Sample Point # 1

FLINT HILLS resources®

501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	2/22/2012 @ 11:30am
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	0.19
Date and Time of Sampling	2-22-12 11:32am
Sample Location	"Duck Pond" Sample point #1
Sample Collector's Name and Title	Richard C Plock / Production facilitator

Sample Observer's Name and Title *(must be different from sample collector)*	Ganesha Krisha, Env Engr
Time of Sample Observation	12:21 p.m.
Color	Slightly Whitish Cloudy
Odor	None
pH	8.78
Clarity	Slightly Cloudy
Floating Solids	Fine Suspended Particles
Settled Solids	None Visible
Suspended Solids	Fine Particles
Foam	None Visible
Oil Sheen	None Visible
Other Obvious Indicators of Pollution	None

[signature] / Production Facilitator — 2-22-2012
Signature/Title of Sample Collector — Date

[signature] / Env Engr — Feb 22, 2012
Signature/Title of Sample Observer — Date:

FHRPRU003043

Sample Point #2

FLINT HILLS resources®

501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	2-22-2012 @ 11:30 am
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	0.19
Date and Time of Sampling	2-22-2012 @ 11:42 am
Sample Location	Sample point #2 Tankfarm office area utilities
Sample Collector's Name and Title	Richard L Ploch / Production facilitator

Sample Observer's Name and Title *(must be different from sample collector)*	Ganesh Krishna / Env Engr
Time of Sample Observation	12:16 p.m.
Color	Clear
Odor	None
pH	8.77
Clarity	Clear
Floating Solids	None
Settled Solids	A few fine particles
Suspended Solids	None Visible
Foam	None Visible
Oil Sheen	None Visible
Other Obvious Indicators of Pollution	None

Signature/Title of Sample Collector: [signature] / Production facilitator — Date: 2-22-12

Signature/Title of Sample Observer: [signature] / Env Engr — Date: Feb 22, 2012

FLINT HILLS resources

501 Brunner Street
Peru, Illinois

SAMPLE POINT #1

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	4-29-12 @ 15:40
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	> 0.1 Inches
Date and Time of Sampling	4-29-12 @ 16:15
Sample Location	Utilities "Man-Hole" Sample Point #1
Sample Collector's Name and Title	Richard L. Mock (Production Facilitator)

Sample Observer's Name and Title *(must be different from sample collector)*	GANESH KRISHA, ENV ENGR
Time of Sample Observation	16:25
Color	NONE [SLIGHTLY CLOUDY]
Odor	NONE
pH	8.6
Clarity	TRANSLUCENT
Floating Solids	SOME DEBRIS OBSERVED
Settled Solids	SOME OBSERVED
Suspended Solids	SLIGHTLY CLOUDY
Foam	NONE
Oil Sheen	NONE
Other Obvious Indicators of Pollution	NONE

Signature/Title of Sample Collector — Date: 4/29/12

Ganesh, Env Engr — Signature/Title of Sample Observer — Date: 4/29/12

FHRPRU003045

FLINT HILLS resources

Sample Point #2

501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	5-1-12 @ 13:00
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	> 0.1 Inches
Date and Time of Sampling	5-1-12 @ 14:35
Sample Location	"Duck Pond" Sample Point # 2
Sample Collector's Name and Title	Richard L Ploch (Production Facilitator)

Sample Observer's Name and Title *(must be different from sample collector)*	Ganesh Krishna, Env Engr
Time of Sample Observation	14:50
Color	Slightly Cloudy [Mild Color]
Odor	None
pH	8.19
Clarity	Slightly Cloudy
Floating Solids	A Few Tiny Particles
Settled Solids	Some Observed
Suspended Solids	Fine Particles [
Foam	None Visible
Oil Sheen	None Visible
Other Obvious Indicators of Pollution	N/A

Signature/Title of Sample Collector: [signature] / Production Facilitator — Date: 5-1-12

Signature/Title of Sample Observer: [signature] / Env Engr — Date: 5/1/12

FLINT HILLS resources

SAMPLE #1

501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	7/11/11 9:00 A.M.
Nature of the Qualifying Event (Rain/Snow Melt)	RAIN
Magnitude of the Qualifying Event (inches)	> 0.1 INCH.
Date and Time of Sampling	7/11/11 9:32
Sample Location	S.W. MANHOLE
Sample Collector's Name and Title	JOHN PTAK - SUPERVISOR

Sample Observer's Name and Title *(must be different from sample collector)*	GANESH KRISHNA / ENV ENGR
Time of Sample Observation	9:58 a.m.
Color	NONE
Odor	NONE
pH	8.6
Clarity	VERY CLEAR
Floating Solids	NONE
Settled Solids	A FEW PARTICLES @ BOTTOM
Suspended Solids	NONE VISIBLE
Foam	NONE VISIBLE
Oil Sheen	NONE VISIBLE
Other Obvious Indicators of Pollution	NONE

Signature/Title of Sample Collector — Date: 7-11-11

/ ENV ENGR — Signature/Title of Sample Observer — Date: JULY 11, 2011

FHRPRU003047

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SAMPLE #2

501 Brunner Street
Peru, Illinois

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	7-11-11 9 A.M.
Nature of the Qualifying Event (Rain/Snow Melt)	RAIN
Magnitude of the Qualifying Event (inches)	> 0.1 INCH
Date and Time of Sampling	7-11-11 9:41
Sample Location	DUCK POND
Sample Collector's Name and Title	JOHN PTAK - SUPERVISOR

Sample Observer's Name and Title *(must be different from sample collector)*	GANESH KRISH / ENV ENGR
Time of Sample Observation	10:05 A.M.
Color	CLEAR
Odor	NONE
pH	8.6
Clarity	CLEAR
Floating Solids	SOME FINE DEBRIS
Settled Solids	A FEW FINE PARTICLES @ BOTTOM
Suspended Solids	NONE VISIBLE
Foam	NONE VISIBLE
Oil Sheen	NONE VISIBLE
Other Obvious Indicators of Pollution	NONE

Signature/Title of Sample Collector — Date: 7-11-11

/ ENV ENGR — Signature/Title of Sample Observer — Date: JULY 11, 2011

FHRPRU003048

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FLINT HILLS resources®

501 Brunner Street
Peru, Illinois

SAMPLE # 1

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	10-12-11 15:30
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	1/2 inch
Date and Time of Sampling	10-12-11 15:30
Sample Location	S.W. Manhole
Sample Collector's Name and Title	Rich Ploch / Relief Supervisor

Sample Observer's Name and Title *(must be different from sample collector)*	GANESH KRISH, ENV ENGR
Time of Sample Observation	15:58
Color	CLOUDY WHITE (DULL)
Odor	NONE
pH	9.12
Clarity	TRANSLUCENT [CLOUDY]
Floating Solids	YES - A FEW MINUTE PARTICLES
Settled Solids	YES. A FEW MINUTE PARTICLES
Suspended Solids	YES.- OBSERVED
Foam	NONE VISIBLE
Oil Sheen	NONE VISIBLE
Other Obvious Indicators of Pollution	NONE OBSERVED

Signature/Title of Sample Collector: Rich Ploch / Relief Supervisor — Date: 10-12-2011

Signature/Title of Sample Observer: Ganesh / ENV ENGR — Date: 10/12/2011

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FLINT HILLS resources

501 Brunner Street
Peru, Illinois

Sample #2 point

Quarterly Storm Water Sample Collection and Visual Observation

Date and Time of the Qualifying Event	10-12-2011 15:15
Nature of the Qualifying Event (Rain/Snow Melt)	Rain
Magnitude of the Qualifying Event (inches)	1/2" inch
Date and Time of Sampling	10-12-11 @ 15:17
Sample Location	Dock Pond Sample #2
Sample Collector's Name and Title	Rich Ploch / Relief Shift Supervisor

Sample Observer's Name and Title *(must be different from sample collector)*	GANESH KRISHA, ENV ENGR
Time of Sample Observation	15:54
Color	CLEAR
Odor	NONE
pH	9.35
Clarity	TRANSPARENT
Floating Solids	A FEW MINUTE PARTICLES
Settled Solids	A FEW MINUTE PARTICLES
Suspended Solids	A FEW MINUTE PARTICLES
Foam	NONE OBSERVED
Oil Sheen	NONE OBSERVED
Other Obvious Indicators of Pollution	NONE OBSERVED

Rich Ploch / Relief Shift Supervisor
Signature/Title of Sample Collector

10/12/2011
Date

Ganesh / ENV ENGR
Signature/Title of Sample Observer

10/12/2011
Date:

Flint Hills Resources Chemical Intermediates, LLC - Peru, Illinois Facility
Summary of Outdoor Releases (Highlighted Rows indicate potential release to the Illinois River)
May 1, 2011 through April 30, 2012

Incident Date	Time of Spill (24-Hr Format)	Duration of Spill (minutes)	Estimated Release Quantity	Material(s) Involved	Location of Spill	Description of Spill	Cause of Spill	Spilled Surface	Miscellaneous Notes
7/5/2011	17:00	Unknown	2 gallons	Motor Oil	Building 4	The D10 product blower on the roof failed resulting in the release of oil on to the surface.	Equipment failure	Roof Top	FHR personnel cleaned up the spill using Oil-Dri. The recovered material was placed in a 55-gal drum and shipped to the facility waste storage area for disposal.
7/7/2011	7:50	70	½ pound	Styrene	TD/PP Lab	Steam and liquid styrene was dripping from Reactor LR04 vent line into the TD Lab containment area.	The filter on the cooling water system malfunctioned Equipment Failure	Contained concrete surface	Some vapors of styrene possibly evaporated to the atmosphere. The contents of this containment area are pumped into the facility's WWTP for pretreatment prior to disposal via the City of Peru POTW.
8/3/2011	17:00	<1	4 gallons	Hydraulic Oil	East Parking Lot	The hydraulic hose on the delivery truck ruptured releasing hydraulic oil on to the asphalt surface.	Equipment failure	Asphalt	FHR personnel cleaned up the spill using Oil-Dri. The recovered material was placed in 5-gal containers and shipped to the facility waste storage area for disposal.
8/29/2011	7:50	Unknown	Unknown	EPS Dust, Stormwater Runoff and Miscellaneous Debris	East of Building 2	The liner on the roll-off containing clean-out materials from the facility's stormwater system slipped down, causing this leak on to the ground.	Liner Malfunction Equipment Failure	Soil	The contents of this roll-off have been analyzed and characterized as a non-hazardous waste. FHR personnel cleaned up the spilled material using Oil-Dri. The recovered material was placed in a 55-gal drum and shipped to the facility waste storage area for disposal.
9/19/2011	22:22	8	16 Oz.	Styrene	Tank Farm	The vent condenser on top of the styrene storage tank was found to be dripping small amounts of styrene on to the concrete surface.	Excessive styrene transfer rate	Contained concrete surface	FHR contractor was pumping a styrene barge into the subject tank. The transfer rate was reduced to keep up with the capacity of the vent condenser (tested OK when checked for problems). Absorbent pads were placed on the area of the spill to recover styrene on the surface. The used pads were placed into a 55-gal drum and shipped to the facility's waste storage area for disposal.
9/20/2011	11:30	Unknown	5 gallons	Stormwater & Styrene	Riverdock Manhole	An alarm was received indicating a leak from the underground styrene unloading line. Upon inspection, a strong styrene odor was observed within the manhole. A quart-size sample was collected and approximately 3 ounces of styrene was observed.	Flange failure Equipment Failure	Contained concrete surface	The contents of the manhole was transferred into 55-gal drums and shipped to the facility's waste storage area for disposal.
9/27/2011	6:59	21	50 gallons	Styrene	Tank Farm	An FHR employee discovered styrene was being sprayed from the monomer circulating vessel (pump), located within the facility's Tank Farm.	Failed filter vessel lid gasket Equipment Failure	Contained concrete surface	The leaking pump along with the associated valves was immediately shutoff to mitigate the spill. Outside contractor services were utilized to recover the spilled styrene (mixed with the stormwater runoff) into a vac-truck. The recovered material was shipped off-site for appropriate disposal.
10/6/2011	9:00	120	30 gallons	Cooling Tower water with traces of sulfuric acid, C-465A and CS-39	Heat Exchanger (South)	Approximately 30 gallons of cooling tower water spilled on to the concrete/asphalt surface from the south Heat Exchanger at the facility. The release occurred when maintenance personnel unlocked the valves upon completion of work.	Human Error	Concrete/Asphalt Surface	None of the released waters entered the on-site stormwater retention pond.

Flint Hills Resources Chemical Intermediates, LLC - Peru, Illinois Facility
Summary of Outdoor Releases (Highlighted Rows indicate potential release to the Illinois River)
May 1, 2011 through April 30, 2012

Incident Date	Time of Spill (24-Hr Format)	Duration of Spill (minutes)	Estimated Release Quantity	Material(s) Involved	Location of Spill	Description of Spill	Cause of Spill	Spilled Surface	Miscellaneous Notes
7/5/2011	17:00	Unknown	2 gallons	Motor Oil	Building 4	The D10 product blower on the roof failed resulting in the release of oil on to the surface.	Equipment failure	Roof Top	FHR personnel cleaned up the spill using Oil-Dri. The recovered material was placed in a 55-gal drum and shipped to the facility waste storage area for disposal.
10/14/2011	9:00	Unknown	100 gallons	Cooling Tower water with traces of sulfuric acid, C-465A and CS-39	Heat Exchanger (South)	An FHR employee observed puddles of water in the vicinity of the south heat-exchanger, during his plant tour. It appeared that repairs were being performed on the heat-exchanger and the residual DI-water with trace amount of additives (i.e. sulfuric acid, CS-39 and C-465A) in the lines drained to the ground (asphalt) when the valve was opened. Approximately 100 gallons was spilled from these lines that eventually entered the on-site stormwater retention pond (which drains into the Illinois River).	Human Error Manual opening of the ½" ball valve at the lower south end of the heat exchanger for performing repairs. Maintenance believed that the lines would not contain any liquids as the equipment was locked-out 5 days ago.	Concrete/Asphalt Surface, to retention pond	The FHR employee immediately notified FHR Legal, Plant Manager and the Environmental Manager of the incident. Requested the shift supervisor to shut-off the stop-gate valve on the retention pond, to prevent discharge of this water to the River (not authorized by the facility's NPDES Permit). Collected a sample from the retention pond for analyses of chemicals-of-concern. The laboratory analyses of this sample indicated that the concentrations of the chemicals-of-concern were below the Illinois Water Quality Standards. Notification was also made to Ms. Terri Labunski Illinois EPA, BOW office in Rockford, IL of this incident at 14:50 hrs via telephone (815.987.7760). A written notification was also submitted to this Agency on October 19, 2011.
10/16/2011	17:30	60	40 gallons	Cooling Tower water with traces of sulfuric acid, C-465A and CS-39 along with ISO lubricating oil	West side of Extrusion Building	The valve on the cooling tower supply line started a leak around the threads and sprayed cooling water on to the floor inside the building. The spraying water also overfilled a 5-gal catch bucket for the ISO 220 lubricating oil for the Extruder lube pump. The released material then travelled to the floor drain that discharges outside to the west of the building.	Equipment Failure Wear & Tear of equipment	Concrete/Soil surfaces	No released material entered the stormwater system. The oil residue was cleaned up by FHR personnel using Oil-Dri. The recovered material was placed in a 55-gal drum and shipped to the facility waste storage area for disposal.
10/17/2011	9:30	20	5 gallons	Cooling Tower water with traces of sulfuric acid, C-465A and CS-39	Heat Exchanger (South)	The heat exchanger started a leak when put back into service upon completion of maintenance activities.	Equipment Failure	Concrete/Asphalt Surface	Maintenance personnel closed the inlet valve right away to stop the leak.
11/20/2011	Unknown	Unknown	1 ounce	Styrene	Styrene Supply Pump	An ounce of styrene was discovered under the monomer supply pump to the facility's TD Lab.	Equipment failure	Contained concrete surface	An oil spill mat was placed under the pump and the faulty equipment was locked out.
12/11/2011	Unknown	Unknown	100 gallons	Cooling Tower water with traces of sulfuric acid, C-465A and CS-39	Heat Exchanger (South)	An FHR employee discovered that the heat exchanger was releasing cooling water to the ground. He immediately shut off the supply valve.	Malfunctioning equipment (missing plug on the 1" line)	Concrete/Asphalt Surface	The FHR employee immediately shut-off the stop-gate valve on the retention pond, to prevent discharge of this water to the River (not authorized by the facility's NPDES Permit). Contents of the pond were pumped to the facility's WWTP for pretreatment prior to disposal via the City of Peru POTW.
1/5/2012	11:30	5	3 gallons	Process Effluent Water from Building 4	Facility WWTP	An FHR employee discovered that the bottom drain valve on SBC-A was leaking. He immediately diverted the flow to the Utilities holding pit via a hose.	Damaged valve (freezing temperature) Equipment Failure	Concrete/Asphalt Surface	None of the released waters entered the stormwater drains.
1/31/2012	10:55	20	4 ounces	Pentane	Tank Farm (North Wall)	An FHR employee observed that pentane was dripping from a damaged hose (truck unloading line) into a collection pan.	Equipment Failure	Concrete surface	The spilled pentane was transferred to a 55-gal drum and shipped to the facility waste storage area for disposal.
2/13/2012	8:00	1	2 gallons	Cooling Tower water with traces of sulfuric acid, C-465A and CS-39	PEP Filter Building	An FHR employee onserved water on the ground coming from inside the PEP Filter Building (for the Cooling Tower).	Equipment Failure	Concrete/Asphalt Surface	No released material entered the stormwater system.
4/29/2012	11:30	15	20 gallons	Cooling Tower water with traces of sulfuric acid, C-465A and CS-39	Cooling Tower Basin	Upon locking out the cooling tower basin for maintenance, it was observed that the basin overfilled and released cooling water on to the ground.	Improper level settings Human Error	Concrete/Asphalt Surface	The PEP backflush was performed to reduce the water level in the cooling tower basin. No released material entered the stormwater system.

FLINT HILLS resources

PERU FACILITY
ENVIRONMENTAL DEPARTMENT

ANNUAL STORM WATER MANAGEMENT INSPECTION CHECKLIST

Date June 12, 2012 Weather Conditions Clear & Sunny

Inspector Name/Title: Ganesh Krish, Environmental Engineer

Y/N	DESCRIPTION: COMMENTS REQUIRED IF ANSWERED YES
N	Trash, litter, debris in the vicinity of stormwater collection system components
N	Significant outdoor accumulations of beads on site (some accumulation of beads was observed in the alley way north of B4, the NW corner of B4 and South of Packout. None significant.)
N	Spillage at compactors (None observed during this inspection)
N	Improper outdoor storage of materials, equipment, and chemicals (None observed during this inspection)
N	Storage boxes and bags -- torn, damaged, exposed to run-off, spillage (None observed during this inspection)
N	Tanks -- corrosion, damage, inadequate support, containment issues, leakage, etc. (None observed during this inspection)
N	Drums -- corrosion, damage, uncovered, containment issues, spillage, etc. (None observed during this inspection)
N	Secondary containment structures -- structural integrity, presence of oil or residue filled with water, valves open? (None observed during this inspection. Secondary containment appeared to be structurally sound)
N	Piping and valves -- corrosion, leakage, supports, etc. (None observed during this inspection)
N	Pumps and hose connections – structurally sound? Leakage? (No leakage observed during this inspection)
N	Sludge accumulations near wastewater plant (None observed during this inspection)

ANNUAL STORM WATER MANAGEMENT INSPECTION CHECKLIST

N ____ Oil staining on ground (outdoors) (Observed a few historical dry stains on the concrete pad around the AWI Compactor just north of Tank Farm)

N ____ Other residue, discolored surfaces (outdoors)
(None observed during this inspection)

N ____ Erosion problems
(None observed during this inspection)

N ____ Accumulations of debris/sediment at catch basins/inlets, stop gates, skimmer pond
(None observed during this inspection)

N ____ Any non-stormwater discharge to Illinois River
(None during this reporting period. Please see the attached Spill Log)

Y ____ Spill response equipment and supplies at appropriate locations
(The inspector observed spill response equipment and supplies during this inspection)

N ____ Any other issues of non-compliance observed during this inspection
(None observed during this inspection)

Signature_____

Inspector's Supplemental Comments:

NONE