


United States Nuclear Regulatory Commission Official Hearing Exhibit	
In the Matter of:	Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generating Units 2 and 3)
	ASLBP #: 07-858-03-LR-BD01
	Docket #: 05000247 05000286
	Exhibit #: ENT00335D-00-BD01
	Admitted: 10/15/2012
	Rejected:
Other:	Identified: 10/15/2012
	Withdrawn:
	Stricken:

ENT00335D
Submitted: March 29, 2012



FINAL QUARTERLY LONG-TERM GROUNDWATER
MONITORING REPORT Q1 2009 (REPORT NO. 5)

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

GEL Work Order Number:

Client Name: <u>Entergy</u>		Phone #: <u>(914) 736-8405</u>				Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)																			
Project/Site Name: <u>Indian Point Energy Center</u>		Fax #: <u>(914) 734-6247</u>				Should this sample be considered:	Total number of containers																<-- Preservative Type (6)		
Address: <u>450 Broadway, Suite 3, Buchanan, NY 10511</u>																									
Collected by: <u>Miguel Britos</u>		Send Results To: <u>Patrick Donahue</u>				Radioactive	TSCA Regulated																		Comments Note: extra sample is required for sample specific QC
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected <small>(mm-dd-yy)</small>	*Time Collected <small>(Military (hhmm))</small>	QC Code <small>(2)</small>	Field Filtered <small>(3)</small>	Sample Matrix <small>(4)</small>																				
<u>MW-50-66-(021)</u>	<u>03/18/09</u>	<u>1516</u>	<u>N</u>	<u>N</u>	<u>GW</u>	<u>Y</u>	<u>Y</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>												<u>2 Liter Poly</u>	

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				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	GEL PM:	
<u>[Signature]</u>	<u>3/18/09</u>	<u>1600</u>	<u>SECURED STORAGE</u>	<u>3/18/09</u>	<u>1600</u>	Method of Shipment:	<u>FEDEX</u>
				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/7470) 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: <u>1</u> of <u>1</u>	GEL Chain of Custody and Analytical Request	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
Project #: <u>Entergy GW Mon Prog</u>	**See www.gel.com for GEL's Sample Acceptance SOP**	
GEL Quote #: COC Number (1): PO Number: <u>50013510</u>	GEL Work Order Number:	

Client Name: <u>Entergy</u>	Phone #: <u>(914) 736-8405</u>	Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)
Project/Site Name: <u>Indian Point Energy Center</u>	Fax #: <u>(914) 734-6247</u>	<-- Preservative Type (6) Comments Note: extra sample is required for sample specific QC
Address: <u>450 Broadway, Suite 3, Buchanan, NY 10511</u>		
Collected by: <u>Miguel Britos</u> Send Results To: <u>Patrick Donahue</u>		

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)									
						Radioactive	TSCA Regulated														
U1-CSS-(011)	03/18/09	1305	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	
<input checked="" type="radio"/> Eastern	Pacific
Central	Other _____
Mountain	

Chain of Custody Signatures	Sample Shipping and Delivery Details																														
<table style="width:100%;"> <tr> <td style="width:30%;">Relinquished By (Signed) <i>Miguel Britos</i></td> <td style="width:15%;">Date</td> <td style="width:15%;">Time</td> <td style="width:30%;">Received by (signed) SECURED STORAGE</td> <td style="width:15%;">Date</td> <td style="width:15%;">Time</td> </tr> <tr> <td></td> <td>3/18/09</td> <td>1601</td> <td></td> <td>3/18/09</td> <td>1601</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Relinquished By (Signed) <i>Miguel Britos</i>	Date	Time	Received by (signed) SECURED STORAGE	Date	Time		3/18/09	1601		3/18/09	1601																			GEL PM: ERIN TREN Method of Shipment: FEDEX Date Shipped: Airbill #: Airbill #:
Relinquished By (Signed) <i>Miguel Britos</i>	Date	Time	Received by (signed) SECURED STORAGE	Date	Time																										
	3/18/09	1601		3/18/09	1601																										

-) Chain of Custody Number = Client Determined
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-) 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

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)

<-- Preservative Type (6)

Comments
 Note: extra sample is required for sample specific QC

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)									
						Radioactive	TSCA Regulated														
MW-66-21-(008)	03/17/09	1200	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures						Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	GEL PM:		Date Shipped:	
<i>Miguel Britos</i>	3/17/09	1459	SECURED STORAGE	3/17/09	1459	ERIN TREN		FEDEX	
								Airbill #:	
								Airbill #:	

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 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=Faecal, 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

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

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

<-- Preservative Type (6)

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

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)									Comments Note: extra sample is required for sample specific QC	
						Radioactive	TSCA Regulated															
MW-67-173-(008)	03/17/09	1400	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures			
Relinquished By (Signed)	Date	Time	
	3/17/09	1500	
			2
			3

Sample Shipping and Delivery Details	
GEL PM: <u>ERIN TREN</u>	
Method of Shipment: <u>FEDEX</u>	Date Shipped:
Airbill #:	
Airbill #:	

-) Chain of Custody Number = Client Determined
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-) 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

Project #: 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

Client Name: Entergy Phone #: (914) 736-8405 Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)

Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247 <-- Preservative Type (6)

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

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)						Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated											
MW-42-49-(016)	03/16/09	1450	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time	
	3/16/09	1520		SECURED STORAGE	3/16/09	1520	

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 #:
 POC 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 <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)						Preservative Type (6)	Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated												
MW-53-120-(014)	03/16/09	0940	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures						Sample Shipping and Delivery Details				
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	GEL PM: ERIN TREN		Method of Shipment: FEDEX		Date Shipped:
	3/16/09	1521	SECURED STORAGE	3/16/09	1521					

- 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
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- 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 = Pipe, 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: <u>1</u> of <u>1</u>	GEL Chain of Custody and Analytical Request	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
Project #: <u>Entergy GW Mon Prog</u>	**See www.gel.com for GEL's Sample Acceptance SOP**	
GEL Quote #:		
COC Number ⁽¹⁾ :	GEL Work Order Number:	
PO Number: <u>50013510</u>		

Client Name: <u>Entergy</u> Phone #: <u>(914) 736-8405</u>						Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)																
Project/Site Name: <u>Indian Point Energy Center</u> Fax #: <u>(914) 734-6247</u>						Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	<-- Preservative Type (6)										
Address: <u>450 Broadway, Suite 3, Buchanan, NY 10511</u>												Comments Note: extra sample is required for sample specific QC										
Collected by: <u>AA / M.B</u> Send Results To: <u>Patrick Donahue</u>																						
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽³⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated															
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	

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	
<input checked="" type="checkbox"/> Eastern	Pacific
Central	Other _____
Mountain	

Chain of Custody Signatures						Sample Shipping and Delivery Details					
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	GEL PM: <u>Erin Trent</u>					
<u>[Signature]</u>	<u>1/27/09</u>	<u>1730</u>	<u>[Signature]</u>	<u>1/27/09</u>	<u>1730</u>	Method of Shipment: <u>FEDEX</u>			Date Shipped: _____		
2						Airbill #: _____					
3						Airbill #: _____					

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- 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).
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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: <u>Entergy</u> Phone #: <u>(914) 736-8405</u>		Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)													
Project/Site Name: <u>Indian Point Energy Center</u> Fax #: <u>(914) 734-6247</u>		Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)								<-- Preservative Type (6)
Address: <u>450 Broadway, Suite 3, Buchanan, NY 10511</u>															
Collected by: <u>AA / MB</u> Send Results To: <u>Patrick Donahue</u>		Radioactive	TSCA Regulated												
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (1)	Sample Matrix (4)										
<u>MW-66-21-(007)</u>	<u>01/27/09</u>	<u>1350</u>	<u>N</u>	<u>N</u>	<u>GW</u>	<u>Y</u>	<u>Y</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>			<u>2 Liter Poly</u>
<u>MW-66-36-(007)</u>	<u>01/27/09</u>	<u>1307</u>	<u>N</u>	<u>N</u>	<u>GW</u>	<u>Y</u>	<u>Y</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>			<u>2 Liter Poly</u>

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				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time	Received by (signed)	GEL PM: <u>Erin Trent</u>			
<u>[Signature]</u>	<u>1/27/09</u>	<u>1720</u>	<u>[Signature]</u>	Method of Shipment: <u>FEDEX</u>	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
 IEL Quote #:
 IEL Quote #: 50013510
 GEL Work Order Number:
 GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Chain of Custody and Analytical Request

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

Client Name: Entergy Phone #: (914) 736-8405
 Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247
 Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)

Address: 450 Broadway, Suite 3, Buchanan, NY 10511
 Collected by: Miguel Britos Send Results To: Patrick Donahue
 <-- Preservative Type (6)

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (3)	Field Filtered (5)	Sample Matrix (4)	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Sample Analysis Requested ⁽⁵⁾						Comments Note: extra sample is required for sample specific QC
MW-42-49-(015)	01/26/09	1616	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 Pacific Central Other Mountain

Chain of Custody Signatures			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	1/26/09	1700	SECURED STORAGE	1/26/09	1700

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 #:
 LOC Number (1):
 PO Number: 50013510

GEL Chain of Custody and Analytical Request

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

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

GEL Work Order Number:

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

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

Collected by: Miguel Britos Send Results To: Patrick Donahue

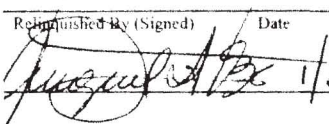
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)						Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated											
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

TAI 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				Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	1/26/09	1701	SECURED STORAGE	1/26/09	1701

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

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

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

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

GEL Chain of Custody and Analytical Request

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

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

GEL Work Order Number:

Client Name: Energy 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/PA Send Results To: Patrick Donahue

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

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Preservative Type (6)				Comments Note: extra sample is required for sample specific QC
MW-62-18-(008)	01/23/09	1155	N	N	GW	Y	Y	1	1	1	1					2 Liter Poly
MW-62-37-(008)	01/23/09	1228	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

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				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time		
<u>[Signature]</u>	<u>1/23/09</u>	<u>1410</u>	<u>[Signature]</u>	<u>1/23/09</u>	<u>1410</u>	GEL PM: <u>Erin Trent</u>	
						Method of Shipment: <u>FEDEX</u> 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, S9= 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 Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number:

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: ADMB Send Results To: Patrick Donahue

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

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (h:mm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Total number of containers	Should this sample be considered:							Comments Note: extra sample is required for sample specific QC			
									Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)								
MW-36-24-(013)	01/22/09	1248	N	N	GW	Y	Y	1	1	1	1								2 Liter Poly
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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<u>[Signature]</u>	<u>1/22/09</u>	<u>1636</u>	<u>[Signature]</u>	<u>1/22/09</u>	<u>1636</u>
2	2		2		
3	3		3		

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

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

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

Should this sample be considered:
Total number of containers:
Tritium (H3)
Gamma Spec (GS)
Strontium 90 (Sr90)
Nickel 63 (Ni63)
Preservative Type (6)

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

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

Comments
Note: extra sample is required for sample specific QC

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)					Comments
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	

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
<u>[Signature]</u>	1/22/09	1620	<u>[Signature]</u>	1/22/09	1620

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 Program
 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						Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)																			
Project/Site Name: Indian Point Energy Center						Fax #: (914) 734-6247						Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)									<-- Preservative Type (6)						
Address: 450 Broadway, Suite 3, Buchanan, NY 10511						Radioactive		TSCA Regulated		Comments Note: extra sample is required for sample specific QC																					
Collected by: AA/MB						Send Results To: Patrick Donahue																									
Sample ID		*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)																			
* For composites - indicate start and stop date/time																															
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									

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				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time	
	1/21/09	1530		Secure	1/21/09	1530	
	1/22/09	1620		Storage	1/22/09	1620	
1							
2							
3							

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

GEL Work Order Number:

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 <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (3)	Field Filtered (4)	Sample Matrix (4)	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)					Comments Note: extra sample is required for sample specific QC
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

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
	1/21/09	0900

Sample Shipping and Delivery Details	
GEL PM: <u>Erin Trent</u>	
Method of Shipment: <u>FEDEX</u>	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/7470) 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 Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number: _____

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 <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (³)	Field Filtered (³)	Sample Matrix (⁴)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)							Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated												
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

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

Sample Shipping and Delivery Details

Relinquished By (Signed) <u>[Signature]</u>	Date <u>1/21/09</u>	Time <u>0901</u>	Received by (signed) <u>SECURED STORAGE</u>	Date <u>1/21/09</u>	Time <u>0901</u>

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=Faecal, 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

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

LABORATORY USE ONLY

REQUEST FOR ANALYSIS AND
CHAIN OF CUSTODY

CONTROL NUMBER

LABORATORY: _____

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)
<input type="checkbox"/> GROSS ALPHA (GA)		<input checked="" type="checkbox"/> STRONTIUM-90 (Sr90)	
<input type="checkbox"/> GROSS BETA (GB)		<input checked="" type="checkbox"/> NICKEL-63 (Ni63)	
<input checked="" type="checkbox"/> GAMMA SPEC (GS)		<input type="checkbox"/>	
<input checked="" type="checkbox"/> TRITIUM (H3)		<input type="checkbox"/>	
<input type="checkbox"/> CARBON-14 (C14)		<input type="checkbox"/>	
<input type="checkbox"/> IODINE-125 (I125)		<input type="checkbox"/>	

RELENGISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<i>[Signature]</i>	<i>[Signature]</i>	01/27/09	1710	Verify correct samples
<i>[Signature]</i>	<i>[Signature]</i>	11/27/09	1710	Relinquished observed & verified sample
<i>[Signature]</i>	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.

CONTROL NUMBER

SAMPLE RECORD - Continued

LABORATORY: _____

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 1645	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

LABORATORY USE ONLY

REQUEST FOR ANALYSIS AND
CHAIN OF CUSTODY

CONTROL NUMBER

LABORATORY: _____

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)
<input type="checkbox"/> GROSS ALPHA (GA)		<input checked="" type="checkbox"/> STRONTIUM-90 (Sr90)	
<input type="checkbox"/> GROSS BETA (GB)		<input checked="" type="checkbox"/> NICKEL-63 (Ni63)	
<input checked="" type="checkbox"/> GAMMA SPEC (GS)		<input type="checkbox"/>	
<input checked="" type="checkbox"/> TRITIUM (H3)		<input type="checkbox"/>	
<input type="checkbox"/> CARBON-14 (C14)		<input type="checkbox"/>	
<input type="checkbox"/> IODINE-125 (I125)		<input type="checkbox"/>	

RELENGISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<i>[Signature]</i>	<i>[Signature]</i>	01/27/09	1710	Verify correct samples
<i>[Signature]</i>	<i>[Signature]</i>	11/27/09	1710	Relinquished observed & verified samples
<i>[Signature]</i>	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

LABORATORY USE ONLY

SAMPLE RECORD - Continued

CONTROL NUMBER

LABORATORY: _____

*
*
*
*

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 1645	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				LABORATORY USE ONLY				
REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY				CONTROL NUMBER _____				
LABORATORY: _____				LICENSEE NUMBER _____		DOCKET NO. _____		
SAMPLE LOCATION (LICENSEE) INDIAN POINT ENERGY CENTER				DATE SAMPLES SUBMITTED _____		PRIORITY <input type="checkbox"/> ROUTINE <input type="checkbox"/> URGENT		
SAMPLE SUBMITTED				SAMPLE COLLECTION INTERVAL				
# TOTAL	TYPE	VOLUME	WEIGHT	START	MONTH	DAY	YEAR	TIME
1	GROUND WATER	2000 ML	~ 2 Kg					
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)		
<input type="checkbox"/> GROSS ALPHA (GA)			<input checked="" type="checkbox"/> STRONTIUM-90 (Sr90)					
<input type="checkbox"/> GROSS BETA (GB)			<input checked="" type="checkbox"/> NICKEL-63 (Ni63)					
<input checked="" type="checkbox"/> GAMMA SPEC (GS)			<input type="checkbox"/>					
<input checked="" type="checkbox"/> TRITIUM (H3)			<input type="checkbox"/>					
<input type="checkbox"/> CARBON-14 (C14)			<input type="checkbox"/>					
<input type="checkbox"/> IODINE-125 (I125)			<input type="checkbox"/>					
RELENGISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY				
<i>Jim Noggle</i>	<i>Jim Noggle</i>	01/27/09	1704	Verify correct samples				
<i>Jim Noggle</i>	<i>Jim Noggle</i>	1/27/09	1704	Relinquished observer verified				
<i>Jim Noggle</i>	<i>Jim Noggle</i>	1/27/09	1704	SECURED STORAGE				
FEE RECOVERABLE <input type="checkbox"/> NO <input checked="" type="checkbox"/> 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

LABORATORY USE ONLY

SAMPLE RECORD - Continued

CONTROL NUMBER

LABORATORY: _____

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

GEL Work Order Number:

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 <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (3)	Field Filtered (4)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)							Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated												
MW-54-37-(008)	02/08/09	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)	02/03/09	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)	02/03/09	1235	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	2/3/09	1555	Secure storage	2/3/09	1555

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

GEL Work Order Number:

Client Name: Entergy Phone #: (914) 736-8405
 Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247

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

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

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

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)									Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated													
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

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

Sample Shipping and Delivery Details

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>[Signature]</i>	02/03/09	1555	SECURED STORAGE	02/03/09	1555

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

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

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

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

Should this sample be considered:
Total number of containers: _____
Preservative Type (6) <-- _____

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

Comments
Note: extra sample is required for sample specific QC

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

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (²)	Field Filtered (³)	Sample Matrix (⁴)	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)						Comments
MW-44-66-(011)	02/03/09	0940	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 Pacific
Central Other _____
Mountain

Chain of Custody Signatures		
Relinquished By (Signed)	Date	Time
<u>[Signature]</u>	02/03/09	1555
Received by (signed)	Date	Time
<u>SECURED STORAGE</u>	02/03/09	1555

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

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

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

Collected by: **AAJMB** Send Results To: Patrick Donahue

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

Chain of Custody Signatures						Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time		
	2/2/09	1830		2/2/09	1830	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=Faecal, 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 <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (²)	Field Filtered (³)	Sample Matrix (⁴)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)												Comments <small>Note: extra sample is required for sample specific QC</small>			
						Radioactive	TSCA Regulated					<-- Preservative Type (⁶)														
MW-45-42-(015)	02/02/09	1830	N	N	GW	Y	Y	1	1	1	1															2 Liter Poly
MW-45-61-(015)	02/02/09	1830	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures			Received by (signed)		
Relinquished By (Signed)	Date	Time	Date	Time	
<i>[Signature]</i>	2/2/09	1830	<i>[Signature]</i>	2/2/09	1830

Sample Shipping and Delivery Details	
GEL PM: <u>Erin Trent</u>	
Method of Shipment: <u>FEDEX</u>	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, S=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/7470) 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 Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number:

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

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

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

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽⁴⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)					<small><-- Preservative Type (6)</small>	Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated										
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

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	1215	Secure Storage	1/30/09	1215

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: <u>1</u> of <u>1</u>	<h2 style="margin: 0;">GEL Chain of Custody and Analytical Request</h2> <p style="margin: 0;">**See www.gel.com for GEL's Sample Acceptance SOP**</p>	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
Project #: <u>Entergy GW Mon Prog</u>		GEL Work Order Number:
GEL Quote #:		
COC Number ⁽¹⁾ :		
PO Number: <u>50013510</u>		

Client Name: <u>Entergy</u>	Phone #: <u>(914) 736-8405</u>	Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)																	
Project/Site Name: <u>Indian Point Energy Center</u>	Fax #: <u>(914) 734-6247</u>	Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)													<-- Preservative Type (6)
Address: <u>450 Broadway, Suite 3, Buchanan, NY 10511</u>																			

Collected by: <u>AA/MLB</u>	Send Results To: <u>Patrick Donahue</u>																Comments Note: extra sample is required for sample specific QC					
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Radioactive	TSCA Regulated															
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	

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 <input checked="" type="checkbox"/> Pacific Central Other _____ Mountain
--	---

Chain of Custody Signatures				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time		
	1/30/09	1510		1/30/09	1510	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=Faecal, 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

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: <u>Entergy</u>		Phone #: <u>(914) 736-8405</u>		Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)														
Project/Site Name: <u>Indian Point Energy Center</u>		Fax #: <u>(914) 734-6247</u>		Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)										<-- Preservative Type (6)
Address: <u>450 Broadway, Suite 3, Buchanan, NY 10511</u>																		
Collected by: <u>MBT/AA</u>		Send Results To: <u>Patrick Donahue</u>		Radioactive	TSCA Regulated	Comments Note: extra sample is required for sample specific QC												
Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military (hhmm))	QC Code (2)															Field Filtered (3)
* For composites - indicate start and stop date/time																		
MW-42-78-(011)	<u>01/30/09</u>	<u>1127</u>	<u>N</u>	<u>N</u>	<u>GW</u>	<u>Y</u>	<u>Y</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>							<u>2 Liter Poly</u>

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			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<u>[Signature]</u>	<u>1/30/09</u>	<u>1215</u>	<u>[Signature]</u>	<u>1/30/09</u>	<u>1215</u>
GEL PM: <u>Erin Trent</u>			Method of Shipment: <u>FEDEX</u> 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
 Project #: Entergy GW Mon Prog
 IEL 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 Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407
 Phone: (843) 556-8171
 Fax: (843) 766-1178

GEL Work Order Number:

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 <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Should this sample be considered:	Sample Analysis Requested ⁽⁵⁾										Preservative Type (6)	Comments Note: extra sample is required for sample specific QC					
									Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)													
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

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			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
	1/29/09	1510		1/29/09	1510

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

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 #:
 DOC 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)												<-- Preservative Type (6)
Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)								
												Radioactive

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)							Comments Note: extra sample is required for sample specific QC
U3-T1-(023)	01/28/09	1250	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

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

Chain of Custody Signatures				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	GEL PM: <u>Erin Trent</u>	
	<u>1/28/09</u>	<u>1345</u>	<u>SECURED STORAGE</u>	<u>1/28/09</u>	<u>1345</u>	Method of Shipment: <u>FEDEX</u>	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: <u>1</u> of <u>1</u>	<h2>GEL Chain of Custody and Analytical Request</h2> <p>**See www.gel.com for GEL's Sample Acceptance SOP**</p>	GEL Laboratories, LLC 2040 Savage Road Charleston, SC 29407 Phone: (843) 556-8171 Fax: (843) 766-1178
Project #: <u>Entergy GW Mon Prog</u>	GEL Work Order Number:	
GEL Quote #:		
COC Number ⁽¹⁾ :		
PO Number: <u>50013510</u>		

Client Name: <u>Entergy</u> Phone #: <u>(914) 736-8405</u>		Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)																	
Project/Site Name: <u>Indian Point Energy Center</u> Fax #: <u>(914) 734-6247</u>		Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)											<-- Preservative Type (6)	
Address: <u>450 Broadway, Suite 3, Buchanan, NY 10511</u>																			
Collected by: <u>Miguel Britos</u> Send Results To: <u>Patrick Donahue</u>		Comments Note: extra sample is required for sample specific QC																	
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)							
MW-55-24-(009)	02/11/09	1255	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures				Sample Shipping and Delivery Details			
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	GEL PM: <u>ERIN TREN</u>	
	<u>02/11/09</u>	<u>1500</u>	<u>SECURED STORAGE</u>	<u>02/11/09</u>	<u>1500</u>	Method of Shipment: <u>FEDEX</u>	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, S9=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

<i>For Lab Receiving Use Only</i>	
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						Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)																	
Project/Site Name: Indian Point Energy Center Fax #: (914) 734-6247						Should this sample be considered:	Total number of containers															-- Preservative Type (6)	
Address: 450 Broadway, Suite 3, Buchanan, NY 10511																							Radioactive
Collected by: <u>Miguel Britos</u> Send Results To: Patrick Donahue																							
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)											Comments	
U3-4D-(019)	02/10/09	1415	N	N	GW	Y	Y	1	1	1	1												2 Liter Poly

TAT Requested: Normal: Rush: Specify: _____ (Subject to Surcharge) Fax Results: Yes / No / 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					Sample Shipping and Delivery Details					
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time	GEL PM: Erin Trent			Method of Shipment: FEDEX	
	02/10/09	1430	SECURED STORAGE	02/10/09	1430	Date Shipped:			Airbill #:	
									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, S=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, 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

<i>For Lab Receiving Use Only</i>
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 ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code ⁽²⁾	Field Filtered ⁽³⁾	Sample Matrix ⁽⁴⁾	Radioactive	TSCA Regulated	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)				Preservative Type (6)	Comments Note: extra sample is required for sample specific QC
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

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			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>Miguel Britos</i>	02/09/09	1655	<i>ERIN TREN</i>	02/09/09	1655

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

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

<-- Preservative Type (6)

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered ^(b)	Sample Matrix ^(c)	Should this sample be considered:		Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)												Comments Note: extra sample is required for sample specific QC			
						Radioactive	TSCA Regulated																			
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	1122	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 Pacific
 Central Other _____
 Mountain

Chain of Custody Signatures			Sample Shipping and Delivery Details		
Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<u>Agile EA</u>	<u>2/6/09</u>	<u>1400</u>	<u>Secure</u>	<u>2/6/09</u>	<u>1400</u>

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=Faecal, 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: MB/AA Send Results To: Patrick Donahue

Sample Analysis Requested ⁽⁵⁾ (Fill in the number of containers for each test)												<-- Preservative Type (6)	Comments Note: extra sample is required for sample specific QC				
Should this sample be considered:	Total number of containers	Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)												
		Radioactive	TSCA Regulated														
Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (3)	Field Filtered ⁽¹⁾	Sample Matrix ⁽⁴⁾												
MW-49-26-(015)	02/06/09	1303	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

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

Sample Shipping and Delivery Details	
GEL PM: <u>Erin Trent</u>	Method of Shipment: <u>FEDEX</u>
Airbill #:	Date Shipped:
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 #:
 LOC 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

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

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

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

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
	02/04/09	1705
SECURED STORAGE	02/04/09	1705

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

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

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT



APPENDIX D: 1ST QUARTER 2009 SAMPLING DATA SHEETS

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 1/19/09
 GZA Engineers: Miguel Britos
 Angela Aitern

GZA Engineer: Miguel Britos
 Time Arrived onSite: 0700
 Time Left Site: 1700

Angela Aitern

Weather: Sunny 20's

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, 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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

Lines (tubing) frozen upon arrival.

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 1/20/09
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer:

Miguel Britos

Angela Altieri

Weather:

Sunny upper 20's

Time Arrived onSite:

0630

Time Left Site:

1630

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, 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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

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

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 4/21/09
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived on Site: 700
 Time Left Site: 1600

Angela Altieri
700
1600

Weather: 20's, sun

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 37-22(13)	IPEC	2L	poly			
MW 37-32(13)	↓	↓	↓			
MW-37-40(13)	↓	↓	↓			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations			Follow-up Required?
	Download	Installation				
OUT-1	X	X	old trans. stopped 12/17/08. Replaced			
			reset transducer			
MW37-32	X	X	9.75'	5.350	+ 0.274	
MW37-22	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: MW37-2
 SAMPLE ID: 013

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 20.5, sun

PROJECT NO: 01.0017869.91
 DATE: 1/21/09
 SAMPLER(S): AA1UB
 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'								
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	6.03	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	200701254

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: 1/21/09
 SAMPLER(S): ADAMS
 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		1 gal purge
1341	14.417	7.50	1.523	2.41	0.57	20.61	118.7		
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	6
flow meter	
turbidity meter	200701254

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 purge

WELL ID: MU-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): AAIMS
 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
1301	12.168								
1314	12.142	7.34	1.693	-	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	12.103	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	200701254

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
 Client: Entergy Nuclear NorthEast
 Site: **INDIAN POINT ENERGY CENTER**
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 1/22/09
 GZA Engineers: Miguel Britos
 Angela Alteri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 7:00
 Time Left Site: 5:40

Angela Alteri
 7:00
 5:40

Weather: 30's, ^{partly} 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)
MW37-40 (013)	IPEC	2L	poly			
MW36-24 (013)	↓	↓	↓			
MW36-52 (012)						
MW50-42 (016)						
MW50-66 (020)	↓	↓	↓			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation					
			DTW transducing should read off by amt				
MW36-24	checked		4.04	7.591	11.598	-0.033	
MW-36-52	checked	X	5.02	6.913	11.670	-0.243	
U3-C1	checked & changed trans.		13.18	5.684	18.060	-0.804	
HR-1	checked & installed second trans.		16.26	2.21	18.496	+0.02	
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 1/22/09 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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date:

4/23/09

GZA Engineers:

Miguel Britos

Angela Aihen

ZA Engineer:

Miguel Britos

Angela Aihen

Time Arrived onSite:

700

700

Time Left Site:

1630

1630

Weather:

30's, sun

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)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation					
MW62-18	x	x	DTW transvd	showed rd	difference		
MW62-37			11.07	1.373	12.810	+ 0.367	
OUT-1		x	11.44	1.373	12.810	+ 0.003	
			changed to nonvented transducer @ 0.003				

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

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

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: **INDIAN POINT ENERGY CENTER**
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 1/26/09
 GZA Engineers:

Miguel Britos
 Angela Altieri

GZA Engineer:

Miguel Britos

Angela Altieri

Weather:

P. sunny 20's

Time Arrived onSite:

0700

Time Left Site:

1800

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, 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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		
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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 4/27/09
 GZA Engineers:

Miguel Britos
 Angela Atheri

GZA Engineer: Miguel Britos
 Time Arrived on Site: 7:00
 Time Left Site: 19:00

Angela Atheri
 7:00
 19:00

Weather: 30's, p. cloudy

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, 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)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation					
				trans.	trans.	Add to	
			DN	Surface rd	Actual depth	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 ~20 min breaking ice on MW63
 - NRC did not observe sampling from 1320-1340 as noted on NRC's CDC.

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 1/28/09
 GZA Engineers: Miguel Britos
 Angela Alten

GZA Engineer: Miguel Britos
 Time Arrived on Site: 7:00
 Time Left Site: 14:30

Angela Alten
 7:00
 14:30

Weather: snow; then
 sleet rain.
 30's

WELL SAMPLING ACTIVITIES

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

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation	PTW	trans surface relig	Actual Depth	Accl to RATA	
U3-T1	checked		4.84	3.673	2.169	+0.005	
U3-T2	checked		4.72	3.806	2.093	+0.014	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

3 hrs spent: went into FSB to check if work going on, waiting for approval to go into RCA; wait to get close 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. maria of MW-30

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

On meters don't say we don't have tube on the schedule.

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 4/29/09
 GZA Engineers: Miguel Britos
 Angela Ather

GZA Engineer: Miguel Britos
 Time Arrived on Site: 7:00
 Time Left Site: 1:00

Angela Ather
 7:00
 1:00

Weather: 20.5, sun

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vos, amber, poly, glass)
MW63-18 (08)	IPEC	2L	poly			
63-34 (08)	↓	↓	↓			
63-50 (08)	↓	↓	↓			
63-93 (08)	↓	↓	↓			
63-163 (08)	↓	↓	↓			
63-174 (08)	↓	↓	↓			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation	DTW	trans. depth	Actual depth	Actual Data	
MW63-18	x	x	13.48	-0.066	4.252	-0.414	* Brit/RES change
MW63-34			13.43	-0.330	12.819	-0.036	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

1.2 hrs spent defrosting lines - frozen.

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 1/30/09
 GZA Engineers:

Miguel Britos
Angela Altieri

GZA Engineer:

Miguel Britos

Angela Altieri

Time Arrived onSite:

700

700

Time Left Site:

1630

1630

Weather:

cloudy,
30's, little
snowflurries

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(01)	IPEC	2L	poly			
MW30-89(02)	↓	↓	↓			
MW30-84(014)	↓	↓	↓			
MW63-112(005)	↓	↓	↓			
MW63-121(007)						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		
RW-1	x		taking depth readings	
MW30-89	x			
MW30-84	x			

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MW42 - 30min - chipping ice on the well.

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: **INDIAN POINT ENERGY CENTER**
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/2/09
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 7:00
 Time Left Site: 19:00

Angela Altieri
 7:00
 19:00

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

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, amber, poly, glass)
MW45-42(05)	IPEC	2L	poly			
MW45-61(05)	↓	↓	↓			
MW44-102(02)	↓	↓	↓			
MW44-67(011)	↓	* 1L	↓			
* Well did not reach, only 1L obtain. Will try tomorrow morning.						

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation	DTW	transducer	Actual Depth	Add to data	
MW44-67	✓	✗	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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/3/09
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 700
 Time Left Site: 1700

Angela Altieri
 700
 1700

Weather: snow, 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)
MW44-66	IPEC	1L	poly	finished sampling from yesterday's		
MW58-26 (007)		2L				
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)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation	DTW	trans. rdng	Actual Depth	Head Data	
MW58-26			8.09	6.157	17.074	-0.017	
MW58-65		x (reset)	7.80	6.899	60.284	-1.449	

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

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

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: **INDIAN POINT ENERGY CENTER**
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/14/09
 GZA Engineers: Miguel Britos
Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 700
 Time Left Site: 1730

Angela Altieri
700
1730

Weather: 20's, sun

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)
MWSS-35 (008)	IPEC	2L	poly			
MWSS-54 (009)						
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)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation	DTW	trc. rd	Actual	Difference	
MWSS-24	checked		9.64	8.110	6.183	+0.020	
MWSS-35	checked		10.04	7.713	23.702	+0.013	
MWSS-54	x	x	10.98	8.120	40.834	-1.330	← this test stopped mid December.

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MWSS-24 - pumping so slow that the tubes tubing froze + PSI 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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/5/09
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 700
 Time Left Site: 1530

Angela Altieri
700
1530

Weather: 70's, sun
Windchill 10°

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)		Special Notes/Issues/Observations				Follow-up Required?
	Download	Installation	DTW	trans rdng	Actual Depth	Difference	
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	
DWT-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
 Client: Entergy Nuclear NorthEast
 Site: **INDIAN POINT ENERGY CENTER**
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/6/09
 GZA Engineers: Miguel Britos
Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 700
 Time Left Site: 1500

Angela Altieri
200
1500

Weather: 10's, cloudy

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, 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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

1 1/2 hrs - defrosting frozen tubing.

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/9/09
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 0700
 Time Left Site: 1730

Angela Altieri

Weather: p. sunny 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)
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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		
MW-60	✓			

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

MW-

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/10/09
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived on Site: 0700
 Time Left Site: 1500

Angela Altieri

Weather: p cloudy low 40'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)
U3-4D	IPEC	2 L	poly			

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		
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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/11/09
 GZA Engineers: Miguel Britos
 Angela Alteri

GZA Engineer:

Miguel Britos
0700
1500

Angela Alteri

Weather: p cloudy 50's

Time Arrived on Site:
 Time Left Site:

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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		
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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/12/08
 GZA Engineers: Miguel Britos
 Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 0700
 Time Left Site: 1500

Angela Altieri

Weather: p. cloudy, windy
 drizzle 40'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)

TRANSDUCER DOWNLOADING AND INSTALLATIONS

Well ID	ACTIVITY (check)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		
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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 2/13/09
 GZA Engineers:

Miguel Britos
 Angela Altieri

GZA Engineer:

Miguel Britos
0700
1500

Angela Altieri

Weather: Sunny 40's

Time Arrived onSite:

Time Left Site:

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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		
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
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 3/16/09
 GZA Engineers: Miguel Britos
Angela Altieri

GZA Engineer: Miguel Britos
 Time Arrived onSite: 0700
 Time Left Site: 1500

Angela Altieri
—
—

Weather: P. Cloudy 50°F

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, 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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 3/17/09
 GZA Engineers: Miguel Britos
Angela Ather

GZA Engineer: Miguel Britos
 Time Arrived onSite: 0700
 Time Left Site: 1500

Angela Ather

Weather: M. Sunny 50's

WELL SAMPLING ACTIVITIES

Well ID	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, amber, poly, glass)	Designation (IPEC, NRC, REL, CAP, etc.)	Quantity/ Volume	container type (vsa, 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)		Special Notes/Issues/Observations	Follow-up Required?
	Download	Installation		

MEETINGS, SPECIAL ACTIVITIES, NOTABLE EVENTS, DELAYS, NOTES

GZA FIELD ACTIVITIES SHEET

Project: Radiological Groundwater Sampling Program
 Client: Entergy Nuclear NorthEast
 Site: INDIAN POINT ENERGY CENTER
 Location: Buchanan, NY
 Project #: 01.0017869.91

Date: 3/18/09
 GZA Engineers: Miguel Britos
Angela Altieri

GZA Engineer:

Miguel Britos
0700
1630

Angela Altieri

Weather:
Sunny 60°F

Time Arrived onSite:

Time Left Site:

WELL SAMPLING ACTIVITIES

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

TRANSDUCER DOWNLOADING AND INSTALLATIONS

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

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: mib

Parameter Values:

		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)	0	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 Zone Improved Zone (ft ²)
	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	438,221	323,116	268,862	585,600	
	Discouraged Area Within Zone	Discouraged Area Within Zone	Discouraged Area Within Zone	Discouraged Area Within Zone	Discouraged Area Within Zone	
44,831	0	324,509	137,938	17,730	144,347	
Northern Clean Zone Catchment (ft ²)	156,694	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)
	354,371	1,136,965	770,550	607,882	943,302	
		Activity (pci/L)				
		Groundwater				
Upper Zone Before Canal		Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South Zone	Southern Clean Zone
	150	546	2,570	328	824	276
Lower Zone Before Canal	150	151	2,810	1,171	439	220
Upper Zone After Canal		Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South Zone	Southern Clean Zone
	150	198	3,101	376	824	276
Lower Zone After Canal	150	582	1,095	483	439	220



Facility Groundwater Flux Calculation

Site Indian Point Prepared By: JAS
 Job No. 17869.91 Reviewed By: mib

Stormwater Discharging to Canal (pCi/L)					
Storm Water for Northern Clean Zone	Storm Water for Unit 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	0	0
<i>Avg MH-4a</i>	<i>Avg CB-14 and CB-34</i>	<i>NA</i>	<i>Avg U3-CB-B8</i>	<i>Avg D1, CB3, E6, & E10</i>	
<i>NA</i>					
Stormwater Discharging to River (pCi/L)					
Storm Water for Northern Clean Zone	Storm Water for Unit 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	683	0	683	598	598
<i>Avg MH-1 and MH-12</i>	<i>Avg CB-15</i>	<i>Avg MH-14</i>	<i>NA</i>	<i>Avg E13,C,B-C2</i>	
<i>NA</i>					

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	1,766	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: mib

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 Prepared By: JAS
 Job No. 17869.91 Reviewed By: mib

Groundwater Discharged to River

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

Upper 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
		32,722 90 0.47 926,576	6,411 18 0.09 181,536	54,110 148 0.77 1,532,223	27,907 76 0.40 790,237	21,949 60 0.31 621,536	268,209 735 3.82 7,594,833
Lower Zone	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
		64,955 178 0.92 1,839,323	23,132 63 0.33 655,037	96,614 265 1.38 2,735,807	69,330 190 0.99 1,963,203	41,857 115 0.60 1,185,255	249,569 684 3.55 7,067,007

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 0 0 0	875,837 2,400 12.47 24,802,148	0 0 0.00 0	37,387 102 7.02 13,972,258	493,426 1,352 7.02 48,134,772



Facility Groundwater Flux Calculation

Site Indian Point Prepared By: JAS
Job No. 17869.91 Reviewed By: mib

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

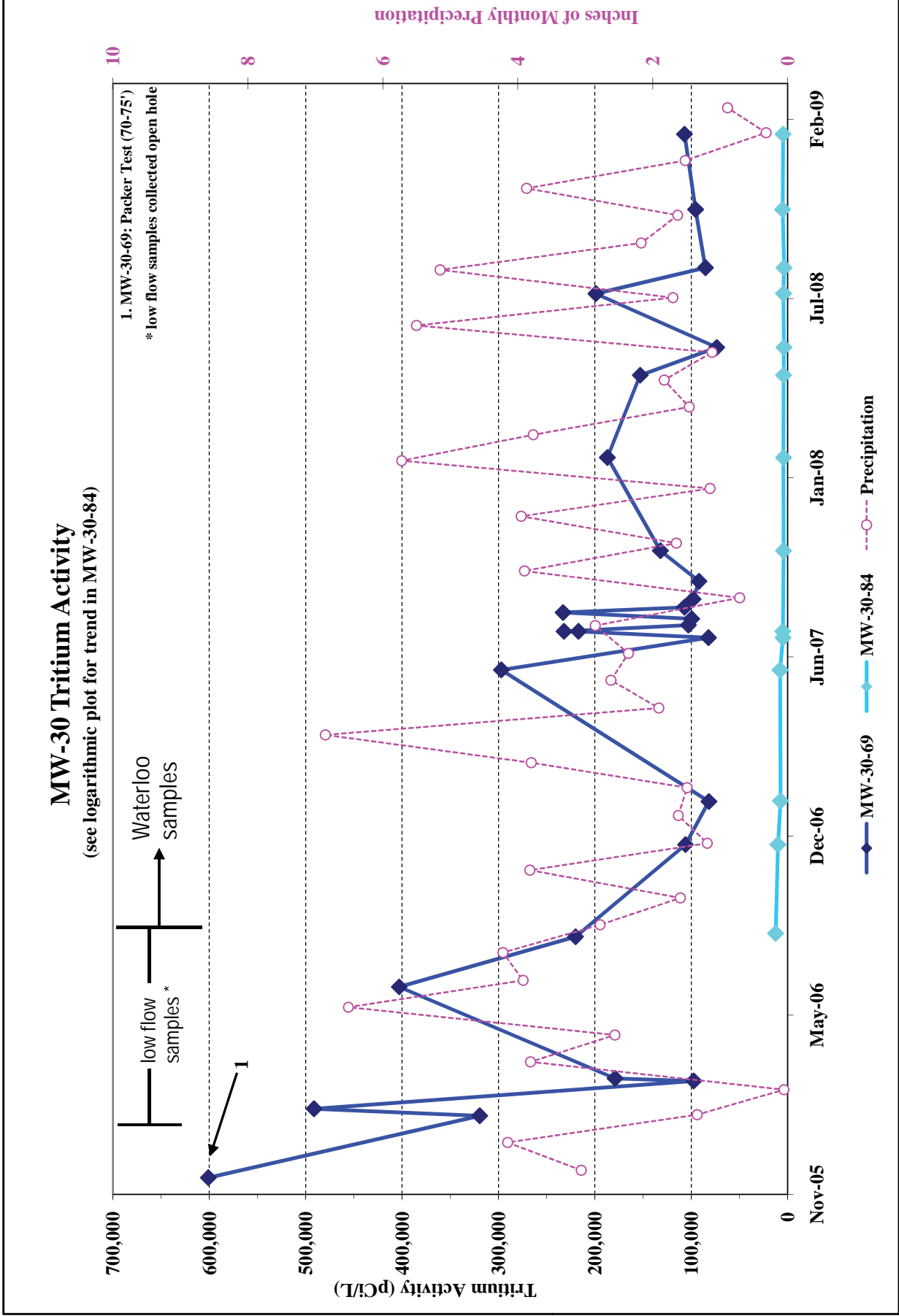


FIGURE G1

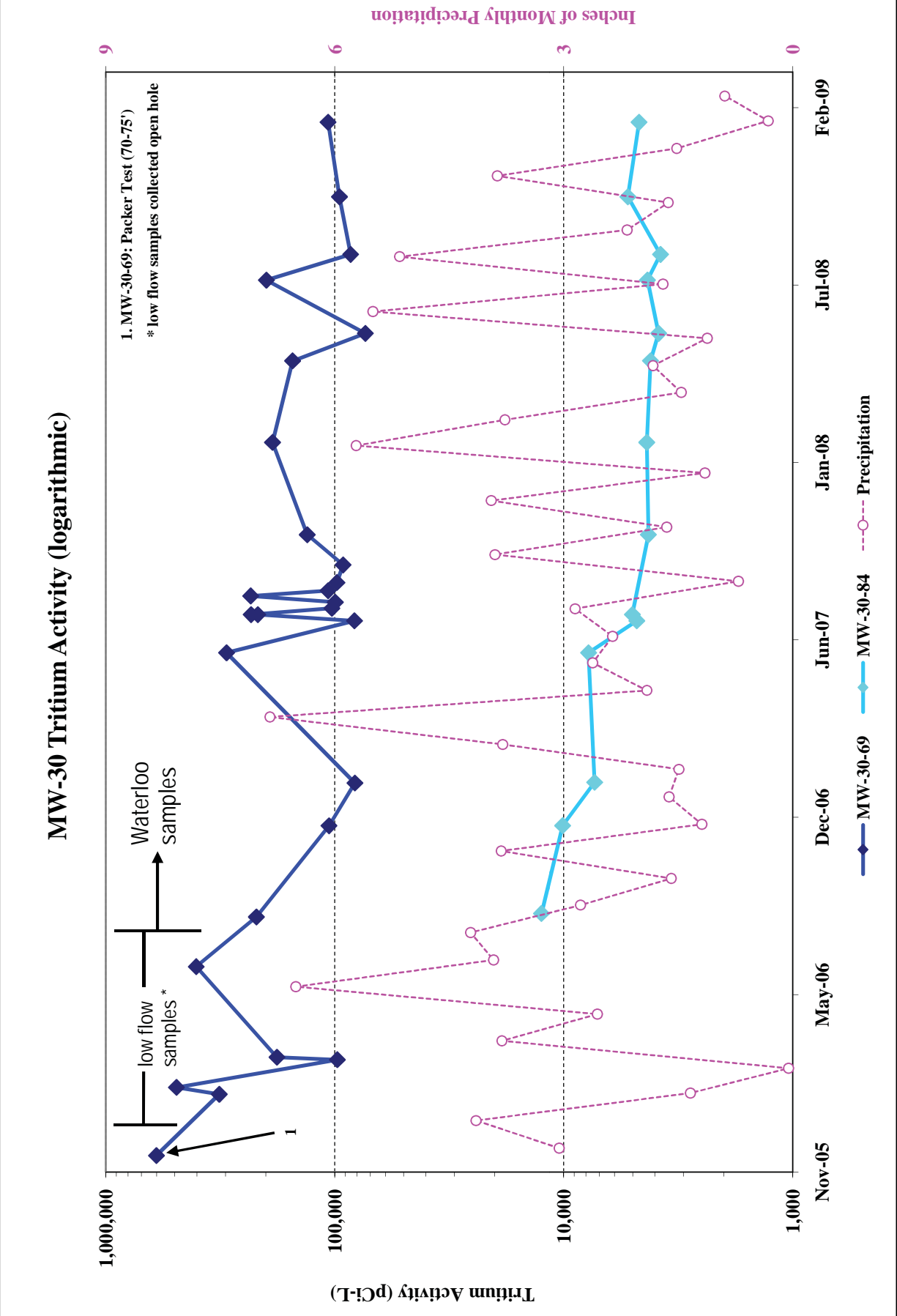


FIGURE G1a

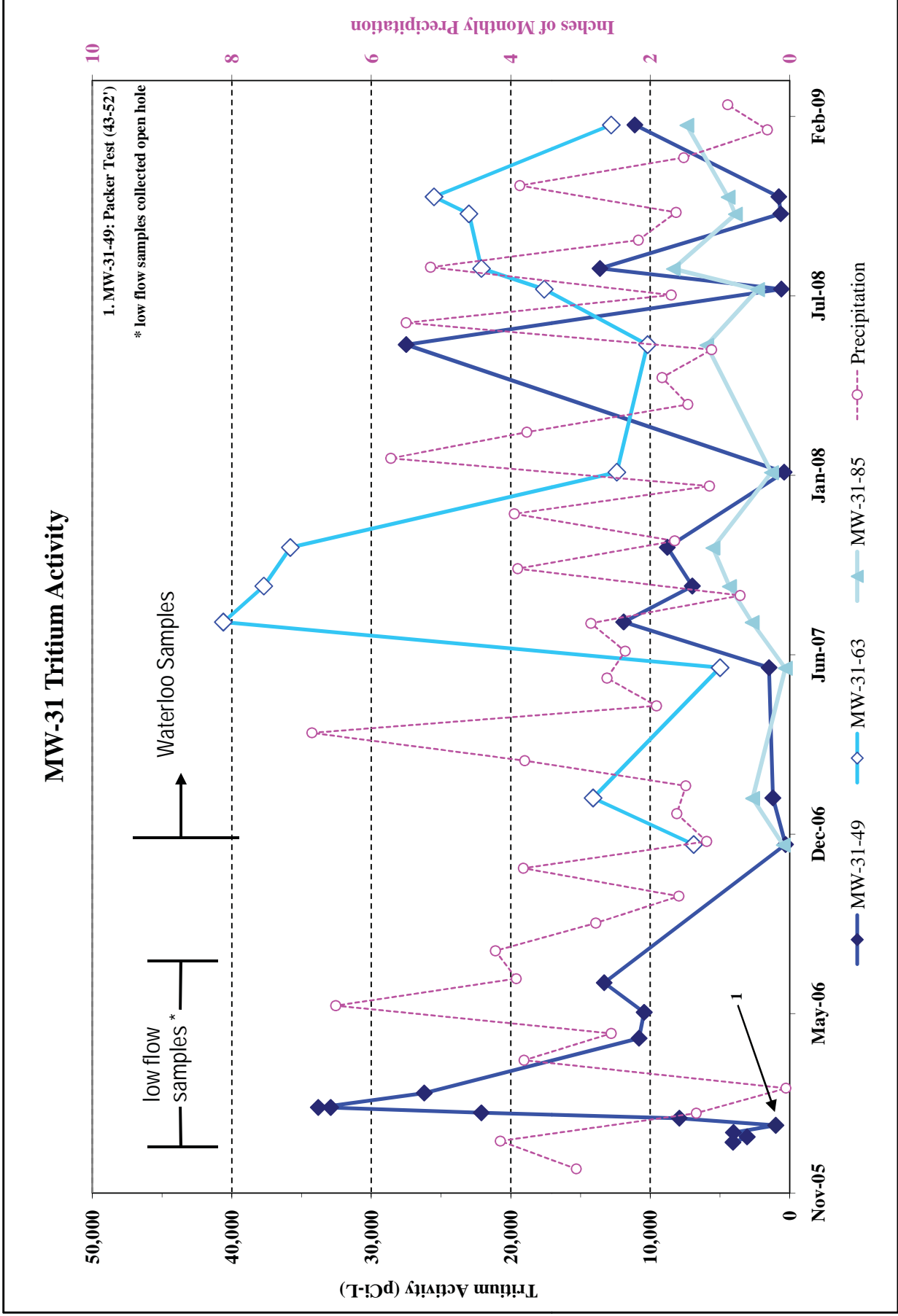


FIGURE G2

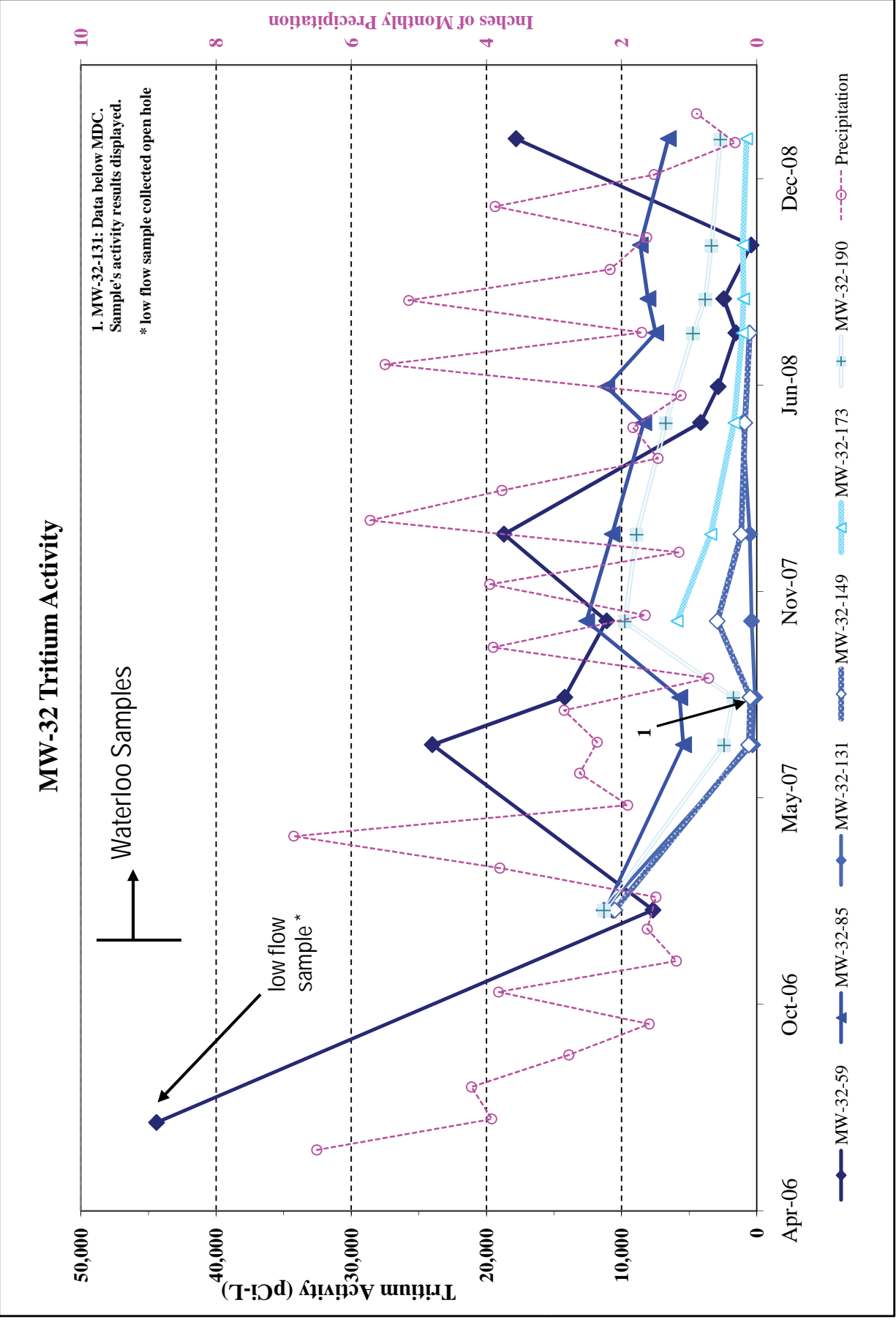


FIGURE G3

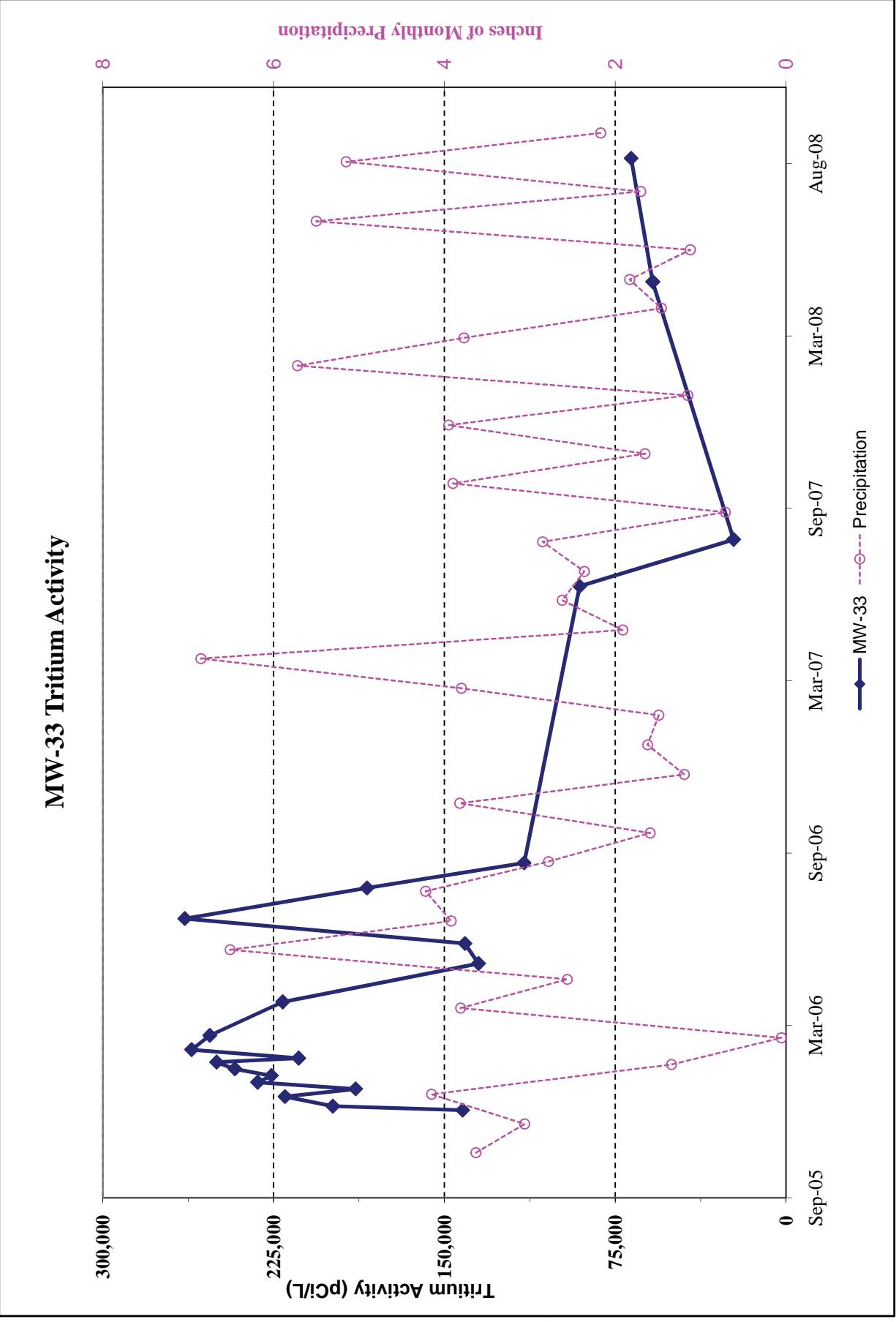


FIGURE G4

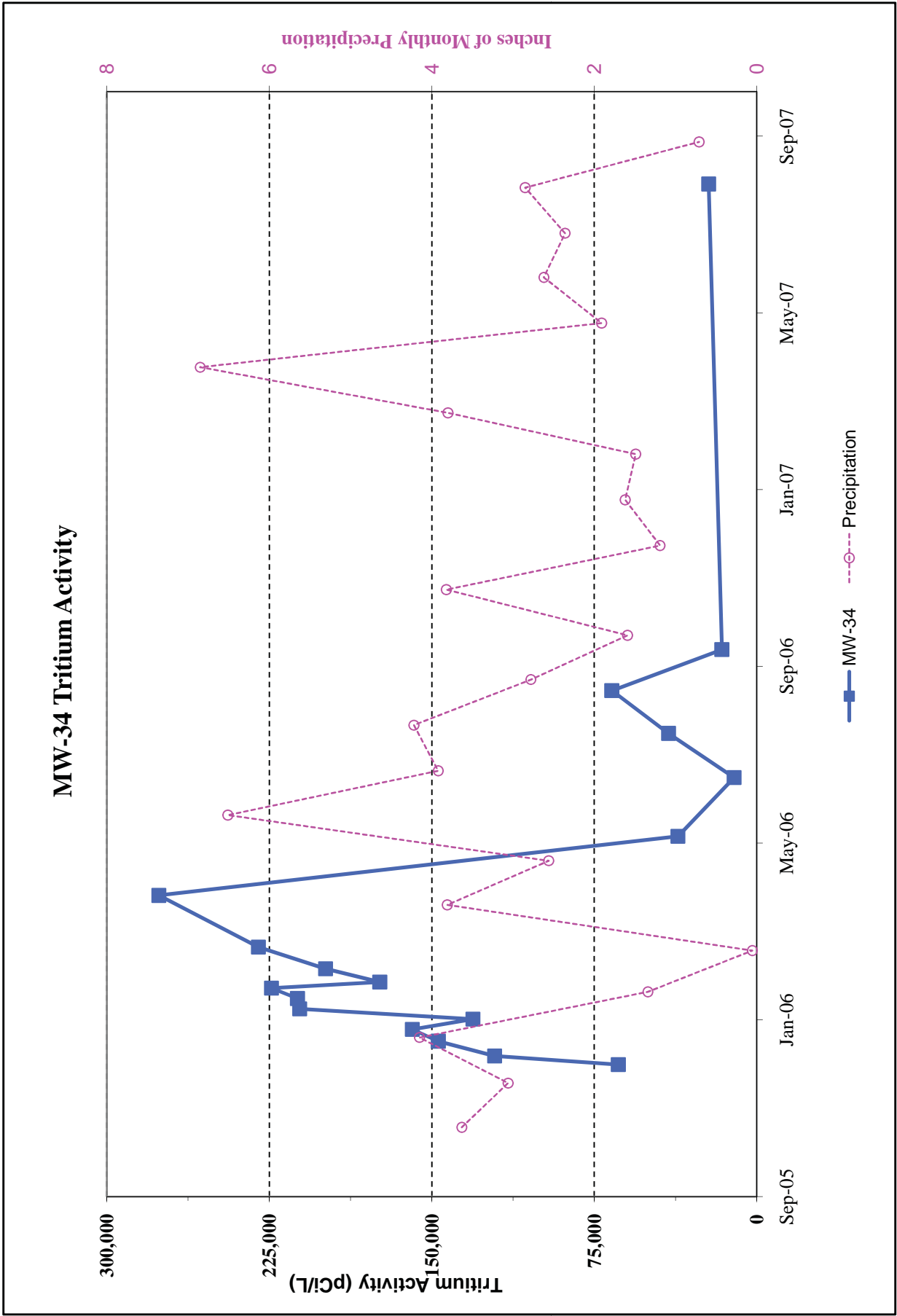


FIGURE G5

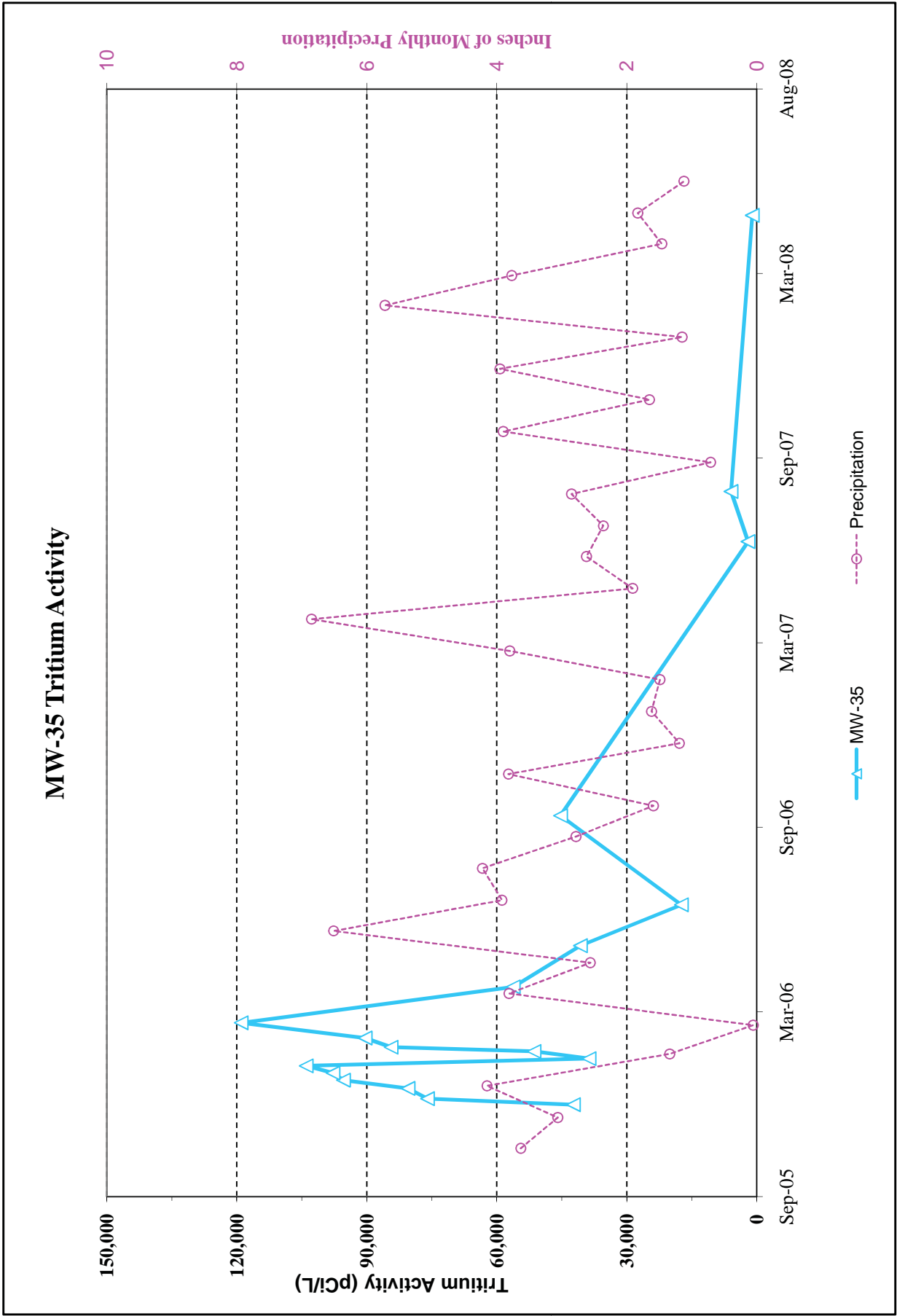


FIGURE G6

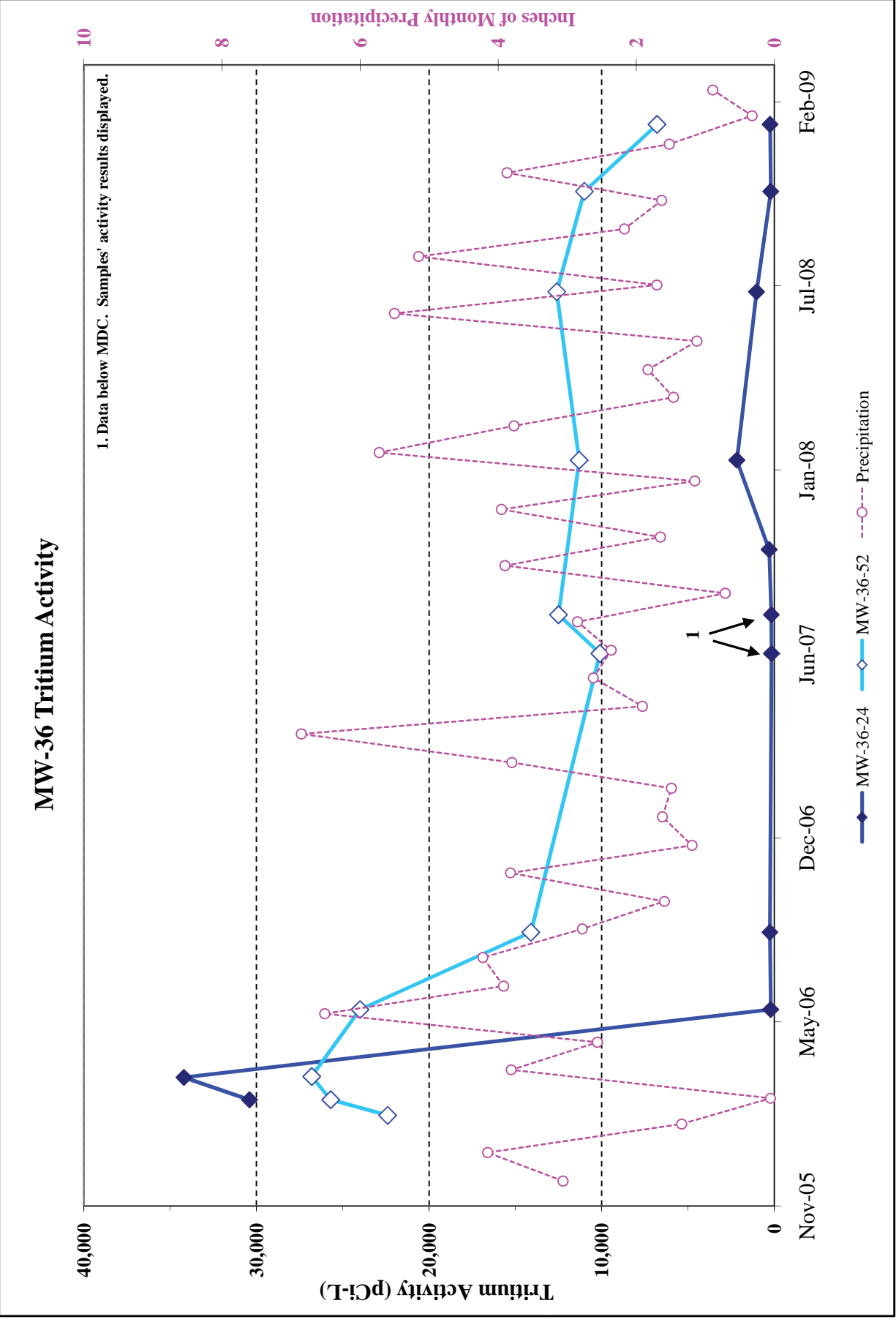


FIGURE G7

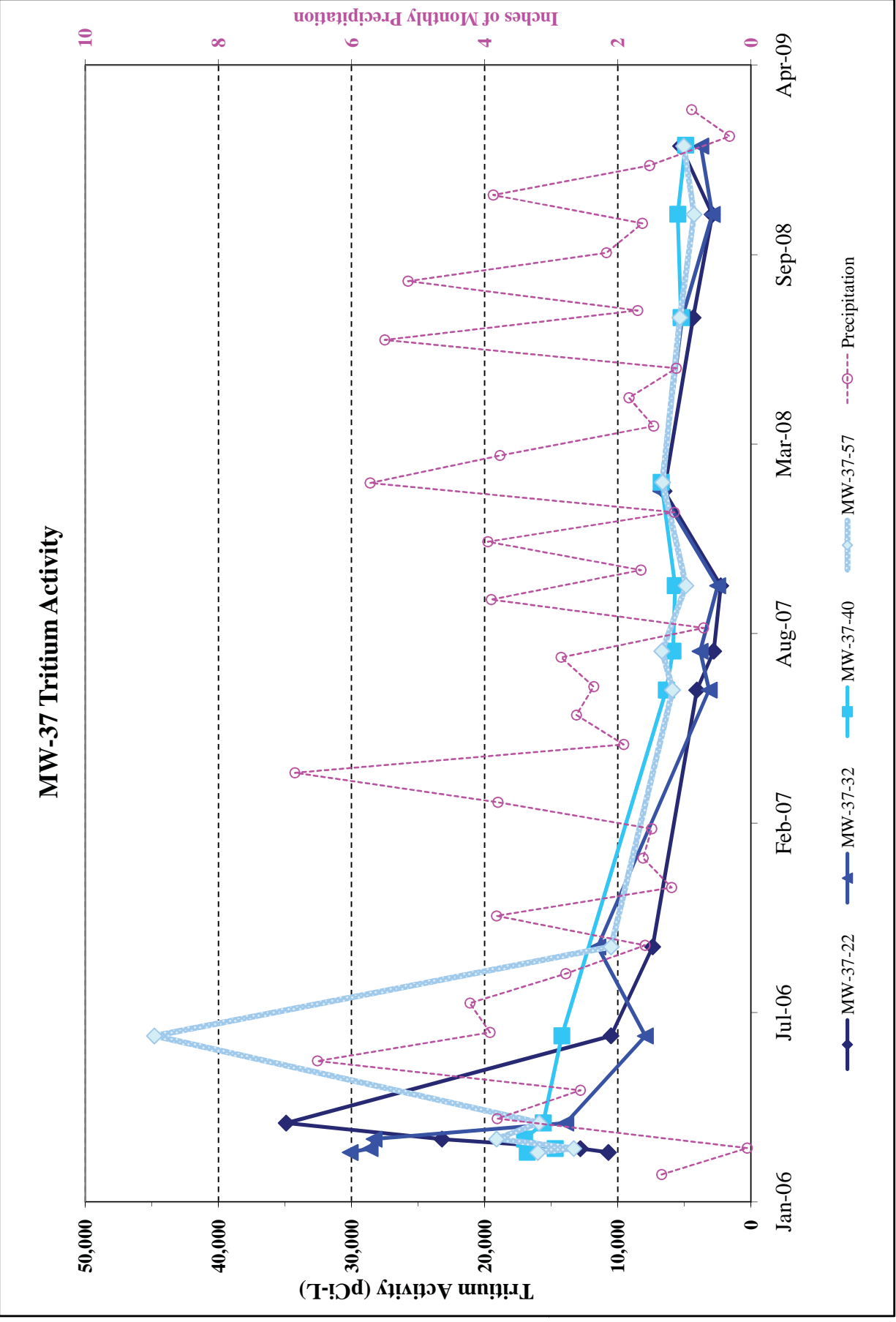


FIGURE G8

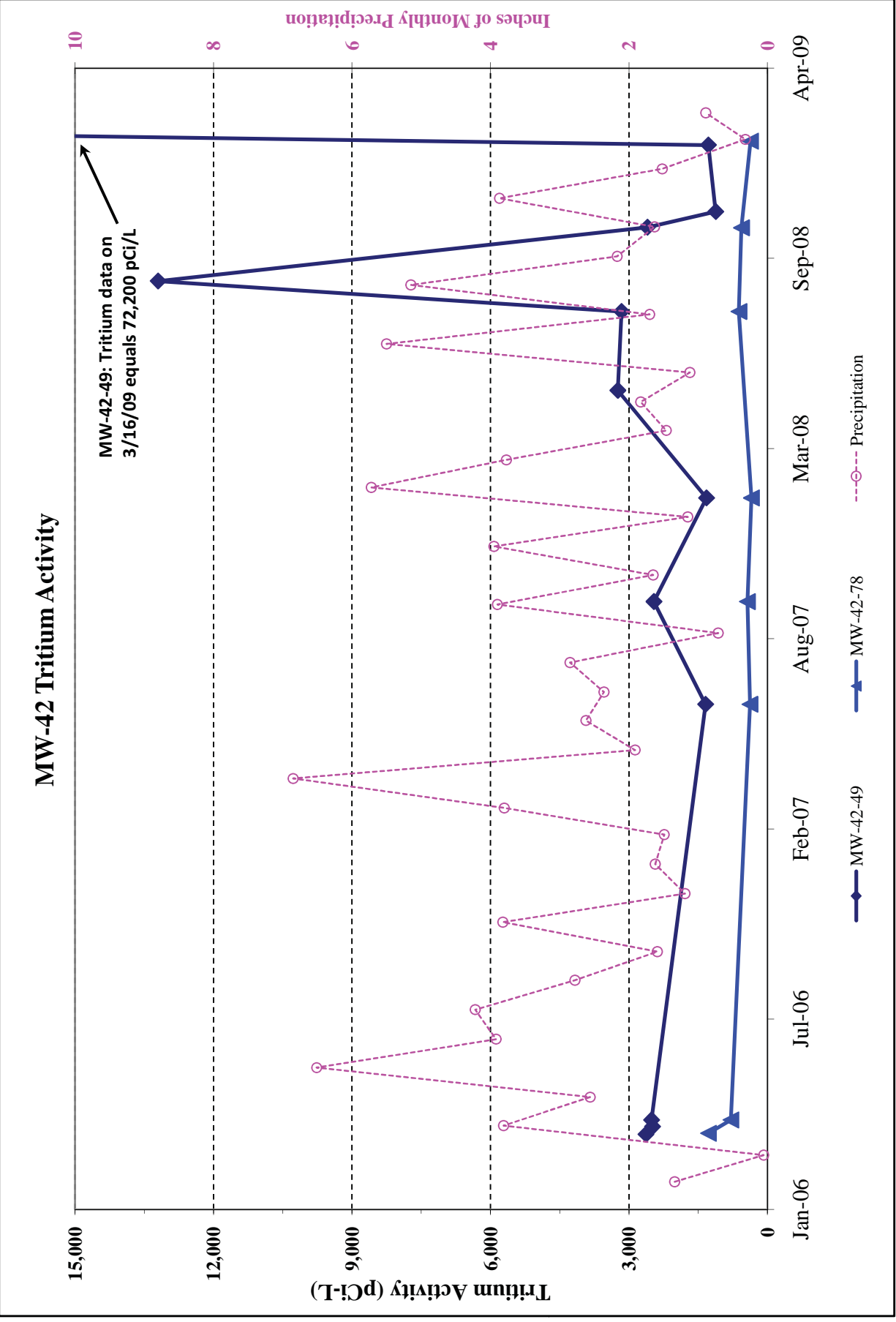


FIGURE G9

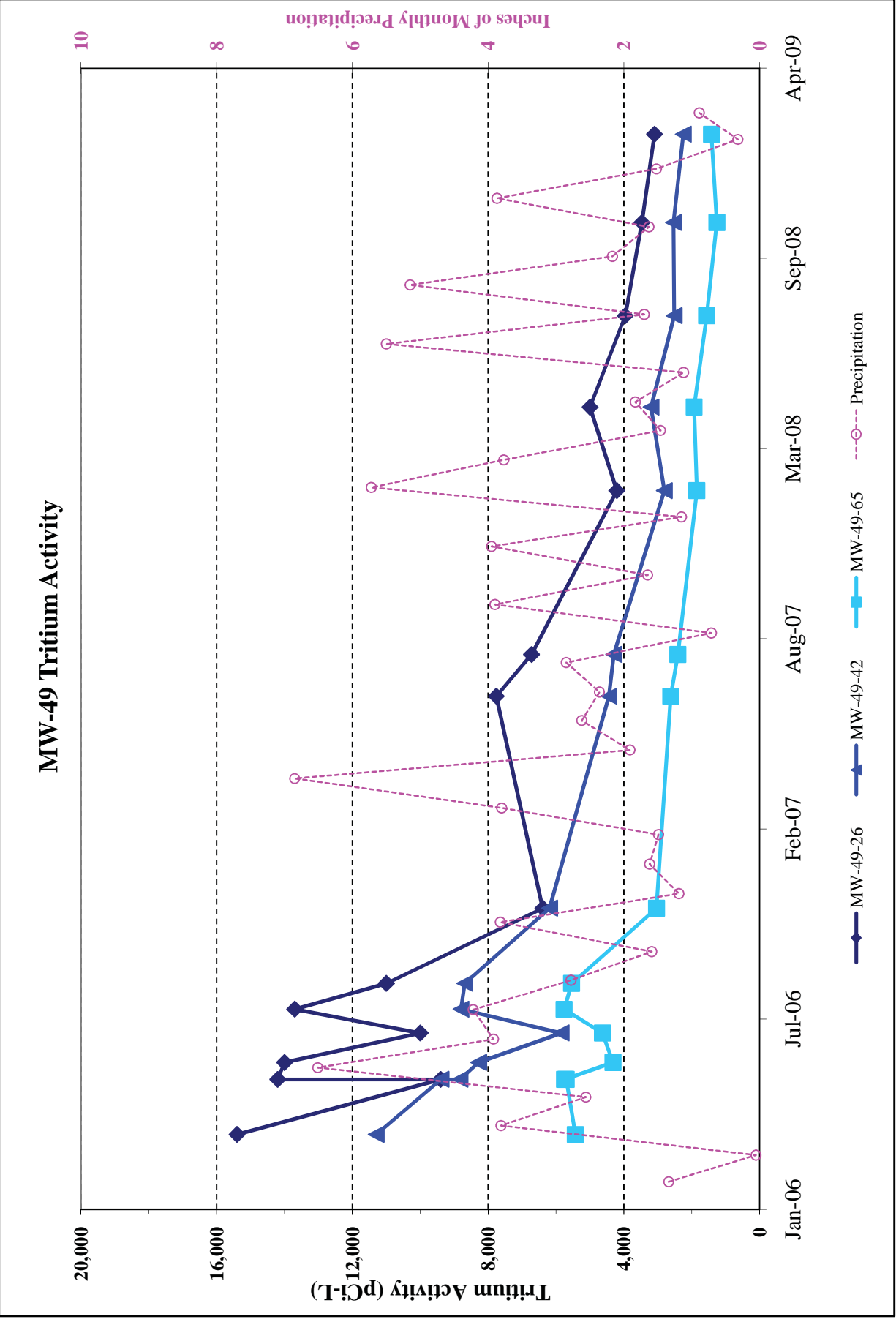


FIGURE G10

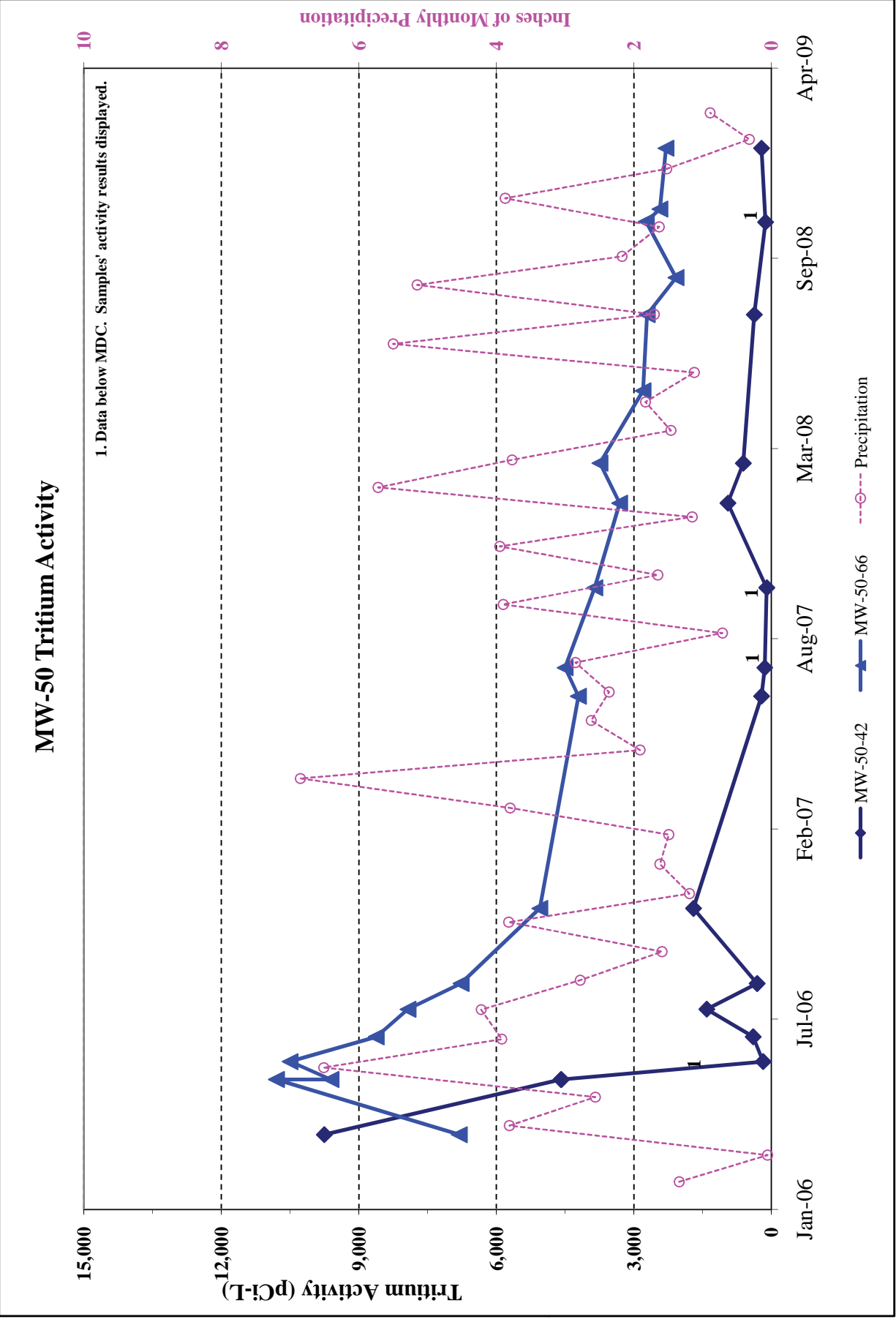


FIGURE G11

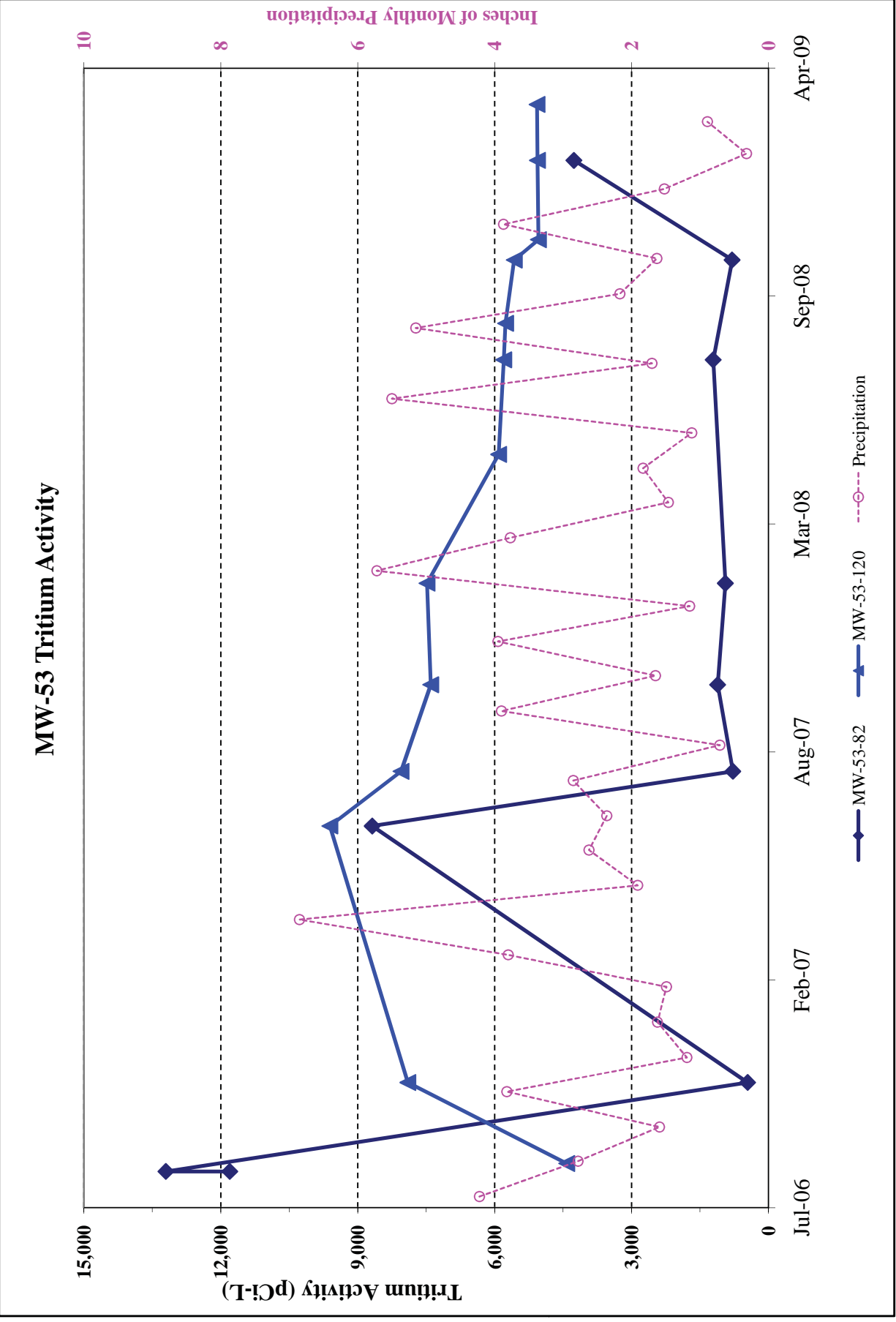


FIGURE G12

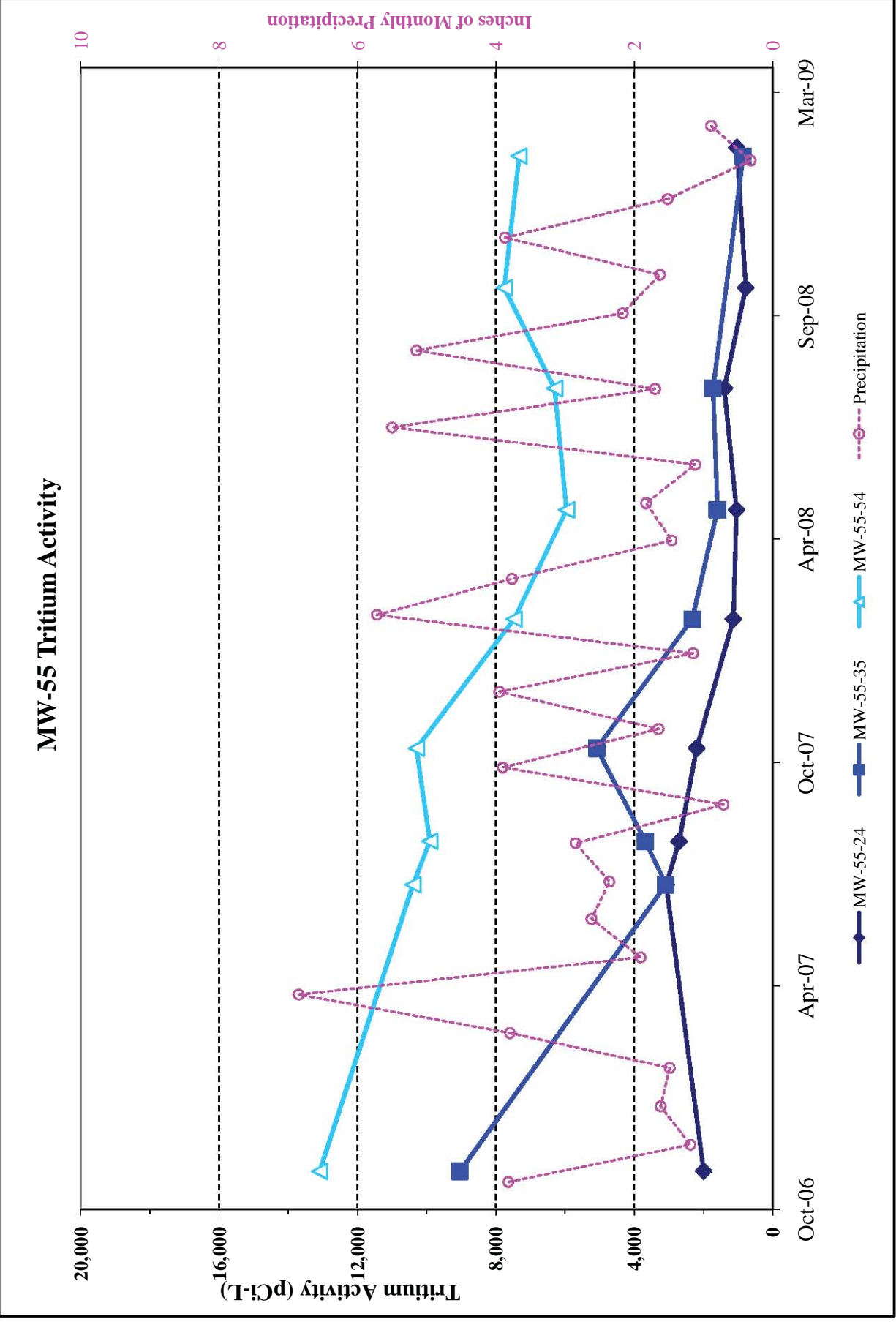


FIGURE G13

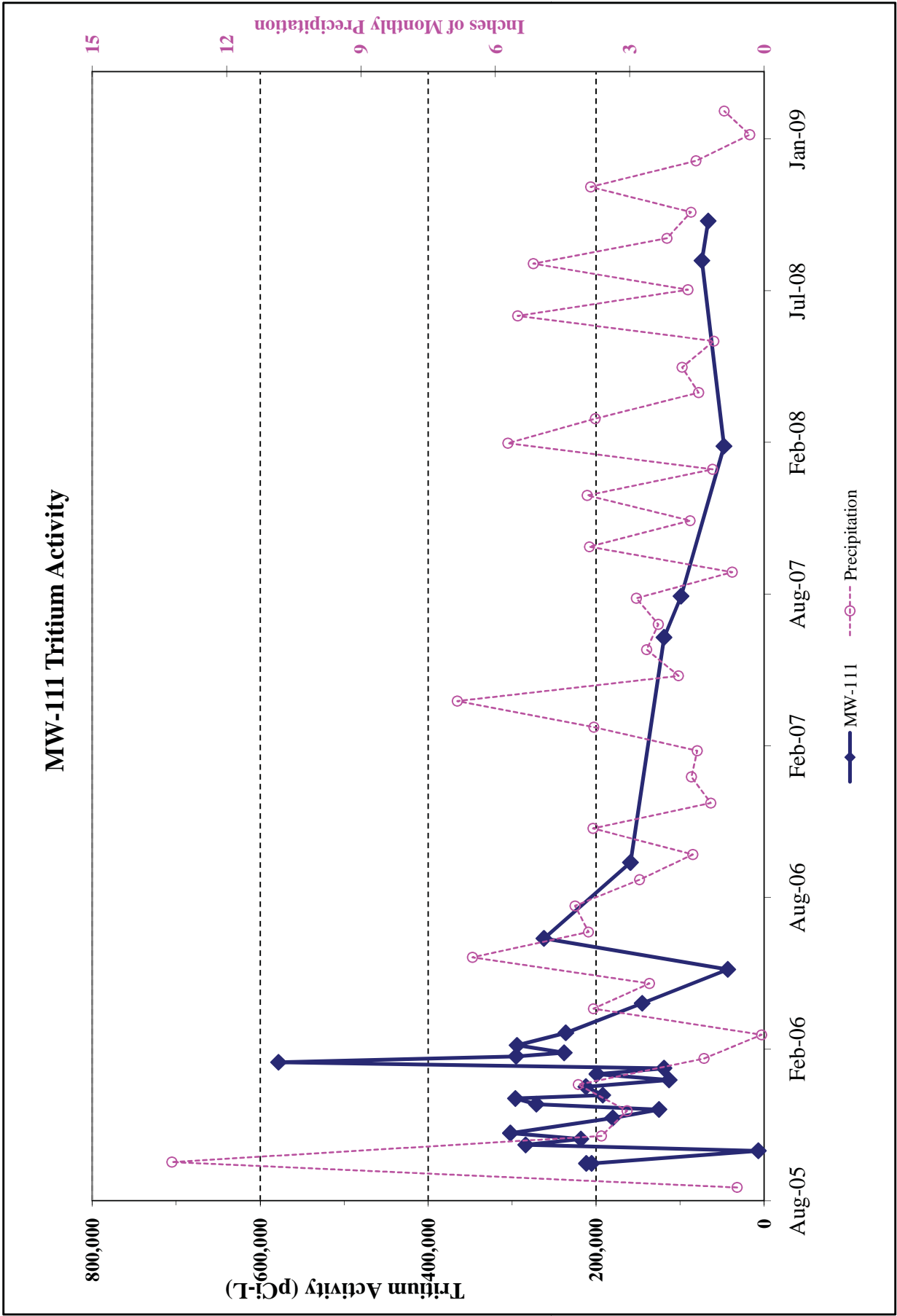
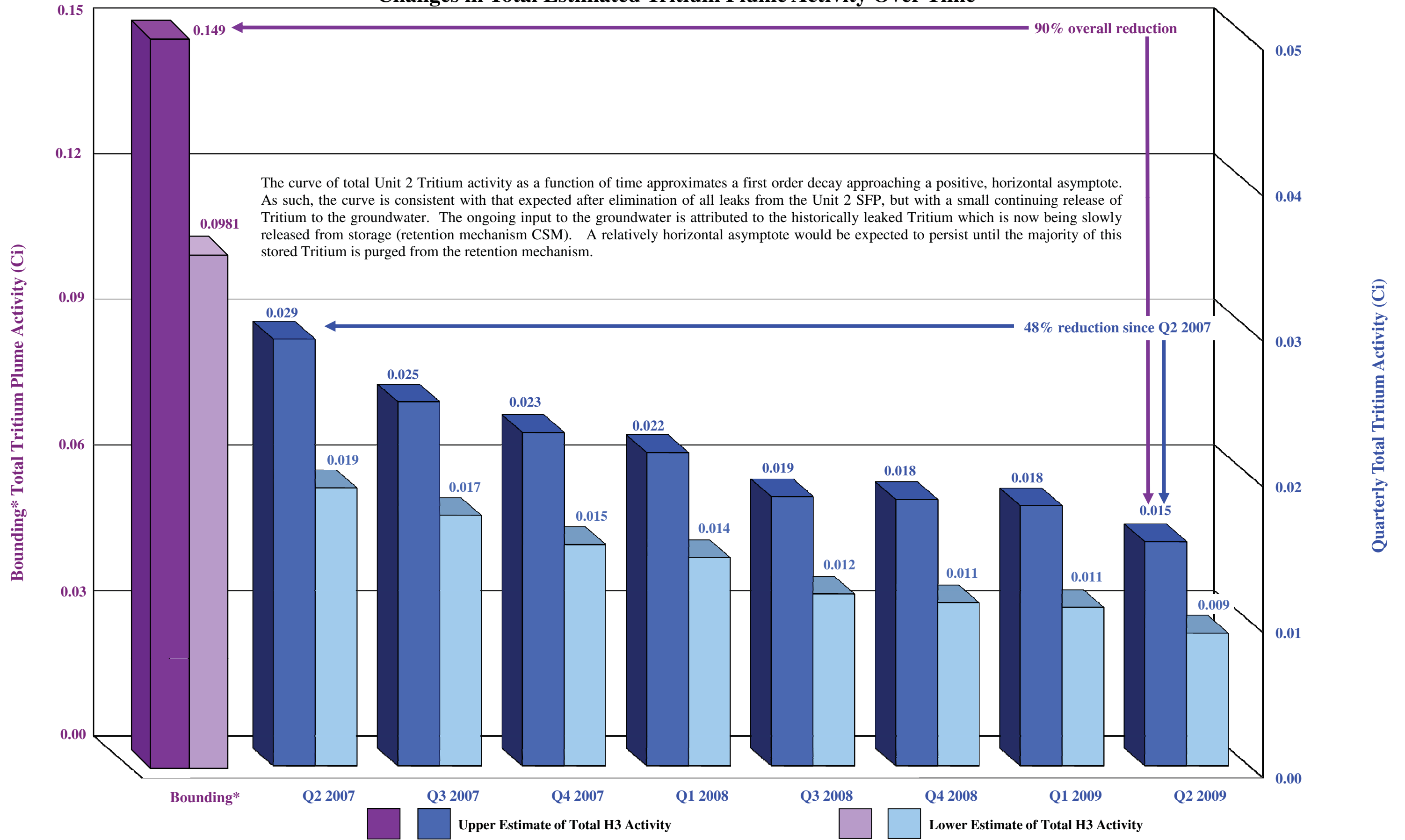


FIGURE G14

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 20006 (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