APPENDIX C: CHAINS OF CUSTODY

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-50-66-(021)	03/18/09	1516	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Central Mountain Pacific Other ____

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 Miguel A Britos	3/18/09	1600	1 SECURED STORAGE	3/18/09	1600
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

(1) Chain of Custody Number = Client Determined
(2) QC Codes N = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite
(3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
(4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
(5) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B- 3, 6010B/7470A - 1*).
(6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
U1-CSS-(011)	03/18/09	1305	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Central Mountain Pacific Other ____

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[signature]	3/18/09	1601	1 SECURED STORAGE	3/18/09	1601
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

1) Chain of Custody Number = Client Determined
2) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5) Sample Analysis Requested. Analytical method requested (i.e **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- 3, *6010B/7470A* - 1).
6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr-90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-66-21-(008)	03/17/09	1200	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
Miguel Britos	3/17/09	1459	1 SECURED STORAGE	3/17/09	1459
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

[1] Chain of Custody Number = Client Determined

[2] QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

[3] Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

[4] Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

[5] Sample Analysis Requested Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

[6] Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: *C*

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-67-173-(008)	03/17/09	1400	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[signature]	3/17/09	1500	1 SECURED STORAGE	3/17/09	1500
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

(1) Chain of Custody Number = Client Determined
(2) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
(3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
(4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
(5) Sample Analysis Requested Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
(6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: *C*

age: 1 of 1
roject #: Entergy GW Mon Prog
EL Quote #:
OC Number [1]:
O Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

lient Name: Entergy — Phone #: (914) 736-8405

roject/Site Name: Indian Point Energy Center — Fax #: (914) 734-6247

ddress: 450 Broadway, Suite 3, Buchanan, NY 10511

ollected by: Miguel Britos — Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)	Comments
MW-42-49-(016)	03/16/09	1450	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly	Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone: (Eastern) Central Mountain Pacific Other ____

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[signature]	3/16/09	1520	1 SECURED STORAGE	3/16/09	152[illegible]
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN

Method of Shipment: FEDEX — Date Shipped:

Airbill #:

Airbill #:

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: C

) Chain of Custody Number = Client Determined

) QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, N=Nasal

) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**)

) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-53-120-(014)	03/16/09	0940	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	3/16/09	1521	1 SECURED STORAGE	3/16/09	1521
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

(1) Chain of Custody Number = Client Determined
(2) QC Codes: **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
(3) Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered
(4) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
(5) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**)
(6) Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: _____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA / M.B Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-67-39-(008)	01/27/09	1615	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-67-105-(007)	01/27/09	1645	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-67-173-(007)	01/27/09	1633	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-67-219-(007)	01/27/09	1234	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-67-276-(007)	01/27/09	1301	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-67-323-(007)	01/27/09	1350	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-67-340-(007)	01/27/09	1244	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
													2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards
This is a split sample observed by the NRC

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	1/27/09	1720	Secure storage	1/27/09	1720
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: ____ *C*

1) Chain of Custody Number = Client Determined
2) QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C** = Composite
3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered
4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy
Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center
Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: AA / MB
Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr-90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-66-21-(007)	01/27/09	1352	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-66-36-(007)	01/27/09	1307	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)
Fax Results: Yes / (No)
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards
This is a split sample observed by the NRC

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	1/27/09	1720	1 SecureStorage	1/27/09	1720
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX
Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: C

1) Chain of Custody Number = Client Determined
2) QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

age: 1 of 1
roject #: Entergy GW Mon Prog
EL Quote #:
OC Number [1]:
O Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

lient Name: Entergy Phone #: (914) 736-8405

roject/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

ddress: 450 Broadway, Suite 3, Buchanan, NY 10511

ollected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr-90)	<-- Preservative Type (6)
MW-42-49-(015)	01/26/09	1616	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Central Mountain Pacific Other ____

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[signature]	1/26/09	1700	SECURED STORAGE	1/26/09	1700
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent

Method of Shipment: FEDEX Date Shipped:

Airbill #:

Airbill #:

) Chain of Custody Number = Client Determined

) QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C** = Composite

) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered

) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**)

) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate. If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only

Custody Seal Intact? *YES* *NO*

Cooler Temp: *C*

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy — Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center — Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: Miguel Britos — Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr-90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-53-82-(010)	01/26/09	1200	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-53-120-(013)	01/26/09	1243	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: Specify: (Subject to Surcharge)
Fax Results: Yes / (No)
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone: (Eastern) Pacific Central Other Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
Miguel Britos	1/26/09	1701	1 SECURED STORAGE	1/26/09	1701
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX — Date Shipped:
Airbill #:
Airbill #:

(1) Chain of Custody Number: Client Determined
(2) QC Codes: **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
(3) Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
(4) Matrix Codes: **DW** Drinking Water, **GW** Groundwater, **SW**= Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
(5) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**)
(6) Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ___ C

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
TOC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: MS / TH Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)	Comments
MW-62-18-(008)	01/23/09	1155	N	N	GW	Y	Y	1	1	1	1		
MW-62-37-(008)	01/23/09	1230	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-62-53-(007)	01/23/09	1244	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-62-71-(008)	01/23/09	1212	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-62-92-(008)	01/23/09	1228	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-62-138-(008)	01/23/09	1250	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-62-182-(008)	01/23/09	1349	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
													2 Liter Poly

Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: Specify: (Subject to Surcharge) Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone: (Eastern) Central Mountain Pacific Other

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	1/23/09	1410	1 Secure Storage	1/23/09	1410
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

[1] Chain of Custody Number = Client Determined
[2] QC Codes N= Normal Sample, TB = Trip Blank, FD= Field Duplicate, EB = Equipment Blank, MS= Matrix Spike Sample, MSD= Matrix Spike Duplicate Sample, G= Grab, C= Composite
[3] Field Filtered For liquid matrices, indicate with a Y - for yes the sample was field filtered or N - for sample was not field filtered
[4] Matrix Codes DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
[5] Sample Analysis Requested Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B- 3, 6010B/7470A - 1)
[6] Preservative Type HA= Hydrochloric Acid, NI = Nitric Acid, SH= Sodium Hydroxide, SA= Sulfuric Acid, AA= Ascorbic Acid, HX= Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: C

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: MB/MB Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr-90)	<-- Preservative Type (6)	Comments
MW-36-24-(013)	01/22/09	1248	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly	Note: extra sample is required for sample specific QC
MW-36-52-(012)	01/22/09	1259	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly	

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
(Eastern) Central Mountain Pacific Other ____

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	1/22/09	1626	1 Secure Storage	1/22/09	1626
2				2		
3				3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent

Method of Shipment: FEDEX Date Shipped:

Airbill #:

Airbill #:

1) Chain of Custody Number = Client Determined

2) QC Codes N= Normal Sample, TB = Trip Blank, FD= Field Duplicate, EB = Equipment Blank, MS= Matrix Spike Sample, MSD= Matrix Spike Duplicate Sample, G= Grab, C= Composite

3) Field Filtered For liquid matrices, indicate with a Y - for yes the sample was field filtered or N - for sample was not field filtered.

4) Matrix Codes DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal

5) Sample Analysis Requested Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- 3, *6010B/7470A* - 1).

6) Preservative Type HA= Hydrochloric Acid, NI = Nitric Acid, SH= Sodium Hydroxide, SA= Sulfuric Acid, AA= Ascorbic Acid, HX= Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: ____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: MB/AA Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-50-42-(016)	01/22/09	1523	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-50-66-(020)	01/22/09	1601	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge) Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	1/22/09	1630	Secure Storage	1/22/09	1630
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1) Chain of Custody Number = Client Determined
2) QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C** = Composite
3) Field Filtered. For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**)
6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: ____ *C*

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: AA/MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-37-22-(013)	01/21/09	1427	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-37-32-(013)	01/21/09	1430	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-37-40-(013)	01/22/09	1305	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-37-57-(013)	01/21/09	1422	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)
Fax Results: Yes / (No)
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		1/21/09	1532	Secure	1/21/09	1530
1		1/22/09	1620	Storage	1/22/09	1620
2				2		
3				3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: ____ C

1) Chain of Custody Number = Client Determined
2) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered
4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr-90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-51-40-(010)	1/20/09	1450	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-51-79-(010)	1/20/09	1521	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-51-104-(008)	1/20/09	1046	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-51-135-(008)	1/20/09	1102	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-51-163-(008)	1/20/09	1144	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-51-189-(008)	1/20/09	1133	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level I / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	1/21/09	0900	SECURED STORAGE	1/21/09	0900
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

3.) Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: _____ *C*

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-40-27-(006)	1/19/09	1429	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-40-46-(007)	1/19/09	1428	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-40-81-(007)	1/19/09	1038	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-40-100-(009)	1/19/09	1152	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-40-127-(009)	1/19/09	1125	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-40-162-(007)	1/19/09	1147	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specifi QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	1/21/09	0901	1 SECURED STORAGE	1/21/09	0901
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

3.) Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

NRC FORM 303 (4-2004)

U.S. NUCLEAR REGULATORY COMMISSION

REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY

LABORATORY: _____

LABORATORY USE ONLY

CONTROL NUMBER

SAMPLE LOCATION (LICENSEE)

INDIAN POINT ENERGY CENTER

LICENSEE NUMBER	DOCKET NO.

SAMPLE SUBMITTED

# TOTAL	TYPE	VOLUME	WEIGHT
1	GROUND WATER	2000 ML	~ 2 Kg

DATE SAMPLES SUBMITTED

PRIORITY
☐ ROUTINE
☐ URGENT

SAMPLE COLLECTION INTERVAL

	MONTH	DAY	YEAR	TIME
START				
STOP				

INSPECTOR RESPONSIBLE: Jim Noggle (USNRC)

TELEPHONE NUMBER: (610) 337-5063

ANALYSIS TO BE PERFORMED	LIST DESIRED LLD (Optional)	OTHER TYPE OF ANALYSIS (Specify)	LIST DESIRED LLD (Optional)
☐ GROSS ALPHA (GA)		☒ STRONTIUM-90 (Sr90)	
☐ GROSS BETA (GB)		☒ NICKEL-63 (Ni63)	
☒ GAMMA SPEC (GS)		☐	
☒ TRITIUM (H3)		☐	
☐ CARBON-14 (C14)		☐	
☐ IODINE-125 (I125)		☐	

RELENQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
[signature]	[signature]	01/27/09	1710	Verify correct samples
[signature]	[signature]	1/27/09	1710	Relenquished/observed/verified sample
[signature]	SECURED STORAGE	01/27/09	1710	Secured Storage.

FEE RECOVERABLE ☐ NO ☒ YES TAC NUMBER _____

REMARKS:

NOTE: SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS REASON ARE NOTED IN REMARKS ABOVE.

NRC FORM 303
(4-2004)

U.S. NUCLEAR REGULATORY COMMISSION

SAMPLE RECORD - Continued

LABORATORY: _____

LABORATORY USE ONLY
CONTROL NUMBER

SAMPLE NUMBER	SAMPLE NAME AND DESCRIPTION	COLLECTION DATE/TIME	REMARKS, PRESERVATIVE ANALYSIS REQUESTED, ETC.
MW-67-39-(008)	Ground Water Split Sample of MW-67-39-(008)	01/27/09 1615	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
MW-67-105-(007)	Ground Water Split Sample of MW-67-105-(007)	01/27/09 1615	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
MW-67-173-(007)	Ground Water Split Sample of MW-67-173-(007)	01/27/09 1633	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
* MW-67-219-(007)	Ground Water Split Sample of MW-67-219-(007)	01/27/09 1234	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
* MW-67-276-(007)	Ground Water Split Sample of MW-67-276-(007)	01/27/09 1301	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
* MW-67-323-(007)	Ground Water Split Sample of MW-67-323-(007)	01/27/09 1350	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
* MW-67-340-(007)	Ground Water Split Sample of MW-67-340-(007)	01/27/09 1244	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
* From 1320 to 1340 these samples were not observed by NRC.			

NRC FORM 303 (4-2004) U.S. NUCLEAR REGULATORY COMMISSION

REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY

LABORATORY: _____

LABORATORY USE ONLY

CONTROL NUMBER

SAMPLE LOCATION (LICENSEE)
INDIAN POINT ENERGY CENTER

LICENSEE NUMBER	DOCKET NO.

SAMPLE SUBMITTED

# TOTAL	TYPE	VOLUME	WEIGHT
1	GROUND WATER	2000 ML	~ 2 Kg

DATE SAMPLES SUBMITTED

PRIORITY
☐ ROUTINE
☐ URGENT

SAMPLE COLLECTION INTERVAL

	MONTH	DAY	YEAR	TIME
START				
STOP				

INSPECTOR RESPONSIBLE: Jim Noggle (USNRC)

TELEPHONE NUMBER: (610) 337-5063

ANALYSIS TO BE PERFORMED	LIST DESIRED LLD (Optional)	OTHER TYPE OF ANALYSIS (Specify)	LIST DESIRED LLD (Optional)
☐ GROSS ALPHA (GA)		☒ STRONTIUM-90 (Sr90)	
☐ GROSS BETA (GB)		☒ NICKEL-63 (Ni63)	
☒ GAMMA SPEC (GS)		☐	
☒ TRITIUM (H3)		☐	
☐ CARBON-14 (C14)		☐	
☐ IODINE-125 (I125)		☐	

RELENQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
[signature]	[signature]	01/27/09	1710	Verify correct samples
[signature]	[signature]	1/27/09	1710	Relenquished/observed/verified samples
[signature]	SECURED STORAGE	01/27/09	1710	Secured Storage.

FEE RECOVERABLE ☐ NO ☒ YES TAC NUMBER _____

REMARKS:

NOTE: SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS REASON ARE NOTED IN REMARKS ABOVE.

NRC FORM 303 (4-2004) U.S. NUCLEAR REGULATORY COMMISSION

SAMPLE RECORD - Continued

LABORATORY: _____

LABORATORY USE ONLY
CONTROL NUMBER

	SAMPLE NUMBER	SAMPLE NAME AND DESCRIPTION	COLLECTION DATE/TIME	REMARKS, PRESERVATIVE ANALYSIS REQUESTED, ETC.
	MW-67-39-(008)	Ground Water Split Sample of MW-67-39-(008)	01/27/09 1615	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
	MW-67-105-(007)	Ground Water Split Sample of MW-67-105-(007)	01/27/09 1615	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
	MW-67-173-(007)	Ground Water Split Sample of MW-67-173-(007)	01/27/09 1633	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
*	MW-67-219-(007)	Ground Water Split Sample of MW-67-219-(007)	01/27/09 1234	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
*	MW-67-276-(007)	Ground Water Split Sample of MW-67-276-(007)	01/27/09 1301	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
*	MW-67-323-(007)	Ground Water Split Sample of MW-67-323-(007)	01/27/09 1350	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
*	MW-67-340-(007)	Ground Water Split Sample of MW-67-340-(007)	01/27/09 1244	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
* From 1320 to 1340 these samples were not observed by NRC.				

NRC FORM 303
(4-2004)

U.S. NUCLEAR REGULATORY COMMISSION

REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY

LABORATORY: ____________

LABORATORY USE ONLY

CONTROL NUMBER

SAMPLE LOCATION (LICENSEE): INDIAN POINT ENERGY CENTER

LICENSEE NUMBER	DOCKET NO.

SAMPLE SUBMITTED

# TOTAL	TYPE	VOLUME	WEIGHT
1	GROUND WATER	2000 ML	~ 2 Kg
.			

DATE SAMPLES SUBMITTED

PRIORITY
☐ ROUTINE
☐ URGENT

SAMPLE COLLECTION INTERVAL

	MONTH	DAY	YEAR	TIME
START				
STOP				

INSPECTOR RESPONSIBLE: Jim Noggle (USNRC)

TELEPHONE NUMBER: (610) 337-5063

ANALYSIS TO BE PERFORMED	LIST DESIRED LLD *(Optional)*	OTHER TYPE OF ANALYSIS *(Specify)*	LIST DESIRED LLD *(Optional)*
☐ GROSS ALPHA (GA)		☒ STRONTIUM-90 (Sr90)	
☐ GROSS BETA (GB)		☒ NICKEL-63 (Ni63)	
☒ GAMMA SPEC (GS)		☐	
☒ TRITIUM (H3)		☐	
☐ CARBON-14 (C14)		☐	
☐ IODINE-125 (I125)		☐	

RELENQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
[signature]	[signature]	01/27/09	1704	Verify correct samples
[signature]	[signature]	1/27/09	1704	Relenquished observed given [illegible]
[signature]	SECURED STORAGE	1/27/09	1704	SECURED STORAGE

FEE RECOVERABLE ☐ NO ☒ YES

TAC NUMBER ____________

REMARKS:

NOTE: SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS REASON ARE NOTED IN REMARKS ABOVE.

NRC FORM 303
(4-2004)

U.S. NUCLEAR REGULATORY COMMISSION

SAMPLE RECORD - Continued

LABORATORY: _____

LABORATORY USE ONLY
CONTROL NUMBER

SAMPLE NUMBER	SAMPLE NAME AND DESCRIPTION	COLLECTION DATE/TIME	REMARKS, PRESERVATIVE ANALYSIS REQUESTED, ETC.
* MW-66-21-(007)	Ground Water Split Sample of MW-66-21-(007)	01/27/09 1352	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
MW-66-36-(007)	Ground Water Split Sample of MW-66-36-(007)	01/27/09 1307	Sample is unfiltered & unpreserved. Analyze for Gamma Spec, H3, Sr90, Ni63
*			
* - From 1320 to 1340 sample collection was not observed by NRC.			

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: MBIVA Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-54-37-(008)	02/02/09	1534	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-54-58-(008)	02/03/09	1453	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-54-123-(008)	02/03/09	1155	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-54-144-(008)	02/02/09	1241	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-54-173-(008)	02/03/09	1219	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-54-190-(008)	02/02/09	1235	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: _____ Specify: _____ (Subject to Surcharge)
Fax Results: Yes / (No)
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	2/3/09	1555	1 Secure storage	2/3/09	1555
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

[1] Chain of Custody Number = Client Determined
[2] QC Codes N = Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
[3] Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
[4] Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
[5] Sample Analysis Requested. Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- 3, *6010B/7470A* - 1).
[6] Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA / MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-58-26-(007)	02/03/09	1249	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-58-65-(007)	02/03/09	1205	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	02/03/09	1555	SECURED 1 STORAGE	02/03/09	1555
2				2		
3				3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

1) Chain of Custody Number = Client Determined
2) QC Codes N= Normal Sample, TB = Trip Blank, FD= Field Duplicate, EB = Equipment Blank, MS= Matrix Spike Sample, MSD= Matrix Spike Duplicate Sample, G= Grab, C = Composite
3) Field Filtered For liquid matrices, indicate with a Y - for yes the sample was field filtered or N - for sample was not field filtered.
4) Matrix Codes DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
5) Sample Analysis Requested Analytical method requested (i.e 8260B, 6010B/7470A and number of containers provided for each (i.e. *8260B- 3, 6010B/7470A - 1*).
6) Preservative Type HA= Hydrochloric Acid, NI = Nitric Acid, SH= Sodium Hydroxide, SA= Sulfuric Acid, AA= Ascorbic Acid, HX= Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA/MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-44-66-(011)	02/03/09	0940	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone: (Eastern) Central Mountain Pacific Other

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	02/03/09	1555	1 SECURED STORAGE	02/03/09	1555
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent

Method of Shipment: FEDEX Date Shipped:

Airbill #:

Airbill #:

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: C

[1] Chain of Custody Number = Client Determined

[2] QC Codes N = Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

[3] Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

[4] Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

[5] Sample Analysis Requested Analytical method requested (i.e. **8260B, 6010B/7470A**and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

[6] Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy — Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center — Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: AA/MB — Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)	Comments
MW-44-102-(012)	02/02/09	1206	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly	Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)
Fax Results: Yes / (No)
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone: (Eastern) Pacific / Central / Other ____ / Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	2/2/09	1830	1 Scott Stevens	2/2/09	1830
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX — Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

[1] Chain of Custody Number = Client Determined
[2] QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
[3] Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
[4] Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
[5] Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
[6] Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AM MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-45-42-(015)	02/02/09	1802	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-45-61-(015)	02/02/09	1313	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		2/2/09	1830	Stevage	2/2/09	1830
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
3.) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4.) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested Analytical method requested (i e **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6.) Preservative Type. **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: MB / AM Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-44-102-(012)	01/22/09	1206	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-44-66-(011)	~~01/22/09~~		N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	2/2/09	1830	[signature] Secure Storage	2/2/09	1830
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
3.) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4.) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6.) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: *C*

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy — Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center — Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA/MB — Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-30-69-(023)	01/30/09	1100	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-30-84-(014)	01/30/09	1121	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
(Eastern) Central Mountain Pacific Other ____

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		1/30/09	1215	Secure Storage	1/30/09	1215
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX — Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

1.) Chain of Custody Number = Client Determined
2.) QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C** = Composite
3.) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4.) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6.) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA / MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-63-112-(008)	01/30/09	1437	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-63-121-(008)	01/30/09	1441	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	1/30/09	1510	1 Secure Storage	1/30/09	1510
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

[1] Chain of Custody Number = Client Determined
[2] QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
[3] Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
[4] Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
[5] Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
[6] Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: MBIAA Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-42-78-(011)	01/30/09	1122	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	1/30/09	1215	Secure Storage	1/30/09	1215
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined
2.) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C** = Composite
3.) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6.) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy
Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center
Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: AP / MB
Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)	Comments
MW-63-18-(008)	01/29/09	1346	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-63-34-(008)	01/29/09	1222	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-63-50-(008)	01/29/09	1406	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-63-93-(009)	01/29/09	1420	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-63-163-(008)	01/29/09	1157	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-63-174-(008)	01/29/09	1155	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly

Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)
Fax Results: Yes / (No)
Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Central Mountain Pacific Other ____

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[signature]	1/29/09	1510	1 Secure Storage	1/29/09	1510
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX
Date Shipped:
Airbill #:
Airbill #:

Chain of Custody Number = Client Determined

QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C** = Composite
Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered
Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: ____ C

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA / MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
U3-T1-(023)	01/28/09	1200	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
U3-T2-(028)	01/28/09	1140	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	1/28/09	1345	1 SECURED STORAGE	1/28/09	1345
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent

Method of Shipment: FEDEX Date Shipped:

Airbill #:

Airbill #:

1) Chain of Custody Number = Client Determined

2) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered

4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5) Sample Analysis Requested. Analytical method requested (i e. **8260B, 6010B/7470A**) and number of containers provided for each (i e. *8260B*- **3**, *6010B/7470A* - **1**).

6) Preservative Type. **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? *YES* *NO*

Cooler Temp: _____ *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-55-24-(009)	02/11/09	1255	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 Miguel A Britos	02/11/09	1500	1 SECURED STORAGE	02/11/09	1500
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

3.) Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: _____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
U3-4D-(019)	02/10/09	1415	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	02/10/09	1430	SECURED 1 STORAGE	02/10/09	1430
2				2		
3				3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined

2.) QC Codes: **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

3.) Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

4.) Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

6.) Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: ____ *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-60-35-(008)	02/09/09	1612	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-53-(008)	02/09/09	1128	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-53-(008)-B	02/09/09	1135	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-53-(008)-D	02/09/09	1138	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-53-(008)-S	02/09/09	1148	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-72-(008)	02/09/09	1125	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-135-(008)	02/09/09	1204	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-154-(008)	02/09/09	1223	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-60-176-(008)	02/09/09	1308	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	Miguel A Brito	02/09/09	1655	SECURED STORAGE	02/09/09	1655
2						
3						

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1.) Chain of Custody Number = Client Determined

2.) QC Codes. **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

3.) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

4.) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

6.) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: _____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AM / MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID *For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)
MW-31-49-(014)	02/06/09	1105	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-31-63-(014)	02/06/09	1153	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-31-85-(014)	02/06/09	1172	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: _____ Specify: _____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	Agle GA	2/6/09	1400	secure storage	2/6/09	1400
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent

Method of Shipment: FEDEX Date Shipped:

Airbill #:

Airbill #:

1) Chain of Custody Number = Client Determined

2) QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C** = Composite

3) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.

4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

5) Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).

6) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact?
YES *NO*

Cooler Temp:
_____ *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number (1):
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: MB / AA Send Results To: Patrick Donahue

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)
MW-49-26-(015)	02/06/09	1305	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-49-42-(015)	02/06/09	957	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly
MW-49-65-(015)	02/06/09	959	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly

Comments
Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: Specify: (Subject to Surcharge) Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		2/6/09	1400	Storage	2/6/09	1400
2						
3						

Sample Shipping and Delivery Details

GEL PM: Erin Trent
Method of Shipment: FEDEX Date Shipped:
Airbill #:
Airbill #:

1) Chain of Custody Number = Client Determined
2) QC Codes N= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
3.) Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered.
4) Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, ML=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
5.) Sample Analysis Requested Analytical method requested (i e **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**).
6.) Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: _____ C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy — Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center — Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA/MS — Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	See Preservative Type (6)	Comments
MW-46-(015)	02/05/07	1346	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly

Comments: Note: extra sample is required for sample specific QC

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: ***Are there any known hazards applicable to these samples? If so, please list the hazards***

Sample Collection Time Zone: (Eastern) Central Mountain Pacific Other

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[signature]	2/5/07	1435	1 Steve Strong	2/5/07	1435
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: Erin Trent

Method of Shipment: FEDEX — Date Shipped:

Airbill #:

Airbill #:

[1] Chain of Custody Number - Client Determined

[2] QC Codes: **N** = Normal Sample, **TB** = Trip Blank, **FD** = Field Duplicate, **EB** = Equipment Blank, **MS** = Matrix Spike Sample, **MSD** = Matrix Spike Duplicate Sample, **G** = Grab, **C** = Composite

[3] Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered

[4] Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

[5] Sample Analysis Requested: Analytical method requested (i.e. **8260B, 6010B/7470A**) and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**)

[6] Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: ____ °C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy Phone #: (914) 736-8405

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: AA/MB Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)	Comments
MW-55-35-(008)	02/04/09	1346	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly	Note: extra sample is required for sample specific QC
MW-55-54-(009)	02/04/09	1242	N	N	GW	Y	Y	1	1	1	1	1	2 Liter Poly	

TAT Requested: Normal: ✓ Rush: Specify: (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone: (Eastern) Central Mountain Pacific Other

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	2/4/09	1705	1 Stuart Stevens	2/4/09	1705
			2		
			3		

Sample Shipping and Delivery Details

GEL PM: ERIN TREN

Method of Shipment: FEDEX Date Shipped:

Airbill #:

Airbill #:

Chain of Custody Number = Client Determined

QC Codes: **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite

Field Filtered: For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered

Matrix Codes: **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal

Sample Analysis Requested: Analytical method requested (i.e **8260B**, **6010B/7470A** and number of containers provided for each (i.e *8260B*- **3**, *6010B/7470A* - **1**)

Preservative Type: **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: C

Page: 1 of 1
Project #: Entergy GW Mon Prog
GEL Quote #:
COC Number [1]:
PO Number: 50013510

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Entergy
Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center
Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: AA/MB
Send Results To: Patrick Donahue

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	<-- Preservative Type (6)	Comments
MW-32-149-(009)	02/04/09	1350	N	N	GW	Y	Y	1	1	1	1		Note: extra sample is required for sample specific QC
MW-32-173-(007)	02/04/09	1340	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly
MW-32-190-(010)	02/04/09	1345	N	N	GW	Y	Y		1	1	1		2 Liter Poly
MW-32-59-(008)	02/04/09	1546	N	N	GW	Y	Y		1	1	1		2 Liter Poly
MW-32-85-(011)	02/04/09	1549	N	N	GW	Y	Y		1	1	1		2 Liter Poly
													2 Liter Poly

TAT Requested: Normal: ✓ Rush: ____ Specify: ____ (Subject to Surcharge)

Fax Results: Yes / (No)

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

Sample Collection Time Zone
(Eastern) Pacific
Central Other ____
Mountain

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
[signature]	02/04/09	1705	SECURED STORAGE	02/04/09	1705
			2		
			3		

Chain of Custody Number - Client Determined

Sample Shipping and Delivery Details

GEL PM: ERIN TREN
Method of Shipment: FEDEX
Date Shipped:
Airbill #:
Airbill #:

QC Codes **N**= Normal Sample, **TB** = Trip Blank, **FD**= Field Duplicate, **EB** = Equipment Blank, **MS**= Matrix Spike Sample, **MSD**= Matrix Spike Duplicate Sample, **G**= Grab, **C**= Composite
Field Filtered For liquid matrices, indicate with a **Y** - for yes the sample was field filtered or **N** - for sample was not field filtered
Matrix Codes **DW**=Drinking Water, **GW**=Groundwater, **SW**=Surface Water, **WW**=Waste Water, **W**=Water, **ML**=Misc Liquid, **SO**=Soil, **SD**=Sediment, **SL**=Sludge, **SS**=Solid Waste, **O**=Oil, **F**=Filter, **P**=Wipe, **U**=Urine, **F**=Fecal, **N**=Nasal
Sample Analysis Requested Analytical method requested (i.e. **8260B**, **6010B/7470A** and number of containers provided for each (i.e. *8260B*- **3**, *6010B/7470A* - **1**)
Preservative Type **HA**= Hydrochloric Acid, **NI** = Nitric Acid, **SH**= Sodium Hydroxide, **SA**= Sulfuric Acid, **AA**= Ascorbic Acid, **HX**= Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp. ____ C

APPENDIX D: 1ST QUARTER 2009 SAMPLING DATA SHEETS

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	1/19/09
Client:	Entergy Nuclear NorthEast	**GZA Engineers:**	Miguel Britos
Site:	**INDIAN POINT ENERGY CENTER**		Angela Altieri
Location:	Buchanan, NY		
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	0700		Sunny 20's
Time Left Site:	1700		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-40-27(006)	IPEC	2 L	poly			
" - -46(007)	"	"	"			
" - -81(007)	"	"	"			
" - -100(009)	"	"	"			
" - -127(009)	"	"	"			
" - -162(007)	"	"	"			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

Lines (tubing) frozen upon arrival.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	1/20/09
Client:	Entergy Nuclear NorthEast	**GZA Engineers:**	Miguel Britos
Site:	**INDIAN POINT ENERGY CENTER**		Angela Altieri
Location:	Buchanan, NY		
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	0630		Sunny upper 20's
Time Left Site:	1630		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-51-40-	(010) IPEC	2 L	poly			
-79-	(010)					
-104-	(008)					
-135-	(008)					
-163-	(008)					
-189-	(008)					

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

Brake 2' of ice on top of wells lid from snow plow. Lines frozen.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	4/21/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	700	700	20's, Sun
Time Left Site:	1620	1620	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW 37-32(3)	IPEC	2L	Poly			
MW 37-32(3)	↓	↓	↓			
MW-37-40(3)	↓	↓	↓			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations			Follow-up Required?
DUT-1	X	X	old trans. stopped 12/17/08. Replaced			
		reset	transducer.			
MW37-32	&	~~test~~ &	9.75'	~~5.355~~ 5.330	+ 0.274	
MW37-21	X	X	9.76'	5.220	+ 0.128	
MW-37-40	X	X	8.08'	6.080	+ 0.712	
MW-37-57			8.18'	6.763	+ 0.16	
			DTW	trans. reading	Off by this amount	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

WELL ID: MW-37-D
SAMPLE ID: 013

GZA GeoEnvironmental of New York
Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: 20's, sun

PROJECT NO: 01.0017869.91
DATE: 1/21/09
SAMPLER(S): AA / MB
PUMP DEPTH: 17 ft

WATER QUALITY:

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1302	9.81'		Pump on						
1312	9.82	7.15	2.624	—	2.30	20.16	-32.0		
1316	9.82	7.16	2.588	10.4	1.57	20.43	-80.8		
1321	9.83	7.24	2.566	5.71	1.22	20.65	-76.7		
1326	9.83	7.25	2.555	5.87	1.03	20.71	-90.7		
1331	9.84	7.29	2.554	8.03	0.79	20.76	-97.6		
1336	9.84	7.25	2.542	4.75	0.72	20.78	-111.8		1 gal purged
1341	9.86	7.30	2.541	4.91	0.66	20.79	-116.8		
1346	9.86	7.27	2.540	4.68	0.63	20.79	-122.2		
1351	9.87	7.30	2.541	4.21	0.59	20.79	-131.5		
1357	9.87	7.28	2.542	4.03	0.57	20.75	-132.1		
1402	9.88	7.27	2.540	3.98	0.53	20.79	-135.3		
1407	start	sampling							
1427	stop	sampling -	2L	IPEC					

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	1
flow meter	
turbidity meter	20070254

NOTES AND OBSERVATIONS:

Depth and Depth to Water (DTW) measurements are given in feet from top of casing.

Groundwater Elevation measurements are given in feet msl.

~2.2 gal purged

WELL ID: MW37-3
SAMPLE ID: 013

GZA GeoEnvironmental of New York
Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: 20's, Sun

PROJECT NO: 01.0017869.91
DATE: 4/21/09
SAMPLER(S): AA/MB
PUMP DEPTH: 29 ft

WATER QUALITY:

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1302	14.541	Pump on							
1313	14.464	7.20	1.757	—	1.26	20.17	155.8		
1318	14.434	7.28	1.648	8.44	0.95	20.39	148.3		
1322	14.411	7.33	1.594	3.68	0.81	20.47	138.7		
1327	14.415	7.39	1.558	4.16	0.71	20.52	136.9		
1332	14.419	7.44	1.536	4.76	0.66	20.58	129.2		
1337	14.403	7.47	1.530	3.16	0.61	20.59	122.7		
1342 ~~1338~~	14.417	7.50	1.523	2.41	0.57	20.61	118.7		1 gal purged
1346	14.388	7.53	1.516	2.23	0.53	20.62	113.0		
1352	14.374	7.56	1.511	2.27	0.48	20.62	107.4		
1358	14.351	7.58	1.506	3.16	0.52	20.62	101.8		
1403	14.370	7.59	1.503	3.38	0.59	20.63	97.4		
1409	Start sampling								
1430	STOP	sampling-		2L	PEC				

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
flow meter	6
turbidity meter	
	20070125

NOTES AND OBSERVATIONS:

Depth and Depth to Water (DTW) measurements are given in feet from top of casing.

Groundwater Elevation measurements are given in feet msl.

~2.2 gal purged

WELL ID: MW-37-40
SAMPLE ID: 013

GZA GeoEnvironmental of New York
Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: 20's, sun.

PROJECT NO: 01.0017869.91
DATE: 1/21/09
SAMPLER(S): AA / MB
PUMP DEPTH: 39 ft

WATER QUALITY:

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (^{0}C)	ORP	Rate (gal/hr)	Notes
1301	12.168	Pump IN							
1314	12.142	7.34	1.653	-	1.40	20.33	18.3		
1319	12.124	7.23	1.642	5.70	1.18	20.71	21.0		
1323	12.121	7.23	1.619	4.85	1.11	20.88	21.4		
1328	12.117	7.18	1.607	5.04	1.08	21.06	24.5		
1333	12.113	7.16	1.605	3.71	1.04	21.15	30.0		
1338	12.101	7.15	1.605	2.92	1.02	21.22	33.7		
1343	12.093	7.17	1.605	3.06	1.04	21.27	36.0		1 gal purged
1348	12.093	7.17	1.606	3.22	1.02	21.29	36.1		
1351	Start sampling								
1422	Stop sampling - 2L IPEC								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	
turbidity meter	20070254

NOTES AND OBSERVATIONS:

Depth and Depth to Water (DTW) measurements are given in feet from top of casing.

Groundwater Elevation measurements are given in feet msl.

~1.3 gal purged

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	1/22/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	700	700	30's, partly cloudy
Time Left Site:	540	540	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW37-40 (013)	IPEC	2L	poly			
MW36-24 (013)	↓	↓	↓			
MW36-52 (013)						
MW50-42 (016)						
MW50-66 (020)						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations				Follow-up Required?
			DTW	trans rdng	should read off by amt		
MW36-24	checked		4.04	7.591	11.598	-0.033	
MW-36-52	checked	X	5.07	6.913	11.670	-0.243	
43-C1	checked & changed trans.		13.18	5.684	18.060	-0.804	
HR-1	checked & installed second trans.		16.26	2.21	18.496	+.02	
MW50-42			11.36	3.309	14.453	-0.186	
MW50-66			8.39	6.057	14.614	+0.167	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

Log from 1/21/09 MW37-40 should be MW-37-57. I included a copy with ~~this~~ today's stuff.

45 min. safety meeting this morning

Project:	Radiological Groundwater Sampling Program	Date:	4/23/09
Client:	Entergy Nuclear NorthEast	GZA Engineers:	Miguel Britos
Site:	INDIAN POINT ENERGY CENTER		Angela Althen
Location:	Buchanan, NY		
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Althen	Weather:
Time Arrived onSite:	700	700	30's, sun
Time Left Site:	1630	1630	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
62-18(008)	IPEC	2L	poly			
62-37(008)	↓	↓	↓			
62-53(007)	↓	↓	↓			
62-71(008)	↓	↓	↓			
62-92(008)	↓	↓	↓			
62-138(008)	↓	↓	↓			
62-182(008)	↓	↓	↓			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
			DTW transd showd rd difference	
MW62-18	x	x	11.07 1.373 12.810 + 0.367	
MW62-37			11.44 1.373 12.810 + 0.003	
OUT-1		x	Changed to nonvented transducer	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

25 min - snow removal around MW62.
1 hr. - overburden wells tubing was frozen & we had to use the heat gun to defrost the lines.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	1/26/09
Client:	Entergy Nuclear NorthEast	**GZA Engineers:**	Miguel Britos
Site:	**INDIAN POINT ENERGY CENTER**		Angela Altieri
Location:	Buchanan, NY		
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	0700		P. sunny 20's
Time Left Site:	1800		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-42-49 (015)	IPEC	2 L	poly			
MW-53-82 (010)	↓	↓	↓			
MW-53-120 (013)	↓	↓	↓			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
MW-42-78	✓	✓	Reprogram because of 0.75 difference	
MW-53-82	✓	✓	" " " 0.372 "	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

Freezing temperatures. Tubing freezes outside well.

Project:	Radiological Groundwater Sampling Program	**Date:**	1/27/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	700	700	30's, P. cloudy
Time Left Site:	1900	1900	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW66-21(007)	IPEC	2L	Poly	NRC	2L	Poly
MW66-36(007)	IPEC	2L	↓	NRC	2L	↓
MW67-39 (008)	↓	↓	↓	↓	↓	↓
MW67-105 (007)						
MW67-173 (007)						
MW67-219 (007)						
MW67-276 (007)						
MW67-323(007)						
MW67-340(007)	↓	↓	↓	↓	↓	↓

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations				Follow-up Required?
			DTW	trans. Surface rd	trans. Actual depth	Add to Data	
MW66-21	X	X	0.284	0.284	7.357	+ 0.133	
MW66-36	X	X	1.066	1.066	not shown	+ 0.094	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MW-63 - Plowed & Miguel spent ~30 min Breaking ice on MW63
- NRC did not observe sampling from 1320-1340 as noted on NRC's COC.

Project:	Radiological Groundwater Sampling Program	**Date:**	1/28/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		
Project #:	01.0017869.91		Angela Altien

GZA Engineer:	Miguel Britos	Angela Altien
Time Arrived onSite:	700	700
Time Left Site:	1430	1430

Weather: snow; then sleet rain. 30's

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
U3-T1 (023)	IPEC	2L	poly			
U3-T2 (028)	IPEC	2L	poly			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations: DTW	trans. Surface rdg	Actual Depth	Add to Data	Follow-up Required?
U3-T1	Checked		4.84	3.673	2.169	+.005	
U3-T2	Checked		4.72	3.806	2.093	+.014	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

3 hrs spent: went into FSB to check if work going on [in area of MW-30]. waiting for approval to go into RCA; wait to get dose to go in sample MW30. Need to be on the schedule to go into RCA area - new rule. Setup at U3-T1 + T2 & sampled. We were going to sample MW30, but the van could not make it up the hill due to ice.

- Entergy employees didn't come until 9:00 due to snow.

(Margin note, with arrow to "RCA area - new rule": J. Peters says we don't have to be on the schedule.)

Project:	Radiological Groundwater Sampling Program	**Date:**	4/29/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	700	700	20's, sun
Time Left Site:	1600	1600	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW63-18 (08)	IPEC	2L	POLY			
63-34 (08)	↓	↓	↓			
63-50 (08)						
63-93 (09)						
63-103 (08)						
63-174 (08)						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	DTW	trans. rdng	Special Notes/Issues/Observations Actual depth	Adapto Data	Follow-up Required?
MW63-18	X	X	13.48	-0.066	4.252	-0.414	* Batteries changed
MW63-34			13.43	-0.330	12.819	-.036	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

~2 hrs spent defrosting lines - frozen.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	4/30/09
Client:	Entergy Nuclear NorthEast	**GZA Engineers:**	Miguel Britos
Site:	**INDIAN POINT ENERGY CENTER**		Angela Altieri
Location:	Buchanan, NY		
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:** cloudy, 30's, little snow flurries PM
Time Arrived onSite:	700	700	
Time Left Site:	1630	1630	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW42-78(011)	IPEC	2L	poly			
MW30-69(027)	↓	↓	↓			
MW30-84(014)						
MW63-113(008)						
MW63-121(008)						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
RW-1	X		taking depth readings	
MW30-69	X			
MW30-84	X			

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MW42 - 30Min - chopping ice on the well.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/2/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri
Time Arrived onSite:	700	700
Time Left Site:	1900	1900

Weather: AM-30's, Sun PM-cooler, cloudy

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW45-42(05)	IPEC	2L	POLY			
MW45-61(05)	↓	↓	↓			
MW44-102(012)		↓				
MW44-67(011)	↓	* 1L	↓			
		* Well did not recharge only 1L				
		Obtain will try tomorrow morning.				

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations				Follow-up Required?
			DTW	trans rdng	Actual Depth	Add to Data	
MW44-67	Y	Y	59.63	33.590	4.414	-.200	
MW44-102			67.72	25.329	30.873	+.041	
MW45-42			25.17	28.065	15.929	+.009	
MW-45-61			26.36	26.794	34.945	+.063	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/3/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	700	700	snow, 30's
Time Left Site:	1700	1700	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW44-66	IPEC	1L	Poly *	finished sampling from yesterday's purge		
MW58-26 (007)		1L				
MW58-65 (007)						
MW54-37 (008)						
MW54-58 (008)						
MW54-123 (008)						
MW54-144 (008)						
MW54-173 (008)						
MW54-190 (008)						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations: DTW	transducer reading	Actual depth	Adjusted Data	Follow-up Required?
MW58-26			8.09	6.157	17.074	-0.017	
MW58-65		x reset	7.80	6.899	60.284	-.449.	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

** One air compressor motor - smoking - doesn't work.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/4/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	700	700	20's, sun
Time Left Site:	1730	1730	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW55-35 (008)	IPEC	2L	POLY			
MW55-54 (069)						
MW32-59 (005)						
MW32-85 (011)						
~~MW32-131 (007)~~						
MW32-149 (009)						
MW32-173 (007)						
MW32-196 (010)						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations				Follow-up Required?
			DTW	transducer	Actual	Difference	
MW55-24	Checked.		9.64	8.110	6.183	+0.020	
MW55-35	Checked		10.04	7.713	23.702	+0.013	
MW55-54	x	x	10.98	8.120	40.834	-1.330	← this test stopped mid December.
↑ Batteries dead							

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MW55-24 - Pumping so slow that the ~~lines~~ tubing froze - YSI inputs/outputs. Will have to sample on a warmer day.

MW32-131 - no water coming out of this level.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/5/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:** 10's, Scn Windchill 0°
Time Arrived onSite:	700	700	
Time Left Site:	1530	1530	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW46	IPEC	2L	poly			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations DTW	trans reading	Actual Depth	Difference	Follow-up Required?
MW49-26	check		12.75	1.433	12.019	-.012	
MW49-42	check		12.70	1.669	14.262	-.146	
MW49-65	check		12.79	1.506	13.076	+.161	
MW46	x	x	4.54	12.910	23.157	-.480	
DUP-1	x						

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MW49- attempted to sample, by using heat gun to defrost lines, but lines would quickly freeze again. unable to sample.

* Extremely cold out today - Windchill 0°

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/6/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	700	700	10's, cloudy
Time Left Site:	1500	1500	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-31-49(014)	IPEC	2L	poly			
MW31-63(014)	↓	↓	↓			
MW31-85(014)						
MW49-26(015)						
MW49-42(015)						
MW49-65(015)						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

1½ hrs- defrosting frozen tubing.

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/9/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	0700		p. sunny 30's
Time Left Site:	1730		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-60-35	IPEC	2 L	poly			
MW-60-53	IPEC					
" " "	IPEC duplicate	2 L				
" " "	IPEC spike	2 L				
MW-60-72						
MW-60-135						
MW-60-154						
MW-60-176						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
MW-60	✓			

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MW-

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/10/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:**
Time Arrived onSite:	0700		p cloudy low 40's
Time Left Site:	1500		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
U3-4D	IPEC	2 L	poly			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
U3-4D	✓		Reset. Difference 0.257	
U3-3	✓		Reset " " 2.1	
U3-C1	✓		Pulled out and cleaned.	
MW-46	✓			
U3-T1	✓			
U3-T2	✓			
U3-4S	✓			

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/11/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:** pcloudy 50's
Time Arrived onSite:	0700		
Time Left Site:	1500		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-55-24	IPEC	2 L	poly			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
MW-55-24	✓	✓		
35	✓			
54	✓			
MW-33	✓			
MW-34	✓		Unable to check DTW. Too much oil in it	
MW-35	✓	✓	Same problem as 34. Estimate DTW to reset.	
MW-111	✓	✓		
MW-52-11	✓	✓		
MW-52-18	✓			
48	✓			
64	✓			
118	✓			
122	✓			
162	✓			
181	✓			

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

1ST Quarter Sampling finished

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/12/08
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:** P. cloudy, windy drizzle 40's
Time Arrived onSite:	0700		
Time Left Site:	1500		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
MW-43-62	✓	✓		
MW-43-28	✓	✓		
MW-41-63	✓		Run off water going into wells	
MW-41-40	✓			
MW-45-42	✓			
MW-45-61	✓			
MW-44-102	✓			
MW-44-67	✓			
MW-39 all	✓			
MW-65-48	✓			
MW-65-80	✓			

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	**Date:**	2/13/09
Client:	Entergy Nuclear NorthEast		
Site:	**INDIAN POINT ENERGY CENTER**	**GZA Engineers:**	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	**Weather:** Sunny 40's
Time Arrived onSite:	0700		
Time Left Site:	1500		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?
MW-31	✓		All 3 levels	
MW-32	✓		All 7 levels	
MW-47-56	✓	✓		
MW-47-80	✓			
MW-56-53	✓	✓		
MW-56-83	✓	✓		
MW-53-82	✓			
MW-53-120	✓			
MW-42-49	✓			
MW-42-78	✓	✓		

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

APPENDIX E: POST-Q1 2009 MID-QUARTER SAMPLING DATA SHEETS

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	Date:	3/16/09
Client:	Entergy Nuclear NorthEast		
Site:	INDIAN POINT ENERGY CENTER	GZA Engineers:	Miguel Britos
Location:	Buchanan, NY		Angela Altieri
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	Weather:
Time Arrived onSite:	0700	—	P. Cloudy 50°F
Time Left Site:	1500	—	

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-42-49(016)	IPEC	2 L.	poly	MID QUARTER SAMPLING		
MW-53-120(014)	"	" "	"			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	Date:	3/17/09
Client:	Entergy Nuclear NorthEast	GZA Engineers:	Miguel Britos
Site:	INDIAN POINT ENERGY CENTER		Angela Altieri
Location:	Buchanan, NY		
Project #:	01.0017869.91		

GZA Engineer:	Miguel Britos	Angela Altieri	Weather:
Time Arrived onSite:	0700		M Sunny 50's
Time Left Site:	1500		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-66-21(008)	IPEC	2 L	poly	MID QUARTER SAMPLING		
MW-67-173(008)	"	" "	"			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

GZA FIELD ACTIVITIES SHEET

Project:	Radiological Groundwater Sampling Program	Date:	3/18/09
Client:	Entergy Nuclear NorthEast	GZA Engineers:	Miguel Britos
Site:	INDIAN POINT ENERGY CENTER		Angela Altieri
Location:	Buchanan, NY		
Project #:	01.0017869.91		

	Miguel Britos	Angela Altieri	Weather:
GZA Engineer:			
Time Arrived onSite:	0700		Sunny 60°F
Time Left Site:	1630		

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (voa, amber, poly, glass)
MW-50-66( )	IPEC	2 L	poly			
UI-CSS( )	"	"	"			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check) Download	Installation	Special Notes/Issues/Observations	Follow-up Required?

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

APPENDIX F: DOSE CALCULATIONS

Facility Groundwater Flux Calculation

Site Indian Point
Job No. 17869.91

Prepared By: JAS
Reviewed By: mjb

Parameter Values:

year
2009

Totals					
Total Catchment Zone (ft^2)	**Total Improved Zone (ft^2)**	**Recharge (ft/yr)**	**Precipitation (ft/yr)**		
3,969,765	1,355,080	0.87	3.02		
Surface Area					
Northern Clean Zone Improved (ft^2)	**Unit 2 North Improved Zone (ft^2)**	**Unit 1/2 Improved Zone (ft^2)**	**Unit 3 North Improved Zone (ft^2)**	**Unit 3 South Improved Zone (ft^2)**	**Southern Clean Improved Zone (ft^2)**
0	136,704	374,234	309,497	321,290	213,354
Northern Clean Unimproved Zone (ft^2)	**Unit 2 North Unimproved Zone (ft^2)**	**Unit 1/2 Unimproved Zone (ft^2)**	**Unit 3 North Unimproved Zone (ft^2)**	**Unit 3 South Unimproved Zone (ft^2)**	**Southern Clean Zone Unimproved (ft^2)**
111,863	217,667	438,221	323,116	268,862	585,600
Discounted Area Within Zone	**Discounted Area Within Zone**	**Discounted Area Within Zone**	**Discounted Area Within Zone**	**Discounted Area Within Zone**	**Discounted Area Within Zone**
44,831	0	324,509	137,938	17,730	144,347
Northern Clean Zone Catchment (ft^2)	**Unit 2 North Catchment Zone (ft^2)**	**Unit 1/2 Catchment Zone (ft^2)**	**Unit 3 North Catchment Zone (ft^2)**	**Unit 3 South Zone (ft^2)**	**Southern Clean Zone (ft^2)**
156,694	354,371	1,136,965	770,550	607,882	943,302
Activity (pCi/L)					
Groundwater					

	Northern Clean Zone Catchment	**Unit 2 North**	**Unit 1/2**	**Unit 3 North**	**Unit 3 South Zone**	**Southern Clean Zone**
Upper Zone Before Canal	150	546	2,570	328	824	276
Lower Zone Before Canal	150	151	2,810	1,171	439	220
	Northern Clean Zone	**Unit 2 North**	**Unit 1/2**	**Unit 3 North**	**Unit 3 South Zone**	**Southern Clean Zone**
Upper Zone After Canal	150	198	3,101	376	824	276
Lower Zone After Canal	150	582	1,095	483	439	220

Site Indian Point
Job No. 17869.91

Prepared By: JAS
Reviewed By: mjb

Stormwater Discharging to Canal (pCi/L)					
Storm Water for Northern Clean Zone	**Storm Water for Unit 2 North**	**Storm Water for Unit 1/2**	**Storm Water for Unit 3 North**	**Storm Water for Unit 3 South**	**Storm Water for Southern Clean Zone**
	1,148		0	0	0
NA	*Avg MH-4a*	*NA*	*Avg CB-14 and CB-34*	*Avg U3-CB-B8*	*Avg D1, CB3, E6, & E10*
Stormwater Discharging to River (pCi/L)					
Storm Water for Northern Clean Zone	**Storm Water for Unit 2 North**	**Storm Water for Unit 1/2**	**Storm Water for Unit 3 North**	**Storm Water for Unit 3 South**	**Storm Water for Southern Clean Zone**
	0	0	683		598
NA	*Avg. MH-1 and MH-12*	*Avg MH-14*	*Avg CB-15*	*NA*	*Avg E13,CB-C2*

Potential Water Received by Storm Drain System

=(Improved Area) x Precipitation

Northern Clean Area	Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South	Southern Clean Zone	Units
0	412,846	1,130,188	934,681	970,294	644,331	ft^3/yr
0	1,131	3,096	2,561	2,658	1,765	ft^3/day
0.00	5.88	16.09	13.30	13.81	9.17	GPM
0	11,690,498	32,003,363	26,467,218	27,475,679	18,245,408	L/Yr

The total amount of water available to be received by the storm system is computed as the combined area of buildings and paved areas in the catchment multiplied by the annual precipitation rate. Note this conservatively assumes that the amount of water lost to the atmosphere or other sinks after precipitation has fallen on paved or built up surfaces is zero.

Water Directly Recharged to Aquifer from Precipitation

=Unimproved Area x Recharge

Northern Clean Area	Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South	Southern Clean Zone	Units
97,677	190,063	382,646	282,138	234,765	511,335	ft^3/yr
268	521	1,048	773	643	1,401	ft^3/day
1.39	2.71	5.45	4.02	3.34	7.28	GPM
2,765,899	5,381,977	10,835,334	7,989,263	6,647,817	14,479,386	L/Yr

Note that this calculation reflects recharge to the aquifer in non-paved areas. The Recharge value listed above and used in this calculation reflects only that portion of precipitation that actually recharges the aquifer.

Facility Groundwater Flux Calculation

Site Indian Point
Job No. 17869.91

Prepared By: JAS
Reviewed By: mjb

Water Recharged to Aquifer (Direct Recharge Plus Storm Water Leakage Minus Building Drain Removal)

=(Direct Recharge + X% Water Received by Storm System) - (Y% x Water Removed by Building Drains)

Total Water Discharged to Aquifer

Upper and Lower Zone	[Northern Clean Area Catchment + (0% Storm Drain Water)]	[Unit 2 North + (50% Storm Drain Water)]-[5gpm]	[Unit 1/2 Area Catchment + (30% Storm Drain Water)]-[7.5 gpm]	[Unit 3 North Area Catchment + (50% Storm Drain Water)]-[7.5gpm]	[Unit 3 South Area + (1% Storm Drain Water)]	[Southern Clean Zone Area + (1% Storm Drain Water)]	Units
	97,677	45,173	194,734	222,510	244,468	517,778	ft^3/yr
	268	124	534	610	670	1,419	ft^3/day
	1.39	0.64	2.77	3.17	3.48	7.37	GPM
	2,765,899	1,279,165	5,514,250	6,300,779	6,922,574	14,661,840	L/Yr

Groundwater Discharged to Canal

=Water Recharged to Aquifer x X% flowing to Canal

Upper and Lower Zone	Northern Clean Area Catchment x 0%	Unit 2 North x 34.6%	Unit 1/2 Area Catchment 22.6%	Unit 3 North Area Catchment x 56.3%	Unit 3 South Area x73.9%	Southern Clean Zone Area x 0%	Units
	0	15,630	44,010	125,273	180,662	0	ft^3/yr
	0	43	121	343	495	0	ft^3/day
	0.00	0.22	0.63	1.78	2.57	0.00	GPM
	0	442,591	1,246,220	3,547,339	5,115,782	0	L/Yr

Facility Groundwater Flux Calculation

Site Indian Point
Job No. 17869.91

Prepared By: JAS
Reviewed By: mjb

Groundwater Discharged to River

=Water Recharged to Aquifer x X% flowing to River x Y% Flowing in Appropriate Vertical Zone

	Northern Clean Area Catchment x 100% x 33.5%	Unit 2 North x 65.4% x 21.7%	Unit 1/2 Area Catchment 77.4% x 35.9%	Unit 3 North Area Catchment x 43.7% x 28.7%	Unit 3 South Area x 26.1% x 34.4%	Southern Clean Zone Area x 100% x 51.8%	Units
Upper Zone	32,722	6,411	54,110	27,907	21,949	268,209	ft^3/yr
	90	18	148	76	60	735	ft^3/day
	0.47	0.09	0.77	0.40	0.31	3.82	GPM
	926,576	181,536	1,532,223	790,237	621,536	7,594,833	L/Yr
	Northern Clean Area Catchment x 100% x 66.5%	**Unit 2 North x 65.4% x 78.3%**	**Unit 1/2 Area Catchment 77.4% x 64.1%**	**Unit 3 North Area Catchment x 43.7% x 71.3%**	**Unit 3 South Area x 26.1% x 65.6%**	**Southern Clean Zone Area x 100% x 48.2%**	**Units**
Lower Zone	64,955	23,132	96,614	69,330	41,857	249,569	ft^3/yr
	178	63	265	190	115	684	ft^3/day
	0.92	0.33	1.38	0.99	0.60	3.55	GPM
	1,839,323	655,037	2,735,807	1,963,203	1,185,255	7,067,007	L/Yr

Water Remaining in Storm Drains and Discharged to Canal

=Storm Drain Water x X% Not Leaking to Groundwater and Not Discharging to River

Northern Clean Area Catchment (0% Storm Drain Water)	Unit 2 North (45% Unit 2 North and 30% of Unit 1/2 Storm Drain Water). Plus 5 gpm (351k cf/yr) from U2 footing drain.	Unit 1/2 Area Catchment (0% Storm Drain Water)	Unit 3 North Area Catchment (4% Unit 3 North Storm Drain Water)	Unit 3 South Area (4% Unit 3 North and 47% Unit 3 South Storm Drain Water)	Southern Clean Zone Area (30% Unit 1/2, 32% Unit 3 North, 47% Unit 3 South, and 94% Southern Clean Zone Storm Drain Water)	Units
0	875,837	0	37,387	493,426	1,699,863	ft^3/yr
0	2,400	0	102	1,352	4,657	ft^3/day
0	12.47	0.00	0.53	7.02	24.19	GPM
0	24,802,148	0	1,058,689	13,972,258	48,134,772	L/Yr

Facility Groundwater Flux Calculation

Site Indian Point
Job No. 17869.91

Prepared By: JAS
Reviewed By: mjb

Water Remaining in Storm Drains and Discharged to River

Northern Clean Area Catchment (0% Storm Drain Water)	Unit 2 North (5% Storm Drain Water)	Unit 1/2 Area Catchment (10% Storm Drain Water)	Unit 3 North Area Catchment (10% Storm Drain Water)	Unit 3 South Area (5% Storm Drain Water)	Southern Clean Zone Area (5% Storm Drain Water)	Units
0	20,642	113,019	93,468	48,515	32,217	ft^3/yr
0	57	310	256	133	88	ft^3/day
0	0.29	1.61	1.33	0.69	0.46	GPM
0	584,525	3,200,336	2,646,722	1,373,784	912,270	L/Yr

Flux Calculations

Conceptual Model: Migration Pathway Summary

	Northern Clean Area	Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South	Southern Clean Zone
GW	100% Upper and Lower Zone To River	68.6% Upper Zone and Lower Zone Flow To River. 31.4% Upper Zone and Lower Zone Flow to Canal	73.4% Upper Zone and Lower Zone To River. 26.6% Upper Zone and Lower Zone to Canal	41.2% Upper Zone and Lower Zone To River. 58.8% Upper Zone and Lower Zone to Canal	26.1% Upper Zone and Lower Zone To River. 73.9% Upper Zone and Lower Zone to Canal	100% Upper and Lower Zone To River
SW	NA	To Canal (Storm Water Considered Clean; Estimated at 5.5 GPM) and To River (5% Storm Water)	To Canal (60% Storm Water) and To River (10% Storm Water)	To Canal (40% Storm Water) and To River (10% Storm Water)	To Canal (94% Storm Water) and To River (5% Storm Water)	To Canal (94% Storm Water) and To River (5% Storm Water)

Flux (pCi/Yr)

	North Clean Area	Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South	South Clean Zone	Total
GW to River-Upper Zone	1.39E+08	3.59E+07	4.75E+09	2.97E+08	5.12E+08	2.09E+09	**7.83E+09**
GW to River-Lower Zone	2.76E+08	3.81E+08	3.00E+09	9.48E+08	5.20E+08	1.55E+09	**6.67E+09**
GW to Canal	0.00E+00	2.42E+08	3.20E+09	1.16E+09	4.22E+09	0.00E+00	**8.83E+09**
SW to Canal	NA	2.85E+10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**2.85E+10**
SW to River	NA	0.00E+00	0.00E+00	1.81E+09	0.00E+00	5.45E+08	**2.35E+09**

Curies/Yr ==> **0.05**

Notes:

The recharge rate used herein, 0.87 ft/yr (10 inches/year), is within the range of values discussed in the USGS modeling report [1]. The reported recharge ranged from 3.6 inches/year to 7.5 inches/year for a till to 20 inches per year for coarse grained glacially stratified deposits. A precipitation value of 2.92ft/yr, (a 10 year average measured at the Facility meteorological station) was also used in the computations. The catchment area was defined using an AutoCAD topo map for the Site and surrounding area. The catchment was defined by starting at the area marked "line of water grant" and tracking east, away from the River, to define portions of the land surface contributing water to the selected discharge zone. Calculations assume that run-off or overland flow in unimproved areas of the Site is negligible, there are no changes in storage and the Hudson River is a gaining stream.

1. USGS. Water Use, Ground-Water Recharge and Availability, and Quality of Water in the Greenwich Area, Fairfield County, Connecticut and Westchester County, New York, 2000-2002

APPENDIX G: UNIT 2 TRITIUM PLUME TREND ANALYSES

TABLE G1
MANN-KENDALL TREND EVALUATION SUMMARY
TRITIUM IN GROUNDWATER NEAR UNIT 2
INDIAN POINT ENERGY CENTER
BUCHANAN, NY

Well ID	Number of Data Points	Number of Times below MDC	Minimum Tritium Activity (pCi/L)	Maximum Tritium Activity (pCi/L)	Mann-Kendall Statistic (S)	Normalized Test Statistic (Z)	Probability	Trend at 95% Level of Significance
MW-30-69	27	0	7.36E+04	6.01E+05	-118.00	-2.44	0.993	decreasing
MW-30-84	14	0	3.78E+03	1.25E+04	-51.00	-2.74	0.997	decreasing
MW-31-49	25	0	2.98E+02	3.38E+04	-28	-0.63	0.736	no trend
MW-31-63	13	0	5.00E+03	4.06E+04	10	0.55	0.709	no trend
MW-31-85	13	0	3.17E+02	8.34E+03	40	2.38	0.991	increasing
MW-32-59	11	0	4.13E+02	4.44E+04	-36	-2.40	0.992	decreasing
MW-32-85	11	0	5.42E+03	1.26E+04	-7	-0.47	0.680	no trend
MW-32-131	6	1	1.29E+02	1.13E+04	2	NA	0.575	no trend
MW-32-149	9	0	4.93E+02	1.05E+04	-20	NA	0.976	decreasing
MW-32-173	7	0	7.56E+02	5.89E+03	-19	NA	0.997	decreasing
MW-32-190	10	0	1.72E+03	1.13E+04	-17	-1.43	0.924	no trend
MW-33	21	0	2.30E+04	2.64E+05	-66	-1.96	0.975	decreasing
MW-34	18	0	1.05E+04	2.76E+05	-19	-0.68	0.752	no trend
MW-35	18	0	1.04E+03	1.19E+05	-59	-2.20	0.986	decreasing
MW-36-24	11	2	1.54E+02	3.42E+04	-10	-0.70	0.758	no trend
MW-36-52	11	0	6.79E+03	2.68E+04	-35	-2.65	0.996	decreasing
MW-37-22	13	0	2.26E+03	3.49E+04	-40	-2.38	0.991	decreasing
MW-37-32	13	0	2.49E+03	3.01E+04	-54	-3.23	0.999	decreasing
MW-37-40	12	0	4.91E+03	1.70E+04	-52	-3.50	1.000	decreasing
MW-37-57	13	0	4.27E+03	4.48E+04	-52	-3.11	0.999	decreasing
MW-42-49	13	0	1.12E+03	7.22E+04	2	0.06	0.524	no trend
MW-42-78	8	0	3.46E+02	1.28E+03	-12	NA	0.913	no trend
MW-49-26	15	0	3.10E+03	1.54E+04	-85	-4.16	1.000	decreasing
MW-49-42	15	0	2.25E+03	1.13E+04	-91	-4.45	1.000	decreasing
MW-49-65	15	0	1.26E+03	5.76E+03	-77	-3.76	1.000	decreasing
MW-50-42	16	4	1.01E+02	9.75E+03	-57	-2.52	0.994	decreasing
MW-50-66	19	0	2.08E+03	1.08E+04	-147	-5.11	1.000	decreasing
MW-53-82	8	0	4.54E+02	1.32E+04	4	NA	0.645	no trend
MW-53-120	13	0	4.42E+03	9.61E+03	-42	-2.50	0.994	decreasing
MW-55-24	9	0	7.82E+02	3.08E+03	-24	NA	0.992	decreasing
MW-55-35	8	0	8.53E+02	9.04E+03	-20	NA	0.991	decreasing
MW-55-54	9	0	5.96E+03	1.31E+04	-22	NA	0.986	decreasing
MW-111	29	0	6.81E+03	5.78E+05	-111	-2.06	0.980	decreasing

Notes: Calculations based on Mann-Kendall trend evaluations as presented in U.S. EPA Practical Methods for Data Analysis, U.S. EPA QA/G-9 QA00 UPDATE, July 2000, Section 4.3.4

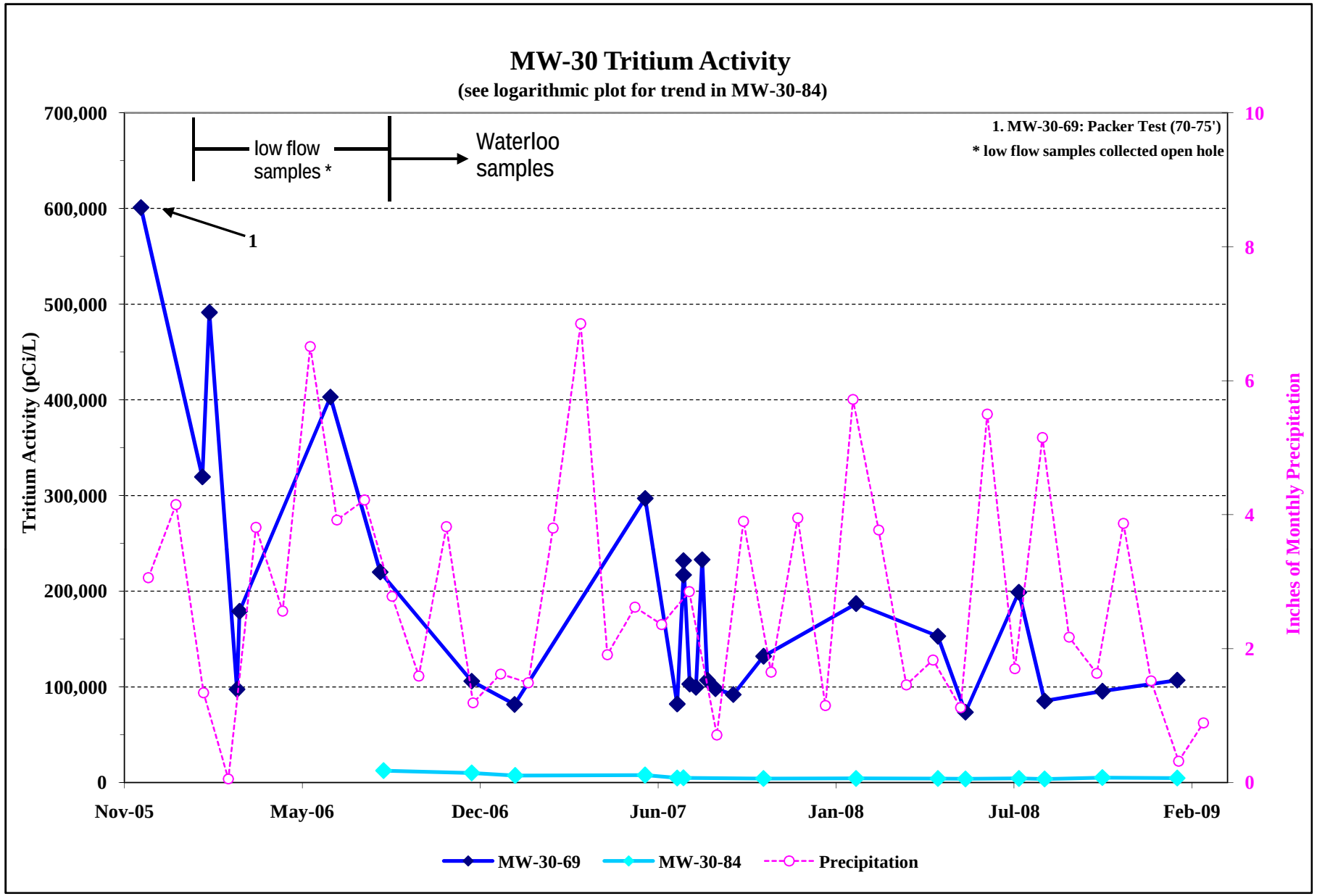

MW-30 Tritium Activity
(see logarithmic plot for trend in MW-30-84)
low flow samples *
Waterloo samples
1
1. MW-30-69: Packer Test (70-75')
* low flow samples collected open hole
Tritium Activity (pCi/L)
Inches of Monthly Precipitation
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
10
8
6
4
2
0
Nov-05
May-06
Dec-06
Jun-07
Jan-08
Jul-08
Feb-09
MW-30-69
MW-30-84
Precipitation

FIGURE G1

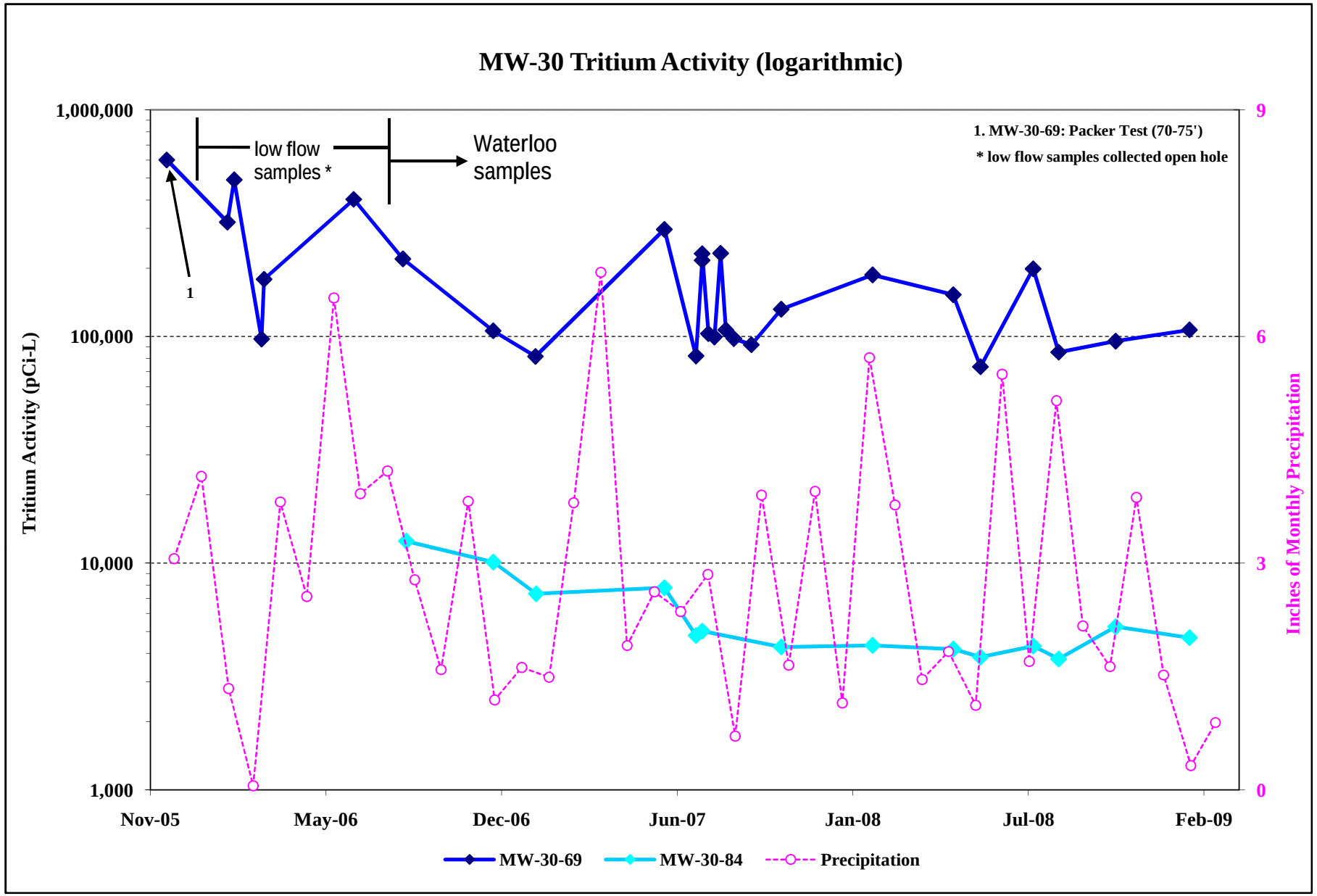

MW-30 Tritium Activity (logarithmic)
1,000,000
100,000
10,000
1,000
Tritium Activity (pCi-L)
9
6
3
0
Inches of Monthly Precipitation
low flow samples *
Waterloo samples
1
1. MW-30-69: Packer Test (70-75')
* low flow samples collected open hole
Nov-05
May-06
Dec-06
Jun-07
Jan-08
Jul-08
Feb-09
MW-30-69
MW-30-84
Precipitation

FIGURE G1a

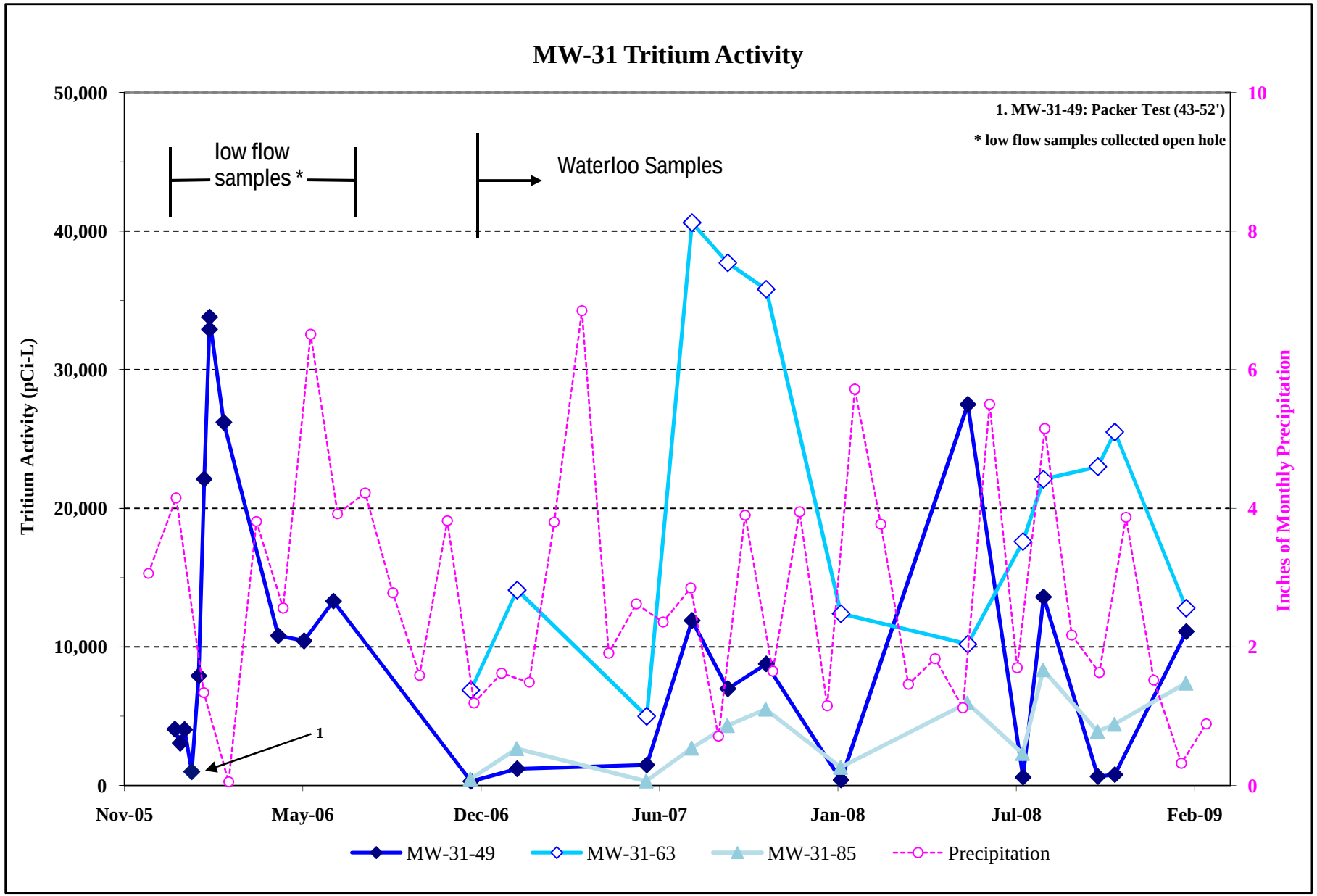

MW-31 Tritium Activity
1. MW-31-49: Packer Test (43-52')
* low flow samples collected open hole
low flow samples *
Waterloo Samples
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
50,000
40,000
30,000
20,000
10,000
0
10
8
6
4
2
0
1
Nov-05
May-06
Dec-06
Jun-07
Jan-08
Jul-08
Feb-09
MW-31-49
MW-31-63
MW-31-85
Precipitation

FIGURE G2

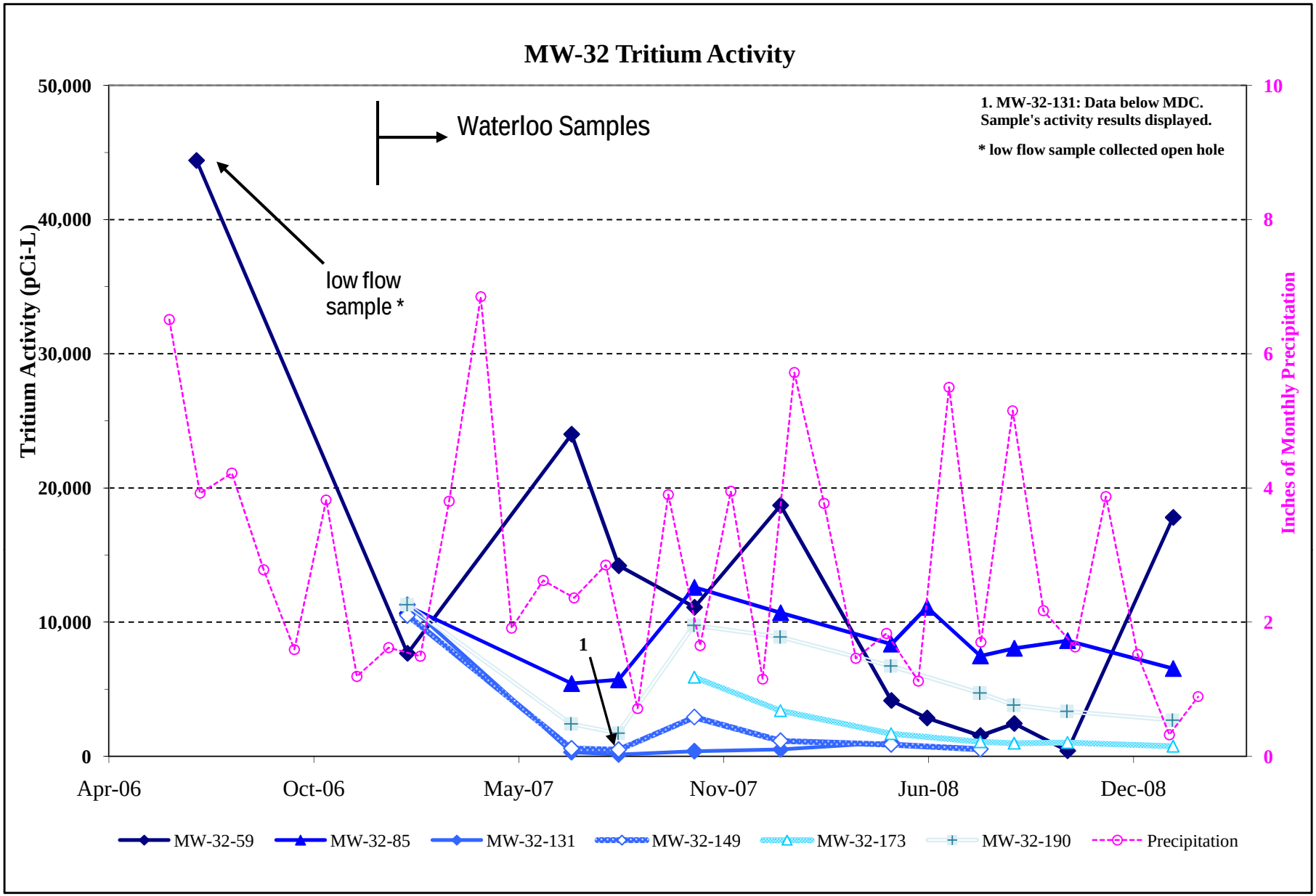

MW-32 Tritium Activity
Waterloo Samples
low flow sample *
1. MW-32-131: Data below MDC. Sample's activity results displayed.
* low flow sample collected open hole
1
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
50,000
40,000
30,000
20,000
10,000
0
10
8
6
4
2
0
Apr-06
Oct-06
May-07
Nov-07
Jun-08
Dec-08
MW-32-59
MW-32-85
MW-32-131
MW-32-149
MW-32-173
MW-32-190
Precipitation

FIGURE G3

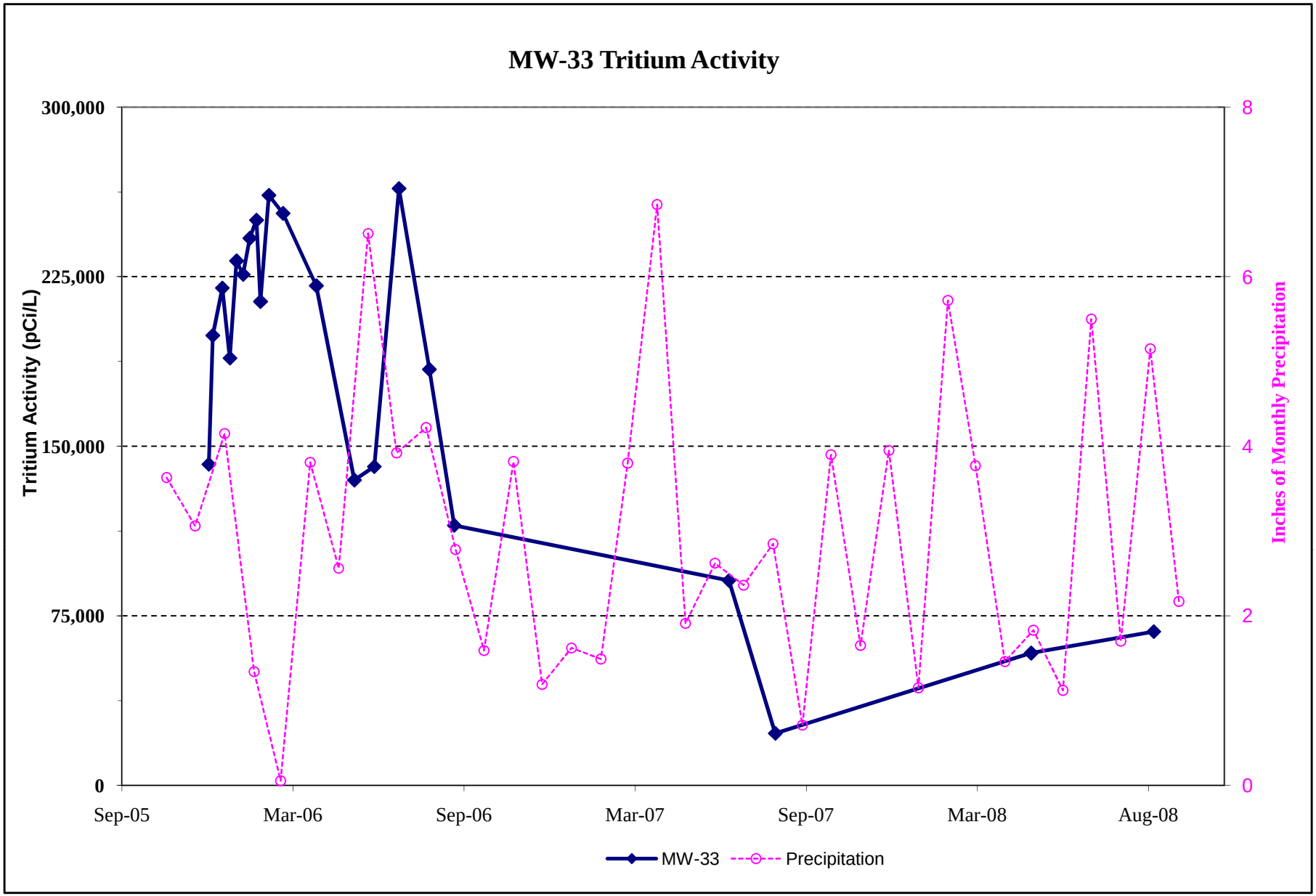

MW-33 Tritium Activity
300,000
225,000
150,000
75,000
0
Tritium Activity (pCi/L)
8
6
4
2
0
Inches of Monthly Precipitation
Sep-05
Mar-06
Sep-06
Mar-07
Sep-07
Mar-08
Aug-08
MW-33
Precipitation

FIGURE G4

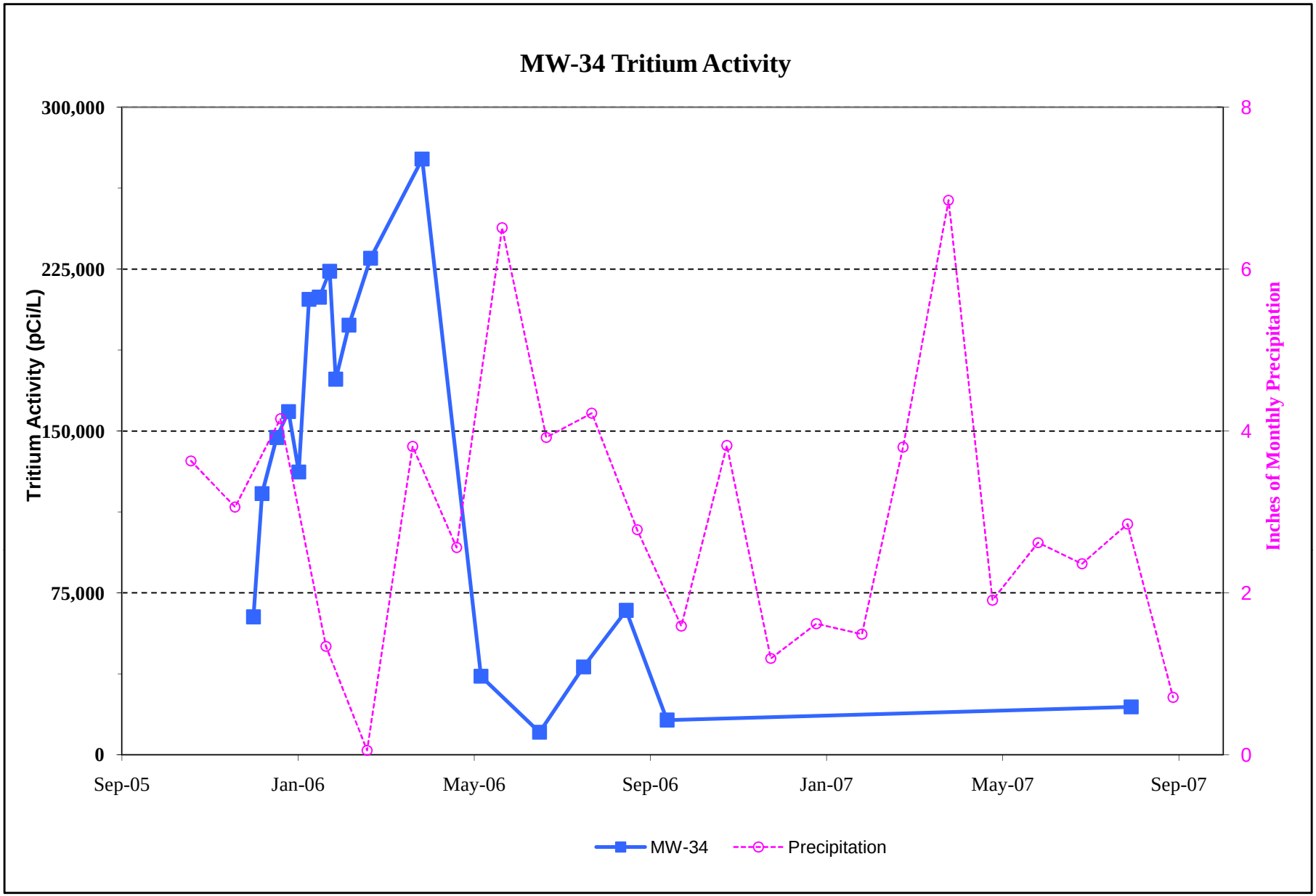

MW-34 Tritium Activity
300,000
225,000
150,000
75,000
0
Tritium Activity (pCi/L)
8
6
4
2
0
Inches of Monthly Precipitation
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
MW-34
Precipitation

FIGURE G5

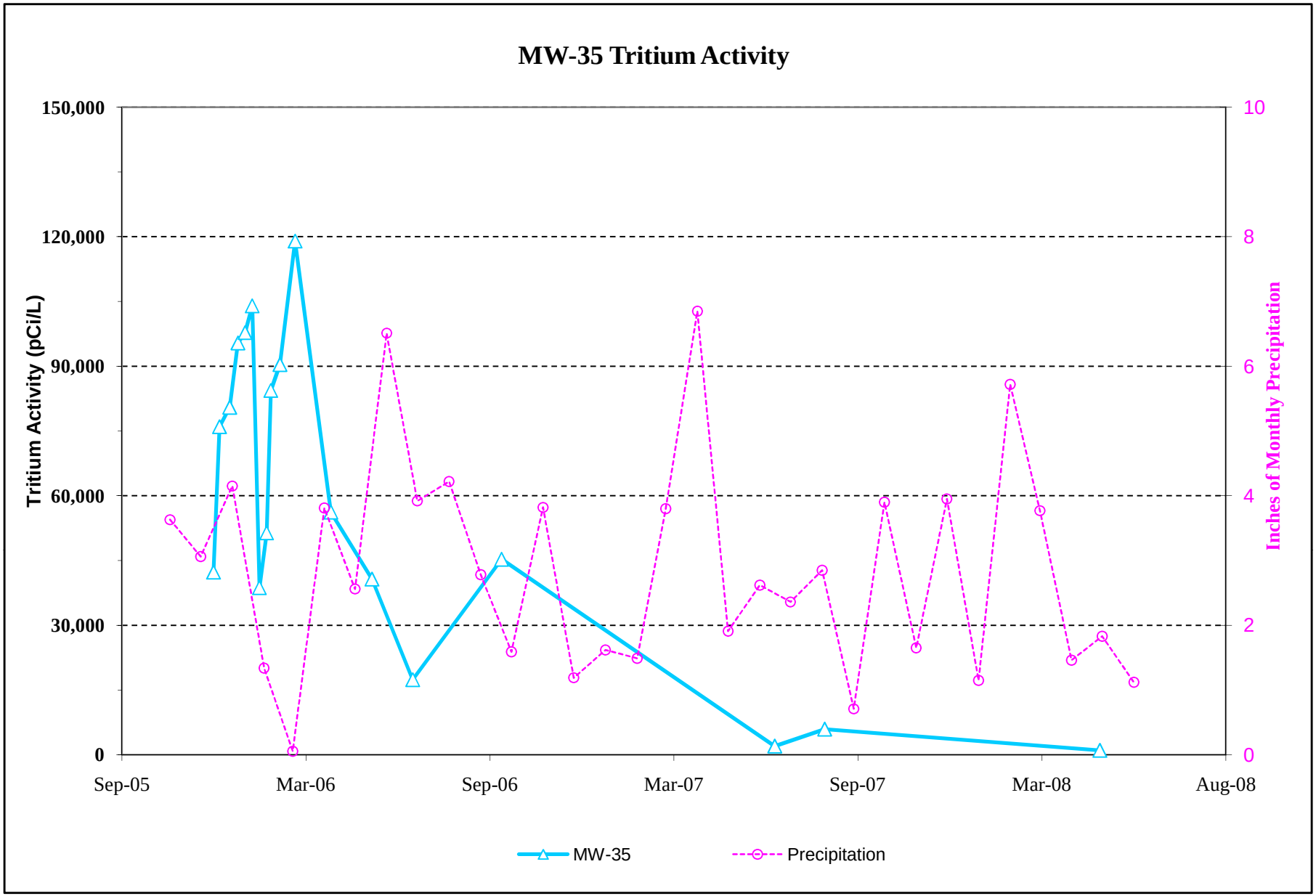

MW-35 Tritium Activity
150,000
120,000
90,000
60,000
30,000
0
Tritium Activity (pCi/L)
10
8
6
4
2
0
Inches of Monthly Precipitation
Sep-05
Mar-06
Sep-06
Mar-07
Sep-07
Mar-08
Aug-08
MW-35
Precipitation

FIGURE G6

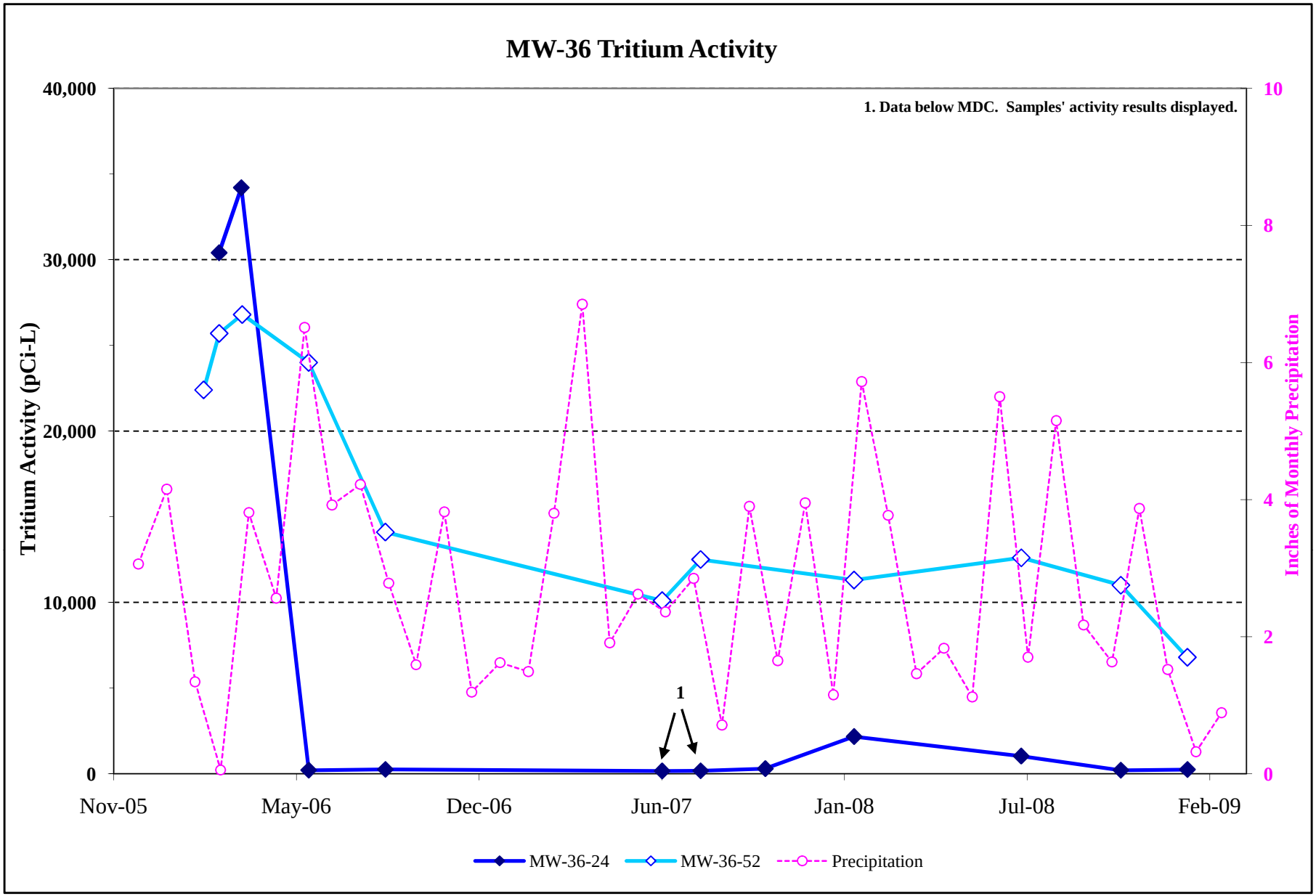

MW-36 Tritium Activity
1. Data below MDC. Samples' activity results displayed.
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
40,000
30,000
20,000
10,000
0
10
8
6
4
2
0
1
Nov-05
May-06
Dec-06
Jun-07
Jan-08
Jul-08
Feb-09
MW-36-24
MW-36-52
Precipitation

FIGURE G7

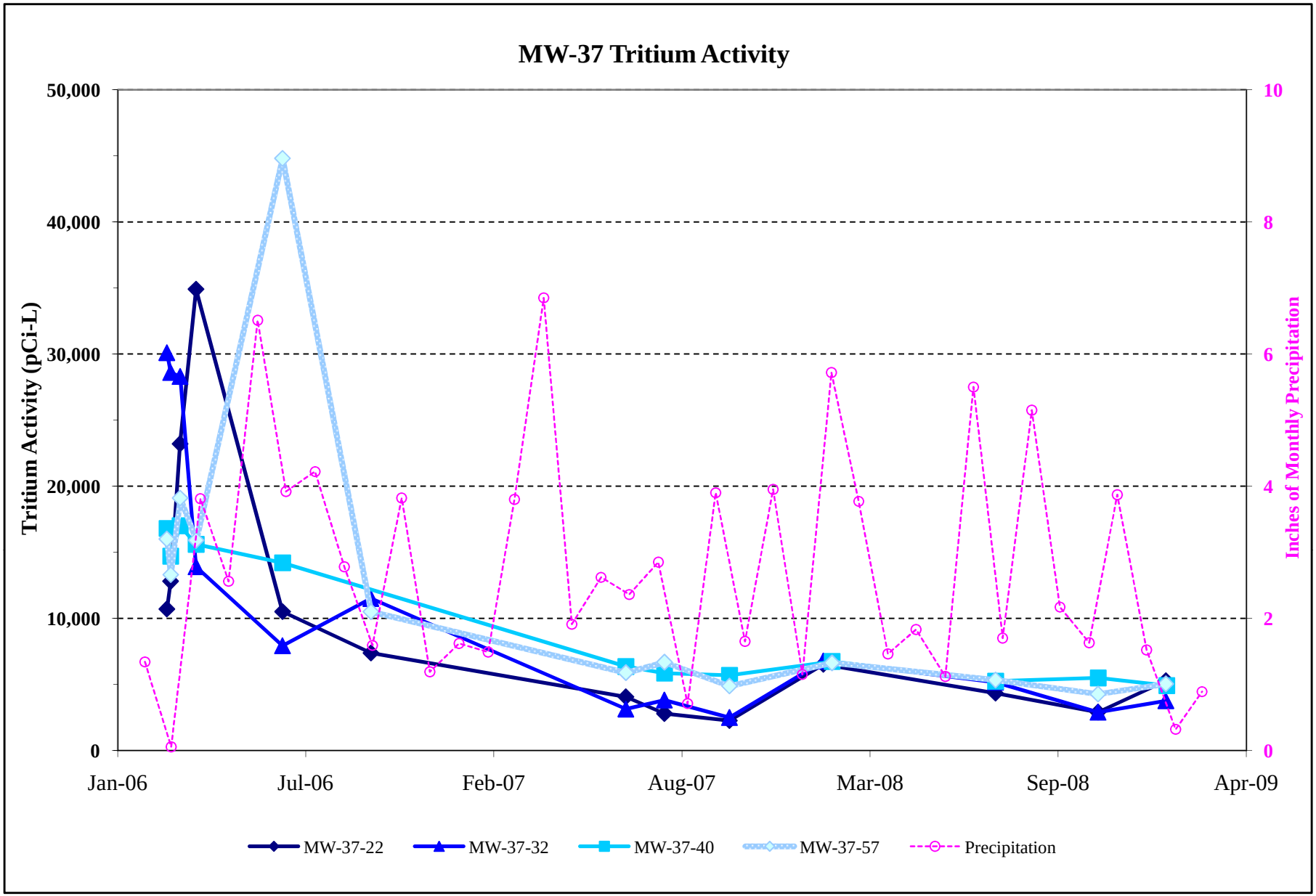

MW-37 Tritium Activity
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
50,000
40,000
30,000
20,000
10,000
0
10
8
6
4
2
0
Jan-06
Jul-06
Feb-07
Aug-07
Mar-08
Sep-08
Apr-09
MW-37-22
MW-37-32
MW-37-40
MW-37-57
Precipitation

FIGURE G8

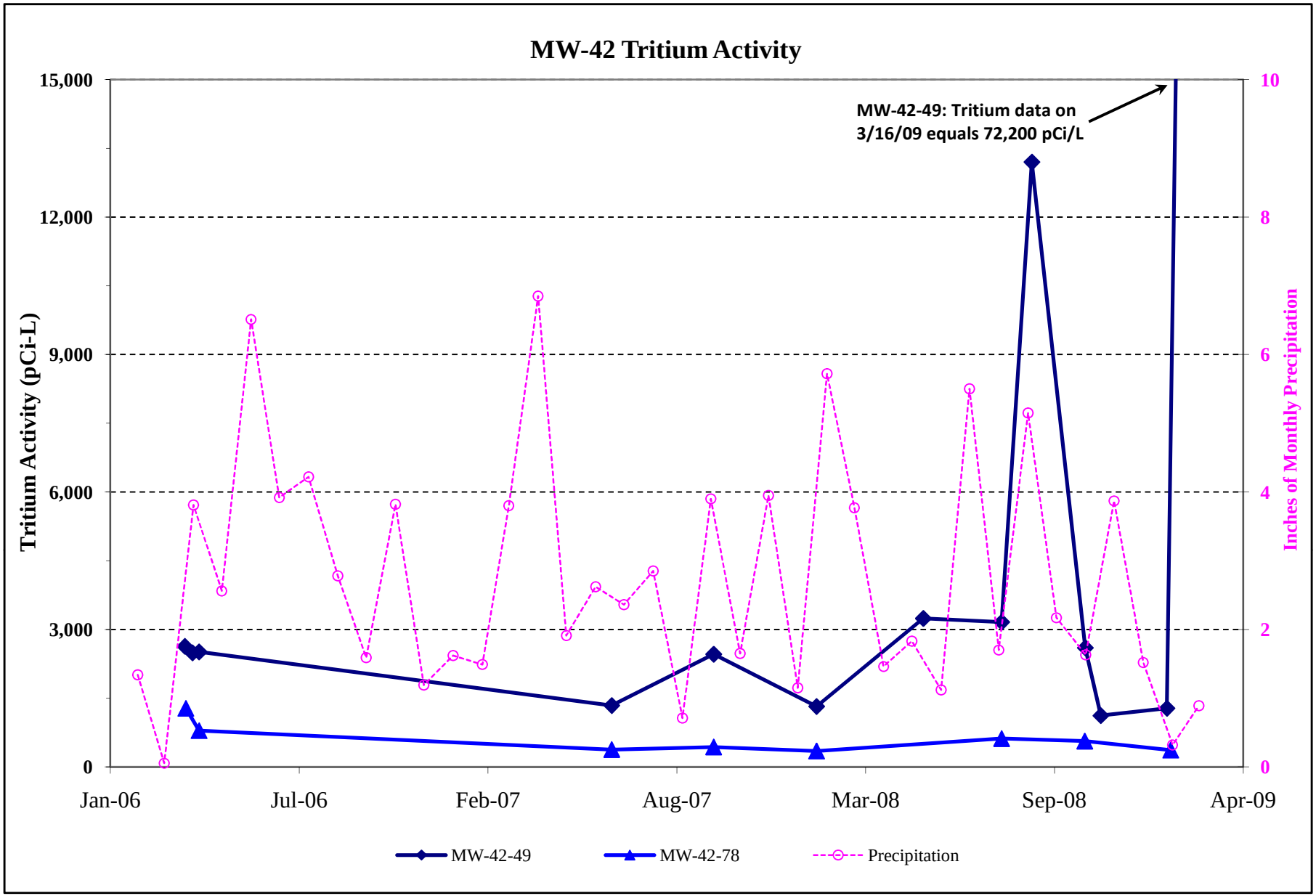

MW-42 Tritium Activity
MW-42-49: Tritium data on
3/16/09 equals 72,200 pCi/L
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
15,000
12,000
9,000
6,000
3,000
0
10
8
6
4
2
0
Jan-06
Jul-06
Feb-07
Aug-07
Mar-08
Sep-08
Apr-09
MW-42-49
MW-42-78
Precipitation

FIGURE G9

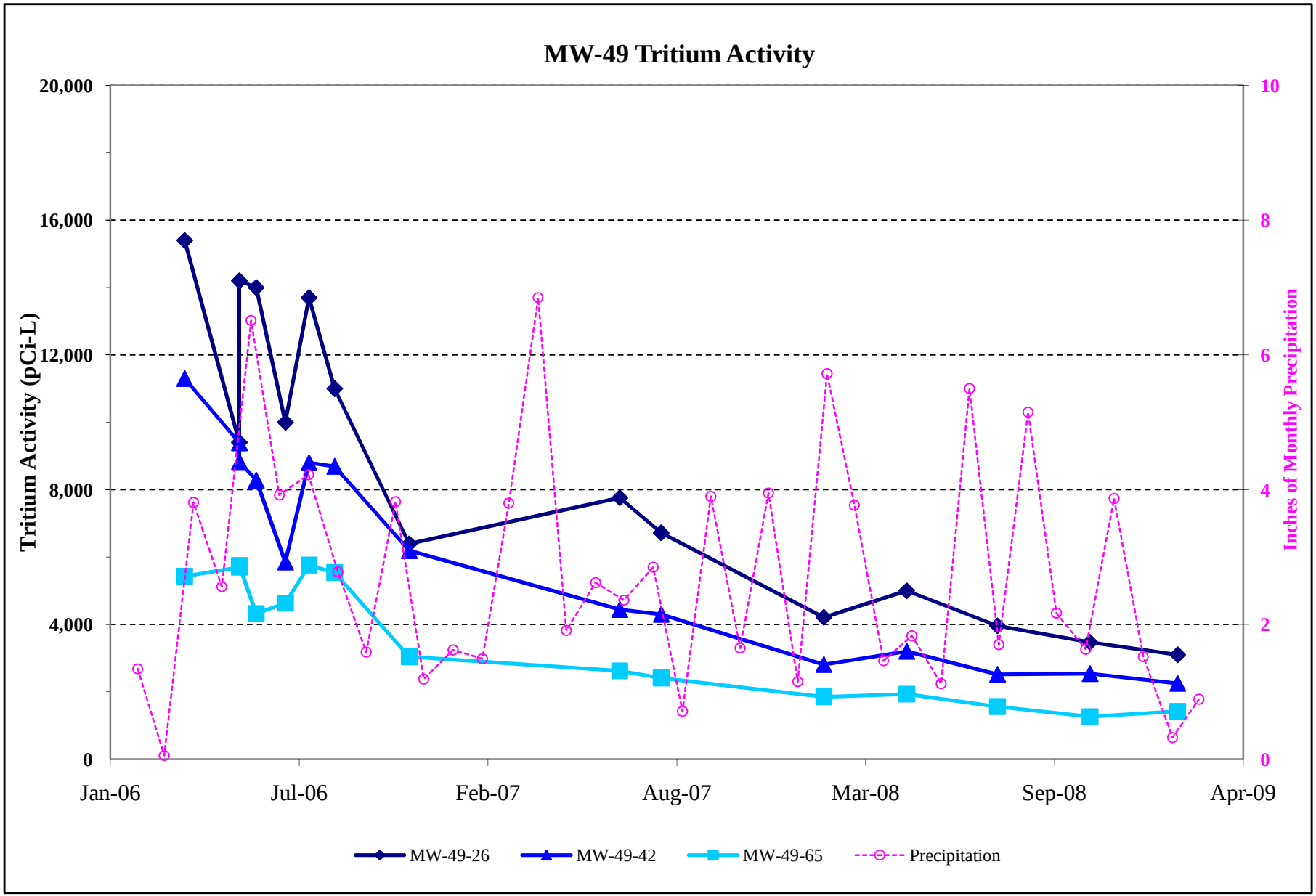

MW-49 Tritium Activity
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
20,000
16,000
12,000
8,000
4,000
0
10
8
6
4
2
0
Jan-06
Jul-06
Feb-07
Aug-07
Mar-08
Sep-08
Apr-09
MW-49-26
MW-49-42
MW-49-65
Precipitation

FIGURE G10

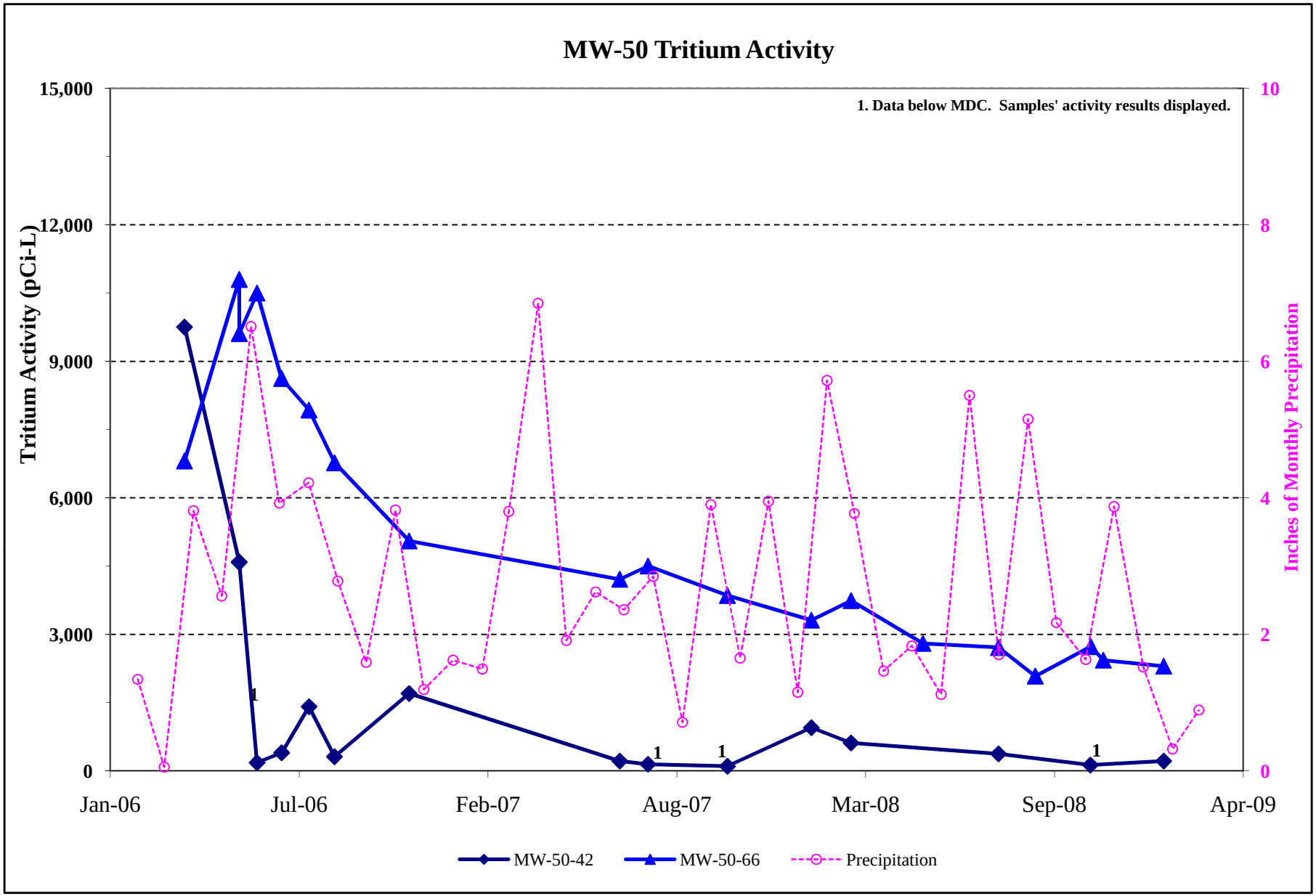

MW-50 Tritium Activity
1. Data below MDC. Samples' activity results displayed.
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
15,000
12,000
9,000
6,000
3,000
0
10
8
6
4
2
0
Jan-06
Jul-06
Feb-07
Aug-07
Mar-08
Sep-08
Apr-09
1
1
1
1
MW-50-42
MW-50-66
Precipitation

FIGURE G11

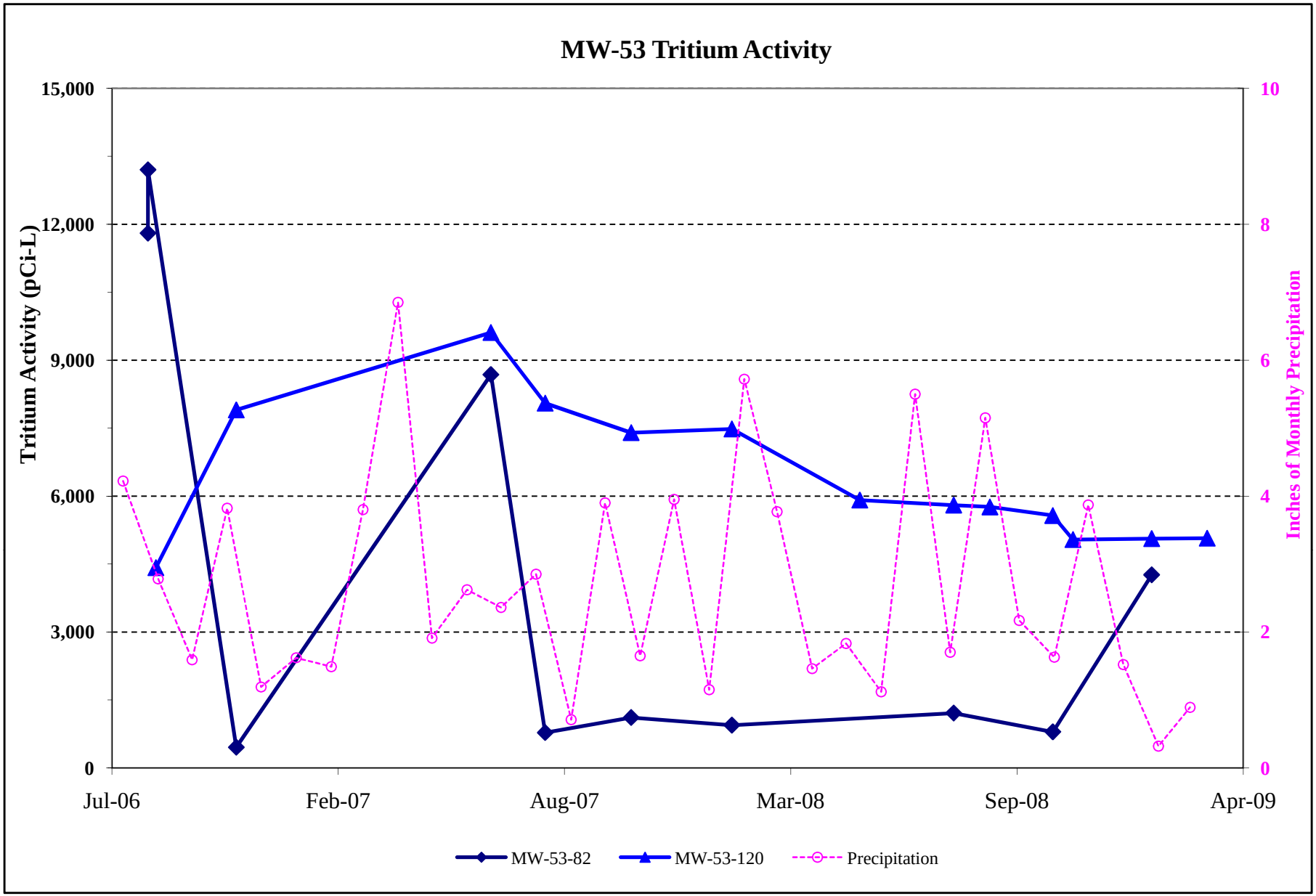

MW-53 Tritium Activity
15,000
12,000
9,000
6,000
3,000
0
Tritium Activity (pCi-L)
10
8
6
4
2
0
Inches of Monthly Precipitation
Jul-06
Feb-07
Aug-07
Mar-08
Sep-08
Apr-09
MW-53-82
MW-53-120
Precipitation

FIGURE G12

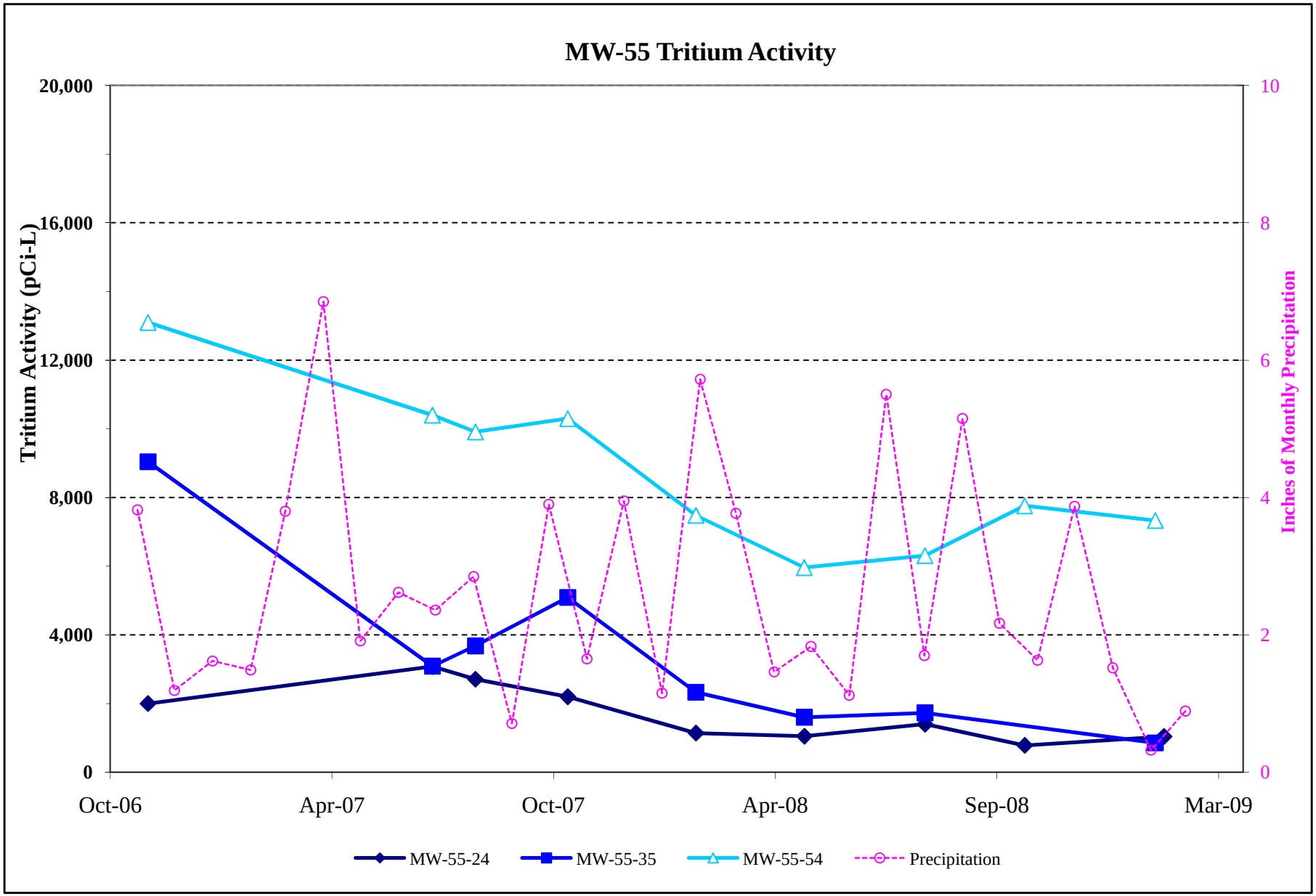

MW-55 Tritium Activity
Tritium Activity (pCi-L)
Inches of Monthly Precipitation
20,000
16,000
12,000
8,000
4,000
0
10
8
6
4
2
0
Oct-06
Apr-07
Oct-07
Apr-08
Sep-08
Mar-09
MW-55-24
MW-55-35
MW-55-54
Precipitation

FIGURE G13

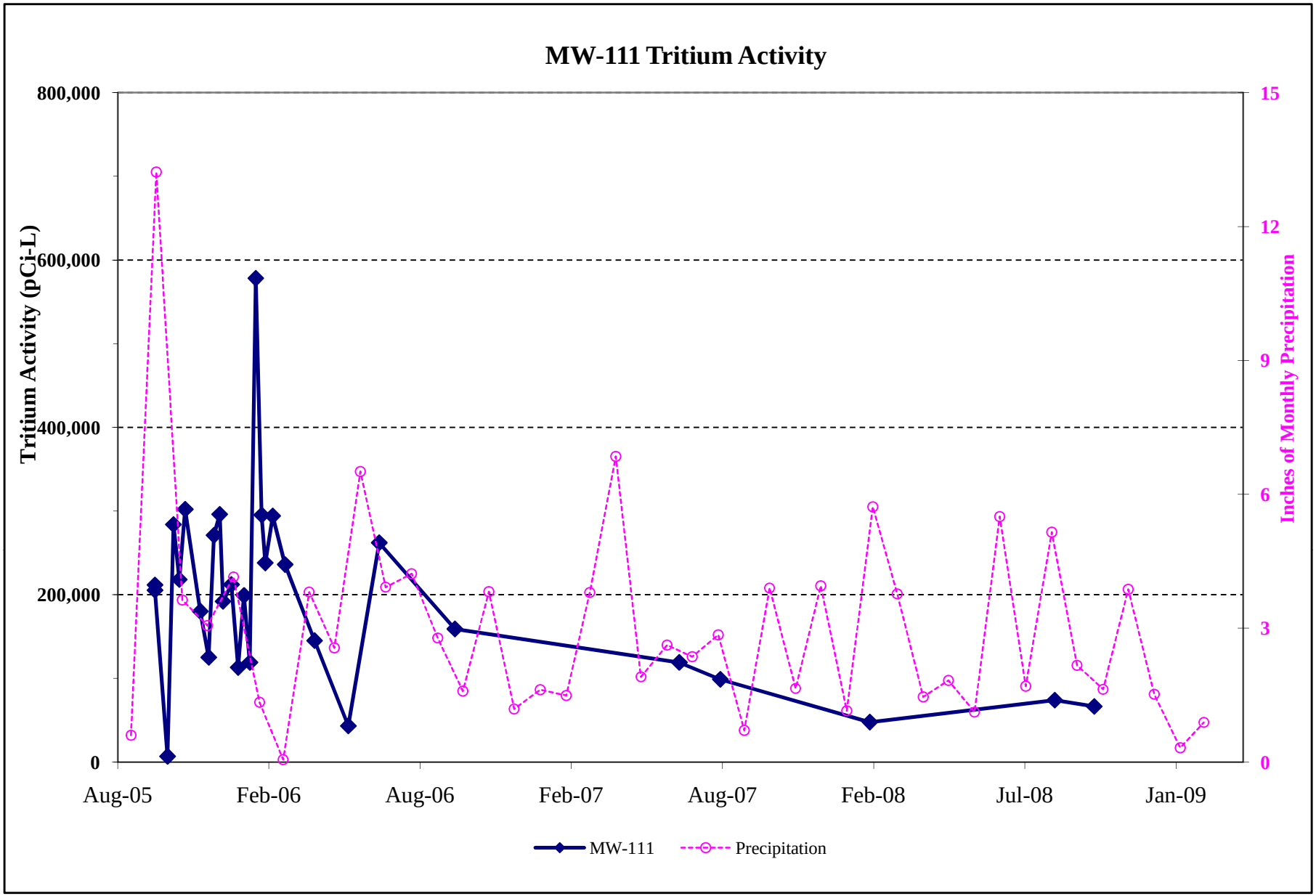
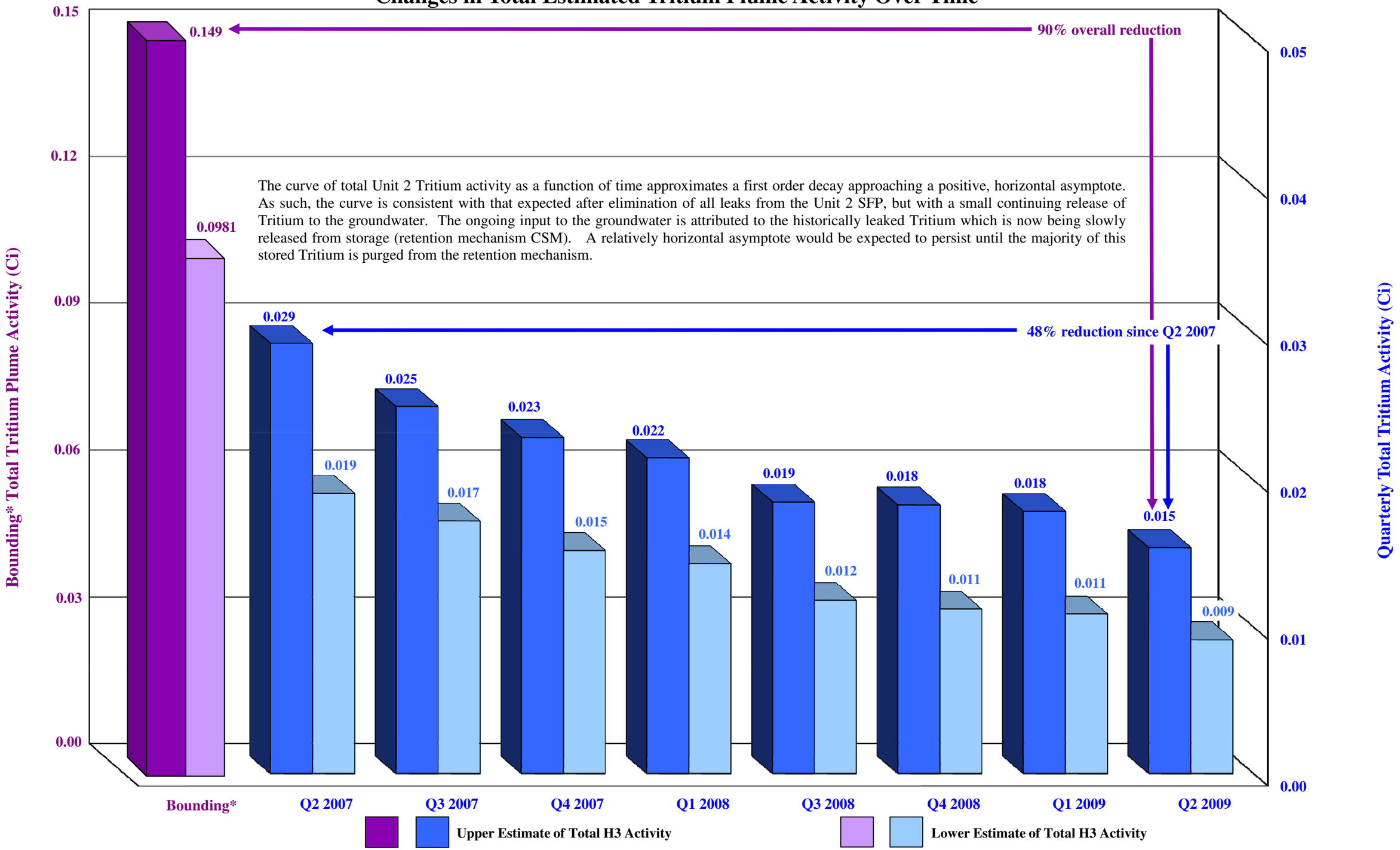

MW-111 Tritium Activity
800,000
600,000
400,000
200,000
0
Tritium Activity (pCi-L)
15
12
9
6
3
0
Inches of Monthly Precipitation
Aug-05
Feb-06
Aug-06
Feb-07
Aug-07
Feb-08
Jul-08
Jan-09
MW-111
Precipitation

FIGURE G14

Changes in Total Estimated Tritium Plume Activity Over Time



Note: Lower estimate is based on a porosity of 0.0003 which was derived from a pumping test conducted in 2006. Upper estimate is based on a porosity of 0.003 derived from a tracer test conducted in 2007. The Q2 2007 to Q1 2009 Tritium plume activity estimates are each based on Tritium levels measured in the groundwater monitoring installations at individual, quarterly "snapshots" in time.

*The bounding activity estimate, however, encompasses a longer period of time, and is focused on the Tritium levels existing during the earliest portions of the groundwater investigation. During this period of time, before termination of all the identified SFP leaks, Tritium concentrations were at their highest levels, but the network of monitoring installations was still being installed. Therefore, measurements made at a multiple times were required to capture early data covering the full extent of the Tritium plume; primarily over the period from Nov 20005 through Nov 2006 (a smaller percentage of the Tritium levels required inclusion of measurements through Sept 07). For the bounding Tritium plume activity estimate, the highest value recorded for each monitoring location during this time period was used in the analysis. For further discussion see Sections 6.0, 7.0 and 8.0 of the Final Hydrogeologic Site Investigation Report, prepared by GZA and dated January 7, 2008.

FIGURE G15