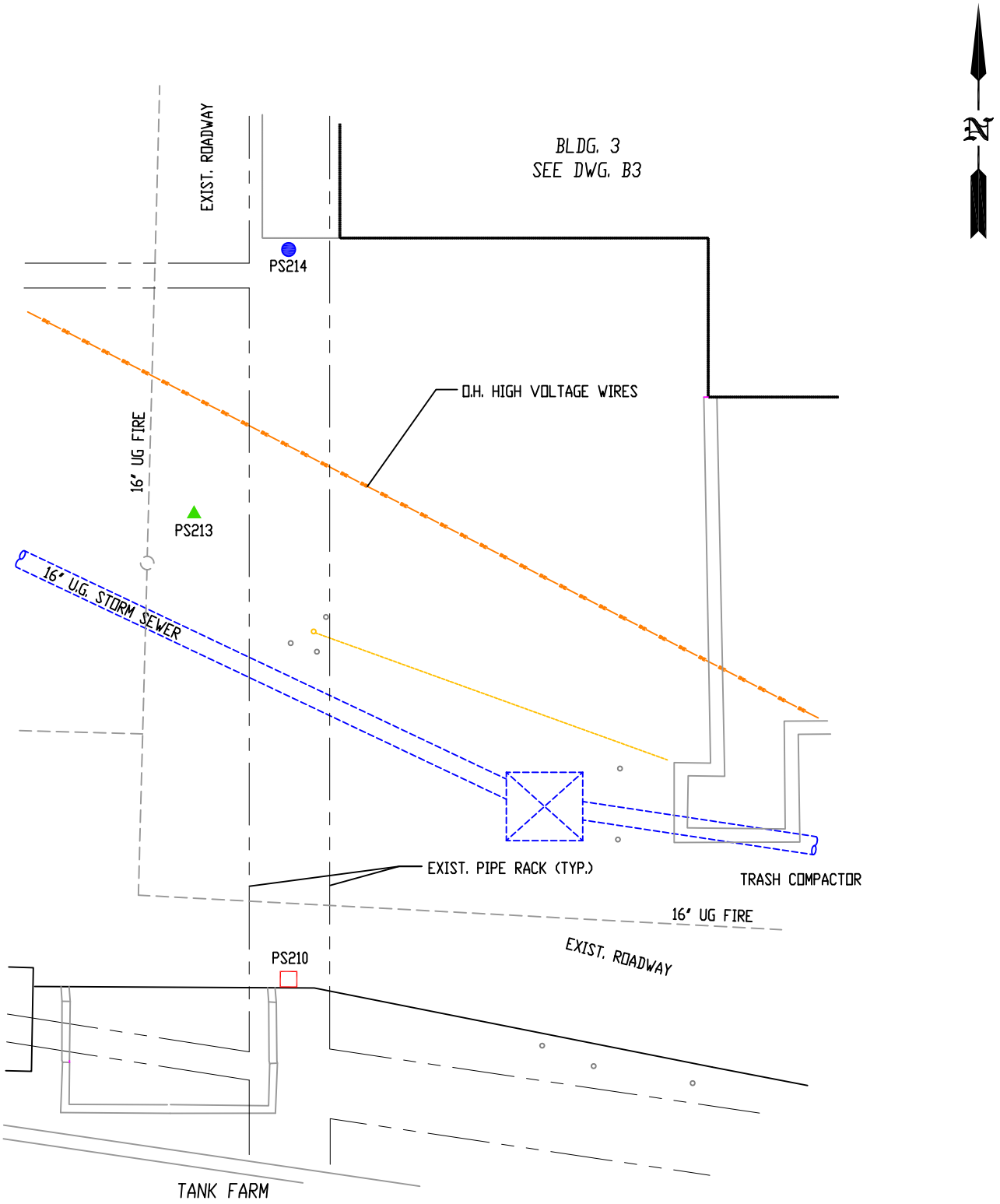
- ABOVE IEPA TIER I CONSTRUCTION WORKER INGESTION OR INHALATION OBJECTIVE
- ABOVE RCRA HAZARDOUS WASTE THRESHOLD
- ABOVE IEPA TIER I CONSTRUCTION WORKER OBJECTIVE & RCRA HAZARDOUS WASTE THRESHOLD
- BELOW REGULATORY LIMITS

1200 N. MERIDIAN ST., STE. 400
INDIANAPOLIS, INDIANA 46204
(317) 916-8000
(317) 916-8001 FAX
August Mack ENVIRONMENTAL

FLINT HILLS RESOURCES
PERU, ILLINOIS

"AREA C"
SITE PLAN SHOWING BORING LOCATIONS

PROJECT No.:	FILENAME:	DATE:
JI0689.320	K:/AMEBPS/PI0889.320/WorkIng/Flg Base/Figure4	10/08/2008
DRAWN BY: ZWG	SCALE: 1" = 40'	FIGURE: 4



LEGEND

- ABOVE IEPA TIER I CONSTRUCTION WORKER INGESTION OR INHALATION OBJECTIVE
- ABOVE RCRA HAZARDOUS WASTE THRESHOLD
- ABOVE IEPA TIER I CONSTRUCTION WORKER OBJECTIVE & RCRA HAZARDOUS WASTE THRESHOLD
- BELOW REGULATORY LIMITS

1200 N. MERIDIAN ST., STE. 400
INDIANAPOLIS, INDIANA 46204
(317) 916-8000
(317) 916-8001 FAX
August Mack ENVIRONMENTAL

FLINT HILLS RESOURCES
PERU, ILLINOIS

"AREA D"
SITE PLAN SHOWING BORING LOCATIONS

PROJECT No.:	FILENAME:	DATE:
JI0689.320	K:/AMEBPS/PI0889.320/Working/Fig Base/Figure5	10/08/2008
DRAWN BY: ZWG	SCALE: 1" = 25'	FIGURE: 5

ATTACHMENT B

Field Sampling Procedures

GEOPROBE® SOIL SAMPLING PROCEDURES

All drilling and sampling were performed in accordance with standard United States Environmental Protection Agency (U.S. EPA) protocols for environmental investigations, under the direct supervision of August Mack personnel.

Soil borings were advanced to the desired depth required for the investigation by using a Geoprobe® Direct Push Sampling System (Geoprobe®). All drilling equipment was supplied and operated by Paramount Environmental Services (Paramount). Soil samples were collected continuously from each boring at two-foot intervals, beginning at grade level and continuing until the boring was terminated. Each soil sample was obtained using a nickel-plated core barrel sampler attached to the end of the boring rods. Soil samples will be collected by pushing a barrel sampler to the desired depth and recovering a continuous, undisturbed soil sample within a disposable acetate liner inside the barrel. New acetate liners were installed prior to each sample collection. Upon retrieval, soil samples were handled with new, clean nitrile sampling gloves to prevent cross-contamination between samples and placed into a decontaminated, stainless steel bowl. Each sample was separated into quarters and thoroughly mixed to ensure a representative composite sample. Soil samples were also continuously sampled and screened in the field for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). All reusable equipment coming into contact with the samples were decontaminated before each use with a non-phosphate detergent (Alconox®) wash, followed by tap water and distilled water rinses. Soil lithological descriptions and field screening results for evidence of contamination such as visible staining and/or odors were logged from each sampling location on boring logs, which are provided in Attachment C.

One (1) composite soil sample from each boring location was collected for the following laboratory analysis:

- Total cadmium, lead, mercury and zinc using U.S. EPA SW-846 Method 6010; and
- U.S. EPA Resource Conservation and Recovery Act (RCRA) TCLP for cadmium, lead, and mercury using U.S. EPA SW-846 Method 1311.

The soil samples were placed in appropriate sample containers, labeled, and stored on ice by August Mack prior to being logged on a chain-of-custody form and submitted to Prairie Analytical Systems (PAS) for analysis. It should be noted that PAS was contracted directly with Flint Hills to provide laboratory services during this project.

Upon completion of the soil probing activities, all sampling equipment was removed from the borehole. Boreholes were properly abandoned by manually pouring bentonite chips/pellets into the boring from the top of the boring. Site restoration was completed by patching the surface materials with concrete or asphalt as necessary.

ATTACHMENT C

Boring Logs

(Will be included in Final Report)

ATTACHMENT D

Table 1 – Summary of Soil Analytical Results
September 2008

TABLE 1
Summary of Soil Analytical Results
Flint Hills Resources
September 10-11, 2008

	CADMIUM		LEAD		MERCURY		ZINC	
Sample Identification	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**
PS-210	0.108	4.41	0.029	39.0	<0.0002	<0.108	NA	1,240
PS-213	0.339	13.7	0.345	141	0.0004	**0.196**	NA	6,690
PS-214	**1.61**	76.3	4.34	**1,410**	0.0003	**0.286**	NA	16,800
PS-217	0.451	14.6	**25.6**	**1,930**	0.0002	**0.208**	NA	7,830
PS-219	0.583	27.8	0.603	377	0.0002	**0.139**	NA	7,080
PS-221	0.143	10.0	0.118	309	<0.0002	<0.113	NA	4,440
PS-223	0.375	25.9	2.41	**1,480**	0.0002	<0.116	NA	9,330
PS-225	0.102	11.4	<0.005	73.3	<0.0002	<0.120	NA	1,230
PS-227	**1.72**	57.3	**5.32**	**1,070**	<0.0002	<0.116	NA	11,200
PS-229	**3.41**	88.1	0.564	356	0.0002	**0.115**	NA	12,800
PS-231	**2.75**	69.1	0.194	**851**	<0.0002	<0.115	NA	17,000
PS-233	0.145	8.49	<0.005	76.2	<0.0002	<0.122	NA	1,800
PS-260	0.0124	0.426	<0.005	8.39	<0.0002	<0.103	NA	74.0
PS-262	0.0741	11.5	<0.005	61.1	<0.0002	<0.103	NA	1,480
PS-264	0.130	7.74	<0.005	39.2	<0.0002	<0.110	NA	634
PS-266	0.0201	0.528	<0.005	44.5	<0.0002	<0.129	NA	164
PS-280	**2.76**	72.8	3.12	**1,250**	<0.0002	**0.325**	NA	17,600
PS-282	**1.78**	112	4.38	**2,680**	<0.0002	**0.273**	NA	28,900
PS-284	**2.83**	133	1.00	**1,190**	<0.0002	<0.112	NA	15,600
PS-286	**7.90**	**443**	0.441	**1,100**	<0.0002	<0.111	NA	21,900
RCRA Thresholds for Characteristic Hazardous Waste (mg/L)	**1.0**	*	**5.0**	*	**0.2**	*	*	*
Tier I Construction Worker Ingestion Objective (mg/Kg)	*	**200**	*	**700** [1]	*	**61**	*	**61,000**
Tier I Construction Worker Inhalation Objective (mg/Kg)	*	**59,000**	*	*	*	**0.1** [1]	*	*

[1] = Exposure limits recently revised (updated February 23, 2007)
All Tier I Construction Worker limits taken from Illinois Pollution Control Board, Chapter II, Subchapter F, Part 742 - Tiered-Approach to Corrective Action (updated February 23, 2007)
All total metal results reported in mg/kg (dry-weight)
NA = Not Analyzed.
* = No level set for specified constituent
RCRA = Resource Conservation and Recovery Act
BOLD Above respective RCRA regulatory limit
BOLD Above respective Tier I Construction Worker Ingestion Objective
BOLD Above respective Tier I Construction Worker Inhalation Objective

ATTACHMENT E

Laboratory Report

(Will be included in Final Report)

TABLE 1
Summary of Soil Analytical Results
Flint Hills Resources
September 10-11, 2008

	CADMIUM		LEAD		MERCURY		ZINC	
Sample Identification	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**	**TCLP (mg/L)**	**Total (mg/kg)**
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PS-221	0.143	10.0	0.118	309	<0.0002	<0.113	NA	4,440
PS-223	0.375	25.9	2.41	**1,480**	0.0002	<0.116	NA	9,330
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PS-286	**7.90**	**443**	0.441	**1,100**	<0.0002	<0.111	NA	21,900
RCRA Thresholds for Characteristic Hazardous Waste (mg/L)	**1.0**	*	**5.0**	*	**0.2**	*	*	*
Tier I Construction Worker Ingestion Objective (mg/Kg)	*	**200**	*	**700 [1]**	*	**61**	*	**61,000**
Tier I Construction Worker Inhalation Objective (mg/Kg)	*	**59,000**	*	*	*	**0.1 [1]**	*	*

[1] = Exposure limits recently revised (updated February 23, 2007)
All Tier I Construction Worker limits taken from Illinois Pollution Control Board, Chapter II, Subchapter F, Part 742 - Tiered-Approach to Corrective Action (updated February 23, 2007)
All total metal results reported in mg/kg (dry-weight)
NA = Not Analyzed.
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RCRA = Resource Conservation and Recovery Act
BOLD Above respective RCRA regulatory limit
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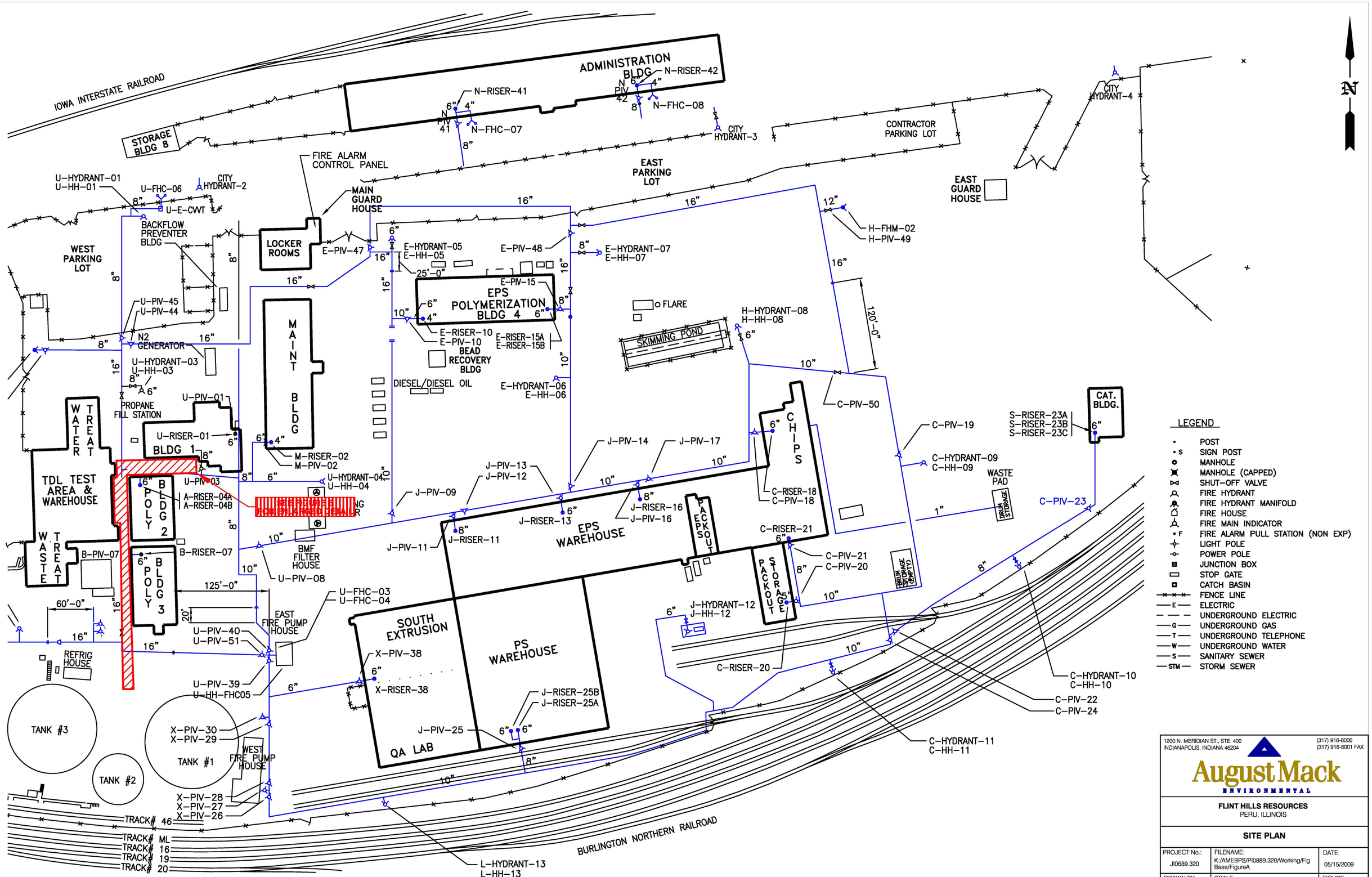
BOLD Above respective Tier I Construction Worker Inhalation Objective



1200 N. MERIDIAN ST., STE. 400
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(317) 916-8000
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August Mack ENVIRONMENTAL

FLINT HILLS RESOURCES
PERU, ILLINOIS

SITE PLAN

PROJECT No.:	FILENAME:	DATE:
JI0689.320	K:/AMEBPS/PI0889.320/Working/Fig Base/FigureA	05/15/2009
DRAWN BY:	SCALE:	FIGURE:
ZWG	1" = 200'	A

FHRPRU001152

FLINT HILLS resources®

FAX COVER

Date: April 21, 2009

Total Pages (including cover):

To: Steph Hendricks

From: Ganesh Krish

Company Name: PDC

Company Name: Flint Hills Resources, LP

Fax: 309.688.0881

Fax: 815.224.5278

Phone: 309.688.0760

Phone: 815.224.5451

Subject: Waste Characterization Documents for the Disposal of Excavated Soil

COMMENTS

Steph, attached is the waste profile sheet and the analytical data for the to-be-excavated soils from our site for disposal at PDC. Please review and let me know if you need any additional information for the disposal-approval process.

Thanks!

Ganesh Krish
Environmental Engineer
Tel: 815.224.5451
E-mail: ganesh.krish@fhr.com

Peoria Disposal Company
Environmental Management Facility

Wastestream Approval Package

waste profile form

*** Please return to PDC only this portion***

Corporate Office
4700 North Sterling Avenue
Peoria, IL 61615

Phone (309) 688-0760
Fax (309) 688-0881

Landfill
4349 Southport Road
Peoria, IL 61615

Phone (309) 676-4893
Fax (309) 672-2726

Waste Profile Form

PROFILE # 30794

Please complete this form in its entirety; refer to the Information and Instruction package.

Section 1 - Generator/Customer Information

Generator Name **Flint Hills Resources, LP**
Waste Generation Address **501 Brunner Street**
City **Peru** St **IL** Zip **61354**
Mailing Address (if different)
City St Zip
Site/Facility Contact **Ganesh Krish**
Phone (**815**) **224** - **5451**
Fax (**815**) **224** – **5278**
e-mail or other # **Ganesh.Krish@fhr.com**
USEPA # **ILD087154555**
IEPA # **0990850005**
SIC code(s) **2821**

Technical Contact **Same**
Company
Mailing Address
City St Zip
Phone ( ) -
Fax ( ) -
e-mail or other #
Invoicing Info (if different):
Contact
Company
Mailing Address
City St Zip
Phone ( ) -
Fax ( ) -

Section 2 - Waste Information

Waste Name **Lead and Cadmium Contaminated Soil**
Process generating waste (*detailed* description) **Excavation related to installation of pipe-supports for the new overhead-process-piping-system at the FHR Peru facility (a former zinc-smelting facility)**

Annual Volume **40 c.y.** Type (i.e roll-offs, drums,...) **Dump Trailers** ☐ Ongoing or ☒ One Time Only
Hazardous Waste Codes (attach separate page if nec.) **D006, D008**
Is this a pollution control waste (35 IL. Adm. Code 858)? ☐ Yes ☒ No
DOT description **"RQ" Hazardous Waste Solid,n.o.s.,9,NA3077, PG III (D006,D008)**
Directions (to site from nearest major hwy.) **Take the IL-251 N Exit (Exit 52) on I-39 N toward La Salle/Peru. Turn left on to IL-251 and take ramp to La Salle. Turn slightly right on US-6 (4th Street). Turn right on Pine Street and then left on Water/Brunner Street. The facility entrance is on the right-hand-side.**

Section 3 - Physical Data

Key Waste Components (must total 100.00%):

Soil	**95** %
Misc Debris	**5** %
	%
	%
	%
	%
	%
	%
	%

Color (describe) **Varies**
Strong odor? ☐ Yes ☒ No
If yes, describe odor.

Does the hazardous waste contain >50% debris by volume? ☐ Yes ☒ No ☐ N/A
If yes, describe debris (debris is considered to be >2.5 in.)

Section 4 - Analytical Data (to be completed by PDC)

Inorganics

pH	**7.47**	Density	**4,389** lb/yd^3
Flash point	**>200** °F	Paint filter	☒ Pass ☐ Fail
Total solids	**97.1** %	EOX	**109** mg/kg
Total Cyanide			**0.488** mg/kg
Reactive Cyanide			**1.34** mg/kg
Amenable Cyanide			**N/A** mg/kg
Total Sulfide			**9.01** mg/kg
Reactive Sulfide			**9.64** mg/kg
Phenolics			**5.36** mg/kg
Radioactivity			**60** CPM

Additional parameters for WASTEWATERS ONLY	
Total Chlorine	ppm
Reid Vapor Pressure	psi
Bottom Sediment & Water	% / %
TOC	ppm
Oil & Grease	mg/l

Metals	Characteristic level	TCLP Analysis
D004 Arsenic	5.0 mg/l	**<0.005** mg/l
D005 Barium	100.0 mg/l	**0.25** mg/l
D006 Cadmium	1.0 mg/l	**0.451** mg/l
D007 Chromium	5.0 mg/l	**<0.005** mg/l
D008 Lead	5.0 mg/l	**25.6** mg/l
D009 Mercury	0.2 mg/l	**0.0002** mg/l
D010 Selenium	1.0 mg/l	**0.0186** mg/l
D011 Silver	5.0 mg/l	**<0.005** mg/l
(other) Nickel		mg/l
Antimony		mg/l
Beryllium		mg/l
Thallium		mg/l
Vanadium		mg/l
Zinc		mg/l
Additional metals for WASTEWATERS ONLY		
Copper		mg/l
Iron		mg/l
Manganese		mg/l
Molybdenum		mg/l
Zinc		mg/l

Organics	Characteristic level (mg/l)	TCLP Analysis
D018 Benzene	0.5	**<0.125** mg/l
D019 Carbon Tetrachloride	0.5	**<0.125** mg/l
D020 Chlordane	0.03	**N/A** mg/l
D021 Chlorobenzene	100.0	**<0.125** mg/l
D022 Chloroform	6.0	**<0.125** mg/l
D023 o-Cresol	200.0	mg/l
D024 m-Cresol	200.0	mg/l
D025 p-Cresol	200.0	mg/l
D026 Cresol (total)	200.0	mg/l
D016 2,4-Dichlorophenoxyacetic acid	10.0	mg/l
D027 1,4-Dichlorobenzene	7.5	**<0.125** mg/l
D028 1,2-Dichloroethane	0.5	**<0.125** mg/l
D029 1,1-Dichloroethylene	0.7	**<0.125** mg/l
D030 2,4-Dinitrotoluene	0.13	mg/l
D012 Endrin	0.02	mg/l
D031 Heptachlor & its epoxide	0.008	mg/l
D032 Hexachlorobenzene	0.13	mg/l
D033 Hexachlorobutadiene	0.5	mg/l
D034 Hexachloroethane	3.0	mg/l
D013 Lindane	0.4	mg/l
D014 Methoxychlor	10.0	mg/l
D035 Methyl Ethyl Ketone	200.0	mg/l
D036 Nitrobenzene	2.0	mg/l
D037 Pentachlorophenol	100.0	mg/l
D038 Pyridine	5.0	mg/l
D039 Tetrachloroethylene	0.7	**<0.125** mg/l
D015 Toxaphene	0.5	mg/l
D040 Trichloroethylene	0.5	**<0.125** mg/l
D041 2,4,5-Trichlorophenol	400.0	mg/l
D042 2,4,6-Trichlorophenol	2.0	mg/l
D017 2,4,5-TP (Silvex)	1.0	mg/l
D043 Vinyl Chloride	0.2	**<0.100** mg/l

Additional Requirements:
Total Mercury **0.3** mg/kg

Section 5 - Certifications

A. Wastestream Certification - Are the following constituents associated with the generation of this wastestream?:

	Yes	No
Polychlorinated Biphenyls (PCB's)	☐	☒
F001 - F005 solvents	☐	☒
Dioxins / Furans	☐	☒
RCRA Pesticides / Herbicides:	☐	☒

RCRA Pesticides / Herbicides

Chlordane	Lindane	2,4-D
Toxaphene	Methoxychlor	Endrin
Heptachlor & its epoxide	2,4,5-TP (Silvex)	

If marked Yes, analysis must be performed. Please contact your PDC Technical Support Representative to make these arrangements for you.

B. Benzene NESHAP - This is applicable only to generators who have one or more of the following SIC codes:

2812	2819	2823	2834	2841	2844	2865	2874	2891	2895	3312
2813	2821	2824	2835	2842	2851	2869	2875	2892	2899	4959
2816	2822	2833	2836	2843	2861	2873	2879	2893	2911	9511

1) Does your operation have one of the SIC codes listed? ☒ Yes ☐ No
   If Yes, which code(s)?. 2821 Proceed to question 2.
   If No, STOP. The Benzene NESHAP Rule does not apply to your waste.
2) Does your facility produce or use more than 10 megagrams (22,000 lb.) of benzene per year?
   ☐Yes ☒No If Yes, what is the volume? _____ Proceed to question 3.
   If No, STOP. The Benzene NESHAP Rule does not apply to your waste.
3) Does your waste contain greater than 10% moisture? ☐ Yes ☐ No
   If Yes, what is the approx. moisture content? _____ % Proceed to question 4.
   If No, STOP. The Benzene NESHAP Rule does not apply to your waste.
4) What is the TOTAL Annual Benzene (TAB) concentration in your waste?_____mg/kg
   ***If you answered Yes** to question 1), 2), and 3) **and** the TAB concentration is greater than 10 mg/kg, your waste is subject to the Benzene NESHAP requirements.*

C. Empty Container Certification - If this waste contains "RCRA-empty" containers, do the waste containers meet the definition of "RCRA-empty" as stated in 40 CFR 261.7, and are therefore, exempt from regulation under Parts 261 through 265, or Part 268, 270, or 124 of 40 CFR Chapter 1, or to the notification requirements of Section 3010 of RCRA? ☐ Yes ☐ No ☒ N/A

D. Cyanide / Sulfide Certification - For wastes with reactive cyanides or sulfides ≥ 10 mg/kg, has any of the following occurred?

	Yes	No
1) Has the waste ever caused injury to a worker because of hydrogen sulfide (H_2S) and/or hydrogen cyanide (HCN) generation?	☐	☒
2) Have the OSHA work place air concentration limits for H_2S and/or HCN been exceeded in areas where the waste is generated, stored, or otherwise handled?	☐	☒
3) Have air concentrations of H_2S and/or HCN, above 10 ppm, been encountered in areas where the waste is generated, stored, or otherwise handled?	☐	☒

E. Toxic Release Inventory Constituents - Based upon the attached TRI Constituents list table, please identify those constituents which are associated with the generation of your waste and their relative concentrations. This knowledge is based upon: ☐ Generator knowledge ☒ Both ☐ Analytical data (please attach)

Constituent	Concentration	Units
Barium	0.25	mg/L
Cadmium	0.451	mg/L
Chromium	<0.005	mg/L
Lead	25.6	mg/L
Zinc	7,830	mg/kg-dry

Attach additional pages if necessary.

F. Certifications For HAZARDOUS WASTE ONLY:

1) Underlying Hazardous Constituents - Based upon analytical verification and/or knowledge of the process which generates my waste, it complies with the Underlying Hazardous Constituents list (40 CFR 268.48) of Land Disposal Restrictions (LDR's). I have marked (▤) in the UHC list individual constituents of concern (reasonably expected to be present at the point of generation). If marked (▤), analytical data on a grab sample has been provided which verifies that these constituents either meet the appropriate LDR standard or are being treated by PDC to meet the appropriate standard.

I have reviewed the UHC list and I: ☒ have indicated on the table the constituents of concern.
☐ do not have any constituents of concern

2) Subpart CC - Is the waste exempt from the Subpart CC standards found in 40 CFR, Part 264? ☒ Yes ☐ No
This knowledge is based upon either analysis of the waste via Method 25D as noted in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", or by using process knowledge as indicated below **(please check the appropriate statement(s)):**

___ 1. Organic material balances for the source, process, or waste management unit generating the waste;
___ 2. Documentation that lists the raw materials or intermediate products fed to a process showing that no organics are used in the process generating the waste;
___ 3. Information that shows the waste is generated by a process that is substantially similar to a process at the same or another facility that generates a waste that has previously been determined by direct measurement to have a volatile organic content less than the action level (500 ppmw);
___ 4. Test data that provide speciation analysis results for the waste that are still applicable to the current waste management practices and from which the total concentration of organics in the waste can be computed (*generator must provide documentation describing the testing protocol and the means by which sampling variability and analytical variability are accounted for in the determination of the volatile organic concentration of the hazardous waste*); or
X 5. Other knowledge based on manifests, shipping papers, or waste certification notices (organic LDR exemption).

Generator Signature

For the purposes of documentation on this Waste Profile Form, signatures transmitted by facsimile machine shall be treated in all manner and respects as an ORIGINAL document and shall be considered to have the same binding legal effect as an ORIGINAL document. I hereby agree that I shall not raise as a defense to the formation of this Waste Profile Form the fact that the signature was transmitted through the use of a facsimile machine.

I certify, on behalf of the generator, to the best of my knowledge and belief that this document, including attachments, certifications, and analytical data is complete, accurate, and representative of the waste I will ship to Peoria Disposal Company. I have used intimate knowledge of the process which generates the waste to accurately determine the proper nature and classification of the waste. If there should be any significant changes in the process which generates my waste which would change its regulatory status or characterization, I will immediately notify PDC of these changes. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine or imprisonment under Federal law.

Signature	Date: 4/21/09
GANESH B. KRISH	ENVIRONMENTAL ENGINEER
Printed name of authorized representative	Title

*** * * FOR PDC USE ONLY * * ***

Region	Permit #	Auth. Code	Method : Facility	Log #	WAP Expiration	Permit Expiration
2	000327-30794	H	05 - PDC - 17	30794	/ /	/ /

Special Conditions

Loaded Miles	Approved By	Approval Date
		/ /

Underlying Hazardous Constituents

for Nonwastewater D004-D043 Wastes and "deactivated" D001-3 Wastes

Mark each constituent of concern in the ▤ column (see certification).

Underlying Hazardous Constituents	UTS-Non WW; Total (mg/kg)[1] unless noted TCLP	▤
Organic Constituents		
Acenaphthylene	3.4	
Acenaphthene	3.4	
Acetone	160	
Acetonitrile	38	
Acetophenone	9.7	
2-Acetylaminofluorene	140	
Acrolein	NA	
Acrylamide	23	
Acrylonitrile	84	
Aldicarb sulfone	0.28	
Aldrin	0.066	
4-Aminobiphenyl	NA	
Aniline	14	
o-Anisidine (2-methoxyaniline)	0.66 mg/l	
Anthracene	3.4	
Aramite	NA	
alpha-BHC	0.066	
beta-BHC	0.066	
delta-BHC	0.066	
gamma-BHC (Lindane)	0.066	
Barban	1.4	
Bendiocarb	1.4	
Benomyl	1.4	
Benzene	10	
Benz(a)anthracene	3.4	
Benzal chloride	6.0	
Benzo(b)fluoranthene (difficult to distinguish from benzo(k) fluoranthene)	6.8	
Benzo(k) fluoranthene (difficult to distinguish from benzo(b) fluoranthene)	6.8	
Benzo(g,h,i)perylene	1.8	
Benzo(a)pyrene	3.4	
Bromodichloromethane	15	
Bromomethane (Methyl bromide)	15	
4-Bromophenyl phenyl ether	15	
n-Butyl alcohol	2.6	
Butylate	1.4	
Butyl benzyl phthalate	28	
2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	2.5	
Carbaryl	0.14	
Carbendazim	1.4	
Carbofuran	0.14	
Carbofuran phenol	1.4	
Carbon disulfide	4.8 mg/l TCLP	
Carbon tetrachloride	6.0	
Carbosulfan	1.4	
Chlordane (alpha and gamma isomers)	0.26	
p-Chloroaniline	16	
Chlorobenzene	6.0	
Chlorobenzilate	NA	
2-Chloro-1,3-butadiene	0.28	
Chlorodibromomethane	15	
Chloroethane	6.0	
bis(2-Chloroethoxy)methane	7.2	

Underlying Hazardous Constituents	UTS-Non WW; Total (mg/kg)[1] unless noted TCLP	▤
bis(2-Chloroethyl)ether	6.0	
Chloroform	6.0	
bis(2-Chloroisopropyl) ether	7.2	
p-Chloro-m-cresol	14	
2-Chloroethyl vinyl ether	NA	
Chloromethane (Methyl chloride)	30	
2-Chloronaphthalene	5.6	
2-Chlorophenol	5.7	
3-Chloropropylene	30	
Chrysene	3.4	
p-Cresidine	0.66 mg/l	
o-Cresol	5.6	
m-Cresol (difficult to distinguish from p-cresol)	5.6	
p-Cresol (difficult to distinguish from m-cresol)	5.6	
m-Cumenyl methylcarbamate	1.4	
Cyclohexanone	0.75 mg/l TCLP	
o,p'-DDD	0.087	
p,p'-DDD	0.087	
o,p'-DDE	0.087	
p,p'-DDE	0.087	
o,p'-DDT	0.087	
p,p'-DDT	0.087	
Dibenz(a,h)anthracene	8.2	
Dibenz(a,e)pyrene	NA	
1,2-Dibromo-3-chloropropane	15	
1,2-Dibromoethane (Ethylene dibromide)	15	
Dibromomethane	15	
m-Dichlorobenzene	6.0	
o-Dichlorobenzene	6.0	
p-Dichlorobenzene	6.0	
Dichlorodifluoromethane	7.2	
1,1-Dichloroethane	6.0	
1,2-Dichloroethane	6.0	
1,1-Dichloroethylene	6.0	
trans-1,2-Dichloroethylene	30	
2,4-Dichlorophenol	14	
2,6-Dichlorophenol	14	
2,4-D (2,4-Dichlorophenoxyacetic acid)	10	
1,2-Dichloropropane	18	
cis-1,3-Dichloropropylene	18	
trans-1,3-Dichloropropylene	18	
Dieldrin	0.13	
Diethyl phthalate	28	
p-Dimethylaminoazobenzene	NA	
2,4-Dimethylaniline (2,4-xylidine)	0.66 mg/l	
2,4-Dimethyl phenol	14	
Dimethyl phthalate	28	
Di-n-butyl phthalate	28	
1,4-Dinitrobenzene	2.3	
4,6-Dinitro-o-cresol	160	
2,4-Dinitrophenol	160	
2,4-Dinitrotoluene	140	

Underlying Hazardous Constituents	UTS-Non WW; Total (mg/kg)[1] unless noted TCLP	
2,6-Dinitrotoluene	28	
Di-n-octyl phthalate	28	
Di-n-propylnitrosamine	14	
1,4-Dioxane	170	
Diphenylamine (difficult to distinguish from diphenylnitrosamine)	13	
Diphenylnitrosamine (difficult to distinguish from diphenylamine)	13	
1,2-Diphenylhadrazine	NA	
Disulfoton	6.2	
Dithiocarbamates (total)	28	
Endosulfan I	0.066	
Endosulfan II	0.13	
Endosulfan sulfate	0.13	
Endrin	0.13	
Endrin aldehyde	0.13	
EPTC (Eptam)	1.4	
Ethyl acetate	33	
Ethyl benzene	10	
Ethyl cyanide (Propanenitrile)	360	
Ethyl ether	160	
bis(2-Ethylhexyl) phthalate	28	
Ethyl methacrylate	160	
Ethylene Oxide	NA	
Famphur	15	
Fluoranthene	3.4	
Fluorene	3.4	
Formetanate hydrochloride	1.4	
Heptachlor	0.066	
Heptachlor epoxide	0.066	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)	0.0025	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)	0.0025	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)	0.0025	
Hexachlorobenzene	10	
Hexachlorobutadiene	5.6	
Hexachlorocyclopentadiene	2.4	
HxCDDs (All Hexachlorodibenzo-p-dioxins)	0.001	
HxCDFs (All Hexachlorodibenzofurans)	0.001	
Hexachloroethane	30	
Hexachloropropylene	30	
Indeno (1,2,3-c,d) pyrene	3.4	
Iodomethane	65	
Isobutyl alcohol	170	
Isodrin	0.066	
Isosafrole	2.6	
Kepone	0.13	
Methacrylonitrile	84	
Methanol	0.75 mg/l TCLP	
Methapyrilene	1.5	
Methiocarb	1.4	
Methomyl	0.14	
Methoxychlor	0.18	
3-Methylcholanthrene	15	

Underlying Hazardous Constituents	UTS-Non WW; Total (mg/kg)[1] unless noted TCLP	
4,4-Methylene bis(2-chloroaniline)	30	
Methylene chloride	30	
Methyl ethyl ketone	36	
Methyl isobutyl ketone	33	
Methyl methacrylate	160	
Methyl methanesulfonate	NA	
Methyl parathion	4.6	
Metolcarb	1.4	
Mexacarbate	1.4	
Molinate	1.4	
Naphthalene	5.6	
2-Naphthylamine	NA	
o-Nitroaniline	14	
p-Nitroaniline	28	
Nitrobenzene	14	
5-Nitro-o-toluidine	28	
o-Nitrophenol	13	
p-Nitrophenol	29	
N-Nitrosodiethylamine	28	
N-Nitrosodimethylamine	2.3	
N-Nitroso-di-n-butylamine	17	
N-Nitrosomethylethylamine	2.3	
N-Nitrosomorpholine	2.3	
N-Nitrosopiperidine	35	
N-Nitrosopyrrolidine	35	
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	0.005	
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.005	
Oxamyl	0.28	
Parathion	4.6	
Total PCBs(sum of all PCB isomers; all aroclors)	10	
Pebulate	1.4	
Pentachlorobenzene	10	
PeCDDs (All Pentachlorodibenzo-p-dioxins)	0.001	
PeCDFs (All Pentachlorodibenzofurans)	0.001	
Pentachloroethane	6.0	
Pentachloronitrobenzene	4.8	
Pentachlorophenol	7.4	
Phenacetin	16	
Phenanthrene	5.6	
Phenol	6.2	
1,3-Phenylenediamine	0.66 mg/l	
Phorate	4.6	
Phthalic acid	28	
Phthalic anhydride	28	
Physostigmine	1.4	
Physostigmine salicylate	1.4	
Promecarb	1.4	
Pronamide	1.5	
Propham	1.4	
Propoxur	1.4	
Prosulfocarb	1.4	
Pyrene	8.2	

Underlying Hazardous Constituents	UTS-Non WW; Total (mg/kg)[1] unless noted TCLP	
Pyridine	16	
Safrole	22	
Silvex (2,4,5-TP)	7.9	
1,2,4,5-Tetrachlorobenzene	14	
TCDDs (all Tetrachlorodibenzo-p-dioxins)	0.001	
TCDFs (All Tetrachlorodibenzofurans)	0.001	
1,1,1,2-Tetrachloroethane	6.0	
1,1,2,2-Tetrachloroethane	6.0	
Tetrachloroethylene	6.0	
2,3,4,6-Tetrachlorophenol	7.4	
Thiodicarb	1.4	
Thiophanate-methyl	1.4	
Toluene	10	
Toxaphene	2.6	
Triallate	1.4	
Tribromomethane (Bromoform)	15	
2,4,6-Tribromophenol	7.4	
1,2,4-Trichlorobenzene	19	
1,1,1-Trichloroethane	6.0	
1,1,2-Trichloroethane	6.0	
Trichloroethylene	6.0	
Trichlorofluoromethane	30	
2,4,5-Trichlorophenol	7.4	
2,4,6-Trichlorophenol	7.4	
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	7.9	
1,2,3-Trichloropropane	30	

Underlying Hazardous Constituents	UTS-Non WW; Total (mg/kg)[1] unless noted TCLP	
1,1,2-Trichloro-1,2,2-trifluoroethane	30	
Triethylamine	1.5	
tris-(2,3-Dibromopropyl) phosphate	0.10	
Vernolate	1.4	
Vinyl chloride	6.0	
Xylenes-mixed isomers (sum of o-,m-, and p-xylene concentrations)	30	
Inorganic Constituents		
Antimony	1.15 mg/l TCLP	
Arsenic	5.0 mg/l TCLP	
Barium	21 mg/l TCLP	
Beryllium	1.22 mg/l TCLP	
Cadmium	0.11 mg/l TCLP	
Chromium (Total)	0.60 mg/l TCLP	✓
Cyanides (Total)[2]	590	
Cyanides (Amenable)[2]	30	
Fluoride[3]	NA	
Lead	0.75 mg/l TCLP	✓
Mercury - Nonwastewater from Retort	0.20 mg/l TCLP	
Mercury - All Others	0.025 mg/l TCLP	
Nickel	11.0 mg/l TCLP	
Selenium[4]	NA	
Silver	0.14 mg/l TCLP	
Sulfides[3]	NA	
Thallium	0.20 mg/l TCLP	
Vanadium[3]	NA	
Zinc[3]	NA	

1. Except for metals and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of 40 CFR Part 264 Subpart O, or 40 CFR Part 265 Subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in § 268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.
2. Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.
3. These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at § 268.2(l).
4. This constituent is not an underlying hazardous constituent as defined at § 268.2(i) of this part because its UTS level is greater than its TC level, thus a treated selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.

An Analytical
Testing Laboratory

Prairie Analytical Systems, INCORPORATED

1210 Capital Airport Drive
Springfield, Illinois 62707
Phone: 217-753-1148
Fax: 217-753-1152
www.prairieanalytical.com

December 01, 2008

Mr. Ganesh Krish
Flint Hills Resources
501 Brunner Street
Peru, IL 61354

RE: RCRA Parameters

PAS Order No.: 0809195

Dear Mr. Ganesh Krish:

Prairie Analytical Systems, Inc. received 20 samples on 9/11/2008 2:35:00 PM for the analyses presented in the following report.

This is an amended report and supersedes the original report. Refer to the case narrative for explanation of the amendment. All applicable quality control procedures met method specific acceptance criteria.

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 call me at (217) 753-1148.

Sincerely,

Michael D. Brophy
Project Manager

Prairie Analytical Systems, Inc. **Date:** *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

CASE NARRATIVE

RCRA hazrdous waste characterization analysis was performed on sample PS-217 (PAS 0809195-004) at the request of the client.

Analysis for Extractable Organic Halides (EOX):
Method Blank result: Not detectable at the reporting limit.
% Recovery for LCS: 91%
% Recovery for MS: 107%
% Recovery for MSD: 82%

Percent solids analysis for sample PS-217 (PAS 0809195-004) was corrected and reported at the request of the client.

Soil density was analyzed by ASTM Method D2937 which provides a result without units.

FHRPRU001163

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-001
Collection Date: 9/11/2008 11:30:00 AM
Client Sample ID: PS-210
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	4.41	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Lead	39.0	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Mercury	U	0.108		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Zinc	1240	541		mg/Kg-dry	500	9/13/2008 8:47:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.108	0.0010		mg/L	1	9/13/2008 8:24:00 AM
Lead	0.0290	0.0050		mg/L	1	9/13/2008 8:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 8:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	7.75	0.01		wt%	1	9/12/2008

Lab ID: 0809195-002
Collection Date: 9/11/2008 11:55:00 AM
Client Sample ID: PS-213
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	13.7	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Lead	141	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Mercury	0.196	0.111		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Zinc	6690	555		mg/Kg-dry	500	9/13/2008 8:57:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.339	0.0010		mg/L	1	9/13/2008 9:40:00 AM
Lead	0.345	0.0050		mg/L	1	9/13/2008 9:40:00 AM
Mercury	0.0004	0.0002		mg/L	1	9/13/2008 9:40:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	10.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-003
Collection Date: 9/11/2008 10:40:00 AM
Client Sample ID: PS-214
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	76.3	0.578		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Lead	1410	145		mg/Kg-dry	500	9/13/2008 9:06:00 PM
Mercury	0.286	0.116		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Zinc	16800	578		mg/Kg-dry	500	9/13/2008 9:06:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.61	0.0010		mg/L	1	9/13/2008 9:49:00 AM
Lead	4.34	0.0050		mg/L	1	9/13/2008 9:49:00 AM
Mercury	0.0003	0.0002		mg/L	1	9/13/2008 9:49:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.7	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-004
Client Sample ID: PS-217

Collection Date: 9/11/2008 10:30:00 AM
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	14.6	0.549		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Lead	1930	137		mg/Kg-dry	500	9/13/2008 9:16:00 PM
Mercury	0.208	0.110		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Zinc	7830	549		mg/Kg-dry	500	9/13/2008 9:16:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **JTC**
Arsenic	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Barium	0.250	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Cadmium	0.451	0.0010		mg/L	1	9/13/2008 9:58:00 AM
Chromium	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Lead	25.6	0.250		mg/L	50	9/13/2008 2:36:00 PM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 9:58:00 AM
Selenium	0.0186	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Silver	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
TCLP SEMIVOLATILES ANALYSIS		**SW8270C**		**(SW3510C)**		Analyst: **JKA**
2,4-Dinitrotoluene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobutadiene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachloroethane	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2-Methylphenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
3 & 4-Methylphenol	U	100		µg/L	1	9/24/2008 8:44:00 PM
Nitrobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Pentachlorophenol	U	250		µg/L	1	9/24/2008 8:44:00 PM
Pyridine	U	250		µg/L	1	9/24/2008 8:44:00 PM
2,4,5-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2,4,6-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorobiphenyl	61.1	38-149		%REC	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorophenol	25.6	12-95		%REC	1	9/24/2008 8:44:00 PM
Surr: Nitrobenzene-d5	57.4	42-156		%REC	1	9/24/2008 8:44:00 PM
Surr: Phenol-d6	19.8	15-90		%REC	1	9/24/2008 8:44:00 PM
Surr: 4-Terphenyl-d14	76.5	42-137		%REC	1	9/24/2008 8:44:00 PM
Surr: 2,4,6-Tribromophenol	49.3	20-100		%REC	1	9/24/2008 8:44:00 PM
TCLP VOLATILES ANALYSIS		**SW8260B**		**(SW5030B)**		Analyst: **BDP**
Benzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
2-Butanone	U	125		µg/L	5	9/25/2008 2:40:00 AM
Carbon tetrachloride	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chloroform	U	125		µg/L	5	9/25/2008 2:40:00 AM
1,4-Dichlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

TCLP VOLATILES ANALYSIS		**SW8260B**	**(SW5030B)**		Analyst: **BDP**
1,2-Dichloroethane	U	125	µg/L	5	9/25/2008 2:40:00 AM
1,1-Dichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Tetrachloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Trichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Vinyl chloride	U	100	µg/L	5	9/25/2008 2:40:00 AM
Surr: 4-Bromofluorobenzene	97.7	67-133	%REC	5	9/25/2008 2:40:00 AM
Surr: 1,2-Dichloroethane-d4	101	86-125	%REC	5	9/25/2008 2:40:00 AM
Surr: Toluene-d8	102	81-116	%REC	5	9/25/2008 2:40:00 AM
EXTRACTABLE ORGANIC HALIDES ANALYSIS		**SW9023**			Analyst: **SUB**
Extractable Organic Halides (EOX)	U	109	ppm-dry	1	9/30/2008
SUBCONTRACTED ANALYSIS		**SUB**			Analyst: **SUB**
Bulk density	2.605	0		1	10/3/2008
FLASH POINT ANALYSIS		**SW1010(M)**			Analyst: **AJD**
Ignitability (Flash Point)	>200	50.0	°F	1	9/23/2008
REACTIVE CYANIDE ANALYSIS		**SW9014**	**(SW7.3.3.2)**		Analyst: **AJD**
Reactive Cyanide	U	1.34	mg/Kg-dry	1	9/24/2008
CYANIDE ANALYSIS		**SW9014**	**(SW9010B)**		Analyst: **AJD**
Cyanide	U	0.488	mg/Kg-dry	1	9/24/2008
REACTIVE SULFIDE ANALYSIS		**SW9034**	**(SW7.3.4.2)**		Analyst: **AJD**
Reactive Sulfide	U	9.64	mg/Kg-dry	1	9/25/2008
SULFIDE ANALYSIS		**SW9034**	**(SW9030B)**		Analyst: **AJD**
Sulfide	U	9.01	mg/Kg-dry	1	9/25/2008
PH ANALYSIS		**SW9045C**			Analyst: **CWA**
pH	7.47	0.01	pH Units	1	9/23/2008 2:53:00 PM
PHENOLICS ANALYSIS		**SW9065(M)**			Analyst: **RMN**
Phenolics	U	5.36	mg/Kg-dry	1	9/26/2008
PAINT FILTER ANALYSIS		**SW9095A**			Analyst: **AJD**
Paint Filter	PASS	0	P/F	1	9/23/2008
PERCENT MOISTURE ANALYSIS		**D2216**			Analyst: **CWA**
Percent Moisture	8.49	0.01	wt%	1	9/12/2008
PERCENT SOLIDS ANALYSIS		**D2216**			Analyst: **RMN**
Percent Solids	91.7	0.01	wt%	1	9/26/2008 9:15:00 AM

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-005
Collection Date: 9/11/2008 10:20:00 AM
Client Sample ID: PS-219
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	27.8	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Lead	377	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Mercury	0.139	0.112		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Zinc	7080	560		mg/Kg-dry	500	9/13/2008 9:55:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.583	0.0010		mg/L	1	9/13/2008 10:08:00 AM
Lead	0.603	0.0050		mg/L	1	9/13/2008 10:08:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:08:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.7	0.01		wt%	1	9/12/2008

Lab ID: 0809195-006
Collection Date: 9/11/2008 10:00:00 AM
Client Sample ID: PS-221
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	10.0	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Lead	309	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Mercury	U	0.113		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Zinc	4440	567		mg/Kg-dry	500	9/13/2008 10:04:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.143	0.0010		mg/L	1	9/13/2008 10:17:00 AM
Lead	0.118	0.0050		mg/L	1	9/13/2008 10:17:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:17:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-007
Collection Date: 9/10/2008 6:10:00 PM
Client Sample ID: PS-223
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	25.9	0.581		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Lead	1480	145		mg/Kg-dry	500	9/13/2008 10:14:00 PM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Zinc	9330	581		mg/Kg-dry	500	9/13/2008 10:14:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.375	0.0010		mg/L	1	9/13/2008 10:27:00 AM
Lead	2.41	0.0050		mg/L	1	9/13/2008 10:27:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:27:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-008
Collection Date: 9/10/2008 5:50:00 PM
Client Sample ID: PS-225
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.4	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Lead	73.3	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Mercury	U	0.120		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Zinc	1230	600		mg/Kg-dry	500	9/13/2008 10:24:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.102	0.0010		mg/L	1	9/13/2008 10:36:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 10:36:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:36:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-009
Collection Date: 9/10/2008 5:35:00 PM
Client Sample ID: PS-227
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	57.3	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Lead	1070	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Zinc	11200	581		mg/Kg-dry	500	9/13/2008 10:33:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.72	0.0010		mg/L	1	9/13/2008 10:46:00 AM
Lead	5.32	0.0050		mg/L	1	9/13/2008 10:46:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:46:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-010
Collection Date: 9/10/2008 5:20:00 PM
Client Sample ID: PS-229
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	88.1	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Lead	356	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Mercury	0.115	0.106		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Zinc	12800	532		mg/Kg-dry	500	9/13/2008 10:43:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	3.41	0.0010		mg/L	1	9/13/2008 11:24:00 AM
Lead	0.564	0.0050		mg/L	1	9/13/2008 11:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.5	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-011
Collection Date: 9/10/2008 5:00:00 PM
Client Sample ID: PS-231
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	69.1	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Lead	851	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Mercury	U	0.115		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Zinc	17000	575		mg/Kg-dry	500	9/13/2008 10:53:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.75	0.0010		mg/L	1	9/13/2008 11:34:00 AM
Lead	0.194	0.0050		mg/L	1	9/13/2008 11:34:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:34:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-012
Collection Date: 9/10/2008 4:40:00 PM
Client Sample ID: PS-233
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	8.49	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Lead	76.2	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Mercury	U	0.122		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Zinc	1800	611		mg/Kg-dry	500	9/13/2008 11:02:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.145	0.0010		mg/L	1	9/13/2008 11:43:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:43:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:43:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-013
Collection Date: 9/10/2008 3:55:00 PM
Client Sample ID: PS-260
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.426	0.349		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Lead	8.39	0.513		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Zinc	74.0	2.05		mg/Kg-dry	2	9/15/2008 2:26:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0124	0.0010		mg/L	1	9/13/2008 11:53:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:53:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:53:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	4.35	0.01		wt%	1	9/12/2008

Lab ID: 0809195-014
Collection Date: 9/10/2008 2:55:00 PM
Client Sample ID: PS-262
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.5	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Lead	61.1	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Zinc	1480	515		mg/Kg-dry	500	9/13/2008 11:51:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0741	0.0010		mg/L	1	9/13/2008 12:02:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:02:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:02:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-015
Collection Date: 9/10/2008 1:40:00 PM
Client Sample ID: PS-264
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	7.74	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Lead	39.2	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Mercury	U	0.110		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Zinc	634	550		mg/Kg-dry	500	9/14/2008
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.130	0.0010		mg/L	1	9/13/2008 12:12:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:12:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:12:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-016
Collection Date: 9/10/2008 12:50:00 PM
Client Sample ID: PS-266
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.528	0.517		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Lead	44.5	0.647		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Mercury	U	0.129		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Zinc	164	2.59		mg/Kg-dry	2	9/15/2008 3:22:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0201	0.0010		mg/L	1	9/13/2008 12:21:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:21:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:21:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	23.3	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-017
Collection Date: 9/10/2008 3:40:00 PM
Client Sample ID: PS-280
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	72.8	0.551		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Lead	1250	138		mg/Kg-dry	500	9/14/2008 12:20:00 AM
Mercury	0.325	0.110		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Zinc	17600	551		mg/Kg-dry	500	9/14/2008 12:20:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.76	0.0010		mg/L	1	9/13/2008 12:31:00 PM
Lead	3.12	0.0050		mg/L	1	9/13/2008 12:31:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:31:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	12.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-018
Collection Date: 9/10/2008 3:15:00 PM
Client Sample ID: PS-282
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	112	0.606		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Lead	2680	152		mg/Kg-dry	500	9/14/2008 12:29:00 AM
Mercury	0.273	0.121		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Zinc	28900	606		mg/Kg-dry	500	9/14/2008 12:29:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.78	0.0010		mg/L	1	9/13/2008 12:40:00 PM
Lead	4.38	0.0050		mg/L	1	9/13/2008 12:40:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:40:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.8	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-019
Collection Date: 9/10/2008 2:25:00 PM
Client Sample ID: PS-284
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	133	0.560		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Lead	1190	140		mg/Kg-dry	500	9/14/2008 12:39:00 AM
Mercury	U	0.112		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Zinc	15600	560		mg/Kg-dry	500	9/14/2008 12:39:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.83	0.0010		mg/L	1	9/13/2008 1:19:00 PM
Lead	1.00	0.0050		mg/L	1	9/13/2008 1:19:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:19:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-020
Collection Date: 9/10/2008 1:15:00 PM
Client Sample ID: PS-286
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	443	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Lead	1100	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Mercury	U	0.111		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Zinc	21900	554		mg/Kg-dry	500	9/14/2008 12:49:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	7.90	0.0500		mg/L	50	9/13/2008 2:46:00 PM
Lead	0.441	0.0050		mg/L	1	9/13/2008 1:28:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:28:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	15.3	0.01		wt%	1	9/12/2008

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, IL 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Pb Cd Hg Zn Totals method 6020	Pb Cd Hg TCLP method 6020							Laboratory Comments
PS-210	9/11/08	1130	S	2	C		✓	✓							
PS-213		1155					✓	✓							
PS-214		1040					✓	✓							
PS-217		1030					✓	✓							
PS-219		1020					✓	✓							
PS-221		1000					✓	✓							
PS-223	9/10/08	1810					✓	✓							
PS-225		1750					✓	✓							
PS-227		1735					✓	✓							
PS-229		1720					✓	✓							
PS-231		1700					✓	✓							
PS-233		1640					✓	✓							

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1235	Hand
			PAS	9/11/08	3:33pm	

Special Instructions: The Samples ending in 1 (PS-210-1) are to be sampled. The samples ending in 2 (PS-210-2) are on hold

Q/C Level: 1 ✓ 2 ___ 3 ___ 4 ___

On Wet Ice: Y / N
Proper Preservation: Y / N

Temperature (°C): 1.3°C

RCRA Haz. Waste Parameters added to PS-217 per client

FHRPRU001177

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, Il 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP Method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Laboratory Comments
PS 260	9/10/08	1555	S	2	C		
PS 262		1455					
PS 264		1340					
PS 266		1250					
PS 280		1540					
PS 282		1515					
PS 284		1425					
PS 286		1315					

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1439	[signature]
			PAS	9/11/08	3:33pm	

Special Instructions: The samples ending in 1 (PS-260-1) are to be sampled
The samples ending in 2 (PS260-2) are on hold

Q/C Level: 1 ✓ 2 __ 3 __ 4 __

On Wet Ice: Y ✓ N
Proper Preservation: Y ✓ N

Temperature (°C): 13°C

FHRPRU001178

PDC Laboratories, Inc.
P.O. Box 9071 • Peoria, IL 61612-9071
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

ACCREDITED IN ACCORDANCE WITH nelac

Flint Hills Resources
501 Brunner St.
Peru, IL 61354

Attn: Ganesh Krish

Date Received: 12-Sep-08
Date Reported 06-Oct-08

Sample No: 08094128-1 Collect Date: 11-Sep-08 11:30
Client Id: FLINT HILLS RESOURCE Site: PS-217-3 Locator: COMPOSITE

	Result	Units	Date / Time	By
BICRON METER				
Radioactivity Screen	60	CPM	02-Oct-08 9:58	MBB
SW-846 3051				
Sample Preparation			29-Sep-08 7:30	JEM
SW-846 6020				
Mercury	0.3	mg/kg	01-Oct-08 11:00	KMC

Certified by: Lisa Grant
Lisa Grant, Project Manager

PDC Laboratories participates in the following laboratory accreditation/certification and proficiency programs. Endorsement by the Federal or State Government or their agencies is not implied.

NELAC Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
State of Illinois Bacteriological Analysis in Drinking Water Certified Lab Registry No. 17533
Drinking Water Certifications: Indiana (C-IL-04); Kansas (E-10338); Kentucky (90058); Missouri (00870); Wisconsin (998294430)
Wastewater Certifications: Arkansas; Iowa (240); Kansas (E-10338); Wisconsin (99829443
Hazardous/Solid Waste Certifications: Arkansas; Kansas (E-10338); Wisconsin (998294430)
UST Certification: Iowa (240)

This Report shall not be reproduced, except in full, without the written approval of the laboratory.

recycled paper

PDC LABORATORIES, INC.
2231 WEST ALTORFER DRIVE
PEORIA, IL 61615

PHONE # 800-752-6611
FAX # 309-692-9689

CHAIN OF CUSTODY RECORD

State where samples collected IL

*ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - **(SAMPLE ACCEPTANCE POLICY ON REVERSE)***

1			
CLIENT: FLINT HILLS RESOURCES	PROJECT NUMBER: FHR-PS	P.O. NUMBER:	MEANS SHIPPED: FED EX
ADDRESS: 501 BRUNNER STREET	PHONE NUMBER: 815.224.5451	FAX NUMBER:	DATE SHIPPED: 9/11/08
CITY STATE ZIP: PERU, IL 61354	SAMPLER (PLEASE PRINT): Andy Taylor		MATRIX TYPES: WW-WASTEWATER, DW-DRINKING WATER, GW-GROUND WATER, WWSL-SLUDGE, NAS-SOLID, LCHT-LEACHATE, OTHER:
CONTACT PERSON: GANESH KRISHA	SAMPLER'S SIGNATURE: [signature]		

3 ANALYSIS REQUESTED

4 (FOR LAB USE ONLY) 2500-20
LOGIN # 0809248620
LOGGED BY: TAS
LAB PROJ. #:
TEMPLATE:
PROJ. MGR.:

2 SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	REMARKS
PS-210-3	9/11/08	1130		C	NAS	1	PLEASE HOLD
PS-213-3		1155				1	ALL SAMPLES
PS-214-3		1040				1	UNTIL FURTHER
PS-217-3		1030				1	INSTRUCTIONS.
PS-219-3		1020				1	
PS-221.3		1000				1	
PS-223-3	9/10/08	1810		C	NAS	1	
PS-225-3		1750				1	
PS-227-3		1735				1	
PS-229-3		1720				1	
PS-231-3		1700				1	
PS-233-3		1640				1	

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH
(RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE)
DATE RESULTS NEEDED
RUSH RESULTS VIA (PLEASE CIRCLE) FAX PHONE E-MAIL
FAX # PHONE # EMAIL ADDRESS ganesh.krish@fhr.com

6 *The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.*

7			
RELINQUISHED BY: (SIGNATURE) [signature]	DATE 9/11/08 TIME 1310	RECEIVED BY: (SIGNATURE) [signature]	DATE 9-11-08 TIME 1310
RELINQUISHED BY: (SIGNATURE) Sally Prime / BJ Hoch	DATE 09-11 TIME 1530	RECEIVED BY: (SIGNATURE) Mary Perez	DATE 9-11 TIME 15-32
RELINQUISHED BY: (SIGNATURE)	DATE TIME	RECEIVED AT LAB BY: (SIGNATURE) [signature]	DATE 9/12/08 TIME 0915

8 COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT	11 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT	Y OR N
SAMPLE(S) RECEIVED ON ICE	Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION	Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME	Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) (EXCLUDES TYPICAL FIELD PARAMETERS)	Y OR N
DATE AND TIME TAKEN FROM SAMPLE BOTTLE	

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

FHRPRU001180

PDC LABORATORIES, INC.
2231 WEST ALTORFER DRIVE
PEORIA, IL 61615

PHONE # 800-752-6611
FAX # 309-692-9689

CHAIN OF CUSTODY RECORD

State where samples collected IL

*ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - **(SAMPLE ACCEPTANCE POLICY ON REVERSE)***

1			
CLIENT: FLINT HILLS RESOURCES	PROJECT NUMBER: FHR-PS	P.O. NUMBER:	MEANS SHIPPED: FED EX
ADDRESS: 501 BRUNNER STREET	PHONE NUMBER: 815.224.5451	FAX NUMBER:	DATE SHIPPED: 9/11/08
CITY STATE ZIP: PERU, IL 61354	SAMPLER (PLEASE PRINT): Andy Taylor		MATRIX TYPES: WW-WASTEWATER, DW-DRINKING WATER, GW-GROUND WATER, WWSL-SLUDGE, NAS-SOLID, LCHT-LEACHATE, OTHER:
CONTACT PERSON: GANESH KRISH	SAMPLER'S SIGNATURE: [signature]		

3 ANALYSIS REQUESTED

4 (FOR LAB USE ONLY)
LOGIN #
LOGGED BY:
LAB PROJ. #
TEMPLATE:
PROJ. MGR.:

2 SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	REMARKS
PS 260-3	9/10/08	1555		C	NAS	1	PLEASE HOLD
PS 262-3		1455				1	ALL SAMPLES
PS 264-3		1340				1	UNTIL FURTHER
PS 266-3		1250				1	INSTRUCTIONS.
PS 280-3		1540				1	
PS 282-3		1515				1	
PS 284-3		1425				1	
PS 286-3		1315				1	

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH DATE RESULTS NEEDED
(RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE)
RUSH RESULTS VIA (PLEASE CIRCLE) FAX PHONE E-MAIL
FAX # PHONE # EMAIL ADDRESS ganesh.krish@fhr.com

6 *The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.* _____

7			
RELINQUISHED BY: (SIGNATURE) [signature]	DATE 9/11/08 TIME 1310	RECEIVED BY: (SIGNATURE) [signature]	DATE 9-11-08 TIME 1310
RELINQUISHED BY: (SIGNATURE) Sally Pruno / B J Fuerte	DATE 09-11 TIME 1530	RECEIVED BY: (SIGNATURE) MARY A FEREZ Sally Pruno / B J Fuerte	DATE 09-11-08 TIME 1530
RELINQUISHED BY: (SIGNATURE)	DATE TIME	RECEIVED AT LAB BY: (SIGNATURE) [signature]	DATE 9/12/08 TIME 0915

8 COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT	11 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT	Y OR N
SAMPLE(S) RECEIVED ON ICE	Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION	Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME	Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) (EXCLUDES TYPICAL FIELD PARAMETERS)	Y OR N
DATE AND TIME TAKEN FROM SAMPLE BOTTLE	_____

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

FHRPRU001181

ALLIED WASTE

GENERATOR WASTE PROFILE SHEET

Requested Disposal Facility: LandComp LF IL F73

an Allied Waste Company

Waste Profile #

AWI Sales Rep:

Date: 06/02/2009

I. Generator Information

Generator Name: Flint Hills Resources, LP			
Generator Site Address: 501 Brunner Street			
City: Peru	County: La Salle	State: Illinois	Zip: 61354
State ID/Reg No: 0990850005	State Approval/Waste Code: (if applicable)		SIC Code: 2821
Generator Mailing Address (if different): 501 Brunner Street			
City: Peru	County: La Salle	State: Illinois	Zip: 61354
Generator Contact Name: Ganesh Krish		Email: ganesh.krish@fhr.com	
Phone Number: (815) 224-5451		Fax Number: (815) 224-5278	

IIa. Transporter Information

Transporter Name: Allied Waste		Contact Name:	
Transporter Address:			
City:	County:	State:	Zip:
Phone Number:	Fax Number:	State Transportation Number:	

IIb. Billing Information

Bill To: Flint Hills Resources, LP			Contact Name: Ganesh Krish	
Billing Address: 501 Brunner Street			Email: ganesh.krish@fhr.com	
City: Peru	State: IL	Zip: 61354	Phone: (815) 224-5451	Fax: (815) 224-5278

III. Waste Stream Information

Name of Waste: Excavated Concrete and Soils (Non-Haz with no known contamination)

Process Generating Waste: Excavations to install foundations for the proposed pipe-supports at the facility.

Type of Waste: ☑ INDUSTRIAL PROCESS WASTE or ☐ POLLUTION CONTROL WASTE

Physical State: ☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID ☐ OTHER: ____

Method of Shipment: ☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:

Estimated Annual Volume: 100 Tons

Frequency: ☑ ONE TIME ☐ ON GOING

Special Handling Instructions:

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules? If testing is older than one year, please explain how it is still representative of the waste. Please add a letter of explanation from the generator.	☑ YES or ☐ NO
Sample Date: 09/11/2008	Type of Sample: ☑ COMPOSITE SAMPLE ☐ GRAB SAMPLE
Laboratory: Prairie Analytical Systems, Inc.	Sampler's Employer: August Mack Environmental
Sample ID Numbers: PS-210, PS-221, PS-225, PS-233, PS-260, PS-262, and PS-266 (See attached Lab Report)	
Sampler's Name (printed): Andy Taylor	Signature: Andy Taylor / gbk

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ALLIED WASTE

GENERATOR WASTE PROFILE SHEET (continued)

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Concrete	70.000
2. Soil	30.000
3.	
4.	
5.	

Color	Odor (describe)	Free Liquids	% Solids	pH:	Flash Point	Phenol
Gray/Brown	None apparent	☐ YES or ☑ NO Content ____%	100.00	N/A	>200 ∞F	N/A ____ppm

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Toxic Material as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No

VI. Generator Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste.

Ganesh Krish, Environmental Engineer	Flint Hills Resources, LP
Authorized Representative Name And Title (Printed)	Company Name
	06/02/2009
Authorized Representative Signature	Date

VII. Allied Waste Decision

Approved ☐ Rejected ☐ Expiration Date:

Name, Title	Signature	Date

Conditions:

© Allied Waste, April 2008

GENERATOR NON SPECIAL WASTE CERTIFICATION
STATE OF ILLINOIS-AW DISPOSAL FACILITIES

GENERATOR COMPANY NAME: FLINT HILLS RESOURCES, LP

Site Address: 501 BRUNNER STREET
PERU, IL 61354

Mailing Address: SAME AS SITE ADDRESS

The Illinois Environmental Protection Act, Section 3.45 describes "Special Waste" and wastes, which may be certified under Section 22.48 by the generator to be Non Special Waste. By completing this Certification, the **Non Hazardous Waste** soils from site excavations meets all requirements of the legislative amendments and is classified as Non Special Waste. This material can be managed as a municipal solid waste in the State of Illinois since this waste is:

- is not a regulated Hazardous Waste (40 CFR 261 & IL Title 35, Part 722.11),
- is not a Potentially Infectious Medical Waste (IL EPA Section 3.84),
- is not a Liquid Waste (pass the Liquids Paint Filter Test, IL Title35, Part 811.107),
- is not an Asbestos Containing Material (NESHAP 40 CFR 61.141),
- does not contain regulated Polychlorinated Biphenyl's (PCB's) (40 CFR Part 761),
- is not formerly Hazardous Waste rendered Non-Hazardous (De-listed waste or De-characterized),
- is not a material generated by shredding or processing recyclable metals (Auto Fluff) (IL EPA Section 22.29)

The information used to determine this waste to be a Non Special Waste includes the completed and signed **AWI Generator Waste Profile Sheet Number** _____, along with the following items (check all that apply):

1) X The Analytical Report from the Laboratory responsible for the test results, signed and **dated** 12/1/08; and/or
2) _____ The relevant Material Safety Data Sheets (if applicable); and/or
3) _____ A signed and **dated** _____ letter from the Generator explaining why no testing is needed, if analytical data is not reported.

By signing this Certification, the generator understands that anyone who knowingly and **falsely** certifies that an industrial process or pollution control waste is not a special waste commits a Class 4 felony for a first offense and a Class 3 felony for a subsequent offense and is subject to the penalties in Section 44 of the Illinois Environmental Protection Act. This Non Special Waste Certification is effective from the date signed and must be retained for three years following the termination of the process that produced the waste. A new certification must be submitted if there is a change in the Generator name and/or address, in the raw material used, or in the process generating the waste.

Ganesh Krish
(Print Name)

(Signature)

Environmental Engineer
(Title)

June 1, 2009
(Date)

UPON REQUEST, A COPY OF THIS CERTIFICATION FORM MUST BE MADE AVAILABLE TO THE ILLINOIS EPA, THE TRANSPORATION FACILITY, AND/OR THE DISPOSAL SITE MANAGING THIS WASTE MATERIAL.

FLINT HILLS
resources®

June 2, 2009

Mr. Mike Egizio
Allied Waste Industries ("AWI")
Ottawa, Illinois

RE: Disposal of Non-Haz Soils
Flint Hills Resources, LP ("FHR")
501 Brunner Street
Peru, IL 61354

Dear Mr. Egizio,

Attached are the documents required for AWI's approval for the transportation and disposal of non-hazardous soils from our site (with no known contamination based on generator knowledge and the appended lab results). This waste stream was generated from the excavation activities related to installation of foundations for the proposed pipe-supports at our facility.

It shall be noted that all the excavated soils and concrete from the hazardous areas (as shown on the attached Figures) are stored separately in roll-offs on site for disposal at a hazardous waste landfill.

Please call or e-mail me should you have any questions or additional concerns. Thank you.

Sincerely,

Ganesh Krish
Environmental Engineer
FHR Peru Facility

<N:\EHS\Environmental\Waste Stream Characterization\Excavated Soils from FHR Site\Pipe Rack\Haz Soils Disposal Notification.doc>

– 501 Brunner Street – Peru, Illinois 61354 – 815-224-1525 – Fax 815-224-5278 –

An Analytical
Testing Laboratory

Prairie Analytical Systems, INCORPORATED

1210 Capital Airport Drive
Springfield, Illinois 62707
Phone: 217-753-1148
Fax: 217-753-1152
www.prairieanalytical.com

December 01, 2008

Mr. Ganesh Krish
Flint Hills Resources
501 Brunner Street
Peru, IL 61354

RE: RCRA Parameters

PAS Order No.: 0809195

Dear Mr. Ganesh Krish:

Prairie Analytical Systems, Inc. received 20 samples on 9/11/2008 2:35:00 PM for the analyses presented in the following report.

This is an amended report and supersedes the original report. Refer to the case narrative for explanation of the amendment. All applicable quality control procedures met method specific acceptance criteria.

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 call me at (217) 753-1148.

Sincerely,

Michael D. Brophy
Project Manager

Prairie Analytical Systems, Inc. **Date:** *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

CASE NARRATIVE

RCRA hazrdous waste characterization analysis was performed on sample PS-217 (PAS 0809195-004) at the request of the client.

Analysis for Extractable Organic Halides (EOX):
Method Blank result: Not detectable at the reporting limit.
% Recovery for LCS: 91%
% Recovery for MS: 107%
% Recovery for MSD: 82%

Percent solids analysis for sample PS-217 (PAS 0809195-004) was corrected and reported at the request of the client.

Soil density was analyzed by ASTM Method D2937 which provides a result without units.

FHRPRU001187

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-001
Collection Date: 9/11/2008 11:30:00 AM
Client Sample ID: PS-210
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	4.41	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Lead	39.0	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Mercury	U	0.108		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Zinc	1240	541		mg/Kg-dry	500	9/13/2008 8:47:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.108	0.0010		mg/L	1	9/13/2008 8:24:00 AM
Lead	0.0290	0.0050		mg/L	1	9/13/2008 8:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 8:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	7.75	0.01		wt%	1	9/12/2008

Lab ID: 0809195-002
Collection Date: 9/11/2008 11:55:00 AM
Client Sample ID: PS-213
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	13.7	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Lead	141	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Mercury	0.196	0.111		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Zinc	6690	555		mg/Kg-dry	500	9/13/2008 8:57:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.339	0.0010		mg/L	1	9/13/2008 9:40:00 AM
Lead	0.345	0.0050		mg/L	1	9/13/2008 9:40:00 AM
Mercury	0.0004	0.0002		mg/L	1	9/13/2008 9:40:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	10.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-003
Collection Date: 9/11/2008 10:40:00 AM
Client Sample ID: PS-214
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	76.3	0.578		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Lead	1410	145		mg/Kg-dry	500	9/13/2008 9:06:00 PM
Mercury	0.286	0.116		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Zinc	16800	578		mg/Kg-dry	500	9/13/2008 9:06:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.61	0.0010		mg/L	1	9/13/2008 9:49:00 AM
Lead	4.34	0.0050		mg/L	1	9/13/2008 9:49:00 AM
Mercury	0.0003	0.0002		mg/L	1	9/13/2008 9:49:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.7	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-004
Client Sample ID: PS-217

Collection Date: 9/11/2008 10:30:00 AM
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	14.6	0.549		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Lead	1930	137		mg/Kg-dry	500	9/13/2008 9:16:00 PM
Mercury	0.208	0.110		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Zinc	7830	549		mg/Kg-dry	500	9/13/2008 9:16:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **JTC**
Arsenic	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Barium	0.250	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Cadmium	0.451	0.0010		mg/L	1	9/13/2008 9:58:00 AM
Chromium	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Lead	25.6	0.250		mg/L	50	9/13/2008 2:36:00 PM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 9:58:00 AM
Selenium	0.0186	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Silver	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
TCLP SEMIVOLATILES ANALYSIS		**SW8270C**		**(SW3510C)**		Analyst: **JKA**
2,4-Dinitrotoluene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobutadiene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachloroethane	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2-Methylphenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
3 & 4-Methylphenol	U	100		µg/L	1	9/24/2008 8:44:00 PM
Nitrobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Pentachlorophenol	U	250		µg/L	1	9/24/2008 8:44:00 PM
Pyridine	U	250		µg/L	1	9/24/2008 8:44:00 PM
2,4,5-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2,4,6-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorobiphenyl	61.1	38-149		%REC	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorophenol	25.6	12-95		%REC	1	9/24/2008 8:44:00 PM
Surr: Nitrobenzene-d5	57.4	42-156		%REC	1	9/24/2008 8:44:00 PM
Surr: Phenol-d6	19.8	15-90		%REC	1	9/24/2008 8:44:00 PM
Surr: 4-Terphenyl-d14	76.5	42-137		%REC	1	9/24/2008 8:44:00 PM
Surr: 2,4,6-Tribromophenol	49.3	20-100		%REC	1	9/24/2008 8:44:00 PM
TCLP VOLATILES ANALYSIS		**SW8260B**		**(SW5030B)**		Analyst: **BDP**
Benzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
2-Butanone	U	125		µg/L	5	9/25/2008 2:40:00 AM
Carbon tetrachloride	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chloroform	U	125		µg/L	5	9/25/2008 2:40:00 AM
1,4-Dichlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

TCLP VOLATILES ANALYSIS		**SW8260B**	**(SW5030B)**		Analyst: **BDP**
1,2-Dichloroethane	U	125	µg/L	5	9/25/2008 2:40:00 AM
1,1-Dichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Tetrachloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Trichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Vinyl chloride	U	100	µg/L	5	9/25/2008 2:40:00 AM
Surr: 4-Bromofluorobenzene	97.7	67-133	%REC	5	9/25/2008 2:40:00 AM
Surr: 1,2-Dichloroethane-d4	101	86-125	%REC	5	9/25/2008 2:40:00 AM
Surr: Toluene-d8	102	81-116	%REC	5	9/25/2008 2:40:00 AM
EXTRACTABLE ORGANIC HALIDES ANALYSIS		**SW9023**			Analyst: **SUB**
Extractable Organic Halides (EOX)	U	109	ppm-dry	1	9/30/2008
SUBCONTRACTED ANALYSIS		**SUB**			Analyst: **SUB**
Bulk density	2.605	0		1	10/3/2008
FLASH POINT ANALYSIS		**SW1010(M)**			Analyst: **AJD**
Ignitability (Flash Point)	>200	50.0	°F	1	9/23/2008
REACTIVE CYANIDE ANALYSIS		**SW9014**	**(SW7.3.3.2)**		Analyst: **AJD**
Reactive Cyanide	U	1.34	mg/Kg-dry	1	9/24/2008
CYANIDE ANALYSIS		**SW9014**	**(SW9010B)**		Analyst: **AJD**
Cyanide	U	0.488	mg/Kg-dry	1	9/24/2008
REACTIVE SULFIDE ANALYSIS		**SW9034**	**(SW7.3.4.2)**		Analyst: **AJD**
Reactive Sulfide	U	9.64	mg/Kg-dry	1	9/25/2008
SULFIDE ANALYSIS		**SW9034**	**(SW9030B)**		Analyst: **AJD**
Sulfide	U	9.01	mg/Kg-dry	1	9/25/2008
PH ANALYSIS		**SW9045C**			Analyst: **CWA**
pH	7.47	0.01	pH Units	1	9/23/2008 2:53:00 PM
PHENOLICS ANALYSIS		**SW9065(M)**			Analyst: **RMN**
Phenolics	U	5.36	mg/Kg-dry	1	9/26/2008
PAINT FILTER ANALYSIS		**SW9095A**			Analyst: **AJD**
Paint Filter	PASS	0	P/F	1	9/23/2008
PERCENT MOISTURE ANALYSIS		**D2216**			Analyst: **CWA**
Percent Moisture	8.49	0.01	wt%	1	9/12/2008
PERCENT SOLIDS ANALYSIS		**D2216**			Analyst: **RMN**
Percent Solids	91.7	0.01	wt%	1	9/26/2008 9:15:00 AM

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-005
Collection Date: 9/11/2008 10:20:00 AM
Client Sample ID: PS-219
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	27.8	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Lead	377	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Mercury	0.139	0.112		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Zinc	7080	560		mg/Kg-dry	500	9/13/2008 9:55:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.583	0.0010		mg/L	1	9/13/2008 10:08:00 AM
Lead	0.603	0.0050		mg/L	1	9/13/2008 10:08:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:08:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.7	0.01		wt%	1	9/12/2008

Lab ID: 0809195-006
Collection Date: 9/11/2008 10:00:00 AM
Client Sample ID: PS-221
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	10.0	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Lead	309	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Mercury	U	0.113		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Zinc	4440	567		mg/Kg-dry	500	9/13/2008 10:04:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.143	0.0010		mg/L	1	9/13/2008 10:17:00 AM
Lead	0.118	0.0050		mg/L	1	9/13/2008 10:17:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:17:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-007
Collection Date: 9/10/2008 6:10:00 PM
Client Sample ID: PS-223
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	25.9	0.581		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Lead	1480	145		mg/Kg-dry	500	9/13/2008 10:14:00 PM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Zinc	9330	581		mg/Kg-dry	500	9/13/2008 10:14:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.375	0.0010		mg/L	1	9/13/2008 10:27:00 AM
Lead	2.41	0.0050		mg/L	1	9/13/2008 10:27:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:27:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-008
Collection Date: 9/10/2008 5:50:00 PM
Client Sample ID: PS-225
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.4	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Lead	73.3	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Mercury	U	0.120		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Zinc	1230	600		mg/Kg-dry	500	9/13/2008 10:24:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.102	0.0010		mg/L	1	9/13/2008 10:36:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 10:36:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:36:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-009
Collection Date: 9/10/2008 5:35:00 PM
Client Sample ID: PS-227
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	57.3	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Lead	1070	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Zinc	11200	581		mg/Kg-dry	500	9/13/2008 10:33:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.72	0.0010		mg/L	1	9/13/2008 10:46:00 AM
Lead	5.32	0.0050		mg/L	1	9/13/2008 10:46:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:46:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-010
Collection Date: 9/10/2008 5:20:00 PM
Client Sample ID: PS-229
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	88.1	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Lead	356	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Mercury	0.115	0.106		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Zinc	12800	532		mg/Kg-dry	500	9/13/2008 10:43:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	3.41	0.0010		mg/L	1	9/13/2008 11:24:00 AM
Lead	0.564	0.0050		mg/L	1	9/13/2008 11:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.5	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-011
Collection Date: 9/10/2008 5:00:00 PM
Client Sample ID: PS-231
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	69.1	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Lead	851	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Mercury	U	0.115		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Zinc	17000	575		mg/Kg-dry	500	9/13/2008 10:53:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.75	0.0010		mg/L	1	9/13/2008 11:34:00 AM
Lead	0.194	0.0050		mg/L	1	9/13/2008 11:34:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:34:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-012
Collection Date: 9/10/2008 4:40:00 PM
Client Sample ID: PS-233
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	8.49	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Lead	76.2	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Mercury	U	0.122		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Zinc	1800	611		mg/Kg-dry	500	9/13/2008 11:02:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.145	0.0010		mg/L	1	9/13/2008 11:43:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:43:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:43:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-013
Collection Date: 9/10/2008 3:55:00 PM
Client Sample ID: PS-260
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.426	0.349		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Lead	8.39	0.513		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Zinc	74.0	2.05		mg/Kg-dry	2	9/15/2008 2:26:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0124	0.0010		mg/L	1	9/13/2008 11:53:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:53:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:53:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	4.35	0.01		wt%	1	9/12/2008

Lab ID: 0809195-014
Collection Date: 9/10/2008 2:55:00 PM
Client Sample ID: PS-262
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.5	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Lead	61.1	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Zinc	1480	515		mg/Kg-dry	500	9/13/2008 11:51:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0741	0.0010		mg/L	1	9/13/2008 12:02:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:02:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:02:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-015
Collection Date: 9/10/2008 1:40:00 PM
Client Sample ID: PS-264
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	7.74	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Lead	39.2	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Mercury	U	0.110		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Zinc	634	550		mg/Kg-dry	500	9/14/2008
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.130	0.0010		mg/L	1	9/13/2008 12:12:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:12:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:12:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-016
Collection Date: 9/10/2008 12:50:00 PM
Client Sample ID: PS-266
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.528	0.517		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Lead	44.5	0.647		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Mercury	U	0.129		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Zinc	164	2.59		mg/Kg-dry	2	9/15/2008 3:22:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0201	0.0010		mg/L	1	9/13/2008 12:21:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:21:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:21:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	23.3	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-017
Collection Date: 9/10/2008 3:40:00 PM
Client Sample ID: PS-280
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	72.8	0.551		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Lead	1250	138		mg/Kg-dry	500	9/14/2008 12:20:00 AM
Mercury	0.325	0.110		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Zinc	17600	551		mg/Kg-dry	500	9/14/2008 12:20:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.76	0.0010		mg/L	1	9/13/2008 12:31:00 PM
Lead	3.12	0.0050		mg/L	1	9/13/2008 12:31:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:31:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	12.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-018
Collection Date: 9/10/2008 3:15:00 PM
Client Sample ID: PS-282
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	112	0.606		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Lead	2680	152		mg/Kg-dry	500	9/14/2008 12:29:00 AM
Mercury	0.273	0.121		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Zinc	28900	606		mg/Kg-dry	500	9/14/2008 12:29:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.78	0.0010		mg/L	1	9/13/2008 12:40:00 PM
Lead	4.38	0.0050		mg/L	1	9/13/2008 12:40:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:40:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.8	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-019
Collection Date: 9/10/2008 2:25:00 PM
Client Sample ID: PS-284
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	133	0.560		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Lead	1190	140		mg/Kg-dry	500	9/14/2008 12:39:00 AM
Mercury	U	0.112		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Zinc	15600	560		mg/Kg-dry	500	9/14/2008 12:39:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.83	0.0010		mg/L	1	9/13/2008 1:19:00 PM
Lead	1.00	0.0050		mg/L	1	9/13/2008 1:19:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:19:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-020
Collection Date: 9/10/2008 1:15:00 PM
Client Sample ID: PS-286
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	443	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Lead	1100	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Mercury	U	0.111		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Zinc	21900	554		mg/Kg-dry	500	9/14/2008 12:49:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	7.90	0.0500		mg/L	50	9/13/2008 2:46:00 PM
Lead	0.441	0.0050		mg/L	1	9/13/2008 1:28:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:28:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	15.3	0.01		wt%	1	9/12/2008

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, IL 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Pb Cd Hg Zn Totals method 6020	Pb Cd Hg TCLP method 6020							Laboratory Comments
PS-210	9/11/08	1130	S	2	C		✓	✓							
PS-213		1155					✓	✓							
PS-214		1040					✓	✓							
PS-217		1030					✓	✓							
PS-219		1020					✓	✓							
PS-221		1000					✓	✓							
PS-223	9/10/08	1810					✓	✓							
PS-225		1750					✓	✓							
PS-227		1735					✓	✓							
PS-229		1720					✓	✓							
PS-231		1700					✓	✓							
PS-233		1640					✓	✓							

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1435	Hand
			PAS	9/11/08	3:33pm	

Special Instructions: The Samples ending in 1 (PS-210-1) are to be sampled. The samples ending in 2 (PS-210-2) are on hold

Q/C Level: 1 ✓ 2 ___ 3 ___ 4 ___

On Wet Ice: Y / N; Proper Preservation: Y / N

Temperature (°C): 1.3°C

RCRA Haz. Waste Parameters added to PS-217 per client

FHRPRU001201

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, Il 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP Method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Laboratory Comments
PS 260	9/10/08	1555	S	2	C		
PS 262		1455					
PS 264		1340					
PS 266		1250					
PS 280		1540					
PS 282		1515					
PS 284		1425					
PS 286		1315					

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1439	[signature]
			PAS	9/11/08	3:33pm	

Special Instructions: The samples ending in 1 (PS-260-1) are to be sampled
The samples ending in 2 (PS260-2) are on hold

Q/C Level: 1 ✓ 2 __ 3 __ 4 __

On Wet Ice: Y ✓ N
Proper Preservation: Y ✓ N

Temperature (°C): 13°C

FHRPRU001202

PDC Laboratories, Inc.
P.O. Box 9071 • Peoria, IL 61612-9071
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

ACCREDITED IN ACCORDANCE WITH nelac

Flint Hills Resources
501 Brunner St.
Peru, IL 61354

Attn: Ganesh Krish

Date Received: 12-Sep-08
Date Reported 06-Oct-08

Sample No: 08094128-1 Collect Date: 11-Sep-08 11:30
Client Id: FLINT HILLS RESOURCE Site: PS-217-3 Locator: COMPOSITE

	Result	Units	Date / Time	By
BICRON METER				
Radioactivity Screen	60	CPM	02-Oct-08 9:58	MBB
SW-846 3051				
Sample Preparation			29-Sep-08 7:30	JEM
SW-846 6020				
Mercury	0.3	mg/kg	01-Oct-08 11:00	KMC

Certified by: Lisa Grant
Lisa Grant, Project Manager

PDC Laboratories participates in the following laboratory accreditation/certification and proficiency programs. Endorsement by the Federal or State Government or their agencies is not implied.

NELAC Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
State of Illinois Bacteriological Analysis in Drinking Water Certified Lab Registry No. 17533
Drinking Water Certifications: Indiana (C-IL-04); Kansas (E-10338); Kentucky (90058); Missouri (00870); Wisconsin (998294430)
Wastewater Certifications: Arkansas; Iowa (240); Kansas (E-10338); Wisconsin (99829443
Hazardous/Solid Waste Certifications: Arkansas; Kansas (E-10338); Wisconsin (998294430)
UST Certification: Iowa (240)

This Report shall not be reproduced, except in full, without the written approval of the laboratory.

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PDC LABORATORIES, INC.
2231 WEST ALTORFER DRIVE
PEORIA, IL 61615

PHONE # 800-752-6611
FAX # 309-692-9689

CHAIN OF CUSTODY RECORD

State where samples collected IL

*ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - **(SAMPLE ACCEPTANCE POLICY ON REVERSE)***

1 CLIENT	PROJECT NUMBER	P.O. NUMBER	MEANS SHIPPED
FLINT HILLS RESOURCES	FHR-PS		FED EX
ADDRESS: 501 BRUNNER STREET	PHONE NUMBER: 815.224.5451	FAX NUMBER	DATE SHIPPED: 9/11/08
CITY STATE ZIP: PERU, IL 61354	SAMPLER (PLEASE PRINT): Andy Taylor		MATRIX TYPES: WW-WASTEWATER, DW-DRINKING WATER, GW-GROUND WATER, WWSL-SLUDGE, NAS-SOLID, LCHT-LEACHATE, OTHER:
CONTACT PERSON: GANESH KRISHA	SAMPLER'S SIGNATURE: [signature]		

3 ANALYSIS REQUESTED

4 (FOR LAB USE ONLY) 2500-20
LOGIN # 0809248620
LOGGED BY: TAS
LAB PROJ. #
TEMPLATE:
PROJ. MGR.:

2 SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	REMARKS
PS-210-3	9/11/08	1130		C	NAS	1	PLEASE HOLD
PS-213-3		1155				1	ALL SAMPLES
PS-214-3		1040				1	UNTIL FURTHER
PS-217-3		1030				1	INSTRUCTIONS.
PS-219-3		1020				1	
PS-221.3		1000				1	
PS-223-3	9/10/08	1810		C	NAS	1	
PS-225-3		1750				1	
PS-227-3		1735				1	
PS-229-3		1720				1	
PS-231-3		1700				1	
PS-233-3		1640				1	

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE): NORMAL RUSH — DATE RESULTS NEEDED
RUSH RESULTS VIA (PLEASE CIRCLE): FAX PHONE E-MAIL
FAX # PHONE # EMAIL ADDRESS: ganesh.krish@fhr.com

6 *The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.*

7 RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)	DATE / TIME
[signature]	9/11/08 1310	[signature]	9-11-08 1310
RELINQUISHED BY: (SIGNATURE) [signature]	DATE 09-11 TIME 1530	RECEIVED BY: (SIGNATURE) [signature] MARY TERRY	DATE 9-11 TIME 15:32
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED AT LAB BY: (SIGNATURE) [signature]	DATE 9/12/08 TIME 0915

8 COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT 11 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT Y OR N
SAMPLE(S) RECEIVED ON ICE Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) Y OR N
(EXCLUDES TYPICAL FIELD PARAMETERS)
DATE AND TIME TAKEN FROM SAMPLE BOTTLE

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

PDC LABORATORIES, INC.
2231 WEST ALTORFER DRIVE
PEORIA, IL 61615

PHONE # 800-752-6611
FAX # 309-692-9689

CHAIN OF CUSTODY RECORD

State where samples collected IL

*ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - **(SAMPLE ACCEPTANCE POLICY ON REVERSE)***

1			
CLIENT: FLINT HILLS RESOURCES	PROJECT NUMBER: FHR-PS	P.O. NUMBER:	MEANS SHIPPED: FED EX
ADDRESS: 501 BRUNNER STREET	PHONE NUMBER: 815.224.5451	FAX NUMBER:	DATE SHIPPED: 9/11/08
CITY STATE ZIP: PERU, IL 61354	SAMPLER (PLEASE PRINT): Andy Taylor		MATRIX TYPES: WW-WASTEWATER, DW-DRINKING WATER, GW-GROUND WATER, WWSL-SLUDGE, NAS-SOLID, LCHT-LEACHATE, OTHER:
CONTACT PERSON: GANESH KRISH	SAMPLER'S SIGNATURE: GK		

3 ANALYSIS REQUESTED

4 (FOR LAB USE ONLY)
LOGIN #
LOGGED BY:
LAB PROJ. #
TEMPLATE:
PROJ. MGR.:

2 SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	REMARKS
PS 260-3	9/10/08	1555		C	NAS	1	PLEASE HOLD
PS 262-3		1455				1	ALL SAMPLES
PS 264-3		1340				1	UNTIL FURTHER
PS 266-3		1250				1	INSTRUCTIONS.
PS 280-3		1540				1	
PS 282-3		1515				1	
PS 284-3		1425				1	
PS 286-3		1315				1	

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH DATE RESULTS NEEDED
(RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE)
RUSH RESULTS VIA (PLEASE CIRCLE) FAX PHONE E-MAIL
FAX # PHONE # EMAIL ADDRESS ganesh.krish@fhr.com

6 *The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.* _____

7			
RELINQUISHED BY: (SIGNATURE) GK	DATE 9/11/08 TIME 1310	RECEIVED BY: (SIGNATURE) Sally Pruno	DATE 9-11-08 TIME 1310
RELINQUISHED BY: (SIGNATURE) Sally Pruno / B J Hrecka	DATE 09-11 TIME 1530	RECEIVED BY: (SIGNATURE) MARIA PEREZ / Sally Pruno / B J Hrecka	DATE 09-11-08 TIME 1530
RELINQUISHED BY: (SIGNATURE)	DATE TIME	RECEIVED AT LAB BY: (SIGNATURE)	DATE 9/12/08 TIME 0915

8 COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT	11 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT	Y OR N
SAMPLE(S) RECEIVED ON ICE	Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION	Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME	Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) (EXCLUDES TYPICAL FIELD PARAMETERS)	Y OR N
DATE AND TIME TAKEN FROM SAMPLE BOTTLE	_____

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

FHRPRU001205

Prairie Analytical Systems, Inc.

Date: *10-Oct-08*

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 1010(M)/FP_S

Sample ID **LCS**	SampType: **LCS**	TestCode: **1010(M)/FP_**	Units: **°F**	Prep Date:	Run ID: **FLASH1_080923A**
Client ID: **ZZZZZ**	Batch ID: **R27635**	TestNo: **SW1010(M)**		Analysis Date: **9/23/2008**	SeqNo: **501216**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ignitability (Flash Point)	82	50.0	77	0	106	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001206

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S

Sample ID: **MBS-13368** SampType: **MBLK** TestCode: **6020_S** Units: **mg/Kg** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **ZZZZZ** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	U	0.250									
Lead	U	0.250									
Mercury	U	0.0500									
Zinc	U	1.00									

Sample ID: **LCSS-13368** SampType: **LCS** TestCode: **6020_S** Units: **mg/Kg** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **ZZZZZ** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	22.22	0.250	25	0	88.9	80	120	0	0		
Lead	24.72	0.250	25	0	98.9	80	120	0	0		
Mercury	0.826	0.0500	1	0	82.6	80	120	0	0		
Zinc	23	1.00	25	0	92	80	120	0	0		

Sample ID: **0809195-020AMS** SampType: **MS** TestCode: **6020_S** Units: **mg/Kg-dry** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **PS-286** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	18690	584	29.19	21940	-11100	75	125	0	0		S

Sample ID: **0809195-020AMS** SampType: **MS** TestCode: **6020_S** Units: **mg/Kg-dry** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **PS-286** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/15/2008** SeqNo: **498833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	401.5	0.584	29.19	443.2	-143	75	125	0	0		S
Lead	728.5	0.584	29.19	1101	-1280	75	125	0	0		S
Mercury	1.109	0.117	1.168	0.08334	87.8	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001207

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S

Sample ID	0809195-020AMSD	SampType:	MSD	TestCode:	6020_S	Units:	mg/Kg-dry	Prep Date:	9/12/2008	Run ID:	ICPMS2_080913A
Client ID:	PS-286	Batch ID:	13368	TestNo:	SW6020	(SW3050B)		Analysis Date:	9/14/2008	SeqNo:	498651

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	12740	582	29.11	21940	-31600	75	125	18690	37.9	20	SR

Sample ID	0809195-020AMSD	SampType:	MSD	TestCode:	6020_S	Units:	mg/Kg-dry	Prep Date:	9/12/2008	Run ID:	ICPMS2_080913A
Client ID:	PS-286	Batch ID:	13368	TestNo:	SW6020	(SW3050B)		Analysis Date:	9/15/2008	SeqNo:	498834

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	301.1	0.582	29.11	443.2	-488	75	125	401.5	28.6	20	SR
Lead	714.6	0.582	29.11	1101	-1330	75	125	728.5	1.93	20	S
Mercury	1.095	0.116	1.164	0.08334	86.9	75	125	1.109	1.28	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001208

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID	MBW-13369	SampType:	MBLK	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	ZZZZZ	Batch ID:	13369	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/13/2008	SeqNo:	498569

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	U	0.00100									
Lead	U	0.00500									
Mercury	U	0.000200									

Sample ID	MBW-13474	SampType:	MBLK	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502303

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	U	0.00500									
Barium	U	0.00500									
Cadmium	U	0.00100									
Chromium	U	0.00500									
Lead	U	0.00500									
Mercury	U	0.000200									
Selenium	U	0.00500									
Silver	U	0.00500									

Sample ID	LCSW-13369	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	ZZZZZ	Batch ID:	13369	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/13/2008	SeqNo:	498570

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.4659	0.00100	0.5	0	93.2	80	120	0	0		
Lead	0.4774	0.00500	0.5	0	95.5	80	120	0	0		
Mercury	0.01699	0.000200	0.02	0	85	80	120	0	0		

Sample ID	LCSW-13474	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502304

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4718	0.00500	0.5	0	94.4	80	120	0	0		
Barium	0.4647	0.00500	0.5	0	92.9	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

FHRPRU001209

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID	LCSW-13474	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502304

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.4521	0.00100	0.5	0	90.4	80	120	0	0		
Chromium	0.4929	0.00500	0.5	0	98.6	80	120	0	0		
Lead	0.462	0.00500	0.5	0	92.4	80	120	0	0		
Mercury	0.01626	0.000200	0.02	0	81.3	80	120	0	0		
Selenium	0.4801	0.00500	0.5	0	96	80	120	0	0		
Silver	0.4574	0.00500	0.5	0	91.5	80	120	0	0		

Sample ID	0809195-001AMS	SampType:	MS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	PS-210	Batch ID:	13369	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/13/2008	SeqNo:	498573

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.5078	0.00100	0.5	0.1078	80	75	125	0	0		
Lead	0.479	0.00500	0.5	0.02902	90	75	125	0	0		
Mercury	0.01665	0.000200	0.02	0.0001507	82.5	75	125	0	0		

Sample ID	0809379-001CMS	SampType:	MS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502306

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4578	0.00520	0.5	0.00547	90.5	75	125	0	0		
Barium	0.8161	0.00520	0.5	0.3511	93	75	125	0	0		
Cadmium	0.3824	0.00104	0.5	0.0009564	76.3	75	125	0	0		
Chromium	0.4924	0.00520	0.5	0.01065	96.4	75	125	0	0		
Lead	0.431	0.00520	0.5	0.02877	80.4	75	125	0	0		
Mercury	0.0167	0.000208	0.02	0.0002204	82.4	75	125	0	0		
Selenium	0.4401	0.00520	0.5	0.00491	87	75	125	0	0		
Silver	0.06233	0.00520	0.5	0	12.5	75	125	0	0		S

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001210

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **PS-217** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502315**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4785	0.00520	0.5	0.002903	95.1	75	125	0	0		
Barium	0.6814	0.00520	0.5	0.2006	96.2	75	125	0	0		
Cadmium	0.7662	0.00104	0.5	0.3828	76.7	75	125	0	0		
Chromium	0.3824	0.00520	0.5	0	76.5	75	125	0	0		
Lead	1.779	0.00520	0.5	1.306	94.7	75	125	0	0		
Mercury	0.01664	0.000208	0.02	0.0001562	82.4	75	125	0	0		
Selenium	0.564	0.00520	0.5	0.005883	112	75	125	0	0		
Silver	0.09422	0.00520	0.5	0.009738	16.9	75	125	0	0		S

Sample ID **0809195-001AMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/12/2008** Run ID: **ICPMS2_080912D**
Client ID: **PS-210** Batch ID: **13369** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/13/2008** SeqNo: **498574**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.5336	0.00100	0.5	0.1078	85.2	75	125	0.5078	4.95	20	
Lead	0.4865	0.00500	0.5	0.02902	91.5	75	125	0.479	1.55	20	
Mercury	0.01744	0.000200	0.02	0.0001507	86.4	75	125	0.01665	4.63	20	

Sample ID **0809379-001CMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **ZZZZZ** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4677	0.00520	0.5	0.00547	92.4	75	125	0.4578	2.14	20	
Barium	0.8187	0.00520	0.5	0.3511	93.5	75	125	0.8161	0.318	20	
Cadmium	0.3869	0.00104	0.5	0.0009564	77.2	75	125	0.3824	1.16	20	
Chromium	0.5007	0.00520	0.5	0.01065	98	75	125	0.4924	1.65	20	
Lead	0.444	0.00520	0.5	0.02877	83	75	125	0.431	2.97	20	
Mercury	0.01614	0.000208	0.02	0.0002204	79.6	75	125	0.0167	3.42	20	
Selenium	0.4462	0.00520	0.5	0.00491	88.2	75	125	0.4401	1.36	20	
Silver	0.06417	0.00520	0.5	0	12.8	75	125	0.06233	2.91	20	S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

FHRPRU001211

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **PS-217** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/28/2008** SeqNo: **502316**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4791	0.00520	0.5	0.002903	95.2	75	125	0.4785	0.130	20	
Barium	0.697	0.00520	0.5	0.2006	99.3	75	125	0.6814	2.26	20	
Cadmium	0.7666	0.00104	0.5	0.3828	76.8	75	125	0.7662	0.0543	20	
Chromium	0.3798	0.00520	0.5	0	76	75	125	0.3824	0.682	20	
Lead	1.798	0.00520	0.5	1.306	98.4	75	125	1.779	1.05	20	
Mercury	0.01656	0.000208	0.02	0.0001562	82	75	125	0.01664	0.501	20	
Selenium	0.5634	0.00520	0.5	0.005883	111	75	125	0.564	0.111	20	
Silver	0.1002	0.00520	0.5	0.009738	18.1	75	125	0.09422	6.10	20	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001212

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **MBT-13461** SampType: **MBLK** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	U	25.0									
1,2-Dichloroethane	U	25.0									
1,4-Dichlorobenzene	U	25.0									
2-Butanone	U	25.0									
Benzene	U	25.0									
Carbon tetrachloride	U	25.0									
Chlorobenzene	U	25.0									
Chloroform	U	25.0									
Tetrachloroethene	U	25.0									
Trichloroethene	U	25.0									
Vinyl chloride	U	20.0									
Surr: 1,2-Dichloroethane-d4	51.34	0	50	0	103	86	125	0	0		
Surr: 4-Bromofluorobenzene	48.75	0	50	0	97.5	67	133	0	0		
Surr: Toluene-d8	51.09	0	50	0	102	81	116	0	0		

Sample ID **LCST-13461** SampType: **LCS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	50.38	25.0	50	0	101	70	130	0	0		
1,2-Dichloroethane	49.03	25.0	50	0	98.1	70	130	0	0		
1,4-Dichlorobenzene	44.74	25.0	50	0	89.5	70	130	0	0		
2-Butanone	95.74	25.0	100	0	95.7	70	130	0	0		
Benzene	49.52	25.0	50	0	99	70	130	0	0		
Carbon tetrachloride	48.31	25.0	50	0	96.6	70	130	0	0		
Chlorobenzene	47.72	25.0	50	0	95.4	70	130	0	0		
Chloroform	48.33	25.0	50	0	96.7	70	130	0	0		
Tetrachloroethene	49.36	25.0	50	0	98.7	70	130	0	0		
Trichloroethene	47.59	25.0	50	0	95.2	70	130	0	0		
Vinyl chloride	51.92	20.0	50	0	104	70	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.8	0	50	0	102	86	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001213

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **LCST-13461** SampType: **LCS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	49.15	0	50	0	98.3	67	133	0	0		
Surr: Toluene-d8	51.64	0	50	0	103	81	116	0	0		

Sample ID **LCSDT-13461** SampType: **LCSD** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.58	25.0	50	0	97.2	70	130	50.38	3.64	20	
1,2-Dichloroethane	48.28	25.0	50	0	96.6	70	130	49.03	1.54	20	
1,4-Dichlorobenzene	45	25.0	50	0	90	70	130	44.74	0.579	20	
2-Butanone	97.72	25.0	100	0	97.7	70	130	95.74	2.05	20	
Benzene	47.43	25.0	50	0	94.9	70	130	49.52	4.31	20	
Carbon tetrachloride	46.66	25.0	50	0	93.3	70	130	48.31	3.47	20	
Chlorobenzene	46.64	25.0	50	0	93.3	70	130	47.72	2.29	20	
Chloroform	46.86	25.0	50	0	93.7	70	130	48.33	3.09	20	
Tetrachloroethene	47.81	25.0	50	0	95.6	70	130	49.36	3.19	20	
Trichloroethene	46.1	25.0	50	0	92.2	70	130	47.59	3.18	20	
Vinyl chloride	49.91	20.0	50	0	99.8	70	130	51.92	3.95	20	
Surr: 1,2-Dichloroethane-d4	50.8	0	50	0	102	86	125	0	0	0	
Surr: 4-Bromofluorobenzene	49.1	0	50	0	98.2	67	133	0	0	0	
Surr: Toluene-d8	51.84	0	50	0	104	81	116	0	0	0	

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	242.2	125	250	0	96.9	70	130	0	0		
2-Butanone	489.1	125	500	0	97.8	70	130	0	0		
Carbon tetrachloride	236.8	125	250	0	94.7	70	130	0	0		
Chlorobenzene	234.8	125	250	0	93.9	70	130	0	0		
Chloroform	238.8	125	250	0	95.5	70	130	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001214

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	225.8	125	250	0	90.3	70	130	0	0		
1,2-Dichloroethane	242.8	125	250	0	97.1	70	130	0	0		
1,1-Dichloroethene	250.7	125	250	0	100	70	130	0	0		
Tetrachloroethene	244.6	125	250	0	97.8	70	130	0	0		
Trichloroethene	233.4	125	250	0	93.4	70	130	0	0		
Vinyl chloride	255.6	100	250	0	102	70	130	0	0		
Surr: 4-Bromofluorobenzene	245.8	0	250	0	98.3	67	133	0	0		
Surr: 1,2-Dichloroethane-d4	253.8	0	250	0	102	86	125	0	0		
Surr: Toluene-d8	258.2	0	250	0	103	81	116	0	0		

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	236	125	250	0	94.4	70	130	242.2	2.59	20	
2-Butanone	470	125	500	0	94	70	130	489.1	3.97	20	
Carbon tetrachloride	230.5	125	250	0	92.2	70	130	236.8	2.68	20	
Chlorobenzene	230.4	125	250	0	92.2	70	130	234.8	1.89	20	
Chloroform	234.6	125	250	0	93.9	70	130	238.8	1.73	20	
1,4-Dichlorobenzene	225.4	125	250	0	90.1	70	130	225.8	0.199	20	
1,2-Dichloroethane	238	125	250	0	95.2	70	130	242.8	1.98	20	
1,1-Dichloroethene	251.6	125	250	0	101	70	130	250.7	0.378	20	
Tetrachloroethene	231.2	125	250	0	92.5	70	130	244.6	5.59	20	
Trichloroethene	224.4	125	250	0	89.8	70	130	233.4	3.93	20	
Vinyl chloride	243.4	100	250	0	97.4	70	130	255.6	4.89	20	
Surr: 4-Bromofluorobenzene	248.6	0	250	0	99.4	67	133	0	0	0	
Surr: 1,2-Dichloroethane-d4	254.8	0	250	0	102	86	125	0	0	0	
Surr: Toluene-d8	258.1	0	250	0	103	81	116	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001215

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **MBT-13470** SampType: **MBLK** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	U	10.0									
2,4,6-Trichlorophenol	U	10.0									
2,4-Dinitrotoluene	U	10.0									
2-Methylphenol	U	10.0									
3 & 4-Methylphenol	U	20.0									
Hexachlorobenzene	U	10.0									
Hexachlorobutadiene	U	10.0									
Hexachloroethane	U	10.0									
Nitrobenzene	U	10.0									
Pentachlorophenol	U	50.0									
Pyridine	U	50.0									
Surr: 2,4,6-Tribromophenol	15.4	0	30	0	51.3	20	100	0	0		
Surr: 2-Fluorobiphenyl	13.54	0	20	0	67.7	38	149	0	0		
Surr: 2-Fluorophenol	8.78	0	30	0	29.3	12	95	0	0		
Surr: 4-Terphenyl-d14	15.54	0	20	0	77.7	42	137	0	0		
Surr: Nitrobenzene-d5	12.97	0	20	0	64.8	42	156	0	0		
Surr: Phenol-d6	6.44	0	30	0	21.5	15	90	0	0		

Sample ID **LCST-13470** SampType: **LCS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	16.26	10.0	20	0	81.3	50	150	0	0		
2,4,6-Trichlorophenol	17.74	10.0	20	0	88.7	50	150	0	0		
2,4-Dinitrotoluene	16.92	10.0	20	0	84.6	50	150	0	0		
2-Methylphenol	12.4	10.0	20	0	62	60	140	0	0		
3 & 4-Methylphenol	48.56	20.0	40	0	121	60	140	0	0		
Hexachlorobenzene	18.03	10.0	20	0	90.2	60	140	0	0		
Hexachlorobutadiene	12.08	10.0	20	0	60.4	60	140	0	0		
Hexachloroethane	13.01	10.0	20	0	65	60	140	0	0		
Nitrobenzene	15.56	10.0	20	0	77.8	60	140	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001216

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **LCST-13470** SampType: **LCS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachlorophenol	16.11	50.0	20	0	80.6	30	170	0	0		J
Pyridine	8.87	50.0	20	0	44.4	25	125	0	0		J
Surr: 2,4,6-Tribromophenol	15.43	0	30	0	51.4	20	100	0	0		
Surr: 2-Fluorobiphenyl	13.77	0	20	0	68.8	38	149	0	0		
Surr: 2-Fluorophenol	8.68	0	30	0	28.9	12	95	0	0		
Surr: 4-Terphenyl-d14	15.57	0	20	0	77.8	42	137	0	0		
Surr: Nitrobenzene-d5	13.49	0	20	0	67.5	42	156	0	0		
Surr: Phenol-d6	6.47	0	30	0	21.6	15	90	0	0		

Sample ID **LCSDT-13470** SampType: **LCSD** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501604**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	15.51	10.0	20	0	77.6	50	150	16.26	4.72	20	
2,4,6-Trichlorophenol	17.79	10.0	20	0	89	50	150	17.74	0.281	20	
2,4-Dinitrotoluene	16.85	10.0	20	0	84.2	50	150	16.92	0.415	38	
2-Methylphenol	13.06	10.0	20	0	65.3	60	140	12.4	5.18	20	
3 & 4-Methylphenol	50.24	20.0	40	0	126	60	140	48.56	3.40	20	
Hexachlorobenzene	18.1	10.0	20	0	90.5	60	140	18.03	0.387	20	
Hexachlorobutadiene	12.51	10.0	20	0	62.6	60	140	12.08	3.50	20	
Hexachloroethane	13.67	10.0	20	0	68.4	60	140	13.01	4.95	20	
Nitrobenzene	15.64	10.0	20	0	78.2	60	140	15.56	0.513	20	
Pentachlorophenol	16.1	50.0	20	0	80.5	30	170	16.11	0	25	J
Pyridine	8.76	50.0	20	0	43.8	25	125	8.87	0	20	J
Surr: 2,4,6-Tribromophenol	15.54	0	30	0	51.8	20	100	0	0	0	
Surr: 2-Fluorobiphenyl	13.19	0	20	0	66	38	149	0	0	0	
Surr: 2-Fluorophenol	8.07	0	30	0	26.9	12	95	0	0	0	
Surr: 4-Terphenyl-d14	15.87	0	20	0	79.4	42	137	0	0	0	
Surr: Nitrobenzene-d5	12.87	0	20	0	64.4	42	156	0	0	0	
Surr: Phenol-d6	6.02	0	30	0	20.1	15	90	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001217

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **PS-217** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501606**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	72.85	50.0	100	0	72.8	50	150	0	0		
2,4,6-Trichlorophenol	79.35	50.0	100	0	79.4	50	150	0	0		
2,4-Dinitrotoluene	80.4	50.0	100	0	80.4	50	150	0	0		
2-Methylphenol	61.55	50.0	100	0	61.6	60	140	0	0		
3 & 4-Methylphenol	237.7	100	200	0	119	60	140	0	0		
Hexachlorobenzene	87	50.0	100	0	87	60	140	0	0		
Hexachlorobutadiene	58.65	50.0	100	0	58.6	60	140	0	0		S
Hexachloroethane	61.75	50.0	100	0	61.8	60	140	0	0		
Nitrobenzene	74.05	50.0	100	0	74	60	140	0	0		
Pentachlorophenol	83.85	250	100	0	83.8	30	170	0	0		J
Pyridine	38.3	250	100	0	38.3	25	125	0	0		J
Surr: 2,4,6-Tribromophenol	76.3	0	150	0	50.9	20	100	0	0		
Surr: 2-Fluorobiphenyl	63.85	0	100	0	63.8	38	149	0	0		
Surr: 2-Fluorophenol	39.5	0	150	0	26.3	12	95	0	0		
Surr: 4-Terphenyl-d14	77.9	0	100	0	77.9	42	137	0	0		
Surr: Nitrobenzene-d5	61.4	0	100	0	61.4	42	156	0	0		
Surr: Phenol-d6	30.35	0	150	0	20.2	15	90	0	0		

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **PS-217** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501607**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	75.15	50.0	100	0	75.2	50	150	72.85	3.11	20	
2,4,6-Trichlorophenol	75.8	50.0	100	0	75.8	50	150	79.35	4.58	20	
2,4-Dinitrotoluene	78.9	50.0	100	0	78.9	50	150	80.4	1.88	38	
2-Methylphenol	60.65	50.0	100	0	60.6	60	140	61.55	1.47	20	
3 & 4-Methylphenol	236.4	100	200	0	118	60	140	237.7	0.548	20	
Hexachlorobenzene	86.2	50.0	100	0	86.2	60	140	87	0.924	20	
Hexachlorobutadiene	60.5	50.0	100	0	60.5	60	140	58.65	3.11	20	
Hexachloroethane	64.1	50.0	100	0	64.1	60	140	61.75	3.73	20	
Nitrobenzene	73	50.0	100	0	73	60	140	74.05	1.43	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

FHRPRU001218

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID	0809195-004BMSD	SampType:	MSD	TestCode:	8270C/BNA_	Units:	µg/L	Prep Date:	9/24/2008	Run ID:	GCMS1_080924A
Client ID:	PS-217	Batch ID:	13470	TestNo:	SW8270C		(SW3510C)	Analysis Date:	9/24/2008	SeqNo:	501607

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachlorophenol	84	250	100	0	84	30	170	83.85	0	25	J
Pyridine	23.9	250	100	0	23.9	25	125	38.3	0	20	JS
Surr: 2,4,6-Tribromophenol	75.45	0	150	0	50.3	20	100	0	0	0	
Surr: 2-Fluorobiphenyl	62.2	0	100	0	62.2	38	149	0	0	0	
Surr: 2-Fluorophenol	38.9	0	150	0	25.9	12	95	0	0	0	
Surr: 4-Terphenyl-d14	82.1	0	100	0	82.1	42	137	0	0	0	
Surr: Nitrobenzene-d5	60.85	0	100	0	60.8	42	156	0	0	0	
Surr: Phenol-d6	29.25	0	150	0	19.5	15	90	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001219

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9014/CN-RX_S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
MB-13466	MBLK	9014/CN-RX_	mg/Kg	9/24/2008	SPEC2_080924A
Client ID: ZZZZZ	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501414

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	U	1.25	0	0	0	0	0	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS-13466	LCS	9014/CN-RX_	mg/Kg	9/24/2008	SPEC2_080924A
Client ID: ZZZZZ	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501416

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	0.985	1.25	1.25	0	78.8	20	120	0	0		J

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS2-13466	LCS	9014/CN-RX_	mg/Kg	9/24/2008	SPEC2_080924A
Client ID: ZZZZZ	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501417

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.72	1.25	2.5	0	68.8	20	120	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MS	MS	9014/CN-RX_	mg/Kg-dry	9/24/2008	SPEC2_080924A
Client ID: PS-217	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501420

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.709	1.24	2.484	0	68.8	20	120	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MSD	MSD	9014/CN-RX_	mg/Kg-dry	9/24/2008	SPEC2_080924A
Client ID: PS-217	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501421

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.421	1.30	2.602	0	54.6	20	120	1.709	18.4	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001220

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9014/CN_S

Sample ID	MB-13469	SampType:	MBLK	TestCode:	9014/CN_S	Units:	mg/Kg	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	ZZZZZ	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501432

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	U	0.500	0	0	0	0	0	0	0		

Sample ID	LCS-13469	SampType:	LCS	TestCode:	9014/CN_S	Units:	mg/Kg	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	ZZZZZ	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501433

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	1.095	0.500	1.25	0	87.6	80	120	0	0		

Sample ID	LCS2-13469	SampType:	LCS	TestCode:	9014/CN_S	Units:	mg/Kg	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	ZZZZZ	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501434

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.235	0.500	2.5	0	89.4	80	120	0	0		

Sample ID	0809195-004B MS	SampType:	MS	TestCode:	9014/CN_S	Units:	mg/Kg-dry	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	PS-217	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501438

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.701	0.520	2.602	0.3464	90.5	80	120	0	0		

Sample ID	0809195-004B MSD	SampType:	MSD	TestCode:	9014/CN_S	Units:	mg/Kg-dry	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	PS-217	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501440

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.397	0.515	2.577	0.3464	79.6	80	120	2.701	11.9	20	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001221

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9034/S-RX_S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
MB-13480	MBLK	9034/S-RX_S	mg/Kg	9/25/2008	BURET1_080925B
Client ID: ZZZZZ	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501682

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	U	9.50	0	0	0	0	0	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS-13480	LCS	9034/S-RX_S	mg/Kg	9/25/2008	BURET1_080925B
Client ID: ZZZZZ	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501684

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	112.8	9.50	253.5	0	44.5	30	100	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MS	MS	9034/S-RX_S	mg/Kg-dry	9/25/2008	BURET1_080925B
Client ID: PS-217	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501688

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	114.2	10.5	253.5	0	45	30	100	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MSD	MSD	9034/S-RX_S	mg/Kg-dry	9/25/2008	BURET1_080925B
Client ID: PS-217	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501690

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	10	10.9	253.5	0	3.94	30	100	114.2	0	0	JS

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001222

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9034/S_S

Sample ID	MB-13479	SampType:	MBLK	TestCode:	9034/S_S	Units:	mg/Kg	Prep Date:	9/25/2008	Run ID:	BURET1_080925A
Client ID:	ZZZZZ	Batch ID:	13479	TestNo:	SW9034		(SW9030B)	Analysis Date:	9/25/2008	SeqNo:	501664

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	U	10.0	0	0	0	0	0	0	0		

Sample ID	LCS-13479	SampType:	LCS	TestCode:	9034/S_S	Units:	mg/Kg	Prep Date:	9/25/2008	Run ID:	BURET1_080925A
Client ID:	ZZZZZ	Batch ID:	13479	TestNo:	SW9034		(SW9030B)	Analysis Date:	9/25/2008	SeqNo:	501665

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	201.9	10.0	253.6	0	79.6	70	130	0	0		

Sample ID	LCSD-13479	SampType:	LCSD	TestCode:	9034/S_S	Units:	mg/Kg	Prep Date:	9/25/2008	Run ID:	BURET1_080925A
Client ID:	ZZZZZ	Batch ID:	13479	TestNo:	SW9034		(SW9030B)	Analysis Date:	9/25/2008	SeqNo:	501666

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	193.1	10.0	253.6	0	76.1	70	130	0	0		

Sample ID	0809195-004B MS	SampType:	MS	TestCode:	9034/S_S	Units:	mg/Kg-dry	Prep Date:	9/25/2008	Run ID:	BURET1_080925A
Client ID:	PS-217	Batch ID:	13479	TestNo:	SW9034		(SW9030B)	Analysis Date:	9/25/2008	SeqNo:	501668

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	132.5	11.0	255	0	52	70	130	0	0		S

Sample ID	0809195-004B MSD	SampType:	MSD	TestCode:	9034/S_S	Units:	mg/Kg-dry	Prep Date:	9/25/2008	Run ID:	BURET1_080925A
Client ID:	PS-217	Batch ID:	13479	TestNo:	SW9034		(SW9030B)	Analysis Date:	9/25/2008	SeqNo:	501669

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	93.39	10.8	251	0	37.2	70	130	132.5	34.6	0	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001223

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045C/PH_S

Sample ID	0809195-004B DUP	SampType:	DUP	TestCode:	9045C/PH_S	Units:	pH Units	Prep Date:		Run ID:	METER1_080923A
Client ID:	PS-217	Batch ID:	R27630	TestNo:	SW9045C			Analysis Date:	9/23/2008	SeqNo:	501175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.501	0.0100	0	0	0	0	0	7.471	0.401	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001224

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9065(M)/PHEN_S

Sample ID	MB	SampType:	MBLK	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	U	5.00	0	0	0	0	0	0	0		

Sample ID	LCS1	SampType:	LCS	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502578

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	10.94	5.00	12.5	0	87.6	80	120	0	0		

Sample ID	LCS2	SampType:	LCS	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	22.68	5.00	25	0	90.7	80	120	0	0		

Sample ID	0809195-004B MS	SampType:	MS	TestCode:	9065(M)/PHE	Units:	mg/Kg-dry	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	PS-217	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502581

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	23.24	5.25	26.27	0	88.5	80	120	0	0		

Sample ID	0809195-004B MSD	SampType:	MSD	TestCode:	9065(M)/PHE	Units:	mg/Kg-dry	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	PS-217	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502582

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	21.25	5.06	25.3	0	84	80	120	23.24	8.94	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001225

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: PMOIST

Sample ID	MB-R27481	SampType:	MBLK	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080912A
Client ID:	ZZZZZ	Batch ID:	R27481	TestNo:	D2216			Analysis Date:	9/12/2008	SeqNo:	498842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	U	0.0100									

Sample ID	MB-R27695	SampType:	MBLK	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080926A
Client ID:	ZZZZZ	Batch ID:	R27695	TestNo:	D2216			Analysis Date:	9/26/2008	SeqNo:	501971

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	U	0.0100									

Sample ID	0809195-020ADUP	SampType:	DUP	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080912A
Client ID:	PS-286	Batch ID:	R27481	TestNo:	D2216			Analysis Date:	9/12/2008	SeqNo:	498863

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.19	0.0100	0	0	0	0	0	15.34	11.4	20	

Sample ID	0809427-008D DUP	SampType:	DUP	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080926A
Client ID:	ZZZZZ	Batch ID:	R27695	TestNo:	D2216			Analysis Date:	9/26/2008	SeqNo:	501996

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.49	0.0100	0	0	0	0	0	14.31	1.25	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001226

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: PSOLID

Sample ID	0809195-004B DUP	SampType:	DUP	TestCode:	PSOLID	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080926A
Client ID:	PS-217	Batch ID:	R27695	TestNo:	D2216			Analysis Date:	9/26/2008	SeqNo:	501999

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Solids	9.4	0.0100	0	0	0	0	0	8.29	12.5	20	H

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001227

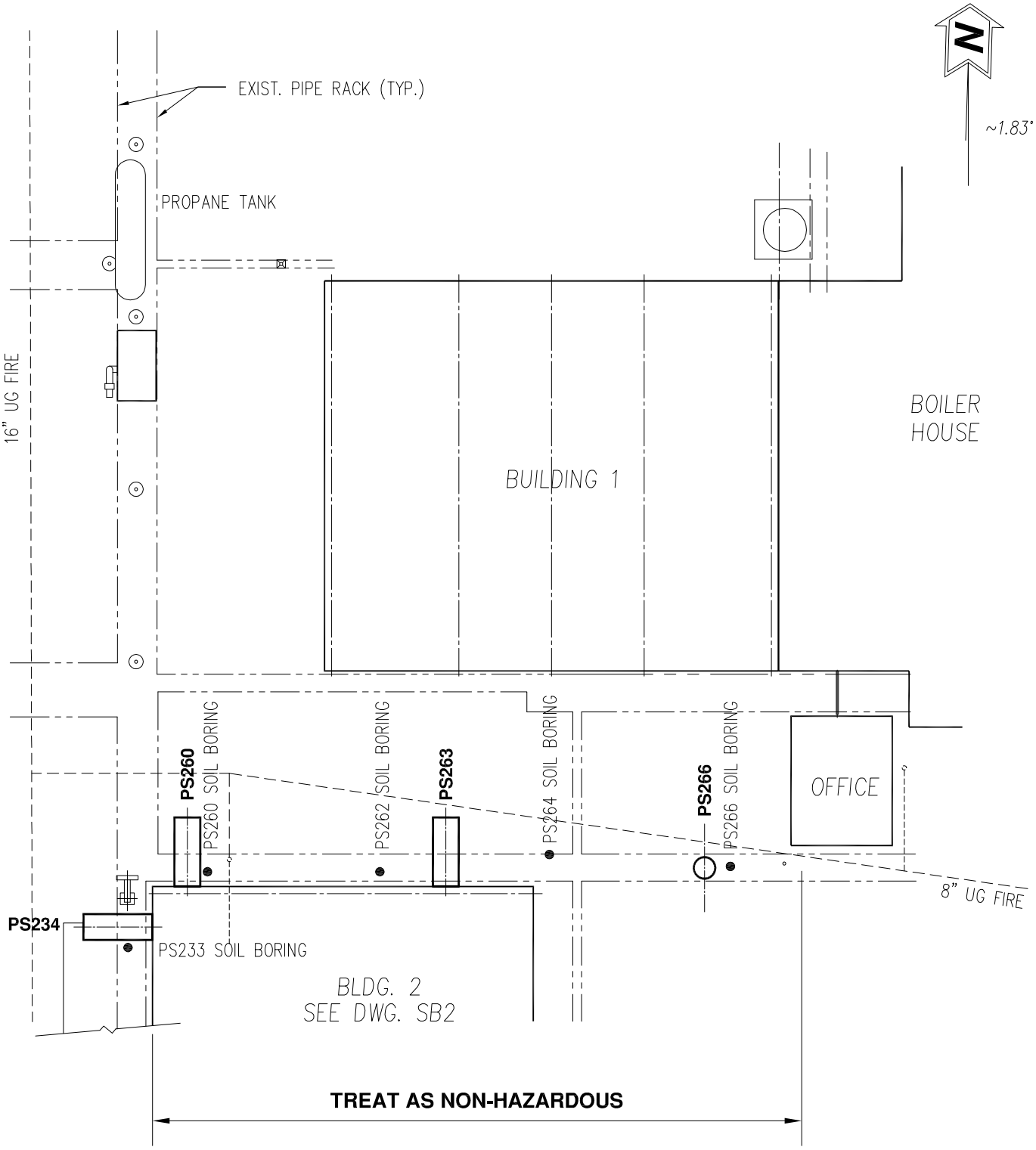
CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: SUBK_REPORT

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001228



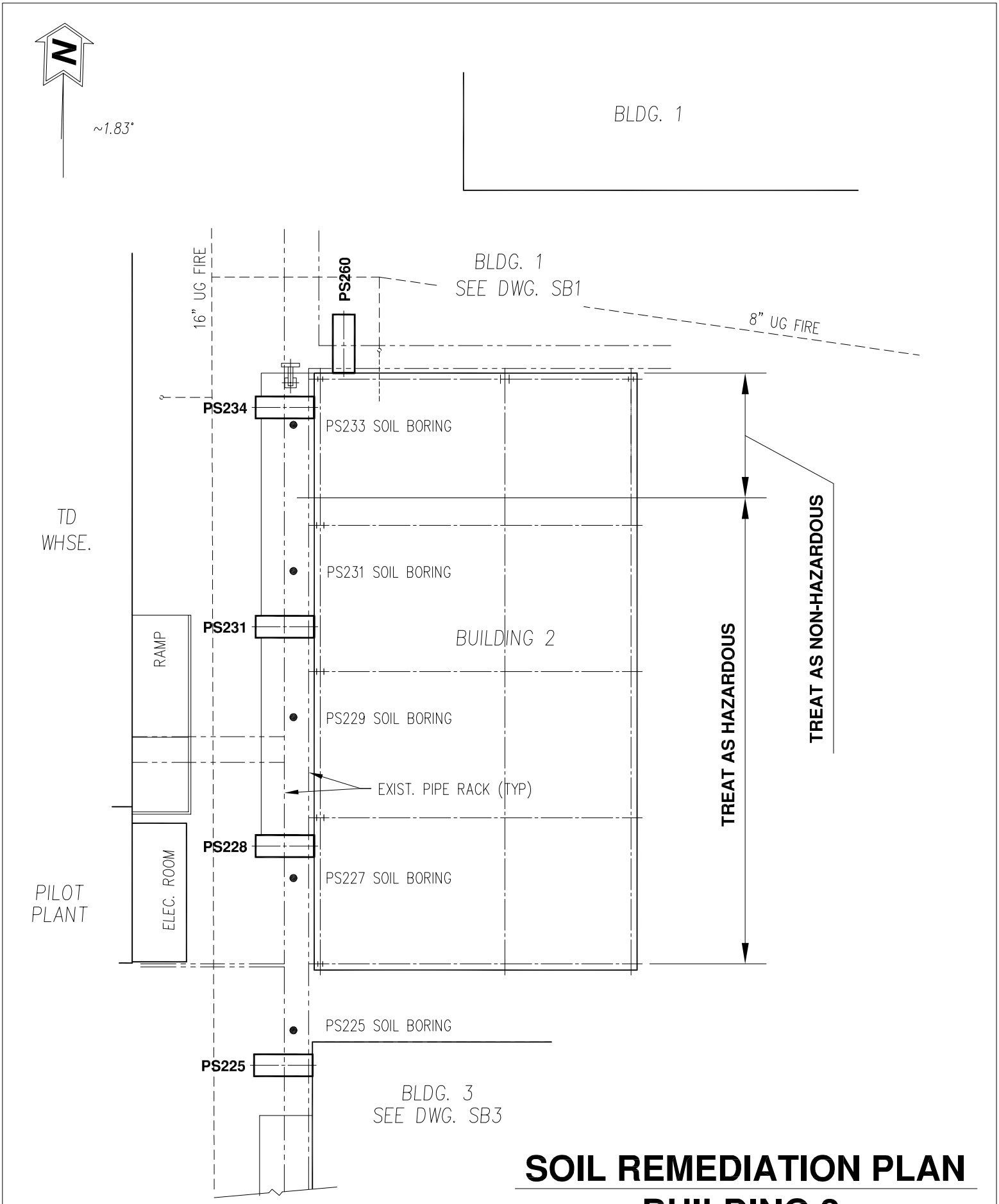
SOIL REMEDIATION PLAN

BUILDING 1

DWG. SB1. REV. B

JEK 04-28-09

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

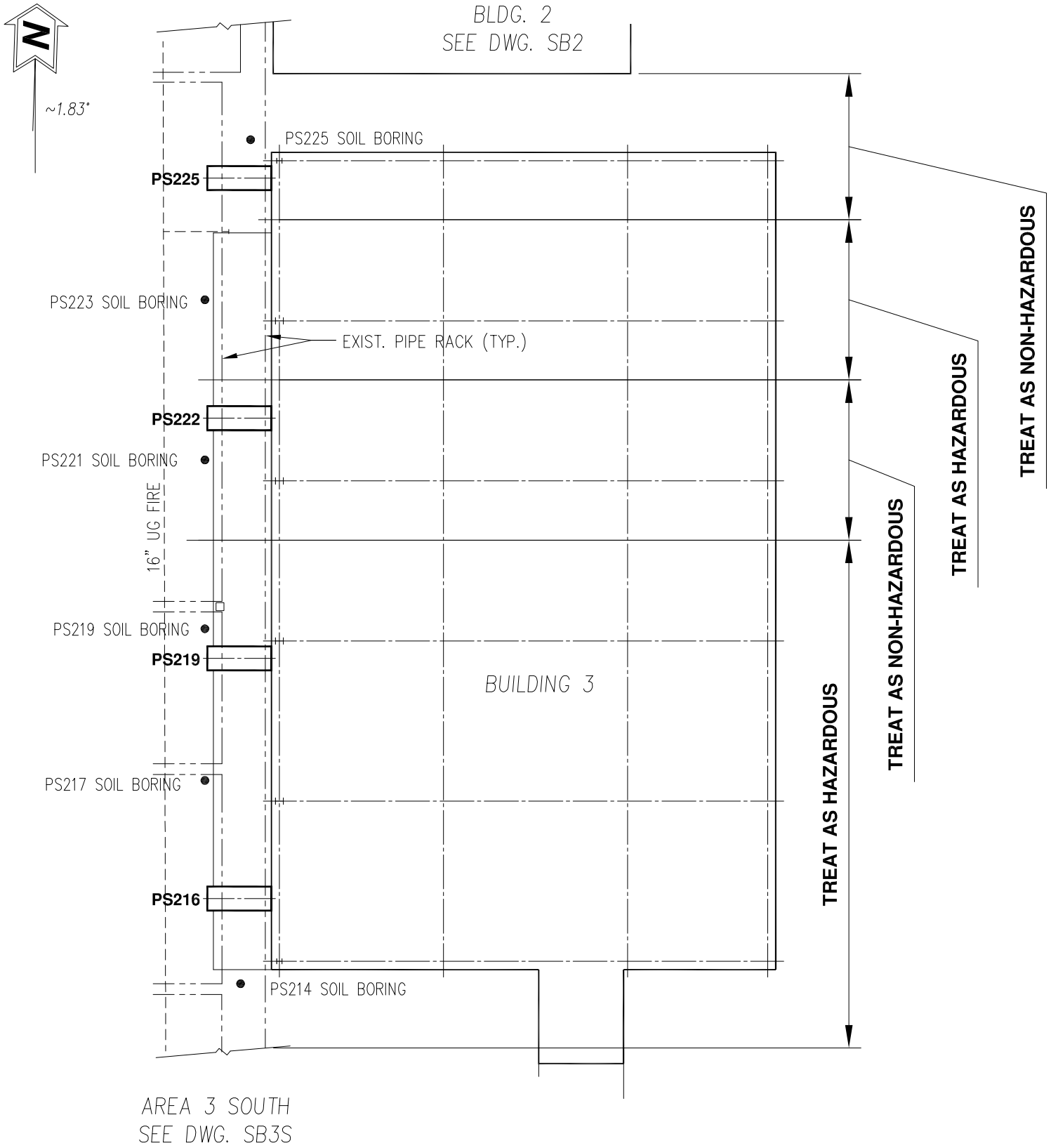


SOIL REMEDIATION PLAN
BUILDING 2

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

DWG. SB2. REV. B

JEK 04-28-09



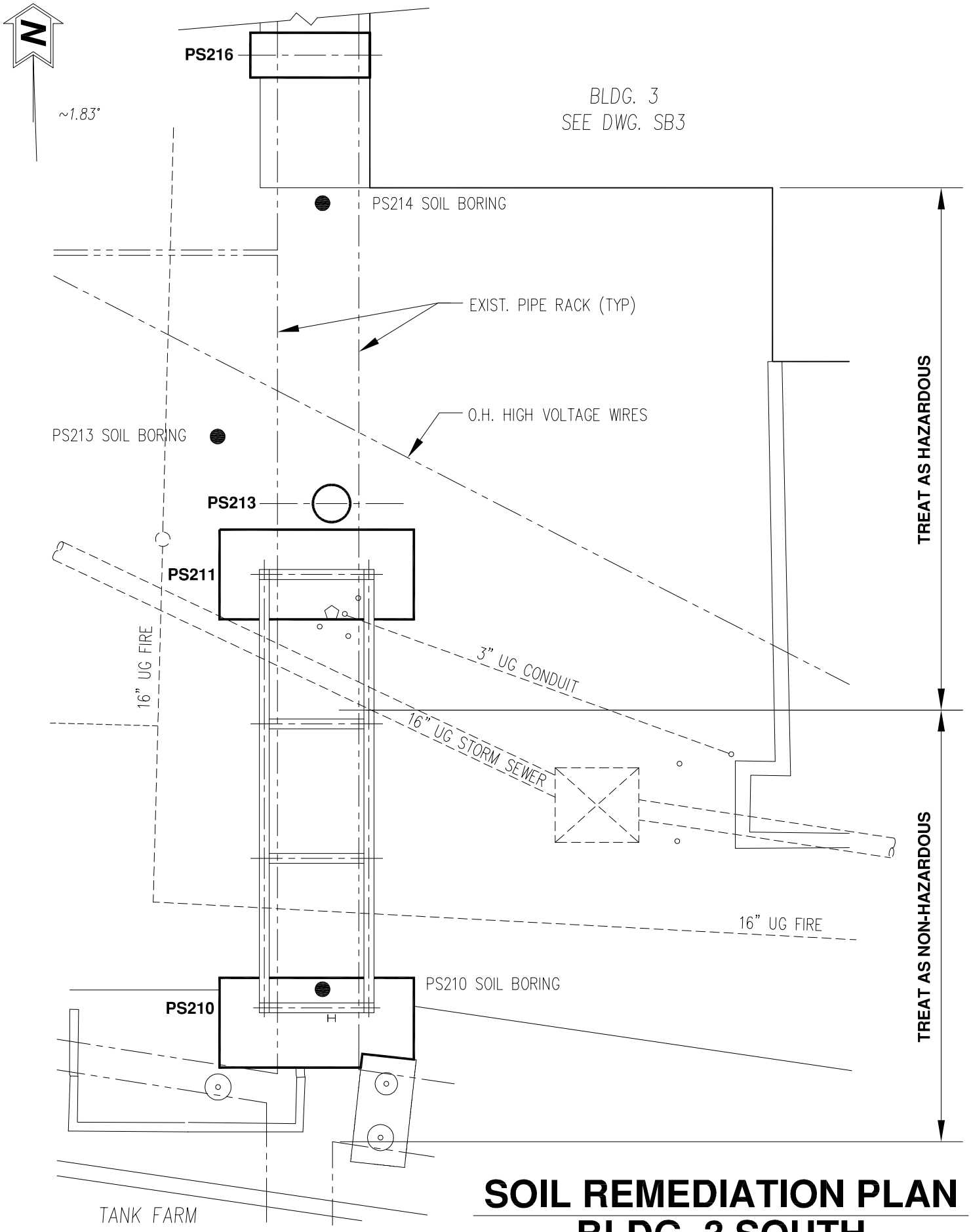
SOIL REMEDIATION PLAN

BUILDING 3

JEK 04-28-09

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

DWG. SB3. REV. B



SOIL REMEDIATION PLAN
BLDG. 3 SOUTH

JEK 04-28-09

SCALE: 1/8" = 1'-0"

DWG. SB3S. REV. B

An Analytical
Testing Laboratory

Prairie Analytical Systems, INCORPORATED

1210 Capital Airport Drive
Springfield, Illinois 62707
Phone: 217-753-1148
Fax: 217-753-1152
www.prairieanalytical.com

October 13, 2008

Mr. Ganesh Krish
Flint Hills Resources
501 Brunner Street
Peru, IL 61354

RE: RCRA Parameters

PAS Order No.: 0809195

Dear Mr. Ganesh Krish:

Prairie Analytical Systems, Inc. received 20 samples on 9/11/2008 2:35:00 PM for the analyses presented in the following report.

This is an amended report and supersedes the original report. Refer to the case narrative for explanation of the amendment. All applicable quality control procedures met method specific acceptance criteria.

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 call me at (217) 753-1148.

Sincerely,

Michael D. Brophy
Project Manager

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, Il 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Pb Cd Hg Zn Totals method 6020	Pb Cd Hg TCLP method 6020	Laboratory Comments
PS-210	9/11/08	1130	S	2	C		✓	✓	
PS-213		1155					✓	✓	
PS-214		1040					✓	✓	
PS-217		1030					✓	✓	
PS-219		1020					✓	✓	
PS-221		1000					✓	✓	
PS-223	9/10/08	1810					✓	✓	
PS-225		1750					✓	✓	
PS-227		1735					✓	✓	
PS-229		1720					✓	✓	
PS-231		1700					✓	✓	
PS-233		1640					✓	✓	

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1235	Hand
			PAS	9/11/08	3:33pm	

Special Instructions: The samples ending in 1 (PS-210-1) are to be sampled. The samples ending in 2 (PS-210-2) are on hold

Q/C Level: 1 ✓ 2 __ 3 __ 4 __

On Wet Ice: Y / N
Proper Preservation: Y / N

Temperature (°C): 1.3°C

RCRA Haz Waste Parameters added to PS-210 per client

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, Il 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP Method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Laboratory Comments
PS 260	9/10/08	1555	S	2	C		
PS 262		1455					
PS 264		1340					
PS 266		1250					
PS 280		1540					
PS 282		1515					
PS 284		1425					
PS 286		1315					

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1439	[signature]
			PAS	9/11/08	3:33pm	

Special Instructions: The samples ending in 1 (PS-260-1) are to be sampled
The samples ending in 2 (PS260-2) are on hold

Q/C Level: 1 ✓ 2 __ 3 __ 4 __

On Wet Ice: Y N
Proper Preservation: Y N

Temperature (°C): 1.3°C

FHRPRU001235

Prairie Analytical Systems, Inc. **Date:** *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

CASE NARRATIVE

RCRA hazrdous waste characterization analysis was performed on sample PS-217 (PAS 0809195-004) at the request of the client.

Analysis for Extractable Organic Halides (EOX):
Method Blank result: Not detectable at the reporting limit.
% Recovery for LCS: 91%
% Recovery for MS: 107%
% Recovery for MSD: 82%

FHRPRU001236

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-001 **Collection Date:** 9/11/2008 11:30:00 AM
Client Sample ID: PS-210 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	4.41	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Lead	39.0	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Mercury	U	0.108		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Zinc	1240	541		mg/Kg-dry	500	9/13/2008 8:47:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.108	0.0010		mg/L	1	9/13/2008 8:24:00 AM
Lead	0.0290	0.0050		mg/L	1	9/13/2008 8:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 8:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	7.75	0.01		wt%	1	9/12/2008

Lab ID: 0809195-002 **Collection Date:** 9/11/2008 11:55:00 AM
Client Sample ID: PS-213 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	13.7	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Lead	141	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Mercury	0.196	0.111		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Zinc	6690	555		mg/Kg-dry	500	9/13/2008 8:57:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.339	0.0010		mg/L	1	9/13/2008 9:40:00 AM
Lead	0.345	0.0050		mg/L	1	9/13/2008 9:40:00 AM
Mercury	0.0004	0.0002		mg/L	1	9/13/2008 9:40:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	10.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-003
Client Sample ID: PS-214

Collection Date: 9/11/2008 10:40:00 AM
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	76.3	0.578		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Lead	1410	145		mg/Kg-dry	500	9/13/2008 9:06:00 PM
Mercury	0.286	0.116		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Zinc	16800	578		mg/Kg-dry	500	9/13/2008 9:06:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.61	0.0010		mg/L	1	9/13/2008 9:49:00 AM
Lead	4.34	0.0050		mg/L	1	9/13/2008 9:49:00 AM
Mercury	0.0003	0.0002		mg/L	1	9/13/2008 9:49:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.7	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-004
Client Sample ID: PS-217

Collection Date: 9/11/2008 10:30:00 AM
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	14.6	0.549		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Lead	1930	137		mg/Kg-dry	500	9/13/2008 9:16:00 PM
Mercury	0.208	0.110		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Zinc	7830	549		mg/Kg-dry	500	9/13/2008 9:16:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **JTC**
Arsenic	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Barium	0.250	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Cadmium	0.451	0.0010		mg/L	1	9/13/2008 9:58:00 AM
Chromium	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Lead	25.6	0.250		mg/L	50	9/13/2008 2:36:00 PM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 9:58:00 AM
Selenium	0.0186	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Silver	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
TCLP SEMIVOLATILES ANALYSIS		**SW8270C**		**(SW3510C)**		Analyst: **JKA**
2,4-Dinitrotoluene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobutadiene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachloroethane	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2-Methylphenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
3 & 4-Methylphenol	U	100		µg/L	1	9/24/2008 8:44:00 PM
Nitrobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Pentachlorophenol	U	250		µg/L	1	9/24/2008 8:44:00 PM
Pyridine	U	250		µg/L	1	9/24/2008 8:44:00 PM
2,4,5-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2,4,6-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
TCLP VOLATILES ANALYSIS		**SW8260B**		**(SW5030B)**		Analyst: **BDP**
Benzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
2-Butanone	U	125		µg/L	5	9/25/2008 2:40:00 AM
Carbon tetrachloride	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chloroform	U	125		µg/L	5	9/25/2008 2:40:00 AM
1,4-Dichlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
1,2-Dichloroethane	U	125		µg/L	5	9/25/2008 2:40:00 AM
1,1-Dichloroethene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Tetrachloroethene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Trichloroethene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Vinyl chloride	U	100		µg/L	5	9/25/2008 2:40:00 AM
EXTRACTABLE ORGANIC HALIDES ANALYSIS		**SW9023**				Analyst: **SUB**

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

EXTRACTABLE ORGANIC HALIDES ANALYSIS		**SW9023**			Analyst: **SUB**
Extractable Organic Halides (EOX)	U	109	ppm-dry	1	9/30/2008
SUBCONTRACTED ANALYSIS		**SUB**			Analyst: **SUB**
Bulk density	2.605	0		1	10/3/2008
FLASH POINT ANALYSIS		**SW1010(M)**			Analyst: **AJD**
Ignitability (Flash Point)	>200	50.0	°F	1	9/23/2008
REACTIVE CYANIDE ANALYSIS		**SW9014**	**(SW7.3.3.2)**		Analyst: **AJD**
Reactive Cyanide	U	1.34	mg/Kg-dry	1	9/24/2008
CYANIDE ANALYSIS		**SW9014**	**(SW9010B)**		Analyst: **AJD**
Cyanide	U	0.488	mg/Kg-dry	1	9/24/2008
REACTIVE SULFIDE ANALYSIS		**SW9034**	**(SW7.3.4.2)**		Analyst: **AJD**
Reactive Sulfide	U	9.64	mg/Kg-dry	1	9/25/2008
SULFIDE ANALYSIS		**SW9034**	**(SW9030B)**		Analyst: **AJD**
Sulfide	U	9.01	mg/Kg-dry	1	9/25/2008
PH ANALYSIS		**SW9045C**			Analyst: **CWA**
pH	7.47	0.01	pH Units	1	9/23/2008 2:53:00 PM
PHENOLICS ANALYSIS		**SW9065(M)**			Analyst: **RMN**
Phenolics	U	5.36	mg/Kg-dry	1	9/26/2008
PAINT FILTER ANALYSIS		**SW9095A**			Analyst: **AJD**
Paint Filter	PASS	0	P/F	1	9/23/2008
PERCENT MOISTURE ANALYSIS		**D2216**			Analyst: **CWA**
Percent Moisture	8.49	0.01	wt%	1	9/12/2008
PERCENT SOLIDS ANALYSIS		**D2216**			Analyst: **RMN**
Percent Solids	8.29	0.01	wt%	1	9/26/2008 9:15:00 AM

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-005 **Collection Date:** 9/11/2008 10:20:00 AM
Client Sample ID: PS-219 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	27.8	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Lead	377	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Mercury	0.139	0.112		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Zinc	7080	560		mg/Kg-dry	500	9/13/2008 9:55:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.583	0.0010		mg/L	1	9/13/2008 10:08:00 AM
Lead	0.603	0.0050		mg/L	1	9/13/2008 10:08:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:08:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.7	0.01		wt%	1	9/12/2008

Lab ID: 0809195-006 **Collection Date:** 9/11/2008 10:00:00 AM
Client Sample ID: PS-221 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	10.0	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Lead	309	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Mercury	U	0.113		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Zinc	4440	567		mg/Kg-dry	500	9/13/2008 10:04:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.143	0.0010		mg/L	1	9/13/2008 10:17:00 AM
Lead	0.118	0.0050		mg/L	1	9/13/2008 10:17:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:17:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-007 **Collection Date:** 9/10/2008 6:10:00 PM
Client Sample ID: PS-223 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	25.9	0.581		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Lead	1480	145		mg/Kg-dry	500	9/13/2008 10:14:00 PM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Zinc	9330	581		mg/Kg-dry	500	9/13/2008 10:14:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.375	0.0010		mg/L	1	9/13/2008 10:27:00 AM
Lead	2.41	0.0050		mg/L	1	9/13/2008 10:27:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:27:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-008 **Collection Date:** 9/10/2008 5:50:00 PM
Client Sample ID: PS-225 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.4	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Lead	73.3	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Mercury	U	0.120		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Zinc	1230	600		mg/Kg-dry	500	9/13/2008 10:24:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.102	0.0010		mg/L	1	9/13/2008 10:36:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 10:36:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:36:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-009 **Collection Date:** 9/10/2008 5:35:00 PM
Client Sample ID: PS-227 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	57.3	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Lead	1070	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Zinc	11200	581		mg/Kg-dry	500	9/13/2008 10:33:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.72	0.0010		mg/L	1	9/13/2008 10:46:00 AM
Lead	5.32	0.0050		mg/L	1	9/13/2008 10:46:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:46:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-010 **Collection Date:** 9/10/2008 5:20:00 PM
Client Sample ID: PS-229 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	88.1	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Lead	356	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Mercury	0.115	0.106		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Zinc	12800	532		mg/Kg-dry	500	9/13/2008 10:43:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	3.41	0.0010		mg/L	1	9/13/2008 11:24:00 AM
Lead	0.564	0.0050		mg/L	1	9/13/2008 11:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.5	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-011 **Collection Date:** 9/10/2008 5:00:00 PM
Client Sample ID: PS-231 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	69.1	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Lead	851	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Mercury	U	0.115		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Zinc	17000	575		mg/Kg-dry	500	9/13/2008 10:53:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.75	0.0010		mg/L	1	9/13/2008 11:34:00 AM
Lead	0.194	0.0050		mg/L	1	9/13/2008 11:34:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:34:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-012 **Collection Date:** 9/10/2008 4:40:00 PM
Client Sample ID: PS-233 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	8.49	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Lead	76.2	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Mercury	U	0.122		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Zinc	1800	611		mg/Kg-dry	500	9/13/2008 11:02:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.145	0.0010		mg/L	1	9/13/2008 11:43:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:43:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:43:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-013 **Collection Date:** 9/10/2008 3:55:00 PM
Client Sample ID: PS-260 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.426	0.349		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Lead	8.39	0.513		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Zinc	74.0	2.05		mg/Kg-dry	2	9/15/2008 2:26:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0124	0.0010		mg/L	1	9/13/2008 11:53:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:53:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:53:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	4.35	0.01		wt%	1	9/12/2008

Lab ID: 0809195-014 **Collection Date:** 9/10/2008 2:55:00 PM
Client Sample ID: PS-262 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.5	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Lead	61.1	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Zinc	1480	515		mg/Kg-dry	500	9/13/2008 11:51:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0741	0.0010		mg/L	1	9/13/2008 12:02:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:02:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:02:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-015 **Collection Date:** 9/10/2008 1:40:00 PM
Client Sample ID: PS-264 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	7.74	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Lead	39.2	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Mercury	U	0.110		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Zinc	634	550		mg/Kg-dry	500	9/14/2008
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.130	0.0010		mg/L	1	9/13/2008 12:12:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:12:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:12:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-016 **Collection Date:** 9/10/2008 12:50:00 PM
Client Sample ID: PS-266 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.528	0.517		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Lead	44.5	0.647		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Mercury	U	0.129		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Zinc	164	2.59		mg/Kg-dry	2	9/15/2008 3:22:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0201	0.0010		mg/L	1	9/13/2008 12:21:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:21:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:21:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	23.3	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-017 **Collection Date:** 9/10/2008 3:40:00 PM
Client Sample ID: PS-280 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	72.8	0.551		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Lead	1250	138		mg/Kg-dry	500	9/14/2008 12:20:00 AM
Mercury	0.325	0.110		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Zinc	17600	551		mg/Kg-dry	500	9/14/2008 12:20:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.76	0.0010		mg/L	1	9/13/2008 12:31:00 PM
Lead	3.12	0.0050		mg/L	1	9/13/2008 12:31:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:31:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	12.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-018 **Collection Date:** 9/10/2008 3:15:00 PM
Client Sample ID: PS-282 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	112	0.606		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Lead	2680	152		mg/Kg-dry	500	9/14/2008 12:29:00 AM
Mercury	0.273	0.121		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Zinc	28900	606		mg/Kg-dry	500	9/14/2008 12:29:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.78	0.0010		mg/L	1	9/13/2008 12:40:00 PM
Lead	4.38	0.0050		mg/L	1	9/13/2008 12:40:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:40:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.8	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-019 **Collection Date:** 9/10/2008 2:25:00 PM
Client Sample ID: PS-284 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	133	0.560		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Lead	1190	140		mg/Kg-dry	500	9/14/2008 12:39:00 AM
Mercury	U	0.112		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Zinc	15600	560		mg/Kg-dry	500	9/14/2008 12:39:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.83	0.0010		mg/L	1	9/13/2008 1:19:00 PM
Lead	1.00	0.0050		mg/L	1	9/13/2008 1:19:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:19:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-020 **Collection Date:** 9/10/2008 1:15:00 PM
Client Sample ID: PS-286 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	443	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Lead	1100	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Mercury	U	0.111		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Zinc	21900	554		mg/Kg-dry	500	9/14/2008 12:49:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	7.90	0.0500		mg/L	50	9/13/2008 2:46:00 PM
Lead	0.441	0.0050		mg/L	1	9/13/2008 1:28:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:28:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	15.3	0.01		wt%	1	9/12/2008

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

Prairie Analytical Systems, Inc.

Date: *26-Nov-08*

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 1010(M)/FP_S

Sample ID **LCS** SampType: **LCS** TestCode: **1010(M)/FP_** Units: **°F** Prep Date: Run ID: **FLASH1_080923A**
Client ID: **ZZZZZ** Batch ID: **R27635** TestNo: **SW1010(M)** Analysis Date: **9/23/2008** SeqNo: **501216**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ignitability (Flash Point)	82	50.0	77	0	106	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S

Sample ID **MBS-13368** SampType: **MBLK** TestCode: **6020_S** Units: **mg/Kg** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **ZZZZZ** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	U	0.250									
Lead	U	0.250									
Mercury	U	0.0500									
Zinc	U	1.00									

Sample ID **LCSS-13368** SampType: **LCS** TestCode: **6020_S** Units: **mg/Kg** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **ZZZZZ** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	22.22	0.250	25	0	88.9	80	120	0	0		
Lead	24.72	0.250	25	0	98.9	80	120	0	0		
Mercury	0.826	0.0500	1	0	82.6	80	120	0	0		
Zinc	23	1.00	25	0	92	80	120	0	0		

Sample ID **0809195-020AMS** SampType: **MS** TestCode: **6020_S** Units: **mg/Kg-dry** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **PS-286** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	18690	584	29.19	21940	-11100	75	125	0	0		S

Sample ID **0809195-020AMS** SampType: **MS** TestCode: **6020_S** Units: **mg/Kg-dry** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **PS-286** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/15/2008** SeqNo: **498833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	401.5	0.584	29.19	443.2	-143	75	125	0	0		S
Lead	728.5	0.584	29.19	1101	-1280	75	125	0	0		S
Mercury	1.109	0.117	1.168	0.08334	87.8	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S

Sample ID	0809195-020AMSD	SampType:	MSD	TestCode:	6020_S	Units:	mg/Kg-dry	Prep Date:	9/12/2008	Run ID:	ICPMS2_080913A
Client ID:	PS-286	Batch ID:	13368	TestNo:	SW6020	(SW3050B)		Analysis Date:	9/14/2008	SeqNo:	498651

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	12740	582	29.11	21940	-31600	75	125	18690	37.9	20	SR

Sample ID	0809195-020AMSD	SampType:	MSD	TestCode:	6020_S	Units:	mg/Kg-dry	Prep Date:	9/12/2008	Run ID:	ICPMS2_080913A
Client ID:	PS-286	Batch ID:	13368	TestNo:	SW6020	(SW3050B)		Analysis Date:	9/15/2008	SeqNo:	498834

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	301.1	0.582	29.11	443.2	-488	75	125	401.5	28.6	20	SR
Lead	714.6	0.582	29.11	1101	-1330	75	125	728.5	1.93	20	S
Mercury	1.095	0.116	1.164	0.08334	86.9	75	125	1.109	1.28	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID	MBW-13369	SampType:	MBLK	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	ZZZZZ	Batch ID:	13369	TestNo:	SW6020	(SW3005A)		Analysis Date:	9/13/2008	SeqNo:	498569

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	U	0.00100									
Lead	U	0.00500									
Mercury	U	0.000200									

Sample ID	MBW-13474	SampType:	MBLK	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020	(SW3005A)		Analysis Date:	9/27/2008	SeqNo:	502303

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	U	0.00500									
Barium	U	0.00500									
Cadmium	U	0.00100									
Chromium	U	0.00500									
Lead	U	0.00500									
Mercury	U	0.000200									
Selenium	U	0.00500									
Silver	U	0.00500									

Sample ID	LCSW-13369	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	ZZZZZ	Batch ID:	13369	TestNo:	SW6020	(SW3005A)		Analysis Date:	9/13/2008	SeqNo:	498570

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.4659	0.00100	0.5	0	93.2	80	120	0	0		
Lead	0.4774	0.00500	0.5	0	95.5	80	120	0	0		
Mercury	0.01699	0.000200	0.02	0	85	80	120	0	0		

Sample ID	LCSW-13474	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020	(SW3005A)		Analysis Date:	9/27/2008	SeqNo:	502304

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4718	0.00500	0.5	0	94.4	80	120	0	0		
Barium	0.4647	0.00500	0.5	0	92.9	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID **LCSW-13474** SampType: **LCS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **ZZZZZ** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502304**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.4521	0.00100	0.5	0	90.4	80	120	0	0		
Chromium	0.4929	0.00500	0.5	0	98.6	80	120	0	0		
Lead	0.462	0.00500	0.5	0	92.4	80	120	0	0		
Mercury	0.01626	0.000200	0.02	0	81.3	80	120	0	0		
Selenium	0.4801	0.00500	0.5	0	96	80	120	0	0		
Silver	0.4574	0.00500	0.5	0	91.5	80	120	0	0		

Sample ID **0809195-001AMS** SampType: **MS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/12/2008** Run ID: **ICPMS2_080912D**
Client ID: **PS-210** Batch ID: **13369** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/13/2008** SeqNo: **498573**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.5078	0.00100	0.5	0.1078	80	75	125	0	0		
Lead	0.479	0.00500	0.5	0.02902	90	75	125	0	0		
Mercury	0.01665	0.000200	0.02	0.0001507	82.5	75	125	0	0		

Sample ID **0809379-001CMS** SampType: **MS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **ZZZZZ** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502306**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4578	0.00520	0.5	0.00547	90.5	75	125	0	0		
Barium	0.8161	0.00520	0.5	0.3511	93	75	125	0	0		
Cadmium	0.3824	0.00104	0.5	0.0009564	76.3	75	125	0	0		
Chromium	0.4924	0.00520	0.5	0.01065	96.4	75	125	0	0		
Lead	0.431	0.00520	0.5	0.02877	80.4	75	125	0	0		
Mercury	0.0167	0.000208	0.02	0.0002204	82.4	75	125	0	0		
Selenium	0.4401	0.00520	0.5	0.00491	87	75	125	0	0		
Silver	0.06233	0.00520	0.5	0	12.5	75	125	0	0		S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **PS-217** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502315**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4785	0.00520	0.5	0.002903	95.1	75	125	0	0		
Barium	0.6814	0.00520	0.5	0.2006	96.2	75	125	0	0		
Cadmium	0.7662	0.00104	0.5	0.3828	76.7	75	125	0	0		
Chromium	0.3824	0.00520	0.5	0	76.5	75	125	0	0		
Lead	1.779	0.00520	0.5	1.306	94.7	75	125	0	0		
Mercury	0.01664	0.000208	0.02	0.0001562	82.4	75	125	0	0		
Selenium	0.564	0.00520	0.5	0.005883	112	75	125	0	0		
Silver	0.09422	0.00520	0.5	0.009738	16.9	75	125	0	0		S

Sample ID **0809195-001AMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/12/2008** Run ID: **ICPMS2_080912D**
Client ID: **PS-210** Batch ID: **13369** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/13/2008** SeqNo: **498574**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.5336	0.00100	0.5	0.1078	85.2	75	125	0.5078	4.95	20	
Lead	0.4865	0.00500	0.5	0.02902	91.5	75	125	0.479	1.55	20	
Mercury	0.01744	0.000200	0.02	0.0001507	86.4	75	125	0.01665	4.63	20	

Sample ID **0809379-001CMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **ZZZZZ** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4677	0.00520	0.5	0.00547	92.4	75	125	0.4578	2.14	20	
Barium	0.8187	0.00520	0.5	0.3511	93.5	75	125	0.8161	0.318	20	
Cadmium	0.3869	0.00104	0.5	0.0009564	77.2	75	125	0.3824	1.16	20	
Chromium	0.5007	0.00520	0.5	0.01065	98	75	125	0.4924	1.65	20	
Lead	0.444	0.00520	0.5	0.02877	83	75	125	0.431	2.97	20	
Mercury	0.01614	0.000208	0.02	0.0002204	79.6	75	125	0.0167	3.42	20	
Selenium	0.4462	0.00520	0.5	0.00491	88.2	75	125	0.4401	1.36	20	
Silver	0.06417	0.00520	0.5	0	12.8	75	125	0.06233	2.91	20	S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID	0809195-004BMSD	SampType:	MSD	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	PS-217	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/28/2008	SeqNo:	502316

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4791	0.00520	0.5	0.002903	95.2	75	125	0.4785	0.130	20	
Barium	0.697	0.00520	0.5	0.2006	99.3	75	125	0.6814	2.26	20	
Cadmium	0.7666	0.00104	0.5	0.3828	76.8	75	125	0.7662	0.0543	20	
Chromium	0.3798	0.00520	0.5	0	76	75	125	0.3824	0.682	20	
Lead	1.798	0.00520	0.5	1.306	98.4	75	125	1.779	1.05	20	
Mercury	0.01656	0.000208	0.02	0.0001562	82	75	125	0.01664	0.501	20	
Selenium	0.5634	0.00520	0.5	0.005883	111	75	125	0.564	0.111	20	
Silver	0.1002	0.00520	0.5	0.009738	18.1	75	125	0.09422	6.10	20	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **MBT-13461** SampType: **MBLK** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B (SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	U	25.0									
1,2-Dichloroethane	U	25.0									
1,4-Dichlorobenzene	U	25.0									
2-Butanone	U	25.0									
Benzene	U	25.0									
Carbon tetrachloride	U	25.0									
Chlorobenzene	U	25.0									
Chloroform	U	25.0									
Tetrachloroethene	U	25.0									
Trichloroethene	U	25.0									
Vinyl chloride	U	20.0									

Sample ID **LCST-13461** SampType: **LCS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B (SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	50.38	25.0	50	0	101	70	130	0	0		
1,2-Dichloroethane	49.03	25.0	50	0	98.1	70	130	0	0		
1,4-Dichlorobenzene	44.74	25.0	50	0	89.5	70	130	0	0		
2-Butanone	95.74	25.0	100	0	95.7	70	130	0	0		
Benzene	49.52	25.0	50	0	99	70	130	0	0		
Carbon tetrachloride	48.31	25.0	50	0	96.6	70	130	0	0		
Chlorobenzene	47.72	25.0	50	0	95.4	70	130	0	0		
Chloroform	48.33	25.0	50	0	96.7	70	130	0	0		
Tetrachloroethene	49.36	25.0	50	0	98.7	70	130	0	0		
Trichloroethene	47.59	25.0	50	0	95.2	70	130	0	0		
Vinyl chloride	51.92	20.0	50	0	104	70	130	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **LCSDT-13461** SampType: **LCSD** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B (SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.58	25.0	50	0	97.2	70	130	50.38	3.64	20	
1,2-Dichloroethane	48.28	25.0	50	0	96.6	70	130	49.03	1.54	20	
1,4-Dichlorobenzene	45	25.0	50	0	90	70	130	44.74	0.579	20	
2-Butanone	97.72	25.0	100	0	97.7	70	130	95.74	2.05	20	
Benzene	47.43	25.0	50	0	94.9	70	130	49.52	4.31	20	
Carbon tetrachloride	46.66	25.0	50	0	93.3	70	130	48.31	3.47	20	
Chlorobenzene	46.64	25.0	50	0	93.3	70	130	47.72	2.29	20	
Chloroform	46.86	25.0	50	0	93.7	70	130	48.33	3.09	20	
Tetrachloroethene	47.81	25.0	50	0	95.6	70	130	49.36	3.19	20	
Trichloroethene	46.1	25.0	50	0	92.2	70	130	47.59	3.18	20	
Vinyl chloride	49.91	20.0	50	0	99.8	70	130	51.92	3.95	20	

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B (SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	242.2	125	250	0	96.9	70	130	0	0		
2-Butanone	489.1	125	500	0	97.8	70	130	0	0		
Carbon tetrachloride	236.8	125	250	0	94.7	70	130	0	0		
Chlorobenzene	234.8	125	250	0	93.9	70	130	0	0		
Chloroform	238.8	125	250	0	95.5	70	130	0	0		
1,4-Dichlorobenzene	225.8	125	250	0	90.3	70	130	0	0		
1,2-Dichloroethane	242.8	125	250	0	97.1	70	130	0	0		
1,1-Dichloroethene	250.7	125	250	0	100	70	130	0	0		
Tetrachloroethene	244.6	125	250	0	97.8	70	130	0	0		
Trichloroethene	233.4	125	250	0	93.4	70	130	0	0		
Vinyl chloride	255.6	100	250	0	102	70	130	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B (SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	236	125	250	0	94.4	70	130	242.2	2.59	20	
2-Butanone	470	125	500	0	94	70	130	489.1	3.97	20	
Carbon tetrachloride	230.5	125	250	0	92.2	70	130	236.8	2.68	20	
Chlorobenzene	230.4	125	250	0	92.2	70	130	234.8	1.89	20	
Chloroform	234.6	125	250	0	93.9	70	130	238.8	1.73	20	
1,4-Dichlorobenzene	225.4	125	250	0	90.1	70	130	225.8	0.199	20	
1,2-Dichloroethane	238	125	250	0	95.2	70	130	242.8	1.98	20	
1,1-Dichloroethene	251.6	125	250	0	101	70	130	250.7	0.378	20	
Tetrachloroethene	231.2	125	250	0	92.5	70	130	244.6	5.59	20	
Trichloroethene	224.4	125	250	0	89.8	70	130	233.4	3.93	20	
Vinyl chloride	243.4	100	250	0	97.4	70	130	255.6	4.89	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **MBT-13470** SampType: **MBLK** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C (SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	U	10.0									
2,4,6-Trichlorophenol	U	10.0									
2,4-Dinitrotoluene	U	10.0									
2-Methylphenol	U	10.0									
3 & 4-Methylphenol	U	20.0									
Hexachlorobenzene	U	10.0									
Hexachlorobutadiene	U	10.0									
Hexachloroethane	U	10.0									
Nitrobenzene	U	10.0									
Pentachlorophenol	U	50.0									
Pyridine	U	50.0									

Sample ID **LCST-13470** SampType: **LCS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C (SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	16.26	10.0	20	0	81.3	50	150	0	0		
2,4,6-Trichlorophenol	17.74	10.0	20	0	88.7	50	150	0	0		
2,4-Dinitrotoluene	16.92	10.0	20	0	84.6	50	150	0	0		
2-Methylphenol	12.4	10.0	20	0	62	60	140	0	0		
3 & 4-Methylphenol	48.56	20.0	40	0	121	60	140	0	0		
Hexachlorobenzene	18.03	10.0	20	0	90.2	60	140	0	0		
Hexachlorobutadiene	12.08	10.0	20	0	60.4	60	140	0	0		
Hexachloroethane	13.01	10.0	20	0	65	60	140	0	0		
Nitrobenzene	15.56	10.0	20	0	77.8	60	140	0	0		
Pentachlorophenol	16.11	50.0	20	0	80.6	30	170	0	0		J
Pyridine	8.87	50.0	20	0	44.4	25	125	0	0		J

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **LCSDT-13470** SampType: **LCSD** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C (SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501604**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	15.51	10.0	20	0	77.6	50	150	16.26	4.72	20	
2,4,6-Trichlorophenol	17.79	10.0	20	0	89	50	150	17.74	0.281	20	
2,4-Dinitrotoluene	16.85	10.0	20	0	84.2	50	150	16.92	0.415	38	
2-Methylphenol	13.06	10.0	20	0	65.3	60	140	12.4	5.18	20	
3 & 4-Methylphenol	50.24	20.0	40	0	126	60	140	48.56	3.40	20	
Hexachlorobenzene	18.1	10.0	20	0	90.5	60	140	18.03	0.387	20	
Hexachlorobutadiene	12.51	10.0	20	0	62.6	60	140	12.08	3.50	20	
Hexachloroethane	13.67	10.0	20	0	68.4	60	140	13.01	4.95	20	
Nitrobenzene	15.64	10.0	20	0	78.2	60	140	15.56	0.513	20	
Pentachlorophenol	16.1	50.0	20	0	80.5	30	170	16.11	0	25	J
Pyridine	8.76	50.0	20	0	43.8	25	125	8.87	0	20	J

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **PS-217** Batch ID: **13470** TestNo: **SW8270C (SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501606**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	72.85	50.0	100	0	72.8	50	150	0	0		
2,4,6-Trichlorophenol	79.35	50.0	100	0	79.4	50	150	0	0		
2,4-Dinitrotoluene	80.4	50.0	100	0	80.4	50	150	0	0		
2-Methylphenol	61.55	50.0	100	0	61.6	60	140	0	0		
3 & 4-Methylphenol	237.7	100	200	0	119	60	140	0	0		
Hexachlorobenzene	87	50.0	100	0	87	60	140	0	0		
Hexachlorobutadiene	58.65	50.0	100	0	58.6	60	140	0	0		S
Hexachloroethane	61.75	50.0	100	0	61.8	60	140	0	0		
Nitrobenzene	74.05	50.0	100	0	74	60	140	0	0		
Pentachlorophenol	83.85	250	100	0	83.8	30	170	0	0		J
Pyridine	38.3	250	100	0	38.3	25	125	0	0		J

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **PS-217** Batch ID: **13470** TestNo: **SW8270C (SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501607**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	75.15	50.0	100	0	75.2	50	150	72.85	3.11	20	
2,4,6-Trichlorophenol	75.8	50.0	100	0	75.8	50	150	79.35	4.58	20	
2,4-Dinitrotoluene	78.9	50.0	100	0	78.9	50	150	80.4	1.88	38	
2-Methylphenol	60.65	50.0	100	0	60.6	60	140	61.55	1.47	20	
3 & 4-Methylphenol	236.4	100	200	0	118	60	140	237.7	0.548	20	
Hexachlorobenzene	86.2	50.0	100	0	86.2	60	140	87	0.924	20	
Hexachlorobutadiene	60.5	50.0	100	0	60.5	60	140	58.65	3.11	20	
Hexachloroethane	64.1	50.0	100	0	64.1	60	140	61.75	3.73	20	
Nitrobenzene	73	50.0	100	0	73	60	140	74.05	1.43	20	
Pentachlorophenol	84	250	100	0	84	30	170	83.85	0	25	J
Pyridine	23.9	250	100	0	23.9	25	125	38.3	0	20	JS

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9014/CN-RX_S

Sample ID **MB-13466** SampType: **MBLK** TestCode: **9014/CN-RX_** Units: **mg/Kg** Prep Date: **9/24/2008** Run ID: **SPEC2_080924A**
Client ID: **ZZZZZ** Batch ID: **13466** TestNo: **SW9014** **(SW7.3.3.2)** Analysis Date: **9/24/2008** SeqNo: **501414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	U	1.25	0	0	0	0	0	0	0		

Sample ID **LCS-13466** SampType: **LCS** TestCode: **9014/CN-RX_** Units: **mg/Kg** Prep Date: **9/24/2008** Run ID: **SPEC2_080924A**
Client ID: **ZZZZZ** Batch ID: **13466** TestNo: **SW9014** **(SW7.3.3.2)** Analysis Date: **9/24/2008** SeqNo: **501416**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	0.985	1.25	1.25	0	78.8	20	120	0	0		J

Sample ID **LCS2-13466** SampType: **LCS** TestCode: **9014/CN-RX_** Units: **mg/Kg** Prep Date: **9/24/2008** Run ID: **SPEC2_080924A**
Client ID: **ZZZZZ** Batch ID: **13466** TestNo: **SW9014** **(SW7.3.3.2)** Analysis Date: **9/24/2008** SeqNo: **501417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.72	1.25	2.5	0	68.8	20	120	0	0		

Sample ID **0809195-004B MS** SampType: **MS** TestCode: **9014/CN-RX_** Units: **mg/Kg-dry** Prep Date: **9/24/2008** Run ID: **SPEC2_080924A**
Client ID: **PS-217** Batch ID: **13466** TestNo: **SW9014** **(SW7.3.3.2)** Analysis Date: **9/24/2008** SeqNo: **501420**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.709	1.24	2.484	0	68.8	20	120	0	0		

Sample ID **0809195-004B MSD** SampType: **MSD** TestCode: **9014/CN-RX_** Units: **mg/Kg-dry** Prep Date: **9/24/2008** Run ID: **SPEC2_080924A**
Client ID: **PS-217** Batch ID: **13466** TestNo: **SW9014** **(SW7.3.3.2)** Analysis Date: **9/24/2008** SeqNo: **501421**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.421	1.30	2.602	0	54.6	20	120	1.709	18.4	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9014/CN_S

Sample ID	MB-13469	SampType:	MBLK	TestCode:	9014/CN_S	Units:	mg/Kg	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	ZZZZZ	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501432

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	U	0.500	0	0	0	0	0	0	0		

Sample ID	LCS-13469	SampType:	LCS	TestCode:	9014/CN_S	Units:	mg/Kg	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	ZZZZZ	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501433

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	1.095	0.500	1.25	0	87.6	80	120	0	0		

Sample ID	LCS2-13469	SampType:	LCS	TestCode:	9014/CN_S	Units:	mg/Kg	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	ZZZZZ	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501434

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.235	0.500	2.5	0	89.4	80	120	0	0		

Sample ID	0809195-004B MS	SampType:	MS	TestCode:	9014/CN_S	Units:	mg/Kg-dry	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	PS-217	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501438

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.701	0.520	2.602	0.3464	90.5	80	120	0	0		

Sample ID	0809195-004B MSD	SampType:	MSD	TestCode:	9014/CN_S	Units:	mg/Kg-dry	Prep Date:	9/24/2008	Run ID:	SPEC2_080924B
Client ID:	PS-217	Batch ID:	13469	TestNo:	SW9014	(SW9010B)		Analysis Date:	9/24/2008	SeqNo:	501440

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.397	0.515	2.577	0.3464	79.6	80	120	2.701	11.9	20	S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9034/S-RX_S

Sample ID **MB-13480** SampType: **MBLK** TestCode: **9034/S-RX_S** Units: **mg/Kg** Prep Date: **9/25/2008** Run ID: **BURET1_080925B**
Client ID: **ZZZZZ** Batch ID: **13480** TestNo: **SW9034** **(SW7.3.4.2)** Analysis Date: **9/25/2008** SeqNo: **501682**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	U	9.50	0	0	0	0	0	0	0		

Sample ID **LCS-13480** SampType: **LCS** TestCode: **9034/S-RX_S** Units: **mg/Kg** Prep Date: **9/25/2008** Run ID: **BURET1_080925B**
Client ID: **ZZZZZ** Batch ID: **13480** TestNo: **SW9034** **(SW7.3.4.2)** Analysis Date: **9/25/2008** SeqNo: **501684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	112.8	9.50	253.5	0	44.5	30	100	0	0		

Sample ID **0809195-004B MS** SampType: **MS** TestCode: **9034/S-RX_S** Units: **mg/Kg-dry** Prep Date: **9/25/2008** Run ID: **BURET1_080925B**
Client ID: **PS-217** Batch ID: **13480** TestNo: **SW9034** **(SW7.3.4.2)** Analysis Date: **9/25/2008** SeqNo: **501688**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	114.2	10.5	253.5	0	45	30	100	0	0		

Sample ID **0809195-004B MSD** SampType: **MSD** TestCode: **9034/S-RX_S** Units: **mg/Kg-dry** Prep Date: **9/25/2008** Run ID: **BURET1_080925B**
Client ID: **PS-217** Batch ID: **13480** TestNo: **SW9034** **(SW7.3.4.2)** Analysis Date: **9/25/2008** SeqNo: **501690**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	10	10.9	253.5	0	3.94	30	100	114.2	0	0	JS

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9034/S_S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
MB-13479	**MBLK**	**9034/S_S**	**mg/Kg**	**9/25/2008**	**BURET1_080925A**
Client ID: **ZZZZZ**	Batch ID: **13479**	TestNo: **SW9034**	**(SW9030B)**	Analysis Date: **9/25/2008**	SeqNo: **501664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	U	10.0	0	0	0	0	0	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS-13479	**LCS**	**9034/S_S**	**mg/Kg**	**9/25/2008**	**BURET1_080925A**
Client ID: **ZZZZZ**	Batch ID: **13479**	TestNo: **SW9034**	**(SW9030B)**	Analysis Date: **9/25/2008**	SeqNo: **501665**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	201.9	10.0	253.6	0	79.6	70	130	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCSD-13479	**LCSD**	**9034/S_S**	**mg/Kg**	**9/25/2008**	**BURET1_080925A**
Client ID: **ZZZZZ**	Batch ID: **13479**	TestNo: **SW9034**	**(SW9030B)**	Analysis Date: **9/25/2008**	SeqNo: **501666**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	193.1	10.0	253.6	0	76.1	70	130	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MS	**MS**	**9034/S_S**	**mg/Kg-dry**	**9/25/2008**	**BURET1_080925A**
Client ID: **PS-217**	Batch ID: **13479**	TestNo: **SW9034**	**(SW9030B)**	Analysis Date: **9/25/2008**	SeqNo: **501668**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	132.5	11.0	255	0	52	70	130	0	0		S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MSD	**MSD**	**9034/S_S**	**mg/Kg-dry**	**9/25/2008**	**BURET1_080925A**
Client ID: **PS-217**	Batch ID: **13479**	TestNo: **SW9034**	**(SW9030B)**	Analysis Date: **9/25/2008**	SeqNo: **501669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	93.39	10.8	251	0	37.2	70	130	132.5	34.6	0	S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045C/PH_S

Sample ID	0809195-004B DUP	SampType:	DUP	TestCode:	9045C/PH_S	Units:	pH Units	Prep Date:		Run ID:	METER1_080923A
Client ID:	PS-217	Batch ID:	R27630	TestNo:	SW9045C			Analysis Date:	9/23/2008	SeqNo:	501175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.501	0.0100	0	0	0	0	0	7.471	0.401	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9065(M)/PHEN_S

Sample ID	MB	SampType:	MBLK	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	U	5.00	0	0	0	0	0	0	0		

Sample ID	LCS1	SampType:	LCS	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502578

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	10.94	5.00	12.5	0	87.6	80	120	0	0		

Sample ID	LCS2	SampType:	LCS	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	22.68	5.00	25	0	90.7	80	120	0	0		

Sample ID	0809195-004B MS	SampType:	MS	TestCode:	9065(M)/PHE	Units:	mg/Kg-dry	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	PS-217	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502581

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	23.24	5.25	26.27	0	88.5	80	120	0	0		

Sample ID	0809195-004B MSD	SampType:	MSD	TestCode:	9065(M)/PHE	Units:	mg/Kg-dry	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	PS-217	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502582

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	21.25	5.06	25.3	0	84	80	120	23.24	8.94	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: PMOIST

Sample ID **MB-R27481** SampType: **MBLK** TestCode: **PMOIST** Units: **wt%** Prep Date: Run ID: **BALANCE2_080912A**
Client ID: **ZZZZZ** Batch ID: **R27481** TestNo: **D2216** Analysis Date: **9/12/2008** SeqNo: **498842**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	U	0.0100									

Sample ID **MB-R27695** SampType: **MBLK** TestCode: **PMOIST** Units: **wt%** Prep Date: Run ID: **BALANCE2_080926A**
Client ID: **ZZZZZ** Batch ID: **R27695** TestNo: **D2216** Analysis Date: **9/26/2008** SeqNo: **501971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	U	0.0100									

Sample ID **0809195-020ADUP** SampType: **DUP** TestCode: **PMOIST** Units: **wt%** Prep Date: Run ID: **BALANCE2_080912A**
Client ID: **PS-286** Batch ID: **R27481** TestNo: **D2216** Analysis Date: **9/12/2008** SeqNo: **498863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.19	0.0100	0	0	0	0	0	15.34	11.4	20	

Sample ID **0809427-008D DUP** SampType: **DUP** TestCode: **PMOIST** Units: **wt%** Prep Date: Run ID: **BALANCE2_080926A**
Client ID: **ZZZZZ** Batch ID: **R27695** TestNo: **D2216** Analysis Date: **9/26/2008** SeqNo: **501996**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.49	0.0100	0	0	0	0	0	14.31	1.25	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: PSOLID

Sample ID	0809195-004B DUP	SampType:	DUP	TestCode:	PSOLID	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080926A
Client ID:	PS-217	Batch ID:	R27695	TestNo:	D2216			Analysis Date:	9/26/2008	SeqNo:	501999

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Solids	9.4	0.0100	0	0	0	0	0	8.29	12.5	20	H

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

TestCode: SUBK_REPORT

An Analytical
Testing Laboratory

Prairie Analytical Systems, INCORPORATED

1210 Capital Airport Drive
Springfield, Illinois 62707
Phone: 217-753-1148
Fax: 217-753-1152
www.prairieanalytical.com

December 01, 2008

Mr. Ganesh Krish
Flint Hills Resources
501 Brunner Street
Peru, IL 61354

RE: RCRA Parameters

PAS Order No.: 0809195

Dear Mr. Ganesh Krish:

Prairie Analytical Systems, Inc. received 20 samples on 9/11/2008 2:35:00 PM for the analyses presented in the following report.

This is an amended report and supersedes the original report. Refer to the case narrative for explanation of the amendment. All applicable quality control procedures met method specific acceptance criteria.

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 call me at (217) 753-1148.

Sincerely,

Michael D. Brophy
Project Manager

Prairie Analytical Systems, Inc. **Date:** *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

CASE NARRATIVE

RCRA hazrdous waste characterization analysis was performed on sample PS-217 (PAS 0809195-004) at the request of the client.

Analysis for Extractable Organic Halides (EOX):
Method Blank result: Not detectable at the reporting limit.
% Recovery for LCS: 91%
% Recovery for MS: 107%
% Recovery for MSD: 82%

Percent solids analysis for sample PS-217 (PAS 0809195-004) was corrected and reported at the request of the client.

Soil density was analyzed by ASTM Method D2937 which provides a result without units.

FHRPRU001273

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-001
Collection Date: 9/11/2008 11:30:00 AM
Client Sample ID: PS-210
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	4.41	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Lead	39.0	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Mercury	U	0.108		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Zinc	1240	541		mg/Kg-dry	500	9/13/2008 8:47:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.108	0.0010		mg/L	1	9/13/2008 8:24:00 AM
Lead	0.0290	0.0050		mg/L	1	9/13/2008 8:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 8:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	7.75	0.01		wt%	1	9/12/2008

Lab ID: 0809195-002
Collection Date: 9/11/2008 11:55:00 AM
Client Sample ID: PS-213
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	13.7	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Lead	141	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Mercury	0.196	0.111		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Zinc	6690	555		mg/Kg-dry	500	9/13/2008 8:57:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.339	0.0010		mg/L	1	9/13/2008 9:40:00 AM
Lead	0.345	0.0050		mg/L	1	9/13/2008 9:40:00 AM
Mercury	0.0004	0.0002		mg/L	1	9/13/2008 9:40:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	10.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-003
Client Sample ID: PS-214

Collection Date: 9/11/2008 10:40:00 AM
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	76.3	0.578		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Lead	1410	145		mg/Kg-dry	500	9/13/2008 9:06:00 PM
Mercury	0.286	0.116		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Zinc	16800	578		mg/Kg-dry	500	9/13/2008 9:06:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.61	0.0010		mg/L	1	9/13/2008 9:49:00 AM
Lead	4.34	0.0050		mg/L	1	9/13/2008 9:49:00 AM
Mercury	0.0003	0.0002		mg/L	1	9/13/2008 9:49:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.7	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-004
Collection Date: 9/11/2008 10:30:00 AM
Client Sample ID: PS-217
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	14.6	0.549		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Lead	1930	137		mg/Kg-dry	500	9/13/2008 9:16:00 PM
Mercury	0.208	0.110		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Zinc	7830	549		mg/Kg-dry	500	9/13/2008 9:16:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **JTC**
Arsenic	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Barium	0.250	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Cadmium	0.451	0.0010		mg/L	1	9/13/2008 9:58:00 AM
Chromium	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Lead	25.6	0.250		mg/L	50	9/13/2008 2:36:00 PM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 9:58:00 AM
Selenium	0.0186	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Silver	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
TCLP SEMIVOLATILES ANALYSIS		**SW8270C**		**(SW3510C)**		Analyst: **JKA**
2,4-Dinitrotoluene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobutadiene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachloroethane	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2-Methylphenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
3 & 4-Methylphenol	U	100		µg/L	1	9/24/2008 8:44:00 PM
Nitrobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Pentachlorophenol	U	250		µg/L	1	9/24/2008 8:44:00 PM
Pyridine	U	250		µg/L	1	9/24/2008 8:44:00 PM
2,4,5-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2,4,6-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorobiphenyl	61.1	38-149		%REC	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorophenol	25.6	12-95		%REC	1	9/24/2008 8:44:00 PM
Surr: Nitrobenzene-d5	57.4	42-156		%REC	1	9/24/2008 8:44:00 PM
Surr: Phenol-d6	19.8	15-90		%REC	1	9/24/2008 8:44:00 PM
Surr: 4-Terphenyl-d14	76.5	42-137		%REC	1	9/24/2008 8:44:00 PM
Surr: 2,4,6-Tribromophenol	49.3	20-100		%REC	1	9/24/2008 8:44:00 PM
TCLP VOLATILES ANALYSIS		**SW8260B**		**(SW5030B)**		Analyst: **BDP**
Benzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
2-Butanone	U	125		µg/L	5	9/25/2008 2:40:00 AM
Carbon tetrachloride	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chloroform	U	125		µg/L	5	9/25/2008 2:40:00 AM
1,4-Dichlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

TCLP VOLATILES ANALYSIS		**SW8260B**	**(SW5030B)**		Analyst: **BDP**
1,2-Dichloroethane	U	125	µg/L	5	9/25/2008 2:40:00 AM
1,1-Dichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Tetrachloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Trichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Vinyl chloride	U	100	µg/L	5	9/25/2008 2:40:00 AM
Surr: 4-Bromofluorobenzene	97.7	67-133	%REC	5	9/25/2008 2:40:00 AM
Surr: 1,2-Dichloroethane-d4	101	86-125	%REC	5	9/25/2008 2:40:00 AM
Surr: Toluene-d8	102	81-116	%REC	5	9/25/2008 2:40:00 AM
EXTRACTABLE ORGANIC HALIDES ANALYSIS		**SW9023**			Analyst: **SUB**
Extractable Organic Halides (EOX)	U	109	ppm-dry	1	9/30/2008
SUBCONTRACTED ANALYSIS		**SUB**			Analyst: **SUB**
Bulk density	2.605	0		1	10/3/2008
FLASH POINT ANALYSIS		**SW1010(M)**			Analyst: **AJD**
Ignitability (Flash Point)	>200	50.0	°F	1	9/23/2008
REACTIVE CYANIDE ANALYSIS		**SW9014**	**(SW7.3.3.2)**		Analyst: **AJD**
Reactive Cyanide	U	1.34	mg/Kg-dry	1	9/24/2008
CYANIDE ANALYSIS		**SW9014**	**(SW9010B)**		Analyst: **AJD**
Cyanide	U	0.488	mg/Kg-dry	1	9/24/2008
REACTIVE SULFIDE ANALYSIS		**SW9034**	**(SW7.3.4.2)**		Analyst: **AJD**
Reactive Sulfide	U	9.64	mg/Kg-dry	1	9/25/2008
SULFIDE ANALYSIS		**SW9034**	**(SW9030B)**		Analyst: **AJD**
Sulfide	U	9.01	mg/Kg-dry	1	9/25/2008
PH ANALYSIS		**SW9045C**			Analyst: **CWA**
pH	7.47	0.01	pH Units	1	9/23/2008 2:53:00 PM
PHENOLICS ANALYSIS		**SW9065(M)**			Analyst: **RMN**
Phenolics	U	5.36	mg/Kg-dry	1	9/26/2008
PAINT FILTER ANALYSIS		**SW9095A**			Analyst: **AJD**
Paint Filter	PASS	0	P/F	1	9/23/2008
PERCENT MOISTURE ANALYSIS		**D2216**			Analyst: **CWA**
Percent Moisture	8.49	0.01	wt%	1	9/12/2008
PERCENT SOLIDS ANALYSIS		**D2216**			Analyst: **RMN**
Percent Solids	91.7	0.01	wt%	1	9/26/2008 9:15:00 AM

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-005
Collection Date: 9/11/2008 10:20:00 AM
Client Sample ID: PS-219
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	27.8	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Lead	377	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Mercury	0.139	0.112		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Zinc	7080	560		mg/Kg-dry	500	9/13/2008 9:55:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.583	0.0010		mg/L	1	9/13/2008 10:08:00 AM
Lead	0.603	0.0050		mg/L	1	9/13/2008 10:08:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:08:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.7	0.01		wt%	1	9/12/2008

Lab ID: 0809195-006
Collection Date: 9/11/2008 10:00:00 AM
Client Sample ID: PS-221
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	10.0	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Lead	309	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Mercury	U	0.113		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Zinc	4440	567		mg/Kg-dry	500	9/13/2008 10:04:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.143	0.0010		mg/L	1	9/13/2008 10:17:00 AM
Lead	0.118	0.0050		mg/L	1	9/13/2008 10:17:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:17:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-007
Collection Date: 9/10/2008 6:10:00 PM
Client Sample ID: PS-223
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	25.9	0.581		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Lead	1480	145		mg/Kg-dry	500	9/13/2008 10:14:00 PM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Zinc	9330	581		mg/Kg-dry	500	9/13/2008 10:14:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.375	0.0010		mg/L	1	9/13/2008 10:27:00 AM
Lead	2.41	0.0050		mg/L	1	9/13/2008 10:27:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:27:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-008
Collection Date: 9/10/2008 5:50:00 PM
Client Sample ID: PS-225
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.4	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Lead	73.3	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Mercury	U	0.120		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Zinc	1230	600		mg/Kg-dry	500	9/13/2008 10:24:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.102	0.0010		mg/L	1	9/13/2008 10:36:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 10:36:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:36:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-009
Collection Date: 9/10/2008 5:35:00 PM
Client Sample ID: PS-227
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	57.3	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Lead	1070	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Zinc	11200	581		mg/Kg-dry	500	9/13/2008 10:33:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.72	0.0010		mg/L	1	9/13/2008 10:46:00 AM
Lead	5.32	0.0050		mg/L	1	9/13/2008 10:46:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:46:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-010
Collection Date: 9/10/2008 5:20:00 PM
Client Sample ID: PS-229
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	88.1	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Lead	356	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Mercury	0.115	0.106		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Zinc	12800	532		mg/Kg-dry	500	9/13/2008 10:43:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	3.41	0.0010		mg/L	1	9/13/2008 11:24:00 AM
Lead	0.564	0.0050		mg/L	1	9/13/2008 11:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.5	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-011
Collection Date: 9/10/2008 5:00:00 PM
Client Sample ID: PS-231
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	69.1	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Lead	851	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Mercury	U	0.115		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Zinc	17000	575		mg/Kg-dry	500	9/13/2008 10:53:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.75	0.0010		mg/L	1	9/13/2008 11:34:00 AM
Lead	0.194	0.0050		mg/L	1	9/13/2008 11:34:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:34:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-012
Collection Date: 9/10/2008 4:40:00 PM
Client Sample ID: PS-233
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	8.49	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Lead	76.2	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Mercury	U	0.122		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Zinc	1800	611		mg/Kg-dry	500	9/13/2008 11:02:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.145	0.0010		mg/L	1	9/13/2008 11:43:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:43:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:43:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-013
Collection Date: 9/10/2008 3:55:00 PM
Client Sample ID: PS-260
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.426	0.349		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Lead	8.39	0.513		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Zinc	74.0	2.05		mg/Kg-dry	2	9/15/2008 2:26:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0124	0.0010		mg/L	1	9/13/2008 11:53:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:53:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:53:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	4.35	0.01		wt%	1	9/12/2008

Lab ID: 0809195-014
Collection Date: 9/10/2008 2:55:00 PM
Client Sample ID: PS-262
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.5	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Lead	61.1	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Zinc	1480	515		mg/Kg-dry	500	9/13/2008 11:51:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0741	0.0010		mg/L	1	9/13/2008 12:02:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:02:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:02:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-015
Collection Date: 9/10/2008 1:40:00 PM
Client Sample ID: PS-264
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	7.74	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Lead	39.2	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Mercury	U	0.110		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Zinc	634	550		mg/Kg-dry	500	9/14/2008
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.130	0.0010		mg/L	1	9/13/2008 12:12:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:12:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:12:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-016
Collection Date: 9/10/2008 12:50:00 PM
Client Sample ID: PS-266
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.528	0.517		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Lead	44.5	0.647		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Mercury	U	0.129		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Zinc	164	2.59		mg/Kg-dry	2	9/15/2008 3:22:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0201	0.0010		mg/L	1	9/13/2008 12:21:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:21:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:21:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	23.3	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-017
Collection Date: 9/10/2008 3:40:00 PM
Client Sample ID: PS-280
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	72.8	0.551		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Lead	1250	138		mg/Kg-dry	500	9/14/2008 12:20:00 AM
Mercury	0.325	0.110		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Zinc	17600	551		mg/Kg-dry	500	9/14/2008 12:20:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.76	0.0010		mg/L	1	9/13/2008 12:31:00 PM
Lead	3.12	0.0050		mg/L	1	9/13/2008 12:31:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:31:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	12.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-018
Collection Date: 9/10/2008 3:15:00 PM
Client Sample ID: PS-282
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	112	0.606		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Lead	2680	152		mg/Kg-dry	500	9/14/2008 12:29:00 AM
Mercury	0.273	0.121		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Zinc	28900	606		mg/Kg-dry	500	9/14/2008 12:29:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.78	0.0010		mg/L	1	9/13/2008 12:40:00 PM
Lead	4.38	0.0050		mg/L	1	9/13/2008 12:40:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:40:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.8	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-019
Collection Date: 9/10/2008 2:25:00 PM
Client Sample ID: PS-284
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	133	0.560		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Lead	1190	140		mg/Kg-dry	500	9/14/2008 12:39:00 AM
Mercury	U	0.112		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Zinc	15600	560		mg/Kg-dry	500	9/14/2008 12:39:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.83	0.0010		mg/L	1	9/13/2008 1:19:00 PM
Lead	1.00	0.0050		mg/L	1	9/13/2008 1:19:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:19:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-020
Collection Date: 9/10/2008 1:15:00 PM
Client Sample ID: PS-286
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	443	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Lead	1100	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Mercury	U	0.111		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Zinc	21900	554		mg/Kg-dry	500	9/14/2008 12:49:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	7.90	0.0500		mg/L	50	9/13/2008 2:46:00 PM
Lead	0.441	0.0050		mg/L	1	9/13/2008 1:28:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:28:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	15.3	0.01		wt%	1	9/12/2008

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, IL 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Pb Cd Hg Zn Totals method 6020	Pb Cd Hg TCLP method 6020							Laboratory Comments
PS-210	9/11/08	1130	S	2	C		✓	✓							
PS-213		1155					✓	✓							
PS-214		1040					✓	✓							
PS-217		1030					✓	✓							
PS-219		1020					✓	✓							
PS-221		1000					✓	✓							
PS-223	9/10/08	1810					✓	✓							
PS-225		1750					✓	✓							
PS-227		1735					✓	✓							
PS-229		1720					✓	✓							
PS-231		1700					✓	✓							
PS-233		1640					✓	✓							

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1235	Hand
			PAS	9/11/08	3:33pm	

Special Instructions: The Samples ending in 1 (PS-210-1) are to be sampled. The samples ending in 2 (PS-210-2) are on hold

Q/C Level: 1 ✓ 2 ___ 3 ___ 4 ___

On Wet Ice: Y / N
Proper Preservation: Y / N

Temperature (°C): 1.3°C

RCRA Haz. Waste Parameters added to PS-217 per client

FHRPRU001287

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, Il 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP Method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Laboratory Comments
PS 260	9/10/08	1555	S	2	C		
PS 262		1455					
PS 264		1340					
PS 266		1250					
PS 280		1540					
PS 282		1515					
PS 284		1425					
PS 286		1315					

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1439	[signature]
			PAS	9/11/08	3:33pm	

Special Instructions: The samples ending in 1 (PS-260-1) are to be sampled
The samples ending in 2 (PS260-2) are on hold

Q/C Level: 1 ✓ 2 __ 3 __ 4 __

On Wet Ice: Y ✓ N
Proper Preservation: Y ✓ N

Temperature (°C): 13°C

FHRPRU001288

PDC Laboratories, Inc.
P.O. Box 9071 • Peoria, IL 61612-9071
(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

ACCREDITED IN ACCORDANCE WITH nelac

Flint Hills Resources
501 Brunner St.
Peru, IL 61354

Attn: Ganesh Krish

Date Received: 12-Sep-08
Date Reported 06-Oct-08

Sample No: 08094128-1 Collect Date: 11-Sep-08 11:30
Client Id: FLINT HILLS RESOURCE Site: PS-217-3 Locator: COMPOSITE

	Result	Units	Date / Time	By
BICRON METER				
Radioactivity Screen	60	CPM	02-Oct-08 9:58	MBB
SW-846 3051				
Sample Preparation			29-Sep-08 7:30	JEM
SW-846 6020				
Mercury	0.3	mg/kg	01-Oct-08 11:00	KMC

Certified by: Lisa Grant
Lisa Grant, Project Manager

PDC Laboratories participates in the following laboratory accreditation/certification and proficiency programs. Endorsement by the Federal or State Government or their agencies is not implied.

NELAC Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
State of Illinois Bacteriological Analysis in Drinking Water Certified Lab Registry No. 17533
Drinking Water Certifications: Indiana (C-IL-04); Kansas (E-10338); Kentucky (90058); Missouri (00870); Wisconsin (998294430)
Wastewater Certifications: Arkansas; Iowa (240); Kansas (E-10338); Wisconsin (99829443
Hazardous/Solid Waste Certifications: Arkansas; Kansas (E-10338); Wisconsin (998294430)
UST Certification: Iowa (240)

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PDC LABORATORIES, INC.
2231 WEST ALTORFER DRIVE
PEORIA, IL 61615

PHONE # 800-752-6611
FAX # 309-692-9689

CHAIN OF CUSTODY RECORD

State where samples collected IL

*ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - **(SAMPLE ACCEPTANCE POLICY ON REVERSE)***

1 CLIENT	PROJECT NUMBER	P.O. NUMBER	MEANS SHIPPED
FLINT HILLS RESOURCES	FHR-PS		FED EX
ADDRESS: 501 BRUNNER STREET	PHONE NUMBER: 815.224.5451	FAX NUMBER	DATE SHIPPED: 9/11/08
CITY STATE ZIP: PERU, IL 61354	SAMPLER (PLEASE PRINT): Andy Taylor		MATRIX TYPES: WW-WASTEWATER, DW-DRINKING WATER, GW-GROUND WATER, WWSL-SLUDGE, NAS-SOLID, LCHT-LEACHATE, OTHER:
CONTACT PERSON: GANESH KRISHA	SAMPLER'S SIGNATURE: [signature]		

3 ANALYSIS REQUESTED

4 (FOR LAB USE ONLY) 2500-20
LOGIN # 0809248620
LOGGED BY: TAS
LAB PROJ. #
TEMPLATE:
PROJ. MGR.:

2 SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	REMARKS
PS-210-3	9/11/08	1130		C	NAS	1	PLEASE HOLD
PS-213-3		1155				1	ALL SAMPLES
PS-214-3		1040				1	UNTIL FURTHER
PS-217-3		1030				1	INSTRUCTIONS.
PS-219-3		1020				1	
PS-221.3		1000				1	
PS-223-3	9/10/08	1810		C	NAS	1	
PS-225-3		1750				1	
PS-227-3		1735				1	
PS-229-3		1720				1	
PS-231-3		1700				1	
PS-233-3		1640				1	

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) (RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE): NORMAL RUSH — DATE RESULTS NEEDED
RUSH RESULTS VIA (PLEASE CIRCLE): FAX PHONE E-MAIL
FAX # PHONE # EMAIL ADDRESS: ganesh.krish@fhr.com

6 *The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.* _____

7 RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)	DATE / TIME
[signature]	9/11/08 1310	[signature]	9-11-08 1310
RELINQUISHED BY: (SIGNATURE) [signature]	DATE 09-11 TIME 1530	RECEIVED BY: (SIGNATURE) [signature] MARY TERRY	DATE 9-11 TIME 15:32
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED AT LAB BY: (SIGNATURE) [signature]	DATE 9/12/08 TIME 0915

8 COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT 11 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT Y OR N
SAMPLE(S) RECEIVED ON ICE Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) Y OR N
(EXCLUDES TYPICAL FIELD PARAMETERS)
DATE AND TIME TAKEN FROM SAMPLE BOTTLE _____

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

FHRPRU001290

PDC LABORATORIES, INC.
2231 WEST ALTORFER DRIVE
PEORIA, IL 61615

PHONE # 800-752-6611
FAX # 309-692-9689

CHAIN OF CUSTODY RECORD

State where samples collected IL

ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT) - **(SAMPLE ACCEPTANCE POLICY ON REVERSE)**

1			
CLIENT: FLINT HILLS RESOURCES	PROJECT NUMBER: FHR-PS	P.O. NUMBER:	MEANS SHIPPED: FED EX
ADDRESS: 501 BRUNNER STREET	PHONE NUMBER: 815.224.5451	FAX NUMBER:	DATE SHIPPED: 9/11/08
CITY STATE ZIP: PERU, IL 61354	SAMPLER (PLEASE PRINT): Andy Taylor		MATRIX TYPES: WW-WASTEWATER, DW-DRINKING WATER, GW-GROUND WATER, WWSL-SLUDGE, NAS-SOLID, LCHT-LEACHATE, OTHER:
CONTACT PERSON: GANESH KRISH	SAMPLER'S SIGNATURE: [signature]		

3 ANALYSIS REQUESTED

4 (FOR LAB USE ONLY)
LOGIN #
LOGGED BY:
LAB PROJ. #
TEMPLATE:
PROJ. MGR.:

2 SAMPLE DESCRIPTION AS YOU WANT ON REPORT	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE GRAB	SAMPLE TYPE COMP	MATRIX TYPE	BOTTLE COUNT	REMARKS
PS 260-3	9/10/08	1555		C	NAS	1	PLEASE HOLD
PS 262-3		1455				1	ALL SAMPLES
PS 264-3		1340				1	UNTIL FURTHER
PS 266-3		1250				1	INSTRUCTIONS.
PS 280-3		1540				1	
PS 282-3		1515				1	
PS 284-3		1425				1	
PS 286-3		1315				1	

5 TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH DATE RESULTS NEEDED
(RUSH TAT IS SUBJECT TO PDC LABS APPROVAL AND SURCHARGE)
RUSH RESULTS VIA (PLEASE CIRCLE) FAX PHONE E-MAIL
FAX # PHONE # EMAIL ADDRESS ganesh.krish@fhr.com

6 *The sample temperature will be measured upon receipt at the lab. By initialing this area you request that the lab notify you, before proceeding with analysis, if the sample temperature is outside of the range of 0.1-6.0°C. By not initialing this area you allow the lab to proceed with analytical testing regardless of the sample temperature.* _____

7			
RELINQUISHED BY: (SIGNATURE) [signature]	DATE 9/11/08 TIME 1310	RECEIVED BY: (SIGNATURE) [signature]	DATE 9-11-08 TIME 1310
RELINQUISHED BY: (SIGNATURE) Sally Pruno / B J Hrecka	DATE 09-11 TIME 1530	RECEIVED BY: (SIGNATURE) MARY [illegible] Sally Pruno / B J Hrecka	DATE 09-11-08 TIME 1530
RELINQUISHED BY: (SIGNATURE)	DATE TIME	RECEIVED AT LAB BY: (SIGNATURE) [signature]	DATE 9/12/08 TIME 0915

8 COMMENTS: (FOR LAB USE ONLY)

SAMPLE TEMPERATURE UPON RECEIPT	11 °C
CHILL PROCESS STARTED PRIOR TO RECEIPT	Y OR N
SAMPLE(S) RECEIVED ON ICE	Y OR N
PROPER BOTTLES RECEIVED IN GOOD CONDITION	Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME	Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S) (EXCLUDES TYPICAL FIELD PARAMETERS)	Y OR N
DATE AND TIME TAKEN FROM SAMPLE BOTTLE	_____

Copies: white should accompany samples to PDC Labs. Yellow copy to be retained by the client.

FHRPRU001291

Prairie Analytical Systems, Inc.

Date: *10-Oct-08*

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 1010(M)/FP_S

Sample ID **LCS**	SampType: **LCS**	TestCode: **1010(M)/FP_**	Units: **°F**		Prep Date:			Run ID: **FLASH1_080923A**	
Client ID: **ZZZZZ**	Batch ID: **R27635**	TestNo: **SW1010(M)**			Analysis Date: **9/23/2008**			SeqNo: **501216**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ignitability (Flash Point)	82	50.0	77	0	106	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001292

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S

Sample ID: **MBS-13368** SampType: **MBLK** TestCode: **6020_S** Units: **mg/Kg** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **ZZZZZ** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	U	0.250									
Lead	U	0.250									
Mercury	U	0.0500									
Zinc	U	1.00									

Sample ID: **LCSS-13368** SampType: **LCS** TestCode: **6020_S** Units: **mg/Kg** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **ZZZZZ** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	22.22	0.250	25	0	88.9	80	120	0	0		
Lead	24.72	0.250	25	0	98.9	80	120	0	0		
Mercury	0.826	0.0500	1	0	82.6	80	120	0	0		
Zinc	23	1.00	25	0	92	80	120	0	0		

Sample ID: **0809195-020AMS** SampType: **MS** TestCode: **6020_S** Units: **mg/Kg-dry** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **PS-286** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/14/2008** SeqNo: **498650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	18690	584	29.19	21940	-11100	75	125	0	0		S

Sample ID: **0809195-020AMS** SampType: **MS** TestCode: **6020_S** Units: **mg/Kg-dry** Prep Date: **9/12/2008** Run ID: **ICPMS2_080913A**
Client ID: **PS-286** Batch ID: **13368** TestNo: **SW6020** **(SW3050B)** Analysis Date: **9/15/2008** SeqNo: **498833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	401.5	0.584	29.19	443.2	-143	75	125	0	0		S
Lead	728.5	0.584	29.19	1101	-1280	75	125	0	0		S
Mercury	1.109	0.117	1.168	0.08334	87.8	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

FHRPRU001293

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S

Sample ID	0809195-020AMSD	SampType:	MSD	TestCode:	6020_S	Units:	mg/Kg-dry	Prep Date:	9/12/2008	Run ID:	ICPMS2_080913A
Client ID:	PS-286	Batch ID:	13368	TestNo:	SW6020		(SW3050B)	Analysis Date:	9/14/2008	SeqNo:	498651

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	12740	582	29.11	21940	-31600	75	125	18690	37.9	20	SR

Sample ID	0809195-020AMSD	SampType:	MSD	TestCode:	6020_S	Units:	mg/Kg-dry	Prep Date:	9/12/2008	Run ID:	ICPMS2_080913A
Client ID:	PS-286	Batch ID:	13368	TestNo:	SW6020		(SW3050B)	Analysis Date:	9/15/2008	SeqNo:	498834

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	301.1	0.582	29.11	443.2	-488	75	125	401.5	28.6	20	SR
Lead	714.6	0.582	29.11	1101	-1330	75	125	728.5	1.93	20	S
Mercury	1.095	0.116	1.164	0.08334	86.9	75	125	1.109	1.28	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001294

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID	MBW-13369	SampType:	MBLK	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	ZZZZZ	Batch ID:	13369	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/13/2008	SeqNo:	498569

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	U	0.00100									
Lead	U	0.00500									
Mercury	U	0.000200									

Sample ID	MBW-13474	SampType:	MBLK	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502303

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	U	0.00500									
Barium	U	0.00500									
Cadmium	U	0.00100									
Chromium	U	0.00500									
Lead	U	0.00500									
Mercury	U	0.000200									
Selenium	U	0.00500									
Silver	U	0.00500									

Sample ID	LCSW-13369	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	ZZZZZ	Batch ID:	13369	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/13/2008	SeqNo:	498570

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.4659	0.00100	0.5	0	93.2	80	120	0	0		
Lead	0.4774	0.00500	0.5	0	95.5	80	120	0	0		
Mercury	0.01699	0.000200	0.02	0	85	80	120	0	0		

Sample ID	LCSW-13474	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502304

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4718	0.00500	0.5	0	94.4	80	120	0	0		
Barium	0.4647	0.00500	0.5	0	92.9	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

FHRPRU001295

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID	LCSW-13474	SampType:	LCS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502304

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.4521	0.00100	0.5	0	90.4	80	120	0	0		
Chromium	0.4929	0.00500	0.5	0	98.6	80	120	0	0		
Lead	0.462	0.00500	0.5	0	92.4	80	120	0	0		
Mercury	0.01626	0.000200	0.02	0	81.3	80	120	0	0		
Selenium	0.4801	0.00500	0.5	0	96	80	120	0	0		
Silver	0.4574	0.00500	0.5	0	91.5	80	120	0	0		

Sample ID	0809195-001AMS	SampType:	MS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/12/2008	Run ID:	ICPMS2_080912D
Client ID:	PS-210	Batch ID:	13369	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/13/2008	SeqNo:	498573

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.5078	0.00100	0.5	0.1078	80	75	125	0	0		
Lead	0.479	0.00500	0.5	0.02902	90	75	125	0	0		
Mercury	0.01665	0.000200	0.02	0.0001507	82.5	75	125	0	0		

Sample ID	0809379-001CMS	SampType:	MS	TestCode:	6020_TCLP	Units:	mg/L	Prep Date:	9/25/2008	Run ID:	ICPMS2_080927C
Client ID:	ZZZZZ	Batch ID:	13474	TestNo:	SW6020		(SW3005A)	Analysis Date:	9/27/2008	SeqNo:	502306

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4578	0.00520	0.5	0.00547	90.5	75	125	0	0		
Barium	0.8161	0.00520	0.5	0.3511	93	75	125	0	0		
Cadmium	0.3824	0.00104	0.5	0.0009564	76.3	75	125	0	0		
Chromium	0.4924	0.00520	0.5	0.01065	96.4	75	125	0	0		
Lead	0.431	0.00520	0.5	0.02877	80.4	75	125	0	0		
Mercury	0.0167	0.000208	0.02	0.0002204	82.4	75	125	0	0		
Selenium	0.4401	0.00520	0.5	0.00491	87	75	125	0	0		
Silver	0.06233	0.00520	0.5	0	12.5	75	125	0	0		S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001296

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **PS-217** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502315**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4785	0.00520	0.5	0.002903	95.1	75	125	0	0		
Barium	0.6814	0.00520	0.5	0.2006	96.2	75	125	0	0		
Cadmium	0.7662	0.00104	0.5	0.3828	76.7	75	125	0	0		
Chromium	0.3824	0.00520	0.5	0	76.5	75	125	0	0		
Lead	1.779	0.00520	0.5	1.306	94.7	75	125	0	0		
Mercury	0.01664	0.000208	0.02	0.0001562	82.4	75	125	0	0		
Selenium	0.564	0.00520	0.5	0.005883	112	75	125	0	0		
Silver	0.09422	0.00520	0.5	0.009738	16.9	75	125	0	0		S

Sample ID **0809195-001AMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/12/2008** Run ID: **ICPMS2_080912D**
Client ID: **PS-210** Batch ID: **13369** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/13/2008** SeqNo: **498574**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.5336	0.00100	0.5	0.1078	85.2	75	125	0.5078	4.95	20	
Lead	0.4865	0.00500	0.5	0.02902	91.5	75	125	0.479	1.55	20	
Mercury	0.01744	0.000200	0.02	0.0001507	86.4	75	125	0.01665	4.63	20	

Sample ID **0809379-001CMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **ZZZZZ** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/27/2008** SeqNo: **502309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4677	0.00520	0.5	0.00547	92.4	75	125	0.4578	2.14	20	
Barium	0.8187	0.00520	0.5	0.3511	93.5	75	125	0.8161	0.318	20	
Cadmium	0.3869	0.00104	0.5	0.0009564	77.2	75	125	0.3824	1.16	20	
Chromium	0.5007	0.00520	0.5	0.01065	98	75	125	0.4924	1.65	20	
Lead	0.444	0.00520	0.5	0.02877	83	75	125	0.431	2.97	20	
Mercury	0.01614	0.000208	0.02	0.0002204	79.6	75	125	0.0167	3.42	20	
Selenium	0.4462	0.00520	0.5	0.00491	88.2	75	125	0.4401	1.36	20	
Silver	0.06417	0.00520	0.5	0	12.8	75	125	0.06233	2.91	20	S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

FHRPRU001297

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_TCLP

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **6020_TCLP** Units: **mg/L** Prep Date: **9/25/2008** Run ID: **ICPMS2_080927C**
Client ID: **PS-217** Batch ID: **13474** TestNo: **SW6020** **(SW3005A)** Analysis Date: **9/28/2008** SeqNo: **502316**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.4791	0.00520	0.5	0.002903	95.2	75	125	0.4785	0.130	20	
Barium	0.697	0.00520	0.5	0.2006	99.3	75	125	0.6814	2.26	20	
Cadmium	0.7666	0.00104	0.5	0.3828	76.8	75	125	0.7662	0.0543	20	
Chromium	0.3798	0.00520	0.5	0	76	75	125	0.3824	0.682	20	
Lead	1.798	0.00520	0.5	1.306	98.4	75	125	1.779	1.05	20	
Mercury	0.01656	0.000208	0.02	0.0001562	82	75	125	0.01664	0.501	20	
Selenium	0.5634	0.00520	0.5	0.005883	111	75	125	0.564	0.111	20	
Silver	0.1002	0.00520	0.5	0.009738	18.1	75	125	0.09422	6.10	20	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001298

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **MBT-13461** SampType: **MBLK** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	U	25.0									
1,2-Dichloroethane	U	25.0									
1,4-Dichlorobenzene	U	25.0									
2-Butanone	U	25.0									
Benzene	U	25.0									
Carbon tetrachloride	U	25.0									
Chlorobenzene	U	25.0									
Chloroform	U	25.0									
Tetrachloroethene	U	25.0									
Trichloroethene	U	25.0									
Vinyl chloride	U	20.0									
Surr: 1,2-Dichloroethane-d4	51.34	0	50	0	103	86	125	0	0		
Surr: 4-Bromofluorobenzene	48.75	0	50	0	97.5	67	133	0	0		
Surr: Toluene-d8	51.09	0	50	0	102	81	116	0	0		

Sample ID **LCST-13461** SampType: **LCS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	50.38	25.0	50	0	101	70	130	0	0		
1,2-Dichloroethane	49.03	25.0	50	0	98.1	70	130	0	0		
1,4-Dichlorobenzene	44.74	25.0	50	0	89.5	70	130	0	0		
2-Butanone	95.74	25.0	100	0	95.7	70	130	0	0		
Benzene	49.52	25.0	50	0	99	70	130	0	0		
Carbon tetrachloride	48.31	25.0	50	0	96.6	70	130	0	0		
Chlorobenzene	47.72	25.0	50	0	95.4	70	130	0	0		
Chloroform	48.33	25.0	50	0	96.7	70	130	0	0		
Tetrachloroethene	49.36	25.0	50	0	98.7	70	130	0	0		
Trichloroethene	47.59	25.0	50	0	95.2	70	130	0	0		
Vinyl chloride	51.92	20.0	50	0	104	70	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.8	0	50	0	102	86	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001299

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **LCST-13461** SampType: **LCS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	49.15	0	50	0	98.3	67	133	0	0		
Surr: Toluene-d8	51.64	0	50	0	103	81	116	0	0		

Sample ID **LCSDT-13461** SampType: **LCSD** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **ZZZZZ** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.58	25.0	50	0	97.2	70	130	50.38	3.64	20	
1,2-Dichloroethane	48.28	25.0	50	0	96.6	70	130	49.03	1.54	20	
1,4-Dichlorobenzene	45	25.0	50	0	90	70	130	44.74	0.579	20	
2-Butanone	97.72	25.0	100	0	97.7	70	130	95.74	2.05	20	
Benzene	47.43	25.0	50	0	94.9	70	130	49.52	4.31	20	
Carbon tetrachloride	46.66	25.0	50	0	93.3	70	130	48.31	3.47	20	
Chlorobenzene	46.64	25.0	50	0	93.3	70	130	47.72	2.29	20	
Chloroform	46.86	25.0	50	0	93.7	70	130	48.33	3.09	20	
Tetrachloroethene	47.81	25.0	50	0	95.6	70	130	49.36	3.19	20	
Trichloroethene	46.1	25.0	50	0	92.2	70	130	47.59	3.18	20	
Vinyl chloride	49.91	20.0	50	0	99.8	70	130	51.92	3.95	20	
Surr: 1,2-Dichloroethane-d4	50.8	0	50	0	102	86	125	0	0	0	
Surr: 4-Bromofluorobenzene	49.1	0	50	0	98.2	67	133	0	0	0	
Surr: Toluene-d8	51.84	0	50	0	104	81	116	0	0	0	

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	242.2	125	250	0	96.9	70	130	0	0		
2-Butanone	489.1	125	500	0	97.8	70	130	0	0		
Carbon tetrachloride	236.8	125	250	0	94.7	70	130	0	0		
Chlorobenzene	234.8	125	250	0	93.9	70	130	0	0		
Chloroform	238.8	125	250	0	95.5	70	130	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001300

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260B/VOA_TCLP

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	225.8	125	250	0	90.3	70	130	0	0		
1,2-Dichloroethane	242.8	125	250	0	97.1	70	130	0	0		
1,1-Dichloroethene	250.7	125	250	0	100	70	130	0	0		
Tetrachloroethene	244.6	125	250	0	97.8	70	130	0	0		
Trichloroethene	233.4	125	250	0	93.4	70	130	0	0		
Vinyl chloride	255.6	100	250	0	102	70	130	0	0		
Surr: 4-Bromofluorobenzene	245.8	0	250	0	98.3	67	133	0	0		
Surr: 1,2-Dichloroethane-d4	253.8	0	250	0	102	86	125	0	0		
Surr: Toluene-d8	258.2	0	250	0	103	81	116	0	0		

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **8260B/VOA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS4_080924B**
Client ID: **PS-217** Batch ID: **13461** TestNo: **SW8260B** **(SW5030B)** Analysis Date: **9/25/2008** SeqNo: **501493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	236	125	250	0	94.4	70	130	242.2	2.59	20	
2-Butanone	470	125	500	0	94	70	130	489.1	3.97	20	
Carbon tetrachloride	230.5	125	250	0	92.2	70	130	236.8	2.68	20	
Chlorobenzene	230.4	125	250	0	92.2	70	130	234.8	1.89	20	
Chloroform	234.6	125	250	0	93.9	70	130	238.8	1.73	20	
1,4-Dichlorobenzene	225.4	125	250	0	90.1	70	130	225.8	0.199	20	
1,2-Dichloroethane	238	125	250	0	95.2	70	130	242.8	1.98	20	
1,1-Dichloroethene	251.6	125	250	0	101	70	130	250.7	0.378	20	
Tetrachloroethene	231.2	125	250	0	92.5	70	130	244.6	5.59	20	
Trichloroethene	224.4	125	250	0	89.8	70	130	233.4	3.93	20	
Vinyl chloride	243.4	100	250	0	97.4	70	130	255.6	4.89	20	
Surr: 4-Bromofluorobenzene	248.6	0	250	0	99.4	67	133	0	0	0	
Surr: 1,2-Dichloroethane-d4	254.8	0	250	0	102	86	125	0	0	0	
Surr: Toluene-d8	258.1	0	250	0	103	81	116	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001301

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **MBT-13470** SampType: **MBLK** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	U	10.0									
2,4,6-Trichlorophenol	U	10.0									
2,4-Dinitrotoluene	U	10.0									
2-Methylphenol	U	10.0									
3 & 4-Methylphenol	U	20.0									
Hexachlorobenzene	U	10.0									
Hexachlorobutadiene	U	10.0									
Hexachloroethane	U	10.0									
Nitrobenzene	U	10.0									
Pentachlorophenol	U	50.0									
Pyridine	U	50.0									
Surr: 2,4,6-Tribromophenol	15.4	0	30	0	51.3	20	100	0	0		
Surr: 2-Fluorobiphenyl	13.54	0	20	0	67.7	38	149	0	0		
Surr: 2-Fluorophenol	8.78	0	30	0	29.3	12	95	0	0		
Surr: 4-Terphenyl-d14	15.54	0	20	0	77.7	42	137	0	0		
Surr: Nitrobenzene-d5	12.97	0	20	0	64.8	42	156	0	0		
Surr: Phenol-d6	6.44	0	30	0	21.5	15	90	0	0		

Sample ID **LCST-13470** SampType: **LCS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	16.26	10.0	20	0	81.3	50	150	0	0		
2,4,6-Trichlorophenol	17.74	10.0	20	0	88.7	50	150	0	0		
2,4-Dinitrotoluene	16.92	10.0	20	0	84.6	50	150	0	0		
2-Methylphenol	12.4	10.0	20	0	62	60	140	0	0		
3 & 4-Methylphenol	48.56	20.0	40	0	121	60	140	0	0		
Hexachlorobenzene	18.03	10.0	20	0	90.2	60	140	0	0		
Hexachlorobutadiene	12.08	10.0	20	0	60.4	60	140	0	0		
Hexachloroethane	13.01	10.0	20	0	65	60	140	0	0		
Nitrobenzene	15.56	10.0	20	0	77.8	60	140	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001302

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **LCST-13470** SampType: **LCS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachlorophenol	16.11	50.0	20	0	80.6	30	170	0	0		J
Pyridine	8.87	50.0	20	0	44.4	25	125	0	0		J
Surr: 2,4,6-Tribromophenol	15.43	0	30	0	51.4	20	100	0	0		
Surr: 2-Fluorobiphenyl	13.77	0	20	0	68.8	38	149	0	0		
Surr: 2-Fluorophenol	8.68	0	30	0	28.9	12	95	0	0		
Surr: 4-Terphenyl-d14	15.57	0	20	0	77.8	42	137	0	0		
Surr: Nitrobenzene-d5	13.49	0	20	0	67.5	42	156	0	0		
Surr: Phenol-d6	6.47	0	30	0	21.6	15	90	0	0		

Sample ID **LCSDT-13470** SampType: **LCSD** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **ZZZZZ** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501604**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	15.51	10.0	20	0	77.6	50	150	16.26	4.72	20	
2,4,6-Trichlorophenol	17.79	10.0	20	0	89	50	150	17.74	0.281	20	
2,4-Dinitrotoluene	16.85	10.0	20	0	84.2	50	150	16.92	0.415	38	
2-Methylphenol	13.06	10.0	20	0	65.3	60	140	12.4	5.18	20	
3 & 4-Methylphenol	50.24	20.0	40	0	126	60	140	48.56	3.40	20	
Hexachlorobenzene	18.1	10.0	20	0	90.5	60	140	18.03	0.387	20	
Hexachlorobutadiene	12.51	10.0	20	0	62.6	60	140	12.08	3.50	20	
Hexachloroethane	13.67	10.0	20	0	68.4	60	140	13.01	4.95	20	
Nitrobenzene	15.64	10.0	20	0	78.2	60	140	15.56	0.513	20	
Pentachlorophenol	16.1	50.0	20	0	80.5	30	170	16.11	0	25	J
Pyridine	8.76	50.0	20	0	43.8	25	125	8.87	0	20	J
Surr: 2,4,6-Tribromophenol	15.54	0	30	0	51.8	20	100	0	0	0	
Surr: 2-Fluorobiphenyl	13.19	0	20	0	66	38	149	0	0	0	
Surr: 2-Fluorophenol	8.07	0	30	0	26.9	12	95	0	0	0	
Surr: 4-Terphenyl-d14	15.87	0	20	0	79.4	42	137	0	0	0	
Surr: Nitrobenzene-d5	12.87	0	20	0	64.4	42	156	0	0	0	
Surr: Phenol-d6	6.02	0	30	0	20.1	15	90	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001303

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID **0809195-004BMS** SampType: **MS** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **PS-217** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501606**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	72.85	50.0	100	0	72.8	50	150	0	0		
2,4,6-Trichlorophenol	79.35	50.0	100	0	79.4	50	150	0	0		
2,4-Dinitrotoluene	80.4	50.0	100	0	80.4	50	150	0	0		
2-Methylphenol	61.55	50.0	100	0	61.6	60	140	0	0		
3 & 4-Methylphenol	237.7	100	200	0	119	60	140	0	0		
Hexachlorobenzene	87	50.0	100	0	87	60	140	0	0		
Hexachlorobutadiene	58.65	50.0	100	0	58.6	60	140	0	0		S
Hexachloroethane	61.75	50.0	100	0	61.8	60	140	0	0		
Nitrobenzene	74.05	50.0	100	0	74	60	140	0	0		
Pentachlorophenol	83.85	250	100	0	83.8	30	170	0	0		J
Pyridine	38.3	250	100	0	38.3	25	125	0	0		J
Surr: 2,4,6-Tribromophenol	76.3	0	150	0	50.9	20	100	0	0		
Surr: 2-Fluorobiphenyl	63.85	0	100	0	63.8	38	149	0	0		
Surr: 2-Fluorophenol	39.5	0	150	0	26.3	12	95	0	0		
Surr: 4-Terphenyl-d14	77.9	0	100	0	77.9	42	137	0	0		
Surr: Nitrobenzene-d5	61.4	0	100	0	61.4	42	156	0	0		
Surr: Phenol-d6	30.35	0	150	0	20.2	15	90	0	0		

Sample ID **0809195-004BMSD** SampType: **MSD** TestCode: **8270C/BNA_** Units: **µg/L** Prep Date: **9/24/2008** Run ID: **GCMS1_080924A**
Client ID: **PS-217** Batch ID: **13470** TestNo: **SW8270C** **(SW3510C)** Analysis Date: **9/24/2008** SeqNo: **501607**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	75.15	50.0	100	0	75.2	50	150	72.85	3.11	20	
2,4,6-Trichlorophenol	75.8	50.0	100	0	75.8	50	150	79.35	4.58	20	
2,4-Dinitrotoluene	78.9	50.0	100	0	78.9	50	150	80.4	1.88	38	
2-Methylphenol	60.65	50.0	100	0	60.6	60	140	61.55	1.47	20	
3 & 4-Methylphenol	236.4	100	200	0	118	60	140	237.7	0.548	20	
Hexachlorobenzene	86.2	50.0	100	0	86.2	60	140	87	0.924	20	
Hexachlorobutadiene	60.5	50.0	100	0	60.5	60	140	58.65	3.11	20	
Hexachloroethane	64.1	50.0	100	0	64.1	60	140	61.75	3.73	20	
Nitrobenzene	73	50.0	100	0	73	60	140	74.05	1.43	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

FHRPRU001304

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270C/BNA_TCLP

Sample ID	0809195-004BMSD	SampType:	MSD	TestCode:	8270C/BNA_	Units:	µg/L	Prep Date:	9/24/2008	Run ID:	GCMS1_080924A
Client ID:	PS-217	Batch ID:	13470	TestNo:	SW8270C		(SW3510C)	Analysis Date:	9/24/2008	SeqNo:	501607

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachlorophenol	84	250	100	0	84	30	170	83.85	0	25	J
Pyridine	23.9	250	100	0	23.9	25	125	38.3	0	20	JS
Surr: 2,4,6-Tribromophenol	75.45	0	150	0	50.3	20	100	0	0	0	
Surr: 2-Fluorobiphenyl	62.2	0	100	0	62.2	38	149	0	0	0	
Surr: 2-Fluorophenol	38.9	0	150	0	25.9	12	95	0	0	0	
Surr: 4-Terphenyl-d14	82.1	0	100	0	82.1	42	137	0	0	0	
Surr: Nitrobenzene-d5	60.85	0	100	0	60.8	42	156	0	0	0	
Surr: Phenol-d6	29.25	0	150	0	19.5	15	90	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001305

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9014/CN-RX_S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
MB-13466	MBLK	9014/CN-RX_	mg/Kg	9/24/2008	SPEC2_080924A
Client ID: ZZZZZ	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501414

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	U	1.25	0	0	0	0	0	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS-13466	LCS	9014/CN-RX_	mg/Kg	9/24/2008	SPEC2_080924A
Client ID: ZZZZZ	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501416

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	0.985	1.25	1.25	0	78.8	20	120	0	0		J

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS2-13466	LCS	9014/CN-RX_	mg/Kg	9/24/2008	SPEC2_080924A
Client ID: ZZZZZ	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501417

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.72	1.25	2.5	0	68.8	20	120	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MS	MS	9014/CN-RX_	mg/Kg-dry	9/24/2008	SPEC2_080924A
Client ID: PS-217	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501420

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.709	1.24	2.484	0	68.8	20	120	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MSD	MSD	9014/CN-RX_	mg/Kg-dry	9/24/2008	SPEC2_080924A
Client ID: PS-217	Batch ID: 13466	TestNo: SW9014	(SW7.3.3.2)	Analysis Date: 9/24/2008	SeqNo: 501421

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	1.421	1.30	2.602	0	54.6	20	120	1.709	18.4	0	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001306

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9014/CN_S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
MB-13469	MBLK	9014/CN_S	mg/Kg	9/24/2008	SPEC2_080924B
Client ID: ZZZZZ	Batch ID: 13469	TestNo: SW9014	(SW9010B)	Analysis Date: 9/24/2008	SeqNo: 501432

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	U	0.500	0	0	0	0	0	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS-13469	LCS	9014/CN_S	mg/Kg	9/24/2008	SPEC2_080924B
Client ID: ZZZZZ	Batch ID: 13469	TestNo: SW9014	(SW9010B)	Analysis Date: 9/24/2008	SeqNo: 501433

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	1.095	0.500	1.25	0	87.6	80	120	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS2-13469	LCS	9014/CN_S	mg/Kg	9/24/2008	SPEC2_080924B
Client ID: ZZZZZ	Batch ID: 13469	TestNo: SW9014	(SW9010B)	Analysis Date: 9/24/2008	SeqNo: 501434

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.235	0.500	2.5	0	89.4	80	120	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MS	MS	9014/CN_S	mg/Kg-dry	9/24/2008	SPEC2_080924B
Client ID: PS-217	Batch ID: 13469	TestNo: SW9014	(SW9010B)	Analysis Date: 9/24/2008	SeqNo: 501438

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.701	0.520	2.602	0.3464	90.5	80	120	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MSD	MSD	9014/CN_S	mg/Kg-dry	9/24/2008	SPEC2_080924B
Client ID: PS-217	Batch ID: 13469	TestNo: SW9014	(SW9010B)	Analysis Date: 9/24/2008	SeqNo: 501440

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	2.397	0.515	2.577	0.3464	79.6	80	120	2.701	11.9	20	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001307

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9034/S-RX_S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
MB-13480	MBLK	9034/S-RX_S	mg/Kg	9/25/2008	BURET1_080925B
Client ID: ZZZZZ	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501682

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	U	9.50	0	0	0	0	0	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS-13480	LCS	9034/S-RX_S	mg/Kg	9/25/2008	BURET1_080925B
Client ID: ZZZZZ	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501684

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	112.8	9.50	253.5	0	44.5	30	100	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MS	MS	9034/S-RX_S	mg/Kg-dry	9/25/2008	BURET1_080925B
Client ID: PS-217	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501688

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	114.2	10.5	253.5	0	45	30	100	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MSD	MSD	9034/S-RX_S	mg/Kg-dry	9/25/2008	BURET1_080925B
Client ID: PS-217	Batch ID: 13480	TestNo: SW9034	(SW7.3.4.2)	Analysis Date: 9/25/2008	SeqNo: 501690

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	10	10.9	253.5	0	3.94	30	100	114.2	0	0	JS

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

FHRPRU001308

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9034/S_S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
MB-13479	MBLK	9034/S_S	mg/Kg	9/25/2008	BURET1_080925A
Client ID: ZZZZZ	Batch ID: 13479	TestNo: SW9034	(SW9030B)	Analysis Date: 9/25/2008	SeqNo: 501664

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	U	10.0	0	0	0	0	0	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCS-13479	LCS	9034/S_S	mg/Kg	9/25/2008	BURET1_080925A
Client ID: ZZZZZ	Batch ID: 13479	TestNo: SW9034	(SW9030B)	Analysis Date: 9/25/2008	SeqNo: 501665

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	201.9	10.0	253.6	0	79.6	70	130	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
LCSD-13479	LCSD	9034/S_S	mg/Kg	9/25/2008	BURET1_080925A
Client ID: ZZZZZ	Batch ID: 13479	TestNo: SW9034	(SW9030B)	Analysis Date: 9/25/2008	SeqNo: 501666

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	193.1	10.0	253.6	0	76.1	70	130	0	0		

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MS	MS	9034/S_S	mg/Kg-dry	9/25/2008	BURET1_080925A
Client ID: PS-217	Batch ID: 13479	TestNo: SW9034	(SW9030B)	Analysis Date: 9/25/2008	SeqNo: 501668

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	132.5	11.0	255	0	52	70	130	0	0		S

Sample ID	SampType	TestCode	Units	Prep Date	Run ID
0809195-004B MSD	MSD	9034/S_S	mg/Kg-dry	9/25/2008	BURET1_080925A
Client ID: PS-217	Batch ID: 13479	TestNo: SW9034	(SW9030B)	Analysis Date: 9/25/2008	SeqNo: 501669

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfide	93.39	10.8	251	0	37.2	70	130	132.5	34.6	0	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001309

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045C/PH_S

Sample ID	0809195-004B DUP	SampType:	DUP	TestCode:	9045C/PH_S	Units:	pH Units	Prep Date:		Run ID:	METER1_080923A
Client ID:	PS-217	Batch ID:	R27630	TestNo:	SW9045C			Analysis Date:	9/23/2008	SeqNo:	501175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.501	0.0100	0	0	0	0	0	7.471	0.401	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001310

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: 9065(M)/PHEN_S

Sample ID	MB	SampType:	MBLK	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	U	5.00	0	0	0	0	0	0	0		

Sample ID	LCS1	SampType:	LCS	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502578

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	10.94	5.00	12.5	0	87.6	80	120	0	0		

Sample ID	LCS2	SampType:	LCS	TestCode:	9065(M)/PHE	Units:	mg/Kg	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	ZZZZZ	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	22.68	5.00	25	0	90.7	80	120	0	0		

Sample ID	0809195-004B MS	SampType:	MS	TestCode:	9065(M)/PHE	Units:	mg/Kg-dry	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	PS-217	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502581

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	23.24	5.25	26.27	0	88.5	80	120	0	0		

Sample ID	0809195-004B MSD	SampType:	MSD	TestCode:	9065(M)/PHE	Units:	mg/Kg-dry	Prep Date:	9/26/2008	Run ID:	SPEC2_080926B
Client ID:	PS-217	Batch ID:	R27726	TestNo:	SW9065(M)			Analysis Date:	9/26/2008	SeqNo:	502582

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	21.25	5.06	25.3	0	84	80	120	23.24	8.94	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001311

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: PMOIST

Sample ID	MB-R27481	SampType:	MBLK	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080912A
Client ID:	ZZZZZ	Batch ID:	R27481	TestNo:	D2216			Analysis Date:	9/12/2008	SeqNo:	498842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	U	0.0100									

Sample ID	MB-R27695	SampType:	MBLK	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080926A
Client ID:	ZZZZZ	Batch ID:	R27695	TestNo:	D2216			Analysis Date:	9/26/2008	SeqNo:	501971

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	U	0.0100									

Sample ID	0809195-020ADUP	SampType:	DUP	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080912A
Client ID:	PS-286	Batch ID:	R27481	TestNo:	D2216			Analysis Date:	9/12/2008	SeqNo:	498863

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	17.19	0.0100	0	0	0	0	0	15.34	11.4	20	

Sample ID	0809427-008D DUP	SampType:	DUP	TestCode:	PMOIST	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080926A
Client ID:	ZZZZZ	Batch ID:	R27695	TestNo:	D2216			Analysis Date:	9/26/2008	SeqNo:	501996

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.49	0.0100	0	0	0	0	0	14.31	1.25	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001312

CLIENT: Flint Hills Resources
Work Order: 0809195
Project: RCRA Parameters

ANALYTICAL QC SUMMARY REPORT

TestCode: PSOLID

Sample ID	0809195-004B DUP	SampType:	DUP	TestCode:	PSOLID	Units:	wt%	Prep Date:		Run ID:	BALANCE2_080926A
Client ID:	PS-217	Batch ID:	R27695	TestNo:	D2216			Analysis Date:	9/26/2008	SeqNo:	501999

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Solids	9.4	0.0100	0	0	0	0	0	8.29	12.5	20	H

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

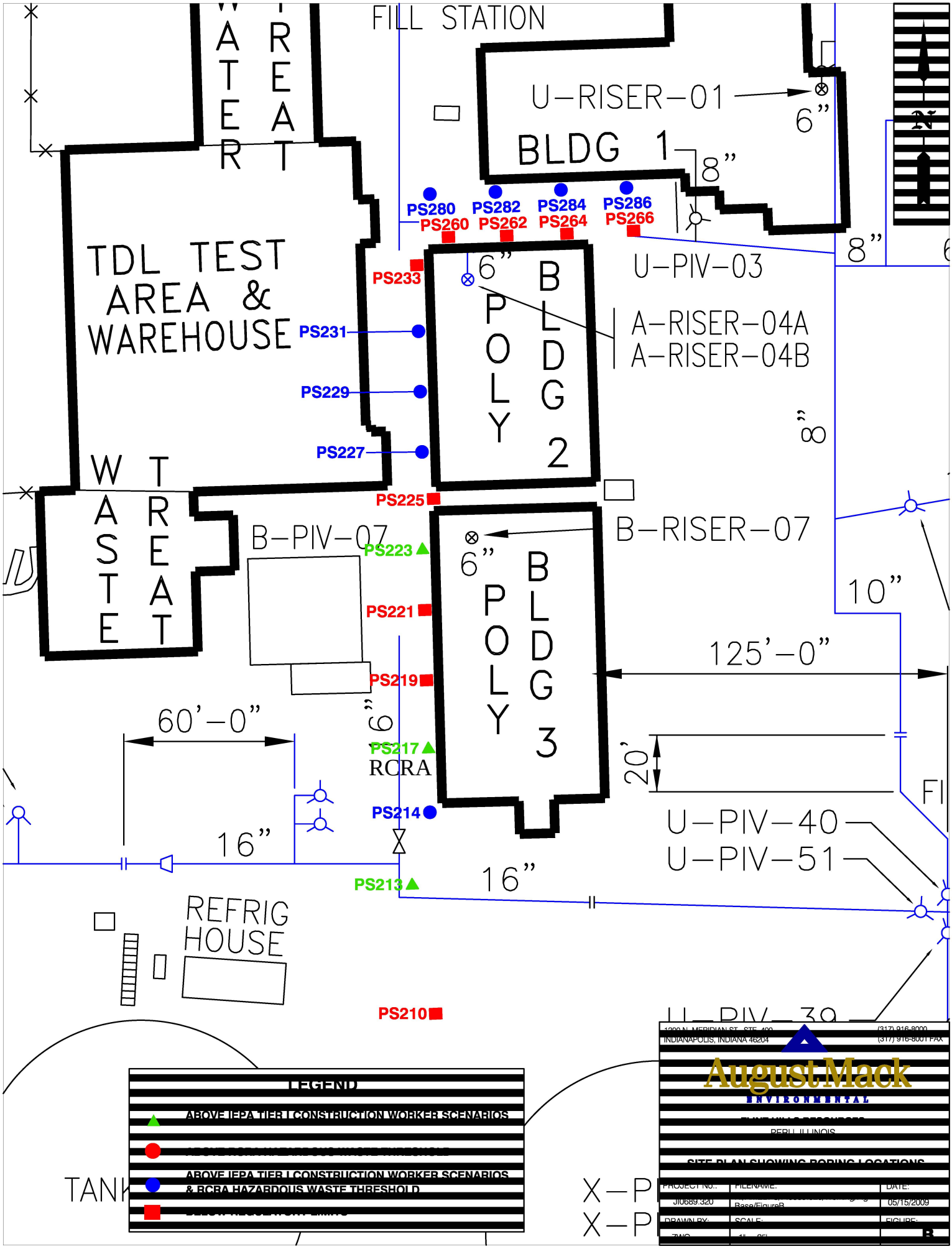
FHRPRU001313

ANALYTICAL QC SUMMARY REPORT

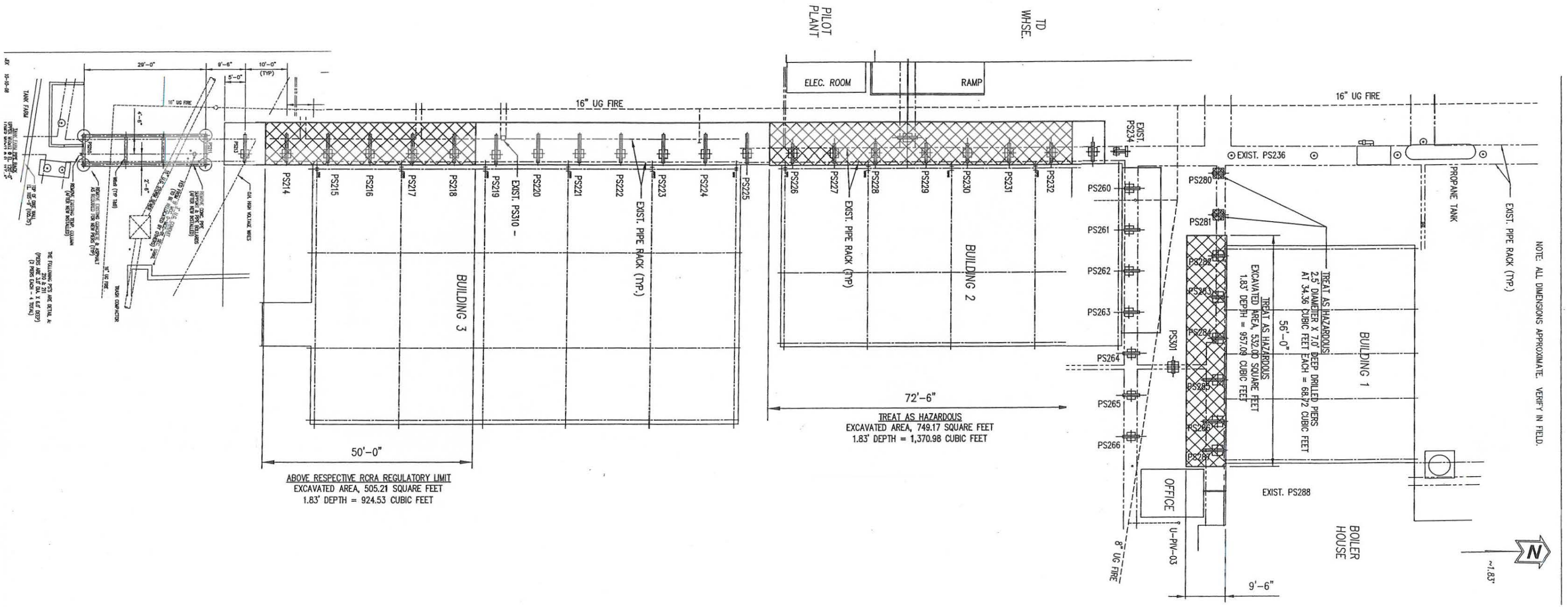
TestCode: SUBK_REPORT

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

FHRPRU001314



FHRPRU001315



NEW PIPERACK PLAN

DESIGNED BY: JIM KOCIUBA

FHRPRU001316

Total Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	532.00	*5 support columns*	
NORTH OF B2	368.33	*4 support columns*	
WEST OF B2	842.17	*8 support columns*	
WEST OF B3	1,101.35	*11 support columns*	
SW OF B3	216.02	*2 support columns*	
Total SF	3,059.88		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	5,609.78		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	206.17	6	34.36
3.0' x 6.0' piers - CF	169.65	4	42.41
Total CF	**5,985.59**		
CF vs CY	27		
Total CY	**221.69**		
15 CY truck	15		
Number of Trucks	14.78		
Adjusted number of Trucks	15		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	3,059.88		
Nominal Fill Depth in Feet	0.50		
Total CF	1,529.94		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

Above RCRA - Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	532.00		
NORTH OF B2	-		
WEST OF B2	749.17		
WEST OF B3	505.21		
SW OF B3	-		
Total SF	1,786.38		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	3,275.02		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	68.72	2	34.36
3.0' x 6.0' piers - CF	-	0	42.41
Total CF	**3,343.74**		
CF vs CY	27		
Total CY	**123.84**		
15 CY truck	15		
Number of Trucks	8.26		
Adjusted number of Trucks	9		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	1,786.38		
Nominal Fill Depth in Feet	0.50		
Total CF	893.19		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

Non Hazardous - Soil Removal Quantity (Estimated)
For North-South Pipe Rack Construction

Location	*SF*		
SOUTH OF B1	-		
NORTH OF B2	368.33		
WEST OF B2	93.00		
WEST OF B3	596.15		
SW OF B3	216.02		
Total SF	1,273.50		
Nominal Excavation Depth in Feet	1.83	*<< 1.33' + 0.50'*	
Sub-Total CF	2,334.76		
		QTY.	CF EACH
2.5' x 7.0' piers - CF	137.45	4	34.36
3.0' x 6.0' piers - CF	169.65	4	42.41
Total CF	**2,641.85**		
CF vs CY	27		
Total CY	**97.85**		
15 CY truck	15		
Number of Trucks	6.52		
Adjusted number of Trucks	7		
SF = Square Feet, CF = Cubic Feet, CY = Cubic Yards			
Minimum Concrete Mat Thickness is 1.33' (1'-4")			
Minimum CA-6 Fill is 0.50' (6")			

Compacted CA-6 Fill under Mat Quantity (Estimated)

	6" Fill	*<< Minimum Fill Quantity*	
Total SF	1,273.50		
Nominal Fill Depth in Feet	0.50		
Total CF	636.75		
The (10) ten Piers will be augered. No fill will be used.			
Actual amount of fill to be used to be determined at time of compaction.			

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-001 **Collection Date:** 9/11/2008 11:30:00 AM
Client Sample ID: PS-210 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	4.41	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Lead	39.0	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Mercury	U	0.108		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Zinc	1240	541		mg/Kg-dry	500	9/13/2008 8:47:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.108	0.0010		mg/L	1	9/13/2008 8:24:00 AM
Lead	0.0290	0.0050		mg/L	1	9/13/2008 8:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 8:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	7.75	0.01		wt%	1	9/12/2008

Lab ID: 0809195-002 **Collection Date:** 9/11/2008 11:55:00 AM
Client Sample ID: PS-213 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	13.7	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Lead	141	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Mercury	0.196	0.111		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Zinc	6690	555		mg/Kg-dry	500	9/13/2008 8:57:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.339	0.0010		mg/L	1	9/13/2008 9:40:00 AM
Lead	0.345	0.0050		mg/L	1	9/13/2008 9:40:00 AM
Mercury	0.0004	0.0002		mg/L	1	9/13/2008 9:40:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	10.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-003 **Collection Date:** 9/11/2008 10:40:00 AM
Client Sample ID: PS-214 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	76.3	0.578		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Lead	1410	145		mg/Kg-dry	500	9/13/2008 9:06:00 PM
Mercury	0.286	0.116		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Zinc	16800	578		mg/Kg-dry	500	9/13/2008 9:06:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.61	0.0010		mg/L	1	9/13/2008 9:49:00 AM
Lead	4.34	0.0050		mg/L	1	9/13/2008 9:49:00 AM
Mercury	0.0003	0.0002		mg/L	1	9/13/2008 9:49:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.7	0.01		wt%	1	9/12/2008

Lab ID: 0809195-004 **Collection Date:** 9/11/2008 10:30:00 AM
Client Sample ID: PS-217 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	14.6	0.549		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Lead	1930	137		mg/Kg-dry	500	9/13/2008 9:16:00 PM
Mercury	0.208	0.110		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Zinc	7830	549		mg/Kg-dry	500	9/13/2008 9:16:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.451	0.0010		mg/L	1	9/13/2008 9:58:00 AM
Lead	25.6	0.250		mg/L	50	9/13/2008 2:36:00 PM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 9:58:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	8.49	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-005 **Collection Date:** 9/11/2008 10:20:00 AM
Client Sample ID: PS-219 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	27.8	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Lead	377	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Mercury	0.139	0.112		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Zinc	7080	560		mg/Kg-dry	500	9/13/2008 9:55:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.583	0.0010		mg/L	1	9/13/2008 10:08:00 AM
Lead	0.603	0.0050		mg/L	1	9/13/2008 10:08:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:08:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.7	0.01		wt%	1	9/12/2008

Lab ID: 0809195-006 **Collection Date:** 9/11/2008 10:00:00 AM
Client Sample ID: PS-221 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	10.0	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Lead	309	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Mercury	U	0.113		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Zinc	4440	567		mg/Kg-dry	500	9/13/2008 10:04:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.143	0.0010		mg/L	1	9/13/2008 10:17:00 AM
Lead	0.118	0.0050		mg/L	1	9/13/2008 10:17:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:17:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-007 **Collection Date:** 9/10/2008 6:10:00 PM
Client Sample ID: PS-223 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	25.9	0.581		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Lead	1480	145		mg/Kg-dry	500	9/13/2008 10:14:00 PM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Zinc	9330	581		mg/Kg-dry	500	9/13/2008 10:14:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.375	0.0010		mg/L	1	9/13/2008 10:27:00 AM
Lead	2.41	0.0050		mg/L	1	9/13/2008 10:27:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:27:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-008 **Collection Date:** 9/10/2008 5:50:00 PM
Client Sample ID: PS-225 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.4	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Lead	73.3	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Mercury	U	0.120		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Zinc	1230	600		mg/Kg-dry	500	9/13/2008 10:24:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.102	0.0010		mg/L	1	9/13/2008 10:36:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 10:36:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:36:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-009 **Collection Date:** 9/10/2008 5:35:00 PM
Client Sample ID: PS-227 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	57.3	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Lead	1070	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Zinc	11200	581		mg/Kg-dry	500	9/13/2008 10:33:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.72	0.0010		mg/L	1	9/13/2008 10:46:00 AM
Lead	5.32	0.0050		mg/L	1	9/13/2008 10:46:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:46:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-010 **Collection Date:** 9/10/2008 5:20:00 PM
Client Sample ID: PS-229 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	88.1	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Lead	356	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Mercury	0.115	0.106		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Zinc	12800	532		mg/Kg-dry	500	9/13/2008 10:43:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	3.41	0.0010		mg/L	1	9/13/2008 11:24:00 AM
Lead	0.564	0.0050		mg/L	1	9/13/2008 11:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.5	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-011 **Collection Date:** 9/10/2008 5:00:00 PM
Client Sample ID: PS-231 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	69.1	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Lead	851	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Mercury	U	0.115		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Zinc	17000	575		mg/Kg-dry	500	9/13/2008 10:53:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.75	0.0010		mg/L	1	9/13/2008 11:34:00 AM
Lead	0.194	0.0050		mg/L	1	9/13/2008 11:34:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:34:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-012 **Collection Date:** 9/10/2008 4:40:00 PM
Client Sample ID: PS-233 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	8.49	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Lead	76.2	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Mercury	U	0.122		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Zinc	1800	611		mg/Kg-dry	500	9/13/2008 11:02:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.145	0.0010		mg/L	1	9/13/2008 11:43:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:43:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:43:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-013 **Collection Date:** 9/10/2008 3:55:00 PM
Client Sample ID: PS-260 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.426	0.349		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Lead	8.39	0.513		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Zinc	74.0	2.05		mg/Kg-dry	2	9/15/2008 2:26:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0124	0.0010		mg/L	1	9/13/2008 11:53:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:53:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:53:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	4.35	0.01		wt%	1	9/12/2008

Lab ID: 0809195-014 **Collection Date:** 9/10/2008 2:55:00 PM
Client Sample ID: PS-262 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.5	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Lead	61.1	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Zinc	1480	515		mg/Kg-dry	500	9/13/2008 11:51:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0741	0.0010		mg/L	1	9/13/2008 12:02:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:02:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:02:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-015 **Collection Date:** 9/10/2008 1:40:00 PM
Client Sample ID: PS-264 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	7.74	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Lead	39.2	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Mercury	U	0.110		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Zinc	634	550		mg/Kg-dry	500	9/14/2008
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.130	0.0010		mg/L	1	9/13/2008 12:12:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:12:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:12:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-016 **Collection Date:** 9/10/2008 12:50:00 PM
Client Sample ID: PS-266 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.528	0.517		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Lead	44.5	0.647		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Mercury	U	0.129		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Zinc	164	2.59		mg/Kg-dry	2	9/15/2008 3:22:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0201	0.0010		mg/L	1	9/13/2008 12:21:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:21:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:21:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	23.3	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-017 **Collection Date:** 9/10/2008 3:40:00 PM
Client Sample ID: PS-280 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	72.8	0.551		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Lead	1250	138		mg/Kg-dry	500	9/14/2008 12:20:00 AM
Mercury	0.325	0.110		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Zinc	17600	551		mg/Kg-dry	500	9/14/2008 12:20:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.76	0.0010		mg/L	1	9/13/2008 12:31:00 PM
Lead	3.12	0.0050		mg/L	1	9/13/2008 12:31:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:31:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	12.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-018 **Collection Date:** 9/10/2008 3:15:00 PM
Client Sample ID: PS-282 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	112	0.606		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Lead	2680	152		mg/Kg-dry	500	9/14/2008 12:29:00 AM
Mercury	0.273	0.121		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Zinc	28900	606		mg/Kg-dry	500	9/14/2008 12:29:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.78	0.0010		mg/L	1	9/13/2008 12:40:00 PM
Lead	4.38	0.0050		mg/L	1	9/13/2008 12:40:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:40:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.8	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *15-Sep-08*

CLIENT: Flint Hills Resources
Project: Flint Hills Resources

Lab Order: 0809195

Lab ID: 0809195-019 **Collection Date:** 9/10/2008 2:25:00 PM
Client Sample ID: PS-284 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	133	0.560		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Lead	1190	140		mg/Kg-dry	500	9/14/2008 12:39:00 AM
Mercury	U	0.112		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Zinc	15600	560		mg/Kg-dry	500	9/14/2008 12:39:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.83	0.0010		mg/L	1	9/13/2008 1:19:00 PM
Lead	1.00	0.0050		mg/L	1	9/13/2008 1:19:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:19:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-020 **Collection Date:** 9/10/2008 1:15:00 PM
Client Sample ID: PS-286 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	443	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Lead	1100	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Mercury	U	0.111		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Zinc	21900	554		mg/Kg-dry	500	9/14/2008 12:49:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	7.90	0.0500		mg/L	50	9/13/2008 2:46:00 PM
Lead	0.441	0.0050		mg/L	1	9/13/2008 1:28:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:28:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	15.3	0.01		wt%	1	9/12/2008

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

S - Spike recovery outside acceptance limits.

U - Analyte not detected (i.e. less than RL or MDL).

An Analytical Testing Laboratory

Prairie Analytical Systems, INCORPORATED

1210 Capital Airport Drive
Springfield, Illinois 62707
Phone: 217-753-1148
Fax: 217-753-1152
www.prairieanalytical.com

December 01, 2008

Mr. Ganesh Krish
Flint Hills Resources
501 Brunner Street
Peru, IL 61354

RE: RCRA Parameters PAS Order No.: 0809195

Dear Mr. Ganesh Krish:

Prairie Analytical Systems, Inc. received 20 samples on 9/11/2008 2:35:00 PM for the analyses presented in the following report.

This is an amended report and supersedes the original report. Refer to the case narrative for explanation of the amendment. All applicable quality control procedures met method specific acceptance criteria.

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 call me at (217) 753-1148.

Sincerely,

Michael D. Brophy
Project Manager

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Brunner St
City, State Zip Code	Peru, IL 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [ ] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM ___ A ___ B ___ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Pb Cd Hg Zn Totals method 6020	Pb Cd Hg TCLP method 6020	Laboratory Comments
PS-210	9/11/08	1130	S	2	C		✓	✓	
PS-213		1155					✓	✓	
PS-214		1040					✓	✓	
PS-217		1030					✓	✓	
PS-219		1020					✓	✓	
PS-221		1000					✓	✓	
PS-223	9/10/08	1810					✓	✓	
PS-225		1750					✓	✓	
PS-227		1735					✓	✓	
PS-229		1720					✓	✓	
PS-231		1700					✓	✓	
PS-233		1640					✓	✓	

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1235	Hand
			PAS	9/11/08	3:33pm	

Special Instructions: The samples ending in 1 (PS-210-1) are to be sampled. The samples ending in 2 (PS-210-2) are on hold

Q/C Level: 1 ✓ 2 ___ 3 ___ 4 ___

On Wet Ice: Y / N

Proper Preservation: Y / N

Temperature (°C): 1.3°C

RCRA Haz. Waste Parameters added to PS-217 per client

FHRPRU001330

Chain of Custody Record

Central IL- 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago Office - PO Box 2116 - Crystal Lake, IL 60039-2116 - Phone (847) 651-2604 - Facsimile (847) 458-9680
www.prairieanalytical.com

Prairie Analytical Systems, INCORPORATED

Client	Flint Hills Resources
Address	501 Bronner ST
City, State Zip Code	Peru, Il 61354
Phone / Facsimile No.	815 224 5451 / 815 224 5278
Client Project	
Location	Same Address
Sampler(s) / Phone	Andy Taylor / 317 223 6832
Turnaround Time	Standard [ ] Rush [✓] Date Required:
P.O. # or Invoice To	Flint Hills Resources
Contact Person	Ganesh Krish

Analysis and/or method Requested: Pb Cd Hg Zn Totals method 6020; Pb Cd Hg TCLP Method 6020

Reporting: TACO ___ Resid ___ Ind/Comm; CALM __ A __ B __ C; RISC ___ Resid ___ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code[1]	Total # of Containers	Sample Comp	Sample Grab	Laboratory Comments
PS 260	9/10/08	1555	S	2	C		
PS 262		1455					
PS 264		1340					
PS 266		1250					
PS 280		1540					
PS 282		1515					
PS 284		1425					
PS 286		1315					

[1] M = Matrix Code: A - Aqueous; DW - Drinking Water; GW - Groundwater; NA - Non-aqueous Liquid; S - Solids; O - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
[signature]	9/11/08	1439	[signature]	9/11/08	1439	[signature]
			PAS	9/11/08	3:33pm	

Special Instructions: The Samples ending in 1 (PS-260-1) are to be sampled
The samples ending in 2 (PS260-2) are on hold

Q/C Level: 1 ✓ 2 __ 3 __ 4 __

On Wet Ice: Y / N
Proper Preservation: Y / N

Temperature (°C): 1.3°C

FHRPRU001331

Prairie Analytical Systems, Inc. **Date:** *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

CASE NARRATIVE

RCRA hazrdous waste characterization analysis was performed on sample PS-217 (PAS 0809195-004) at the request of the client.

Analysis for Extractable Organic Halides (EOX):
Method Blank result: Not detectable at the reporting limit.
% Recovery for LCS: 91%
% Recovery for MS: 107%
% Recovery for MSD: 82%

Percent solids analysis for sample PS-217 (PAS 0809195-004) was corrected and reported at the request of the client.

Soil density was analyzed by ASTM Method D2937 which provides a result without units.

FHRPRU001332

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-001 **Collection Date:** 9/11/2008 11:30:00 AM
Client Sample ID: PS-210 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	4.41	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Lead	39.0	0.541		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Mercury	U	0.108		mg/Kg-dry	2	9/14/2008 11:04:00 PM
Zinc	1240	541		mg/Kg-dry	500	9/13/2008 8:47:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.108	0.0010		mg/L	1	9/13/2008 8:24:00 AM
Lead	0.0290	0.0050		mg/L	1	9/13/2008 8:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 8:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	7.75	0.01		wt%	1	9/12/2008

Lab ID: 0809195-002 **Collection Date:** 9/11/2008 11:55:00 AM
Client Sample ID: PS-213 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	13.7	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Lead	141	0.555		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Mercury	0.196	0.111		mg/Kg-dry	2	9/14/2008 11:22:00 PM
Zinc	6690	555		mg/Kg-dry	500	9/13/2008 8:57:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.339	0.0010		mg/L	1	9/13/2008 9:40:00 AM
Lead	0.345	0.0050		mg/L	1	9/13/2008 9:40:00 AM
Mercury	0.0004	0.0002		mg/L	1	9/13/2008 9:40:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	10.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-003
Client Sample ID: PS-214

Collection Date: 9/11/2008 10:40:00 AM
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	76.3	0.578		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Lead	1410	145		mg/Kg-dry	500	9/13/2008 9:06:00 PM
Mercury	0.286	0.116		mg/Kg-dry	2	9/14/2008 11:31:00 PM
Zinc	16800	578		mg/Kg-dry	500	9/13/2008 9:06:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.61	0.0010		mg/L	1	9/13/2008 9:49:00 AM
Lead	4.34	0.0050		mg/L	1	9/13/2008 9:49:00 AM
Mercury	0.0003	0.0002		mg/L	1	9/13/2008 9:49:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.7	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-004
Client Sample ID: PS-217

Collection Date: 9/11/2008 10:30:00 AM
Matrix: SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	14.6	0.549		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Lead	1930	137		mg/Kg-dry	500	9/13/2008 9:16:00 PM
Mercury	0.208	0.110		mg/Kg-dry	2	9/14/2008 11:39:00 PM
Zinc	7830	549		mg/Kg-dry	500	9/13/2008 9:16:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **JTC**
Arsenic	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Barium	0.250	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Cadmium	0.451	0.0010		mg/L	1	9/13/2008 9:58:00 AM
Chromium	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Lead	25.6	0.250		mg/L	50	9/13/2008 2:36:00 PM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 9:58:00 AM
Selenium	0.0186	0.0050		mg/L	1	9/13/2008 9:58:00 AM
Silver	U	0.0050		mg/L	1	9/13/2008 9:58:00 AM
TCLP SEMIVOLATILES ANALYSIS		**SW8270C**		**(SW3510C)**		Analyst: **JKA**
2,4-Dinitrotoluene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachlorobutadiene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Hexachloroethane	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2-Methylphenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
3 & 4-Methylphenol	U	100		µg/L	1	9/24/2008 8:44:00 PM
Nitrobenzene	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Pentachlorophenol	U	250		µg/L	1	9/24/2008 8:44:00 PM
Pyridine	U	250		µg/L	1	9/24/2008 8:44:00 PM
2,4,5-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
2,4,6-Trichlorophenol	U	50.0		µg/L	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorobiphenyl	61.1	38-149		%REC	1	9/24/2008 8:44:00 PM
Surr: 2-Fluorophenol	25.6	12-95		%REC	1	9/24/2008 8:44:00 PM
Surr: Nitrobenzene-d5	57.4	42-156		%REC	1	9/24/2008 8:44:00 PM
Surr: Phenol-d6	19.8	15-90		%REC	1	9/24/2008 8:44:00 PM
Surr: 4-Terphenyl-d14	76.5	42-137		%REC	1	9/24/2008 8:44:00 PM
Surr: 2,4,6-Tribromophenol	49.3	20-100		%REC	1	9/24/2008 8:44:00 PM
TCLP VOLATILES ANALYSIS		**SW8260B**		**(SW5030B)**		Analyst: **BDP**
Benzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
2-Butanone	U	125		µg/L	5	9/25/2008 2:40:00 AM
Carbon tetrachloride	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM
Chloroform	U	125		µg/L	5	9/25/2008 2:40:00 AM
1,4-Dichlorobenzene	U	125		µg/L	5	9/25/2008 2:40:00 AM

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

TCLP VOLATILES ANALYSIS		**SW8260B**	**(SW5030B)**		Analyst: **BDP**
1,2-Dichloroethane	U	125	µg/L	5	9/25/2008 2:40:00 AM
1,1-Dichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Tetrachloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Trichloroethene	U	125	µg/L	5	9/25/2008 2:40:00 AM
Vinyl chloride	U	100	µg/L	5	9/25/2008 2:40:00 AM
Surr: 4-Bromofluorobenzene	97.7	67-133	%REC	5	9/25/2008 2:40:00 AM
Surr: 1,2-Dichloroethane-d4	101	86-125	%REC	5	9/25/2008 2:40:00 AM
Surr: Toluene-d8	102	81-116	%REC	5	9/25/2008 2:40:00 AM
EXTRACTABLE ORGANIC HALIDES ANALYSIS		**SW9023**			Analyst: **SUB**
Extractable Organic Halides (EOX)	U	109	ppm-dry	1	9/30/2008
SUBCONTRACTED ANALYSIS		**SUB**			Analyst: **SUB**
Bulk density	2.605	0		1	10/3/2008
FLASH POINT ANALYSIS		**SW1010(M)**			Analyst: **AJD**
Ignitability (Flash Point)	>200	50.0	°F	1	9/23/2008
REACTIVE CYANIDE ANALYSIS		**SW9014**	**(SW7.3.3.2)**		Analyst: **AJD**
Reactive Cyanide	U	1.34	mg/Kg-dry	1	9/24/2008
CYANIDE ANALYSIS		**SW9014**	**(SW9010B)**		Analyst: **AJD**
Cyanide	U	0.488	mg/Kg-dry	1	9/24/2008
REACTIVE SULFIDE ANALYSIS		**SW9034**	**(SW7.3.4.2)**		Analyst: **AJD**
Reactive Sulfide	U	9.64	mg/Kg-dry	1	9/25/2008
SULFIDE ANALYSIS		**SW9034**	**(SW9030B)**		Analyst: **AJD**
Sulfide	U	9.01	mg/Kg-dry	1	9/25/2008
PH ANALYSIS		**SW9045C**			Analyst: **CWA**
pH	7.47	0.01	pH Units	1	9/23/2008 2:53:00 PM
PHENOLICS ANALYSIS		**SW9065(M)**			Analyst: **RMN**
Phenolics	U	5.36	mg/Kg-dry	1	9/26/2008
PAINT FILTER ANALYSIS		**SW9095A**			Analyst: **AJD**
Paint Filter	PASS	0	P/F	1	9/23/2008
PERCENT MOISTURE ANALYSIS		**D2216**			Analyst: **CWA**
Percent Moisture	8.49	0.01	wt%	1	9/12/2008
PERCENT SOLIDS ANALYSIS		**D2216**			Analyst: **RMN**
Percent Solids	91.7	0.01	wt%	1	9/26/2008 9:15:00 AM

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Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-005 **Collection Date:** 9/11/2008 10:20:00 AM
Client Sample ID: PS-219 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	27.8	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Lead	377	0.560		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Mercury	0.139	0.112		mg/Kg-dry	2	9/15/2008 12:07:00 AM
Zinc	7080	560		mg/Kg-dry	500	9/13/2008 9:55:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.583	0.0010		mg/L	1	9/13/2008 10:08:00 AM
Lead	0.603	0.0050		mg/L	1	9/13/2008 10:08:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:08:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.7	0.01		wt%	1	9/12/2008

Lab ID: 0809195-006 **Collection Date:** 9/11/2008 10:00:00 AM
Client Sample ID: PS-221 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	10.0	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Lead	309	0.567		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Mercury	U	0.113		mg/Kg-dry	2	9/15/2008 12:16:00 AM
Zinc	4440	567		mg/Kg-dry	500	9/13/2008 10:04:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.143	0.0010		mg/L	1	9/13/2008 10:17:00 AM
Lead	0.118	0.0050		mg/L	1	9/13/2008 10:17:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:17:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.4	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-007 **Collection Date:** 9/10/2008 6:10:00 PM
Client Sample ID: PS-223 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	25.9	0.581		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Lead	1480	145		mg/Kg-dry	500	9/13/2008 10:14:00 PM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:13:00 AM
Zinc	9330	581		mg/Kg-dry	500	9/13/2008 10:14:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.375	0.0010		mg/L	1	9/13/2008 10:27:00 AM
Lead	2.41	0.0050		mg/L	1	9/13/2008 10:27:00 AM
Mercury	0.0002	0.0002		mg/L	1	9/13/2008 10:27:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	16.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-008 **Collection Date:** 9/10/2008 5:50:00 PM
Client Sample ID: PS-225 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.4	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Lead	73.3	0.600		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Mercury	U	0.120		mg/Kg-dry	2	9/15/2008 1:41:00 AM
Zinc	1230	600		mg/Kg-dry	500	9/13/2008 10:24:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.102	0.0010		mg/L	1	9/13/2008 10:36:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 10:36:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:36:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-009 **Collection Date:** 9/10/2008 5:35:00 PM
Client Sample ID: PS-227 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	57.3	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Lead	1070	0.581		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Mercury	U	0.116		mg/Kg-dry	2	9/15/2008 1:50:00 AM
Zinc	11200	581		mg/Kg-dry	500	9/13/2008 10:33:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.72	0.0010		mg/L	1	9/13/2008 10:46:00 AM
Lead	5.32	0.0050		mg/L	1	9/13/2008 10:46:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 10:46:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.0	0.01		wt%	1	9/12/2008

Lab ID: 0809195-010 **Collection Date:** 9/10/2008 5:20:00 PM
Client Sample ID: PS-229 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	88.1	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Lead	356	0.532		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Mercury	0.115	0.106		mg/Kg-dry	2	9/15/2008 1:59:00 AM
Zinc	12800	532		mg/Kg-dry	500	9/13/2008 10:43:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	3.41	0.0010		mg/L	1	9/13/2008 11:24:00 AM
Lead	0.564	0.0050		mg/L	1	9/13/2008 11:24:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:24:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.5	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-011 **Collection Date:** 9/10/2008 5:00:00 PM
Client Sample ID: PS-231 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	69.1	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Lead	851	0.575		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Mercury	U	0.115		mg/Kg-dry	2	9/15/2008 2:08:00 AM
Zinc	17000	575		mg/Kg-dry	500	9/13/2008 10:53:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.75	0.0010		mg/L	1	9/13/2008 11:34:00 AM
Lead	0.194	0.0050		mg/L	1	9/13/2008 11:34:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:34:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-012 **Collection Date:** 9/10/2008 4:40:00 PM
Client Sample ID: PS-233 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	8.49	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Lead	76.2	0.611		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Mercury	U	0.122		mg/Kg-dry	2	9/15/2008 2:17:00 AM
Zinc	1800	611		mg/Kg-dry	500	9/13/2008 11:02:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.145	0.0010		mg/L	1	9/13/2008 11:43:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:43:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:43:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	22.9	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters
Lab Order: 0809195

Lab ID: 0809195-013 **Collection Date:** 9/10/2008 3:55:00 PM
Client Sample ID: PS-260 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.426	0.349		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Lead	8.39	0.513		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 2:26:00 AM
Zinc	74.0	2.05		mg/Kg-dry	2	9/15/2008 2:26:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0124	0.0010		mg/L	1	9/13/2008 11:53:00 AM
Lead	U	0.0050		mg/L	1	9/13/2008 11:53:00 AM
Mercury	U	0.0002		mg/L	1	9/13/2008 11:53:00 AM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	4.35	0.01		wt%	1	9/12/2008

Lab ID: 0809195-014 **Collection Date:** 9/10/2008 2:55:00 PM
Client Sample ID: PS-262 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	11.5	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Lead	61.1	0.515		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Mercury	U	0.103		mg/Kg-dry	2	9/15/2008 3:04:00 AM
Zinc	1480	515		mg/Kg-dry	500	9/13/2008 11:51:00 PM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0741	0.0010		mg/L	1	9/13/2008 12:02:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:02:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:02:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-015 **Collection Date:** 9/10/2008 1:40:00 PM
Client Sample ID: PS-264 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	7.74	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Lead	39.2	0.550		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Mercury	U	0.110		mg/Kg-dry	2	9/15/2008 3:13:00 AM
Zinc	634	550		mg/Kg-dry	500	9/14/2008
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.130	0.0010		mg/L	1	9/13/2008 12:12:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:12:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:12:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	11.2	0.01		wt%	1	9/12/2008

Lab ID: 0809195-016 **Collection Date:** 9/10/2008 12:50:00 PM
Client Sample ID: PS-266 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	0.528	0.517		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Lead	44.5	0.647		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Mercury	U	0.129		mg/Kg-dry	2	9/15/2008 3:22:00 AM
Zinc	164	2.59		mg/Kg-dry	2	9/15/2008 3:22:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	0.0201	0.0010		mg/L	1	9/13/2008 12:21:00 PM
Lead	U	0.0050		mg/L	1	9/13/2008 12:21:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:21:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	23.3	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-017 **Collection Date:** 9/10/2008 3:40:00 PM
Client Sample ID: PS-280 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	72.8	0.551		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Lead	1250	138		mg/Kg-dry	500	9/14/2008 12:20:00 AM
Mercury	0.325	0.110		mg/Kg-dry	2	9/15/2008 3:32:00 AM
Zinc	17600	551		mg/Kg-dry	500	9/14/2008 12:20:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.76	0.0010		mg/L	1	9/13/2008 12:31:00 PM
Lead	3.12	0.0050		mg/L	1	9/13/2008 12:31:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:31:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	12.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-018 **Collection Date:** 9/10/2008 3:15:00 PM
Client Sample ID: PS-282 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	112	0.606		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Lead	2680	152		mg/Kg-dry	500	9/14/2008 12:29:00 AM
Mercury	0.273	0.121		mg/Kg-dry	2	9/15/2008 3:41:00 AM
Zinc	28900	606		mg/Kg-dry	500	9/14/2008 12:29:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	1.78	0.0010		mg/L	1	9/13/2008 12:40:00 PM
Lead	4.38	0.0050		mg/L	1	9/13/2008 12:40:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 12:40:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	17.8	0.01		wt%	1	9/12/2008

Prairie Analytical Systems, Inc.

Date: *01-Dec-08*

CLIENT: Flint Hills Resources
Project: RCRA Parameters

Lab Order: 0809195

Lab ID: 0809195-019 **Collection Date:** 9/10/2008 2:25:00 PM
Client Sample ID: PS-284 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	133	0.560		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Lead	1190	140		mg/Kg-dry	500	9/14/2008 12:39:00 AM
Mercury	U	0.112		mg/Kg-dry	2	9/15/2008 3:50:00 AM
Zinc	15600	560		mg/Kg-dry	500	9/14/2008 12:39:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	2.83	0.0010		mg/L	1	9/13/2008 1:19:00 PM
Lead	1.00	0.0050		mg/L	1	9/13/2008 1:19:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:19:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	14.3	0.01		wt%	1	9/12/2008

Lab ID: 0809195-020 **Collection Date:** 9/10/2008 1:15:00 PM
Client Sample ID: PS-286 **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
METALS ANALYSIS		**SW6020**		**(SW3050B)**		Analyst: **JTC**
Cadmium	443	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Lead	1100	0.554		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Mercury	U	0.111		mg/Kg-dry	2	9/15/2008 3:59:00 AM
Zinc	21900	554		mg/Kg-dry	500	9/14/2008 12:49:00 AM
TCLP METALS ANALYSIS		**SW6020**		**(SW3005A)**		Analyst: **MCL**
Cadmium	7.90	0.0500		mg/L	50	9/13/2008 2:46:00 PM
Lead	0.441	0.0050		mg/L	1	9/13/2008 1:28:00 PM
Mercury	U	0.0002		mg/L	1	9/13/2008 1:28:00 PM
PERCENT MOISTURE ANALYSIS		**D2216**				Analyst: **CWA**
Percent Moisture	15.3	0.01		wt%	1	9/12/2008

Qualifiers:

B - Analyte detected in the associated method blank.

E - Value above quantitation range.

H - Analysis performed past holding time.

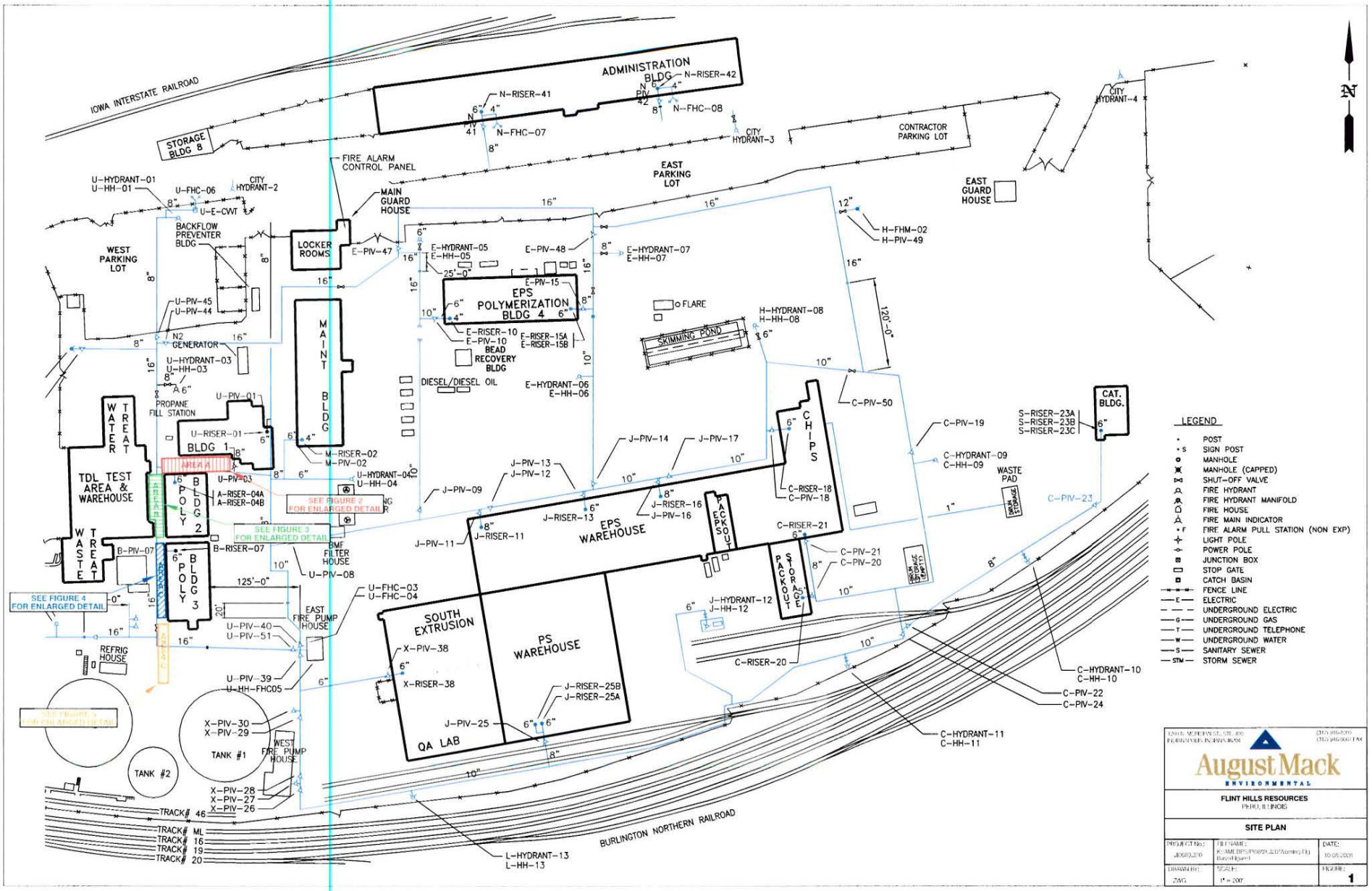
HT - Sample received past holding time.

J - Analyte detected between RL and MDL.

R - RPD outside acceptance limits.

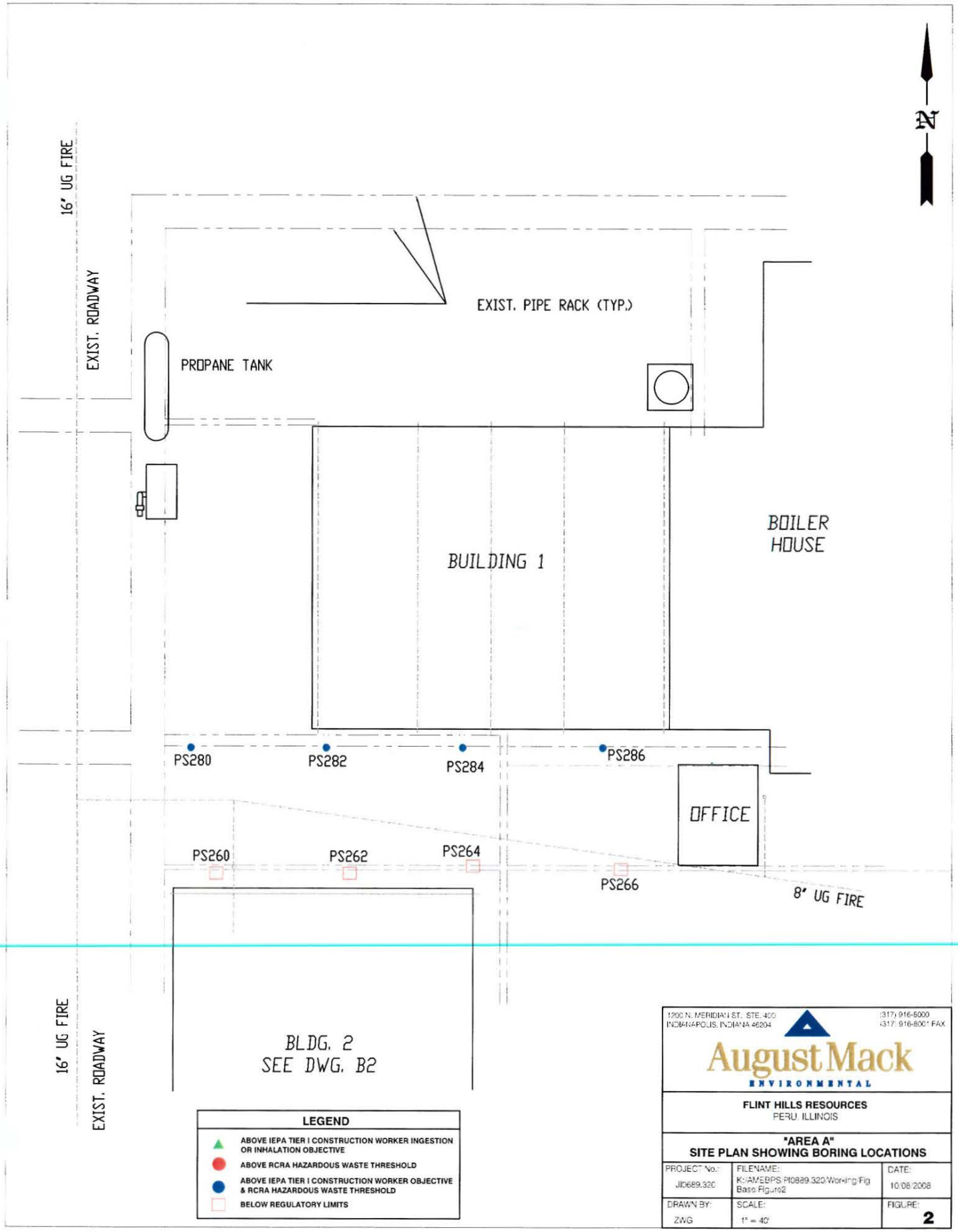
S - Spike recovery outside acceptance limits.

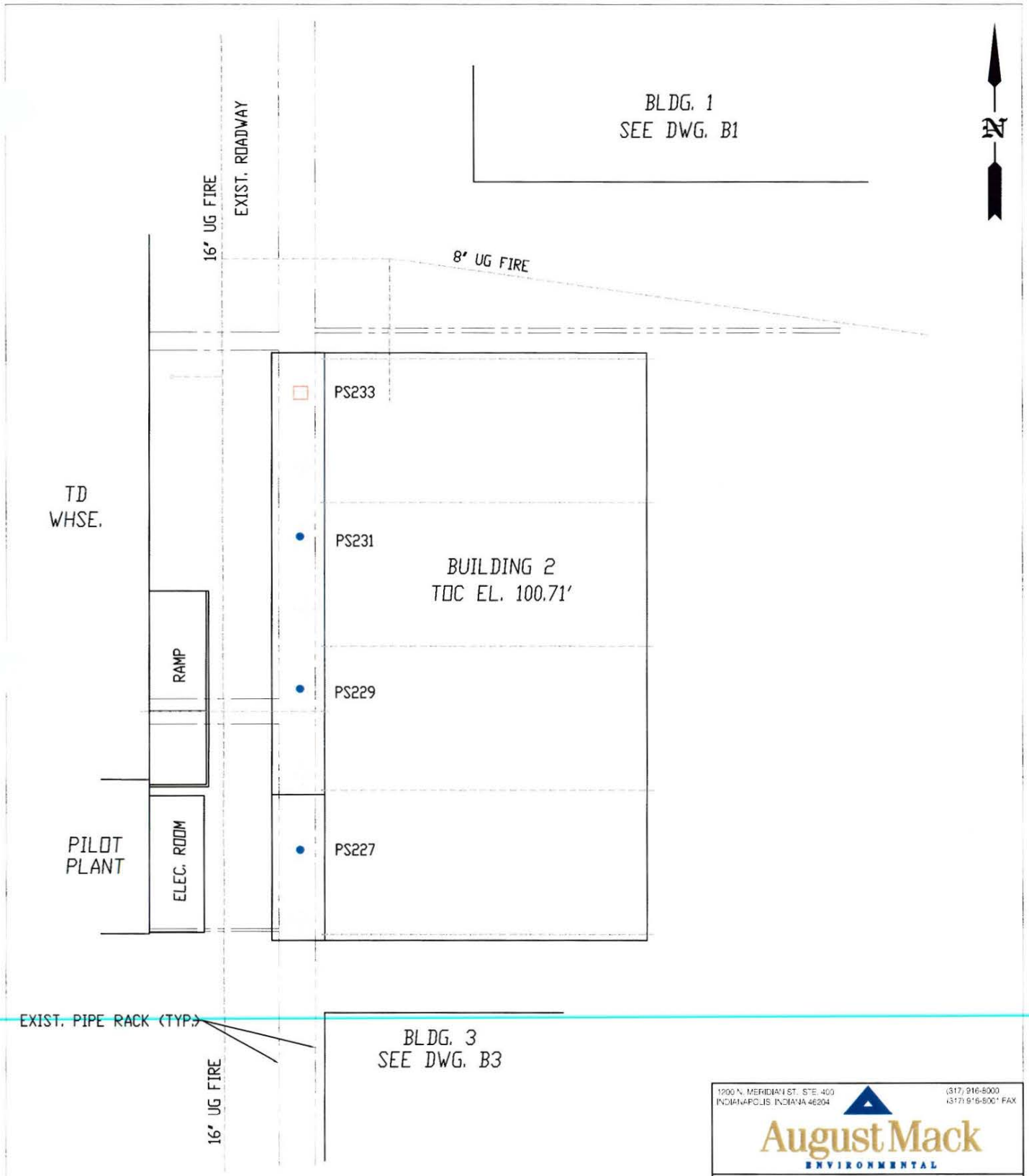
U - Analyte not detected (i.e. less than RL or MDL).



FHRPRU001346

FHRPRU001347





LEGEND

- ABOVE IEPA TIER I CONSTRUCTION WORKER INGESTION OR INHALATION OBJECTIVE
- ABOVE RCRA HAZARDOUS WASTE THRESHOLD
- ABOVE IEPA TIER I CONSTRUCTION WORKER OBJECTIVE & RCRA HAZARDOUS WASTE THRESHOLD
- BELOW REGULATORY LIMITS

1200 N. MERIDIAN ST. STE. 400
INDIANAPOLIS, INDIANA 46204
(317) 916-8000
(317) 916-8001 FAX

August Mack ENVIRONMENTAL

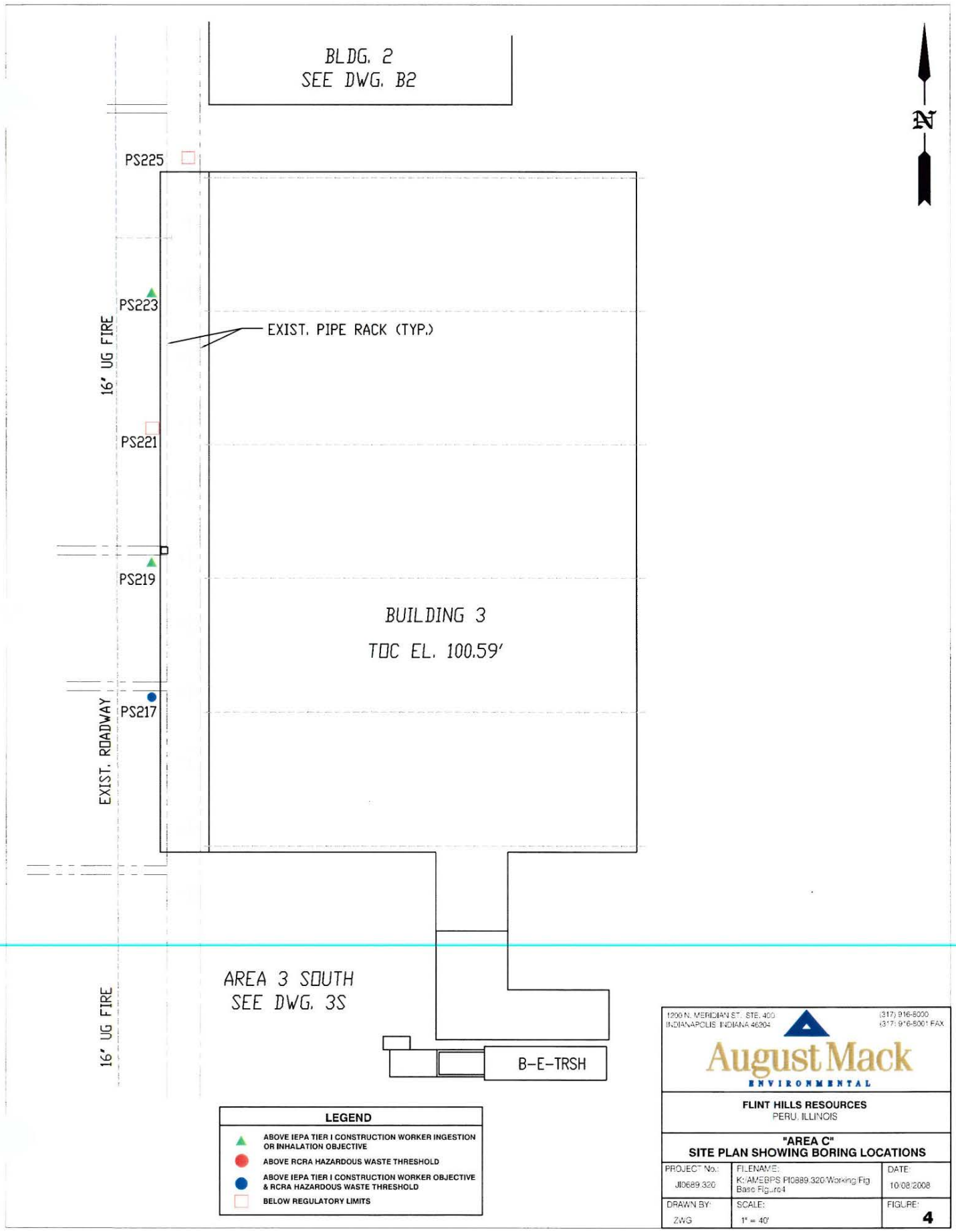
FLINT HILLS RESOURCES
PERU, ILLINOIS

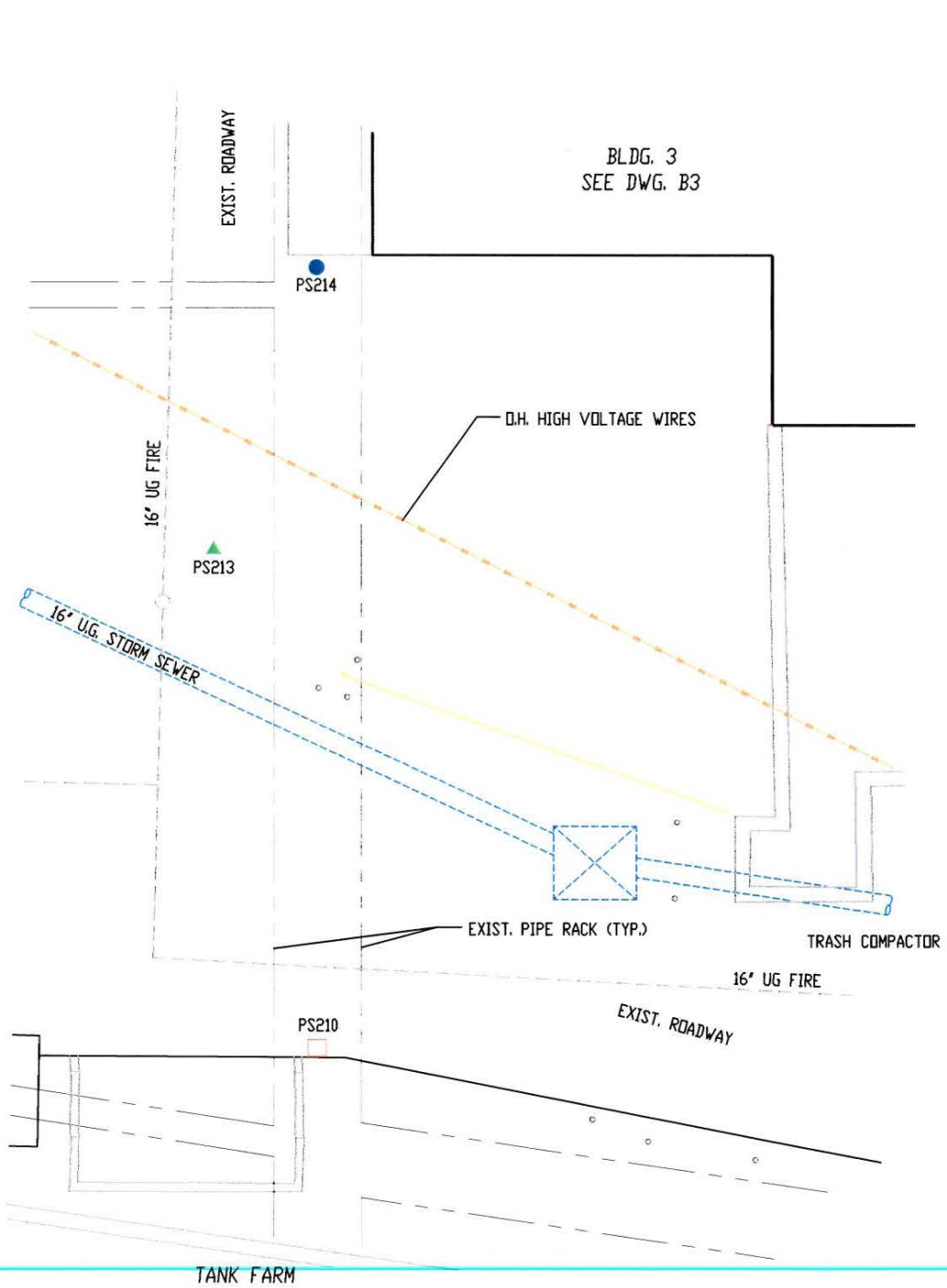
"AREA B"
SITE PLAN SHOWING BORING LOCATIONS

PROJECT No.:	FILENAME:	DATE:
JI0889.320	K:\AMEBPS\JI0889.320\Working\Fig Base Figure3	10/08/2008
DRAWN BY:	SCALE:	FIGURE:
ZWG	1" = 40'	3

FHRPRU00134B

FHRPRU001349





LEGEND

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1200 N. MERIDIAN ST., STE. 400
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(317) 916-6001 FAX

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FLINT HILLS RESOURCES
PERU, ILLINOIS

"AREA D"
SITE PLAN SHOWING BORING LOCATIONS

PROJECT No.:	FILENAME:	DATE:
JI0889.320	K:/AMEBPS/PI0889.320/Working/Fig Base Figures	10/08/2008
DRAWN BY:	SCALE:	FIGURE:
ZWG	1" = 25'	5

FHRPRU001350