

**FINAL  
IPEC QUARTERLY LONG-TERM  
GROUNDWATER MONITORING REPORT  
QUARTER ONE 2008  
(REPORT NO. 2)  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NEW YORK**

PREPARED FOR:

**ENTERGY NUCLEAR NORTHEAST, INC.**

INDIAN POINT ENERGY CENTER  
450 BROADWAY  
BUCHANAN, NEW YORK 10511



ON BEHALF OF:

ENERCON SERVICES INC. c/o  
INDIAN POINT ENERGY CENTER  
295 BROADWAY, SUITE 3  
P.O. BOX 308  
BUCHANAN, NY 10511-0308

PREPARED BY:

**GZA GEOENVIRONMENTAL OF NEW YORK**

440 NINTH AVENUE, 18TH FLOOR  
NEW YORK, NEW YORK 10001

MAY 15, 2008

FILE NO. 41.0161619.00



May 15, 2008  
File No. 41.0161619.00



Mr. Robert Evers  
Enercon Services Inc. c/o  
Indian Point Energy Center  
295 Broadway, Suite 3  
P.O. Box 308  
Buchanan, NY 10511-0308

One Edgewater Drive  
Norwood  
Massachusetts  
02062  
781-278-3700  
FAX 781-278-5701  
<http://www.gza.com>

**Re: IPEC Quarterly Groundwater Monitoring Report  
Quarter One 2008 (Report No. 2)  
Indian Point Energy Center  
450 Broadway  
Buchanan, New York 11501**


Dear Mr. Evers:


GZA GeoEnvironmental of New York (GZA) is pleased to provide this Quarterly Groundwater Monitoring Report for our mutual client, Energy Nuclear Northeast, Inc. for Indian Point Energy Center located at 450 Broadway, Buchanan, NY.

We trust that this information satisfies your present needs. Should you need any additional information, please do not hesitate to call us at (212) 594-8140.


Very truly yours,

GZA GEOENVIRONMENTAL OF NEW YORK

  
Sara Covelli  
Project Engineer

  
Michael Powers, PE  
Consultant/Reviewer

  
Matthew Gozdor  
Senior Technical Specialist

  
Matthew J. Barvenik, LSP  
Senior Principal

Attachments: 3 Copies



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## 1.0 EXECUTIVE SUMMARY

On behalf of Entergy Nuclear Northeast, Inc., GZA GeoEnvironmental of New York (GZA) has completed the Q1 2008 quarterly groundwater monitoring report for the Indian Point Energy Center (IPEC). The radionuclide concentrations measured during Q1 2008 were combined with previous quarterly data to compute rolling average concentrations reflective of groundwater contaminant levels over the past year. These data were multiplied by the associated individual groundwater flux values, derived from the Precipitation Mass Balance Model, to compute yearly average radionuclide release rates to the Discharge Canal and Hudson River. The Conceptual Site Model (CSM) continues to be validated through the ongoing verification of the Precipitation Mass Balance Model calibration, as based on groundwater elevation data collected for Q1 2008, as well as for 2007<sup>1</sup>.

Based on the quarterly groundwater sampling data for Q1 2008, GZA concludes that groundwater contaminants continue to migrate toward the Hudson River to the West, and have not migrated off the Site to the North, East or South.

The Q1 2008 data indicate that the Unit 2 Tritium and Unit 1 Strontium plumes contain radionuclide levels that are generally at or below those measured during previous quarterly monitoring. We therefore conclude that no new leaks to groundwater have been detected in the Structures, Systems and Components (SSCs) monitored. There were, however, select instances where the currently established Investigation Levels were met. These cases are analyzed individually in the report and none were found to indicate a new leak in the SSCs. Based on the Q1 2008 data, as well as that collected during 2007, it currently appears that the Investigation Level values originally established are somewhat too sensitive relative to natural seasonal/precipitation-driven transient variations in radionuclide concentrations. As such, these existing Investigation Levels will be re-evaluated over the next quarter.

Finally, the data further indicate that the plumes have remained relatively stable since the last (Q4 2007) monitoring period, when the plumes are viewed in their entirety and the past release events and expected seasonal variability in the sampling data are accounted for. Given the above, ultimate confirmation of plume attenuation will require monitoring over a number of years to allow ranges in seasonal variation to be adequately reflected in the monitoring data. Overall, however, GZA believes that the continuing monitoring will further demonstrate decreasing long term trends in groundwater contaminant concentrations over time given the source interdictions completed, and to be completed by Entergy.

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<sup>1</sup> The formulation and basis for the Precipitation Mass Balance model, as well as the overall Conceptual Site Model, is presented in the Hydrogeologic Site Investigation Report, January 7, 2008, prepared by GZA GeoEnvironmental, Inc. on behalf of Enercon Services, Inc., for Entergy Nuclear Northeast, Indian Point Energy Center, 450 Broadway, Buchanan, NY 10511.



## 2.0 SCOPE OF WORK

During Q1 2008<sup>2</sup>, GZA performed groundwater monitoring activities at Indian Point Energy Center (IPEC) in Buchanan, New York (Site) as part of IPEC's overall Long Term Groundwater Monitoring Program (LTMP) at the Site. The overall foundation for the development and execution of this LTMP is based on the Conceptual Site Model, a description contained within GZA's Hydrogeologic Site Investigation Report<sup>3</sup>. The scope of work completed for this quarter's monitoring is described in the Sections below. Refer to **Figures 1 and 2** for a Site Location Plan and Site Plan. **Figure 3** provides a Lower Hudson Valley Geologic Map and **Figure 4** summarizes Current and Potential Future SSC Source Locations.

### 2.1 Dedicated Sampling Equipment

GZA used dedicated sampling equipment, including polyethylene and/or nylon tubing and submersible electric pumps in the majority of monitoring wells designated for sampling as part of this program. The use of dedicated sampling equipment limits the possibility of cross-contamination between monitoring installations and/or individual multi-level samples within a single installation. Refer to **Table 1** for a summary of the sampling methods, equipment, frequency, and depths employed during this quarter's groundwater monitoring round.

### 2.2 Groundwater Elevation Measurement

GZA currently maintains transducers and dataloggers as part of the monitoring instrumentation located across the Site. These instruments record groundwater elevation and temperature measurements at regular time intervals. Transducer installation logs are presented in **Appendix B**.

Following the quarterly sampling, GZA downloaded groundwater elevation data collected by the pressure transducers over the duration of the quarter. Using these data, GZA developed maps of the Site groundwater elevation contours at low river tide conditions for the upper and lower portions of bedrock. These data are presented on **Table 2** and **Figure 5** for the January 3, 2008 tidal cycle.

The groundwater contour maps are used to compute groundwater flow gradients, which are used to provide ongoing calibration of the Precipitation Mass Balance Model (as used in IPEC's radiological dose computations – see **Section 3.1**). It is anticipated that sufficient seasonal groundwater elevation data will be collected by the end of 2008. As such, it is currently our intent to terminate groundwater elevation data collection at that time.

### 2.3 Groundwater Sampling

During Q1 2008, GZA collected groundwater samples for radionuclide analysis from scheduled sampling intervals within select monitoring installations ("wells") as shown in **Table 3**. Chains of Custody for samples collected by GZA are presented in **Appendix C**. In addition, GZA

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<sup>2</sup> Refer to the "Final Quarterly Long-Term Groundwater Monitoring Report Q2–Q4 2007 (Report No. 1)", dated May 2008 for Site background information and a description of the environmental setting.

<sup>3</sup> Hydrogeologic Site Investigation Report, January 7, 2008, prepared by GZA GeoEnvironmental, Inc, on behalf of Enercon Services, Inc., for Entergy Nuclear Northeast, Indian Point Energy Center, 450 Broadway, Buchanan, NY 10511.

## Section 2.0 Scope of Work

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split groundwater samples from select locations between Entergy, the Nuclear Regulatory Commission (NRC), and the NYSDEC (New York State Department of Environmental Conservation) GZA implemented two methods of sampling to collect representative groundwater samples: the low flow method and a modified well volume purge method. The Low Flow method allows collection of representative groundwater samples from discrete sampling zones within a monitoring installation, while limiting the accumulation of wastewater<sup>4</sup>.

As agreed upon by Entergy Nuclear Northeast, the NRC, NYSDEC, and GZA, the modified traditional purge method<sup>5</sup> allows for the collection of a representative groundwater sample from a monitoring installation after purging 1.5 volumes of water. We implemented this method in wells where low flow sampling was not practical. Sampling Data Sheets summarizing water quality data and sampling information are presented in **Appendix D**.

GZA used different types of pumping equipment depending upon the sampling method and the characteristics of the individual monitoring installation<sup>6</sup>. **Table 1** lists the monitoring installations sampled, the sampling method and equipment used, and sampling depths and elevations.

### 2.4 Vapor Containment Building Foundation Drain Sampling

GZA collected water samples from three manholes on-Site to characterize discharge from foundation drains around and below the Unit 2 and 3 Vapor Containment Structures (the drains include both the foundation drains around the building periphery ("curtain drains") as well as those below the sumps near the middle of the structures). These drains are being used as an integral part of the early leak detection monitoring network. GZA sampled the east drain line in manhole MH-5 to capture drainage from the Unit 2 Vapor Containment Foundation Drains. GZA sampled the east drain line in manhole B-1 to capture drainage from the Unit 3 Vapor Containment South Curtain Drain. GZA sampled the manhole B-6 to capture drainage from the Unit 3 Vapor Containment North Curtain Drain and Sump foundation Drain<sup>7</sup>.

### 2.5 Preventative Maintenance

GZA performed general wellhead maintenance tasks, such as housekeeping of well vaults and roadboxes, and replacement of dedicated sampling equipment, tubing and transducers.

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4 As described in: Low-Flow Sample Collection, GZA, 7/18/2007

5 As described in: Modified Traditional Groundwater Sample Collection, GZA, 7/18/2007

6 Refer to Section 4.3 of the Final 2007 Quarterly Long-Term Groundwater Monitoring Report No. 1, dated May 2008, and prepared by GZA for a sampling method and equipment selection rationale.

7 GZA attempted to collect a discrete sample specifically representative of only the east drain line in B-6. However, the height of the water within the manhole was above the drain lines, which only permitted collection of a composite sample. A more definitive sampling solution for storm drain manhole B-6 is currently being developed.



### 3.0 DATA EVALUATION

The Long Term Monitoring Program was designed to provide data to address four main objectives:

1. Monitor groundwater flow rate and radionuclide concentrations to both detect and characterize current and potential future off-Site groundwater contaminant migration to the Hudson River, both via direct groundwater discharge to the river and through infiltration into the Discharge Canal, from *abnormal radionuclide releases* of liquid effluents, so as to allow computation of potential radiation dose to the public from these releases;
2. Monitor groundwater proximate to Systems, Structures and Components (SSCs) which exhibit a credible probability of resulting in a visually undetected release of radionuclides to the subsurface carrying an activity level of significance;
3. Monitor groundwater along the property boundary to confirm that contaminated groundwater is not migrating off of the property to locations other than the river; and
4. Monitor the groundwater plumes identified on-Site to demonstrate overall reductions in total activity over time as is consistent with the requirements of Monitored Natural Attenuation (MNA)<sup>8</sup>, the selected remediation for the IPEC Site.

These objectives are consistent with and fully encompass the guidance provided in the NEI Groundwater Protection Initiative. The following sections provide data analyses to address these four objectives.

#### 3.1 Groundwater Mass Flux

The following sections describe the computation of groundwater flow (mass flux) through the Site using the Precipitation Mass Balance Model and the verification of the calibration of this model based on the quarterly groundwater elevation monitoring data.

##### 3.1.1 Groundwater Mass Flux Computation

As presented in the Hydrogeologic Site Investigation Report, groundwater flow in both the upper and lower flow zones is toward the power block area from the North, East and South, with subsequent discharge to the Hudson River to the West. A corollary to this conclusion is that there is no groundwater flow, and thus no radionuclide migration from the power block area to the North, East or South. Groundwater flow associated with infiltration from the watershed may be as deep as 350 feet, but still ultimately discharges to the river.

To estimate groundwater flow (i.e., groundwater mass flux) beneath the Site, an analytical groundwater flow model was constructed based on a Precipitation Mass Balance Model. This model is based on the precept that, on a long term average, the groundwater flowing through

and discharging from the aquifer is equal to the watershed infiltration recharge. The Precipitation Mass Balance Model was also calibrated to groundwater fluxes based on a Darcy's

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<sup>8</sup> The selection of MNA as the remediation for the Site is more fully discussed in the Hydrogeologic Site Investigation Report.

## Section 3.0 Data Evaluation

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Law Model with gradients derived from Quarter 2 (June 2007) groundwater elevation contours<sup>9</sup>. This calibration not only verified the reasonableness of the overall groundwater flow rates predicted by the Precipitation Mass Balance Model, but also allowed further discretization of the groundwater flow into upper and lower flow zones as well as flow volumes upgradient and downgradient of the Discharge Canal.

The mass balance approach recognizes that the only substantial source of recharge to the aquifer is areal recharge derived from precipitation. The previous ten year average for precipitation measured at the Site is 36 inches. Based on a USGS infiltration study<sup>10</sup> as well as the model calibration cited above, approximately 29 percent of the precipitation falling on pervious surfaces over the Site watershed area results in infiltration recharge to the groundwater. This computation indicates that the groundwater recharge rate is approximately 10.5 inches per year for the 2007/2008 monitoring period.

Applying this information to the pervious surfaces within the six individual groundwater flow zones shown on **Figure 4**, it is estimated that approximately 5.2 gpm of groundwater flows into the Discharge Canal from the upper and lower zones. In addition, approximately 5.8 and 7.7 gpm of groundwater flows into the Hudson River from the upper and lower zones, respectively. Furthermore, the mass balance model accounts for storm water discharge<sup>11</sup> to both the Discharge Canal and directly to the Hudson River which are estimated to be 39 and 4 gpm, respectively. These flows can be further subdivided into flow zones as shown in the table in **Appendix E**.

### 3.1.2 Quarterly Groundwater Mass Flux Calibration

As indicated above, the Precipitation Mass Balance Model was calibrated to groundwater fluxes computed based on a Darcy's Law Model. The calibration compared the total groundwater flow values for each of the six flow zones computed independently<sup>12</sup> using the Precipitation Mass Balance Model and the Darcy's Law Model. The initial calibration was performed using gradients derived from contours of groundwater elevation measured on June, 1 2007, as described in the Hydrogeologic Site Investigation Report.

As part of the initial portions of the Long Term Monitoring Program<sup>13</sup>, this calibration is being evaluated quarterly to verify that seasonal changes in groundwater elevations do not materially impact the calibration. Therefore, quarterly groundwater elevations measured with pressure transducers at representative low river tides<sup>14</sup> have been used to construct groundwater

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9 Refer to the Hydrogeologic Site Investigation Report prepared by GZA and dated January 7, 2008.

10 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.

11 The storm drains also include groundwater discharges from the foundation drains for Unit 2 and Unit 3 VC Buildings.

12 The two models use different sets of input parameters which are not dependent or related to each other. The groundwater flow computed using the Precipitation Mass Balance Model is based on yearly precipitation amounts and the proportion of this precipitation that results in infiltration recharge to the groundwater. The Darcy's Law Model, on the other hand, is based on the measured groundwater flow gradients (as computed from groundwater elevation contours) and estimates of the formation hydraulic conductivity.

13 It is anticipated that six to eight quarters of seasonal groundwater elevation data should be sufficient to capture sufficient seasonal and yearly groundwater flow variation to verify the validity of the current calibration. It is anticipated that once these data are obtained, the model will be recalibrated to the data set that yields the largest groundwater flow values, so as to be conservative. Acquisition of groundwater elevation data will then be terminated at that point.

14 Previous evaluations (provided in the Hydrogeologic Site Investigation Report) have shown that the shape of the groundwater contours is relatively unchanged at different times of the tidal cycle. However, the use of low tide contours provides the greatest

## Section 3.0 Data Evaluation

elevation contours for the upper groundwater flow zone (water table contours) and the lower flow (potentiometric head contours), as shown in **Figure 5** for Q1 2008. As summarized on the table included below, similar calibration analyses were performed for previous quarterly monitoring (2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2007)<sup>15,16</sup>.

**Figure 5** shows that the deep zone groundwater contours continue to be a subdued reflection of the upper zone groundwater contours. This demonstrates that the anthropogenic effects at the Site are generally shallow. The groundwater flows computed using the Darcy's Law Model in each of the six flow zones, for each of the four available quarterly data sets, are compared to the flows used in the calibrated Precipitation Mass Balance Model (see table below).

	PRECIPITATION MASS BALANCE MODEL (GPM)	DARCY LAW MODEL (GPM)			
	Q2 2007	Q2 2007	Q3 2007	Q4 2007	Q1 2008
<b>Totals</b>	<b>18.8</b>	<b>18.8</b>	<b>18.4</b>	<b>18.2</b>	<b>20.6</b>
Northern Clean Zone	1.4	0.7	0.7	0.5	0.9
Unit 2 North Zone	0.6	0.8	0.9	0.8	1.3
Unit ½ Zone	2.8	2.3	1.7	2.1	3.2
Unit 3 North Zone	3.2	4.5	4.4	4.1	5.5
Unit 3 South Zone	3.5	2.6	2.8	2.7	2.2
Southern Clean Zone	7.4	7.9	7.9	8.1	7.6

The new data for Q1 2008 show that the overall groundwater flow through the Site for this quarter is greater than previous quarters by approximately ten percent. This is as would be expected given that groundwater levels typically increase on a seasonal basis during the beginning of the year in the northeast of the country. However, this increase in flow has no material impact on the dose computations and associated results<sup>17</sup>. Given the small variability of flow over the seasons monitored to date, GZA believes that recalibrating the Precipitation Mass Balance Model, as used to compute groundwater flux through the Site as part of the radionuclide dose computation, is not warranted at this time<sup>18</sup>.

transient gradients (larger than the average gradient) and therefore result in a computed groundwater flux from the Site that is biased high. Computation of radionuclide release rates to the river based on these data will therefore also have a high bias (i.e., they will be conservative).

15 See Final 2007 Quarterly Reports dated May 1, 2008, and prepared by GZA, .

16 There was no formal 1st quarter monitoring event in 2007 given that the Long Term Monitoring Program had not yet been initiated.

17 It is noted that the increase in groundwater flow in the Unit ½ Zone is somewhat higher, approximately 15%. However, even recognizing that this zone encompasses the majority of the radionuclide migration to the river, the total dose computed with the higher groundwater flow is still a small fraction of the permitted value.

18 Once sufficient seasonal data has been collected, it is anticipated that the model will be recalibrated to the quarterly data set that yields the largest groundwater flow values, so as to be conservative.

## Section 3.0 Data Evaluation

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### 3.2 Groundwater Sampling

The following sections describe the groundwater sampling results and associated QA/QC protocols.

#### 3.2.1 Groundwater Sampling Results

Groundwater samples collected on behalf of Entergy during Q1 2008 were analyzed for radionuclides including Tritium, Sr-90, Cs-137, Co-60, and Ni-63 at GEL Laboratories<sup>19</sup>. **Table 3** presents the Q1 2008 analytical results specific to Tritium, Sr-90, Cs-137, Co-60, and Ni-63. The rolling yearly averages for the last four quarters, including Q1 2008, are also presented in **Table 3**. **Table 4** presents minimum detection concentrations (MDC), standard deviation, and Investigation Levels assigned to each well for the Q1 2008 analytical results. **Table 5** presents historic Site groundwater analytical data. Isopleth maps of rolling averages for Tritium and Sr-90 are presented in **Figures 6** and **7**, respectively. **Figure 8** presents a data map of rolling averages for Cs-137, Co-60, and Ni-63.

An overall evaluation of the sample handling, shipment and analytical procedures, indicate that the quality assurance quality control protocols have been complied with, and the analytical results should be useable. This conclusion is further supported by a review of the Q1 2008 analytical data, as compared to previous historical trends. Refer to section 5.2.2 of the Final 2007 Quarterly Long-Term Groundwater Monitoring Report No. 1 for further details pursuant to quality assurance quality control protocols.

### 3.3 Radionuclide Release Rates

The calibrated Precipitation Mass Balance Model groundwater flows within each of the six flow zones are multiplied by yearly rolling average radionuclide levels within each zone (computed separately for upper and lower flow zones as well as upgradient and downgradient of the Discharge Canal) to compute groundwater radionuclide release rates to the Discharge Canal and Hudson River. Storm drain flows computed based on yearly precipitation rates are multiplied by radionuclide concentrations measured in the storm drains to compute the associated storm drain radionuclide release rates to the Discharge Canal and Hudson River<sup>20</sup>. The selection of specific monitoring locations for each of the six zones is described in the January 25, 2008 Memorandum – Synopsis of Long Term Monitoring Plan Bases. The radionuclide release rates from the groundwater and storm drains to the Discharge Canal and Hudson River for Q1 2008 are shown in the table on the following page<sup>21</sup>.

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19 It should be noted that samples were analyzed for gamma emitters via gamma spectroscopy. Although only Co-60 and Cs-137 are reported, gamma spectroscopy could detect and identify other gamma emitters if they became present in groundwater.

20 The storm drains also include groundwater discharges from the foundation drains for Unit 2 and Unit 3 VC Buildings.

21 Activity in the Northern Clean Zone is attributable to an assumed background concentration of 150 pCi/L in the groundwater. The remaining radionuclides were assumed to not be present in this streamtube. Radionuclide release rate in the Southern Clean Zone is calculated from activity measured in monitoring wells MW-40 and MW-51.

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	GROUNDWATER AND SURFACE WATER TO RIVER (CI/YR)	GROUNDWATER AND SURFACE WATER TO CANAL (CI/YR)
Northern Clean Zone	4.15E-04	0.00E+00
Unit 2 North Zone	4.55E-04	1.38E-02
Unit 1/2 Zone	1.37E-02	4.29E-03
Unit 3 North Zone	1.16E-02	1.61E-03
Unit 3 South Zone	1.04E-03	4.77E-03
Southern Clean Zone	3.33E-03	0.00E+00

Release rates are then used by Entergy to calculate the radiological dose to the environment via the Discharge Canal and the Hudson River using the procedure outlined in the Liquid Radioactive Effluents (0-CY-2740) document, prepared by Entergy and dated January 12, 2007.

### 3.4 SSCs and Property Boundary Monitoring

The Long Term Monitoring Program has been designed to provide rapid detection of potential leaks from Systems, Structures and Components (SSCs) which exhibit a credible probability of resulting in a visually undetected release of radionuclides to the subsurface. The monitored SSCs are shown on **Figure 4** and a description of the specific monitoring installations associated with each SSC are provided in the January 25, 2008 Memorandum – Synopsis of Long Term Monitoring Plan Bases. In addition to monitoring the SSCs, on-Site and off-Site wells are used to monitor the property boundaries for unanticipated radionuclide migration across these boundaries. Again, the rationale underpinning the selection of wells designated for this purpose is provided in the January 25, 2008 Memorandum – Synopsis of Long Term Monitoring Plan Bases. These monitoring protocols are consistent with the NEI Groundwater Protection Initiative.

Investigation Levels (I.L.'s) were established for the associated monitoring wells to set quantitative radionuclide concentrations above which further action would be undertaken. As part of the ongoing groundwater monitoring program, the reported analytical concentrations are compared against the Investigation Levels shown in the table below. Investigation Levels will be computed each year based upon yearly averages of the quarterly groundwater sampling analytical results of the previous year. The I.L.'s generally described on the following page and presented in **Table 4** are established for comparison with 2008 analytical results based on the quarterly samples collected and analyzed in 2007.



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WELL ID	INVESTIGATION LEVELS (I.L.'s)		
	TRITIUM PCi/L	SR-90 PCi/L	OTHER PLANT-RELATED RADIONUCLIDES
Off-Site Boundary Wells (LAF-002)	any detection <sup>22</sup>	any detection <sup>22</sup>	any detection <sup>22</sup>
On-Site Boundary Wells (MW-40, MW-51, MW-52, and MW-107)	1,000 <sup>23</sup>	2 <sup>23</sup>	any detection <sup>22</sup>
Riverfront Boundary Wells (MW-60, MW-62, MW-63)	2,000 <sup>23</sup>	2 <sup>23</sup>	any detection <sup>22</sup>
All Other Wells	>2x average <sup>24</sup>	>2x average <sup>24</sup>	>2x average <sup>24</sup>

In the event that the analytical results of a groundwater sample exceed the designated I.L., the following series of actions will be considered:

- Contact the laboratory to verify that all quality control checks were satisfactory, sufficient sample volume was used; required MDC's were met, etc.
- Re-sample the location to verify the result.
- Increase the frequency of sampling for this location.
- Initiate an investigation utilizing Entergy's corrective action program and related resources as appropriate (e.g. site engineering / radiation protection)
- Initiation of source/ground water remediation techniques commensurate with the potential dose impact analyses and good environmental stewardship

### 3.4.1 Boundary Investigation Levels

For the On and Off-Site Boundary Wells, a comparison of the Q1 2008 analytical results to their respective I.L. values shows that the I.L.s were not met and thus there was no cause to further investigate radionuclide activity in Off-Site or On-Site Boundary Wells.

### 3.4.2 SSC Investigation Levels

For the SSC monitoring wells, a comparison of the Q1 2008 analytical results to their respective I.L. values shows that the I.L.s were met in a number of cases. A subset of these wells were resampled and the results were found to no longer meet I.L. levels (see table on following page).

<sup>22</sup> A radionuclide is positively detected when the result is greater than or equal to the MDC and 3 times the 1 sigma uncertainty.

<sup>23</sup> The values of 1000 and 2000 pCi/L for H-3 and 2 pCi/L for Sr-90 have been chosen to be low enough to result in timely detection of a new release or change to an existing release and still be outside the normal expected range of sample results at these locations, to the extent possible with the currently available data over time.

<sup>24</sup> Any positively detected radionuclide that has a result greater than 2 times the average from the previous year. The IL is not reached until an H-3 result is greater than 1000 pCi/L or a Sr-90 result is greater than 2 pCi/L.

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WELL ID	RADIONUCLIDE	RESULT (PCI/L)	RESAMPLED RESULT (PCI/L)	INVESTIGATION LEVEL (PCI/L)
MW-50-42	Cs-137	16.30	ND	Greater than ND
MW-50-66	Cs-137	15.60	ND	Greater than ND
MW-67-105	Cs-137	9.32	ND	Greater than ND
MW-67-173	Cs-137	5.82	ND	Greater than ND
MW-67-219	Cs-137	4.25	ND	Greater than ND
MW-67-276	Cs-137	4.55	ND	Greater than ND
MW-67-340	Cs-137	5.82	ND	Greater than ND

More specifically, low, but positive levels of Cs-137 were detected in the original set of Q1 2008 samples collected from both depth intervals in MW50 and five of the seven intervals in MW67. Quality control review of the original analyses showed no evidence of laboratory error or problems with field collection procedures. As such, a second set of samples was collected and analyzed for these locations. None of the results for these samples exceeded their respective I.L.s. In addition, it is important to note that all the previous quarterly data were below MDC and three times the one sigma uncertainty (i.e. not positive) at these locations. Therefore, any positive detection of Cs-137, no matter how low, meets the current I.L. for these samples. Furthermore, the second set of samples yielded results which were also all below MDC and three times the one sigma uncertainty values. These data, when considered collectively, suggest that the first set of results do not appropriately characterize Cs-137 activity at these locations. Therefore, the resampling data, along with a comparison to historical data, allows us to conclude that the initial Q1 2008 results for MW50 and MW67 do not indicate new leaks in the monitored SSCs.

Additional samples that meet the I.L.s are shown in the table below. These results are discussed individually below.

WELL ID	RADIONUCLIDE	RESULT (PCI/L)	INVESTIGATION LEVEL (PCI/L)
MW-36-24	H3	2,160	572
MW-37-22	H3	6,520	6,067
MW-37-32	H3	6,760	6,287
MW-41-40	Cs-137	2.67	Greater than ND
MW-44-66	Cs-137	17.3	Greater than ND
MW-44-102	Cs-137	11.8	Greater than ND
MW-50-42	H3	948	430
MW-50-42 <sup>1</sup>	H3	613	430
MW-55-24	Cs-137	3.3	Greater than ND
MW-111	Sr-90	2.56	1.95

1. Note that the second MW-50-42 sample was obtained because the results from the first sample met the I.L.. The second sample was taken approximately one month after the initial Q1 2008 sampling event.

## Section 3.0 Data Evaluation

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These instances in which the I.L.s were met do not warrant further investigation as discussed below:

- **MW-36-24.** While the Q1 2008 tritium result does represent an apparent increase in Tritium activity which is nearly four times above the I.L. for this location, the actual Tritium magnitude is still low when compared to historic values which are representative of known Unit 2 SFP leakage (prior to interdictions by Entergy)<sup>25</sup>. It is also instructive to note that the two deeper monitoring intervals at the MW-36 location continue to exhibit a decreasing Tritium trend. Finally, Tritium activities measured upgradient do not show any increasing Tritium trends. To the contrary, the upgradient data show significant decreasing Tritium trends<sup>26</sup>. These data, when viewed in the context of the Conceptual Site Model, indicate that the small Q1 2008 increase in Tritium activity measured at this location does not indicate a new leak in the monitored SSCs. Rather, it is likely the result of natural transient variability in the groundwater system, at least a portion of which is attributable to the interaction of precipitation events with the retention mechanisms discussed in the Hydrogeologic Site Investigation Report. Moreover, the fact that the I.L. was exceeded by nearly a factor of four in this case, leads to the further conclusion that the original quantitative levels set for the I.L.s need to be re-evaluated<sup>27</sup>.
- **MW-37-22 & MW-37-32.** It is noted that the 22' depth monitoring interval for MW-37 is in the soil backfill of the Discharge Canal, as is the 24' depth interval for MW-36 above; the 32' depth interval for MW-37, while in bedrock, is only 2' below the top of rock and still above the bottom of the Discharge Canal. These two MW-37 monitoring intervals would therefore be expected to exhibit trends similar to MW-36, as supported by the tracer test travel time results<sup>28</sup>. For both MW-37 depth intervals, the I.L. were met in the first quarter of 2008, just after a 2007 monitoring period exhibiting consistently low Tritium values. As such, it is believed that these Q1 2008 data for MW-37 are reflective of the natural transient variability in the groundwater system, as discussed above for MW-36.
- **MW-41-40, MW-44-66 & MW-44-102.** These monitoring locations are all associated with the Unit 1 legacy storm drain discharge from the Sphere Foundation Drain Sump (SFDS)<sup>29</sup>. It is therefore probable that Cs-137, as well as Sr-90, is adsorbed to the subsurface deposits proximate to and downgradient of these drain lines, and thus low level detections are to be expected. In addition, it is important to note that all the previous quarterly data were below MDC and/or three times the one sigma uncertainty (i.e. not positive) at these locations. Therefore, any positive detection of Cs-137, no matter how low, meets the current I.L. for these samples. Finally, it is also noted that some data prior to implementation of the quarterly sampling shows higher levels of Cs-137 (long after the legacy piping connection was terminated). It is therefore likely that the quarterly sampling of these wells will exhibit relatively high natural variability in Cs-137 levels over time. Based on the above, it has been concluded that these data are

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25 Tritium levels over an order of magnitude higher (greater than 30,000 pCi/L) than the current Q1 2008 value were measured in early 2006.

26 For example, both MW-111 and MW-33 located immediately upgradient of MW-36 and towards the Unit 2 SFP, show consistent downward trends of nearly an order of magnitude since the middle of 2006.

27 The I.L.s were generally set equal to two times the yearly average for the previous year. It was recognized that a factor of two may not be sufficient to separate the initial indication of a new leak from the natural variability of the groundwater system, thus resulting in numerous false positives. However, it was decided to bias the I.L.s low to be conservative while the level of natural variability was being quantitatively characterized using the quarterly data collected over time.

28 Refer to the Hydrogeologic Site Investigation Report prepared by GZA and dated January 7, 2008.

29 Refer to the Hydrogeologic Site Investigation Report prepared by GZA and dated January 7, 2008.

## Section 3.0 Data Evaluation

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indicative of historic residual contamination from the legacy SFDS discharge and not of a new release from the monitored SSCs.

- **MW-50-42.** The I.L.s are based on the quarterly results for 2007, which when viewed in light of the previous data for this location, exhibit relatively consistently low values as compared to the overall natural variability. The magnitude of this variability is judged based on samples taken *after* the “slug” of much higher H3 levels associated with the Unit 2 SFP leaks and/or the 2005 Unit 1 SFP water elevation increase<sup>30</sup> had moved past this monitoring location (see historic data presented in **Table 5**). Furthermore, H3 levels measured upgradient of MW-50 do not show increases of a magnitude portending a significant new leak. As such, it has been concluded that the observed H3 levels are indicative of natural variability in the groundwater system and do not indicate that there is a new leak in any of the monitored SSCs. These data therefore further support the conclusion that the original quantitative levels set for the I.L.s need to be re-evaluated, as discussed above.
- **MW-55-24.** The reported Cs-137 activity for this location is just barely above the detection criteria. In that respect, it is important to note that all the previous quarterly data (as well as prior data) were below MDC and/or three times the one sigma uncertainty (i.e. not positive) at these locations. Therefore, any positive detection of Cs-137, no matter how low, meets the current I.L. for this sample. Finally, this monitoring location is within the core of the Unit 1 Sr-90 plume (see **Figure 7**). Therefore, low level detections of Cs-137, along with relatively high natural variability, are to be expected over time, consistent with that observed in upgradient wells. As such, while the investigation level may have been met for this sample, it is likely that this result is due to natural variability in the groundwater system and not due to a new release from the monitored SSCs.
- **MW-111.** The I.L. value for Sr-90 at this location is based on the 2007 quarterly data, and the current Q1 2008 result just meets this low I.L. value. However, it is noted that previous data has shown higher levels as well as non-detects, with no particular trend being evident. It is further noted that upgradient wells do not show Sr-90 detections. Based on the above, and in consideration of the Conceptual Site Model, it is believed that the random detects of Sr-90 in MW-111 likely reflect desorption of Sr-90 from the Unit 1 soils used to backfill the Unit 2 Transformer Yard in immediate proximity to this monitoring well<sup>31</sup>. As such, it has been concluded that these data are not indicative of a new release from the monitored SSCs.

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<sup>30</sup> In 2005, the water elevation in the Unit 1 SFPs was increased, resulting in the anticipated increased leakage rate from these pools. It is hypothesized that an associated slug of elevated Tritium (and Strontium) in groundwater migrated downgradient and moved past MW-50 and then MW-49 over time (the Tritium and Strontium slugs moving at different rates). While it is difficult to apportion increased Tritium levels between releases from the Unit 1 and Unit 2 SFPs, elevated Strontium is clearly associated with Unit 1. The historic data clearly show a slug of Strontium has recently past MW-50 and is now migrating through MW-49 (hypothesized to have resulted from the 2005 water level increase in the Unit 1 SFPs). These data therefore support the supposition that the associated Tritium slug had past this location relatively long ago, as evident in the MW-50 data. As such, the subsequent variation in Tritium levels can be ascribed to natural variability in the groundwater system, a portion of which is likely due to the interaction of precipitation events with the retention mechanisms discussed in the Hydrogeologic Site Investigation Report.

<sup>31</sup> Refer to the Hydrogeologic Site Investigation Report prepared by GZA and dated January 7, 2008.

## Section 3.0 Data Evaluation

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### 3.4.3 Conclusions - Boundary and SSC Leak Detection Monitoring

Recognizing that measured activities in the Off-Site and On-Site Boundary Wells did not meet I.L. levels and in consideration of the above discussions pursuant to SSC monitoring where I.L. levels were met, the overall data set demonstrates that: 1) radionuclides are not migrating off of the property to the North, East or South, as expected given groundwater flow directions towards the power block area, and; 2) there is no compelling reason to believe that any new leaks have developed in the SSCs monitored. In addition, the fact that a number of I.L. levels were met under the conditions described above, leads to the conclusion that the current I.L. levels are likely set quantitatively too low, thus resulting in a large number of false positives. Uncorrected, this condition is likely to prove detrimental over time relative to the overall intent of establishing the I.L.s for leak detection. Therefore, these levels should be re-evaluated in light of the natural transient variability of the groundwater system in response to precipitation events.

### 3.5 Plume Natural Attenuation Monitoring

The forth and final objective of the Long Term Monitoring Program is to evaluate if the groundwater plumes identified on-Site demonstrate overall reductions in total activity over time, as is consistent with the requirements of Monitored Natural Attenuation (MNA)<sup>32</sup>, the selected remediation for the IPEC Site.

Given the likely ages of the leaks identified and characterized during the hydrogeologic investigation, it is probable that the Unit 2 (Tritium) and Unit 1 (Strontium) plumes had reached steady state conditions prior to the beginning of the quarterly monitoring. Given that: 1) the identified leaks in the Unit 2 SFP have all been previously repaired, and; 2) the water in the Unit 1 West Pool underwent intensified demineralization (with a reduction in Strontium levels of over 95 percent), it would be expected that the plumes should have started to attenuate with time. While both plumes have shown significant levels of attenuation as *compared to the highest levels measured during the two-year hydrogeologic investigation period*<sup>33</sup>, it was expected that the plumes would *not* show substantial additional attenuation during the shorter time frames subsequent to the source interdictions implemented by Entergy<sup>34</sup>. As predicted, Q1 2008 quarterly data indicate that the Unit 2 Tritium and Unit 1 Strontium plumes have remained relatively stable over the monitoring period, when the plumes are viewed in their entirety.

On a smaller scale however, it was previously observed in 2007 that some vertical intervals in monitoring installations MW-37 and MW-50, as well as those downgradient along the plume migration pathway, had shown an apparent increasing trend in Strontium levels, with a number of intervals showing the highest levels recorded during the 4<sup>th</sup> quarter 2007. Subsequently during Q1 2008, MW-37 and MW-50 exhibited decreased Sr-90 activity. However, downgradient wells (i.e. MW-49-65, MW-49-42, and MW-66-36) still exhibit somewhat increased Sr-90 activities. In addition, there is no indication of increasing trends upgradient in the Unit 1 SFPs source area, and in fact if any trends exist, they are downward for MW-42 and MW-53. Therefore, there is no credible current source for an increasing trend. Based on the above and

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32 The selection of MNA as the remediation for the Site is more fully discussed in the Hydrogeologic Site Investigation Report.

33 See discussion in the Hydrogeologic Site Investigation Report.

34 In the case of the Unit 2 Tritium plume, it has been demonstrated that vadose zone storage mechanisms result in protracted release of Tritium to the groundwater after the physical leaks have been repaired. In the case of the Unit 1 Strontium plume, Strontium partitioning would be expected to slow plume attenuation via desorption of Strontium from the geologic deposits back into the groundwater.

## Section 3.0 Data Evaluation

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further operational investigations conducted during Q1 2008, it appears that the observed behavior is likely associated with the residual downgradient response to a previous (2005) transient increase in Unit 1 pool leakage rate due to a required short-term rising of water levels in the Unit 1 SFPs. These wells, and those downgradient, will continue be specifically observed as additional quarterly monitoring data becomes available.

As originally stated in the Hydrogeologic Site Investigation Report, it is to be anticipated that contaminant concentrations in individual monitoring wells will fluctuate over time (increasing at times as well as decreasing, as potentially related to precipitation events), and that future short-term increases in concentrations do *not*, in and of themselves, indicate a new leak. In addition, it is also expected that some areas within the plumes will exhibit faster decay rates than others. Both behaviors are commonly observed throughout the industry with groundwater contamination sampling and analyses, and therefore, conclusions pursuant to plume behavior must be evaluated in the context of all of the Site-wide monitoring data. Given the above, ultimate confirmation of plume attenuation will require monitoring over a number of years to allow ranges in seasonal variation to be adequately reflected in the monitoring data. Overall, however, GZA believes that the continuing monitoring will further demonstrate decreasing long term trends in groundwater contaminant concentrations over time given the source interdictions completed by Entergy.



#### 4.0 CONCLUSIONS AND PLANNED ACTIVITIES

Evaluation of data collected during Q1 2008 has shown the following:

- While Investigation Levels have been met at a number of locations, there is no evidence of leaks from the systems, structures, or components monitored.
- Groundwater flux values calculated using the Precipitation Mass Balance Model have routinely been consistent with that predicted using the Darcy Law Model, given anticipated seasonal precipitation variability.
- H3 and Sr-90 activity within the Unit 2 and Unit 1 plumes is generally stable or decreasing. A portion of the Unit 1 plume just downgradient (West) of the Discharge Canal, exhibited a continued increasing trend in Sr-90 activity during Q1 2008. This trend is following that initially observed immediately upgradient of the canal where levels are now decreasing. These data are attributed to residual downgradient response to a previous (2005) transient increase in Unit 1 pool leakage during a required short-term raising of the water levels in the Unit 1 SFPs.

Based on the results and evaluation of the Q1 2008 groundwater monitoring within the context of the long term monitoring program, IPEC plans to continue routine groundwater sampling and related maintenance during Q2 2008. In addition, GZA recommends that the quantitative values originally established for the Investigation Levels be re-evaluated in light of the large number of false positives observed.



## TABLES

**Table 1 Groundwater Sampling Methods, Equipment, Frequency, and Depths**

**Table 2 2007-2008 Low Tide Groundwater Elevations**

**Table 3 2007-2008 Groundwater Analytical Results and Averages**

**Table 4 2008 1st Quarter Groundwater Analytical Results**

**Table 5 Historic Groundwater Analytical Results**



TABLE 1  
GROUNDWATER SAMPLING METHODS, EQUIPMENT, FREQUENCY AND DEPTHS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	Sampling Method	Sampling Equipment Used	2008 Sampling Frequency <sup>2</sup>	SAMPLING INTERVAL <sup>3</sup>				SAMPLING DEPTH <sup>4</sup>	
				Elevation in Feet msl		Feet Below TOC	Elevation in Feet msl	Feet Below TOC	Elevation in Feet msl
				Top	Bottom				
MW-30-69	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	67.3	71.3	8.4	4.4	69.3	6.4
MW-30-84	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	77.3	85.4	-1.6	-9.5	83.8	-8.1
MW-31-49	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	34.8	49.3	40.8	26.3	48.8	26.8
MW-31-63	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	55.3	63.8	20.3	11.8	63.3	12.3
MW-31-85	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	69.8	85.4	5.8	-9.6	84.8	-9.2
MW-32-59	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	28.3	61.3	48.8	15.8	58.8	18.3
MW-32-85	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	79.3	92.8	-2.2	-15.7	85.3	85.3
MW-32-131	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	138.3	156.8	-70.2	-61.2	130.8	-53.7
MW-32-149	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	125.8	156.8	-70.2	-79.7	149.3	-72.2
MW-32-173	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	165.8	174.3	-88.7	-97.2	172.8	-95.7
MW-32-190	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	180.3	193.9	-103.2	-116.8	190.3	-113.7
MW-33	Low Flow	Peristaltic Pump	Annually	8.0	30.0	10.6	-11.7	16	2.8
MW-34	Low Flow	Peristaltic Pump	Inactive	5.0	30.0	13.5	-11.5	16.5	2.0
MW-35	Low Flow	Peristaltic Pump	Annually	6.5	30.0	12.1	-11.4	15.0	3.6
MW-36-24 <sup>5</sup>	Low Flow	Peristaltic Pump	Quarterly	11.0	24.0	0.8	-12.2	17.0	-5.2
MW-36-41	Modified Well Vol Purge	Peristaltic Pump	Inactive	36.0	41.0	-24.2	-29.2	37.0	-25.2
MW-36-52	Modified Well Vol Purge	Peristaltic Pump	Quarterly	48.0	53.0	-36.2	-41.2	50.0	-38.2
MW-37-22	Low Flow	Peristaltic Pump	Quarterly	12.0	22.0	3.0	-7.0	17.0	-2.0
MW-37-32	Low Flow	Peristaltic Pump	Quarterly	28.0	32.5	-13.0	-17.5	29.0	-14.0
MW-37-40	Modified Well Vol Purge	Peristaltic Pump	Quarterly	38.5	40.5	-23.5	-24.5	39.0	-24.0
MW-37-57	Low Flow	Peristaltic Pump	Quarterly	52.0	57.0	-37.0	-42.0	55.0	-40.0
MW-38	Low Flow	Peristaltic Pump	Inactive	5.0	40.0	9.3	-25.7	25.4	-11.1
MW-39-67	Waterloo Low Flow	Waterloo Multilevel System	Bi-Annually	65.0	70.5	15.0	9.5	67.0	13.0
MW-39-84	Waterloo Low Flow	Waterloo Multilevel System	Bi-Annually	76.5	85.0	3.5	-5.0	83.5	-3.5
MW-39-102	Waterloo Low Flow	Waterloo Multilevel System	Bi-Annually	93.0	103.0	-13.0	-23.0	101.5	-21.5
MW-39-124	Waterloo Low Flow	Waterloo Multilevel System	Bi-Annually	115.0	126.5	-35.0	-46.5	124.0	-44.0
MW-39-183	Waterloo Low Flow	Waterloo Multilevel System	Bi-Annually	169.5	186.0	-89.5	-106.0	182.5	-102.5
MW-39-195	Waterloo Low Flow	Waterloo Multilevel System	Bi-Annually	193.0	198.6	-113.0	-118.4	195.0	-115.0
MW-40-27	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	18.2	35.2	55.0	38.0	26.7	46.5
MW-40-46	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	44.2	53.7	29.0	19.5	46.2	27.0
MW-40-81	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	61.7	84.2	8.5	-11.0	80.7	-7.5
MW-40-100	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	93.2	106.7	-20.0	-33.5	100.2	-27.0
MW-40-127	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	125.2	136.7	-52.0	-63.5	127.2	-54.0
MW-40-162	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	138.7	190.3	-85.5	-116.9	161.7	-88.5
MW-41-40	Low Flow	Peristaltic Pump	Bi-Annually	22.0	42.0	32.9	12.9	36.0	18.9
MW-41-63	Modified Well Vol Purge	Water Pump	Bi-Annually	59.0	64.0	-4.1	-9.1	61.0	-6.1
MW-42-49	Low Flow	Submersible Pump	Quarterly	31.0	51.0	38.7	18.7	41.0	28.7
MW-42-78	Modified Well Vol Purge	Water Pump	Quarterly	60.0	79.0	0.7	-9.3	74.0	-4.3
MW-43-28	Low Flow	Submersible Pump	Bi-Annually	8.0	28.0	40.8	20.7	23.0	25.8
MW-43-62	Low Flow	Submersible Pump	Bi-Annually	42.0	62.0	6.8	-13.2	54.0	-5.2
MW-44-66	Modified Well Vol Purge	Submersible Pump	Quarterly	52.0	67.0	41.5	26.5	63.0	30.5
MW-44-102	Modified Well Vol Purge	Water Pump	Quarterly	79.0	104.0	14.5	-10.5	80.0	13.5
MW-45-42	Low Flow	Peristaltic Pump	Quarterly	51.5	61.5	2.2	-7.8	58.0	-4.4
MW-45-61	Low Flow	Peristaltic Pump	Quarterly	6.0	30.0	12.1	-11.9	10.5	7.6
MW-47-56	Low Flow	Submersible Pump	Inactive	36.0	56.0	34.3	14.3	52.0	18.3
MW-47-80	Modified Well Vol Purge	Water Pump	Inactive	70.0	80.0	0.3	-9.7	72.0	-1.7
MW-48-23	Low Flow	Peristaltic Pump	Inactive	8.0	23.0	7.4	-7.6	15.8	-0.4

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TABLE 1 - Q1.08.Methods, Frequency, Depnths

Methods, Frequency, Depths

TABLE 1  
GROUNDWATER SAMPLING METHODS, EQUIPMENT, FREQUENCY AND DEPTHS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	Sampling Method	Sampling Equipment Used	2008 Sampling Frequency <sup>2</sup>	SAMPLING INTERVAL <sup>3</sup>				SAMPLING DEPTH <sup>4</sup>	
				Elevation in Feet msl		Feet Below TOC	Elevation in Feet msl	Feet Below TOC	
				Top	Bottom				Top
MW-48-37	Low Flow	Peristaltic Pump	Inactive	33.0	38.0	-17.6	22.6	35.8	-20.4
MW-49-26	Low Flow	Peristaltic Pump	Quarterly	15.0	25.0	-0.3	-10.4	20.0	-5.3
MW-49-42	Low Flow	Peristaltic Pump	Quarterly	32.0	42.0	-17.4	-27.4	37.0	-22.3
MW-49-65	Low Flow	Peristaltic Pump	Quarterly	60.0	65.0	-50.4	-45.4	61.0	-46.4
MW-50-42	Low Flow	Peristaltic Pump	Quarterly	22.0	42.0	-7.1	-27.1	27.0	-12.1
MW-50-66	Low Flow	Peristaltic Pump	Quarterly	62.0	67.0	-47.1	-52.1	60.0	-45.1
MW-51-40	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	29.7	44.2	-38.0	-23.5	39.7	-28.0
MW-51-79	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	63.2	81.2	-13.5	-13.5	78.7	-11.0
MW-51-104	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	101.2	111.2	-33.5	-43.5	103.7	-36.0
MW-51-135	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	130.2	143.7	-62.5	-76.0	135.2	-67.5
MW-51-163	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	134.7	166.2	-87.0	-98.5	162.7	-95.0
MW-51-189	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	184.2	197.8	-116.5	-129.9	189.2	-121.5
MW-52-11	Modified Well Vol. Purge	Peristaltic Pump	Annually	2.0	12.0	14.8	4.8	10.0	6.8
MW-52-18	Waterloo Low Flow	Waterloo Multilevel System	Annually	10.0	30.0	4.9	-15.1	17.5	-2.6
MW-52-48	Waterloo Low Flow	Waterloo Multilevel System	Annually	48.0	56.0	-33.1	-11.1	48.0	-33.1
MW-52-64	Waterloo Low Flow	Waterloo Multilevel System	Annually	59.0	71.5	-44.1	-56.6	64.0	-49.1
MW-52-122	Waterloo Low Flow	Waterloo Multilevel System	Annually	110.5	123.5	-95.6	-108.6	122.0	-107.1
MW-52-162	Waterloo Low Flow	Waterloo Multilevel System	Annually	134.5	164.0	-139.6	-149.1	161.5	-146.6
MW-52-181	Waterloo Low Flow	Waterloo Multilevel System	Annually	171.0	198.1	-156.1	-183.0	181.0	-166.1
MW-53-82	Low Flow	Submersible Pump	Quarterly	62.0	82.0	8.3	-11.7	75.0	-4.7
MW-53-120	Modified Well Vol. Purge	Water Pump	Quarterly	100.0	120.0	-29.7	-49.7	105.0	-34.7
MW-54-37	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	29.0	42.0	-15.9	-28.9	36.5	-23.4
MW-54-58	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	51.5	64.0	-38.4	-50.9	57.5	-44.4
MW-54-123	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	116.0	126.0	-102.9	-112.9	123.0	-109.9
MW-54-144	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	135.0	155.5	-121.9	-142.4	144.0	-130.9
MW-54-173	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	170.5	182.0	-157.4	-168.9	172.5	-159.4
MW-54-190	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	185.0	203.6	-171.9	-190.3	190.0	-176.9
MW-55-24	Low Flow	Peristaltic Pump	Quarterly	14.0	24.0	4.3	-5.8	16.0	2.3
MW-55-35	Low Flow	Peristaltic Pump	Quarterly	30.0	35.0	-11.8	-16.8	32.0	-13.8
MW-55-54	Low Flow	Peristaltic Pump	Quarterly	44.0	54.0	-25.8	-35.8	47.0	-28.8
MW-56-53	Low Flow	Submersible Pump	Bi-Annually	49.2	54.2	21.0	16.0	52.0	18.3
MW-56-83	Modified Well Vol. Purge	Water Pump	Bi-Annually	69.9	84.9	0.4	-14.6	74.0	-3.7
MW-57-11	Low Flow	Peristaltic Pump	Bi-Annually	6.0	11.0	9.0	4.0	10.0	5.0
MW-57-20	Low Flow	Peristaltic Pump	Bi-Annually	15.5	20.5	-0.5	-5.5	19.0	-4.0
MW-57-45	Low Flow	Peristaltic Pump	Bi-Annually	30.5	45.5	-15.5	-30.5	40.0	-25.0
MW-58-26	Low Flow	Peristaltic Pump	Bi-Annually	16.0	26.0	-1.4	-11.4	20.0	-5.4
MW-58-65	Low Flow	Peristaltic Pump	Quarterly	50.0	65.0	-35.4	-50.4	54.0	-39.4
MW-59-32	Low Flow	Peristaltic Pump	Inactive	21.0	31.0	-6.5	-16.5	27.0	-12.5
MW-59-45	Low Flow	Peristaltic Pump	Inactive	35.0	45.0	-20.5	-30.5	42.0	-27.5
MW-59-68	Low Flow	Peristaltic Pump	Inactive	53.0	68.0	-38.5	-53.5	58.0	-43.5
MW-60-35	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	24.9	39.4	-12.4	-26.9	34.9	-22.4
MW-60-53	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	45.4	59.4	-32.9	-46.9	55.4	-40.9
MW-60-72	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	66.4	78.9	-53.9	-66.4	72.4	-59.9
MW-60-135	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	124.9	141.4	-112.4	-128.9	134.9	-122.4
MW-60-154	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	147.4	164.9	-154.9	-152.4	154.4	-141.9
MW-60-176	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	170.9	200.4	-184.4	-187.8	175.4	-163.4
MW-62-18	Low Flow	Peristaltic Pump	Quarterly	4.7	14.7	10.0	0.0	13.5	1.2
MW-62-37	Low Flow	Peristaltic Pump	Quarterly	33.3	38.3	-18.6	-23.6	34.5	-19.6

J:\17\_000-18-999\17869\161610-00\MG\WORK\UTM\_Report\2008 Quarter 1 Report\TABLE 1 - Q1.08 Methods, Frequency, Depnms.xls  
Methods, Frequency, Depths

TABLE 1  
GROUNDWATER SAMPLING METHODS, EQUIPMENT, FREQUENCY AND DEPTHS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	Sampling Method	Sampling Equipment Used	2008 Sampling Frequency <sup>2</sup>	SAMPLING INTERVAL <sup>3</sup>				SAMPLING DEPTH <sup>4</sup>	
				Elevation in Feet msl		Feet Below TOC	Elevation in Feet msl	Feet Below TOC	
				Top	Bottom				Top
MW-62-53	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	49.6	54.1	-36.8	-41.3	55.1	-40.3
MW-62-71	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	61.1	82.6	-48.3	-69.8	71.1	-58.3
MW-62-92	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	88.6	99.1	-75.8	-86.3	91.6	-78.8
MW-62-138	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	126.1	143.6	-113.3	-130.8	138.1	-125.3
MW-62-18C	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	177.6	198.7	-164.8	-185.7	182.1	-169.3
MW-63-18	Low Flow	Peristaltic Pump	Quarterly	8.0	18.0	-3.8	-13.8	14.9	0.7
MW-63-34	Low Flow	Peristaltic Pump	Quarterly	30.0	35.0	-15.8	-20.8	31.5	-17.3
MW-63-50	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	41.5	58.0	-29.2	-45.7	49.5	-37.2
MW-63-93	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	81.5	100.5	-69.2	-88.2	93.0	-80.7
MW-63-112	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	106.5	112.0	-94.2	-99.7	111.5	-99.2
MW-63-121	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	118.0	127.5	-105.7	-115.2	121.0	-108.7
MW-63-163	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	150.5	165.0	-138.2	-152.7	162.5	-150.2
MW-63-174	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	168.0	191.1	-155.7	-178.6	174.0	-161.7
MW-66-21	Low Flow	Peristaltic Pump	Quarterly	7.0	27.0	6.0	-7.0	14.1	0
MW-66-36	Low Flow	Peristaltic Pump	Quarterly	31.0	36.0	-17.0	-22.0	33.6	-19.5
MW-67-39	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	28.8	54.3	-15.8	-41.3	38.3	-25.8
MW-67-105	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	90.3	110.8	-77.3	-97.8	104.8	-92.3
MW-67-173	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	164.8	188.3	-151.8	-175.3	172.3	-159.8
MW-67-219	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	209.3	229.8	-196.3	-216.8	218.8	-206.3
MW-67-276	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	250.8	281.3	-237.8	-268.3	275.3	-262.8
MW-67-323	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	317.8	328.3	-304.8	-315.3	322.3	-309.8
MW-67-340	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	335.3	347.9	-322.3	-334.9	339.8	-327.3
MW-107	Low Flow	Submersible Pump	Annually	105.1	126.1	34.9	13.9	32.7	110.1
MW-111	Low Flow	Peristaltic Pump	Bi-Annually	11.6	17.4	7.0	1.5	16.5	2.4
U3-4D	Low Flow	Peristaltic Pump	Quarterly	25.0	27.6	-10.2	-12.8	25.6	-10.8
U3-T1	Low Flow	Peristaltic Pump	Quarterly	0.2	1.2	3.1	2.1	5.7	2.8
U3-T2	Low Flow	Peristaltic Pump	Quarterly	0.6	1.6	2.7	1.7	5.7	2.6
U1-CSS	Low Flow	Peristaltic Pump	Bi-Annually	NA	10.2	NA	4.9	14.0	6.1
LAF-002	NA	NA	Bi-Annually	NA	NA	NA	NA	NA	-22.3
MH-5 <sup>6</sup>	Grab	NA	Quarterly	NA	NA	NA	NA	NA	NA
E-1 <sup>6</sup>	Grab	NA	Quarterly	NA	NA	NA	NA	NA	NA
E-6 <sup>6</sup>	Grab	NA	Quarterly	NA	NA	NA	NA	NA	NA

Notes:

- For nested multi-level monitoring wells, suffix indicates depth (rounded to nearest foot) from reference point on casing to bottom of well screen. For Waterloo multi-level systems, suffix indicates depth (rounded to nearest foot) from reference point on casing to top of sampling port. Well IDs without a suffix are open bedrock wellbores.
- Sampling frequencies presented for 2008 are subject to change.
- For nested multi-level monitoring wells, interval includes well screen and sand pack. For Waterloo multi-level systems, interval includes open wellbore between bottom of 1st packer above and top of 1st packer below sampling port. For open bedrock wellbores, interval extends from bottom of casing to bottom of hole.
- Sampling depths within sampling intervals (i.e. location of pump intake) have been located adjacent to a transmissive zone where possible.
- Dot pattern denotes sampling interval is positioned within overburden. Open box indicates sampling interval is in bedrock.
- These locations are storm drains.

TABLE 2  
2007-2008 LOW TIDE GROUNDWATER ELEVATIONS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID	LOW RIVER TIDE GROUNDWATER ELEVATIONS (Feet msl)			
	Quarter 2 <sup>1</sup> , 2007	Quarter 3 <sup>2</sup> , 2007	Quarter 4 <sup>3</sup> , 2007	Quarter 1 <sup>4</sup> , 2008
HRI	NA	-0.86	-1.57	-2.15
I2	50.23	48.62	51.87	53.73
MW-30-69	11.83	11.53	12.00	NA
MW-30-84	12.77	12.47	12.83	NA
MW-31-49	44.09	NA	45.40	47.50
MW-31-63	41.56	NA	42.71	45.52
MW-31-85	39.59	NA	40.81	43.19
MW-32-48	NA	42.12	46.73	48.81
MW-32-59 (MW-32-62) <sup>4</sup>	42.79	41.44	45.99	47.99
MW-32-85 (MW-32-92)	10.27	12.35	12.78	13.30
MW-32-131 (MW-32-140)	13.11	11.96	13.21	25.01
MW-32-149 (MW-32-165)	8.18	9.87	10.06	10.20
MW-32-173	NA	9.73	9.86	9.92
MW-32-190 (MW-32-196)	6.74	8.05	7.88	7.88
MW-33	10.08	9.80	10.38	11.49
MW-34	9.87	9.82	10.44	11.63
MW-35	10.03	9.67	10.37	11.65
MW-36-24	8.89	7.31	7.67	6.85
MW-36-41	8.22	NA	NA	NA
MW-36-52	7.43	6.43	6.45	6.42
MW-37-22	5.51	5.15	4.83	4.66
MW-37-32	5.51	5.07	4.82	4.63
MW-37-40	5.40	6.83	6.19	6.17
MW-37-57	7.07	6.23	6.39	6.28
MW-38	3.01	2.19	1.46	2.22
MW-39-67	NA	NA	26.84	32.20
MW-39-84	NA	NA	26.64	31.94
MW-39-100	NA	NA	26.38	30.99
MW-39-102	NA	NA	26.31	31.56
MW-39-124	NA	NA	26.05	28.37
MW-39-183	NA	NA	25.28	29.74
MW-39-195	NA	NA	24.36	28.80
MW-40-24	NA	NA	NA	NA
MW-40-27	NA	NA	55.46	60.39
MW-40-46	NA	47.27	53.19	59.35
MW-40-81	NA	41.65	47.45	56.06
MW-40-100	NA	39.47	45.18	54.10
MW-40-127	NA	38.89	44.60	53.61
MW-40-162	NA	36.67	41.09	50.49
MW-41-40	29.87	NA	32.48	36.57
MW-41-63	25.94	NA	27.77	33.31
MW-42-49	NA	NA	34.55	34.96
MW-42-78	NA	NA	35.71	36.63
MW-43-28	32.75	31.08	31.98	33.47
MW-43-62	30.83	NA	NA	NA
MW-44-66	33.36	NA	34.36	37.99
MW-44-102	23.10	NA	24.84	NA
MW-45-42	NA	24.82	28.47	34.19
MW-45-61	NA	24.33	27.57	32.91
MW-46	12.80	11.95	12.57	15.05
MW-47-57	21.83	20.77	23.05	27.76
MW-47-80	22.29	21.41	21.82	26.53
MW-48-23	-0.08	-0.27	-0.39	-1.14
MW-48-38	0.64	0.26	-0.06	-0.18
MW-49-26	1.04	NA	-0.37	-0.62
MW-49-42	0.31	0.90	0.40	-0.44
MW-49-65	0.89	1.01	0.34	0.07
MW-50-42	7.24	NA	NA	NA
MW-50-66	3.71	NA	NA	1.97
MW-51-40	NA	48.69	50.07	51.95
MW-51-79	NA	39.92	41.07	42.91
MW-51-102	NA	35.98	38.07	38.46
MW-51-104	NA	NA	37.93	38.41
MW-51-135	NA	37.42	39.47	39.99
MW-51-163	NA	33.79	34.83	36.15
MW-51-189	NA	29.33	30.16	31.34
MW-52-11	6.04	5.61	8.12	8.47
MW-52-18	6.64	NA	8.63	6.04
MW-52-48	7.08	NA	6.55	6.53
MW-52-64	5.96	NA	5.90	5.25
MW-52-118	5.34	NA	4.41	4.44
MW-52-122	5.25	NA	4.26	4.32
MW-52-162	0.67	NA	-0.80	-1.31
MW-52-181	0.41	NA	-1.08	-1.56
MW-53-82	NA	9.59	10.03	11.99
MW-53-120	9.91	9.18	9.59	10.87
MW-54-35	NA	NA	6.40	6.27
MW-54-37	7.52	NA	6.58	6.45
MW-54-58	6.86	NA	5.82	5.60
MW-54-123	5.69	NA	4.16	3.65

TABLE 2  
2007-2008 LOW TIDE GROUNDWATER ELEVATIONS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID	LOW RIVER TIDE GROUNDWATER ELEVATIONS (Feet msl)			
	Quarter 2 <sup>1</sup> , 2007	Quarter 3 <sup>2</sup> , 2007	Quarter 4 <sup>3</sup> , 2007	Quarter 1 <sup>4</sup> , 2008
MW-54-144	8.85	NA	7.13	6.60
MW-54-173	5.17	NA	3.52	2.99
MW-54-190	5.08	NA	3.46	2.91
MW-55-24	8.56	7.82	7.97	8.17
MW-55-35	8.10	7.29	7.52	7.60
MW-55-54	8.47	7.65	7.75	8.08
MW-56-53	21.04	20.16	NA	NA
MW-56-83	21.10	20.10	22.18	26.41
MW-57-11	9.57	8.83	9.36	10.99
MW-57-20	9.38	NA	NA	NA
MW-57-45	9.08	NA	NA	NA
MW-58-26	8.03	6.49	6.58	8.32
MW-58-65	6.03	6.83	6.22	NA
MW-59-32	1.06	NA	0.67	0.42
MW-59-45	1.06	1.27	0.42	NA
MW-59-68	2.91	2.51	1.97	0.90
MW-60-35	2.19	1.28	1.32	1.58
MW-60-53	-0.63	-1.24	-1.67	-2.04
MW-60-55	NA	-0.28	-0.73	-1.10
MW-60-72	0.74	-0.09	-0.45	-0.68
MW-60-135	0.94	0.11	-0.44	-0.90
MW-60-154	0.08	-0.96	-1.61	-2.07
MW-60-176	-0.48	-1.38	-2.03	-2.47
MW-62-18	0.25	0.25	-0.37	-0.79
MW-62-37	0.59	0.61	-0.03	-0.46
MW-62-52	NA	0.48	-0.30	-1.13
MW-62-53	0.95	0.54	-0.25	-1.01
MW-62-71	0.89	0.22	-0.56	-1.26
MW-62-92	1.07	0.58	-0.09	-0.76
MW-62-138	1.40	0.77	0.09	-0.49
MW-62-181	1.33	0.38	-0.33	-0.99
MW-62-182	NA	-0.33	-1.83	-0.78
MW-63-18	0.14	0.09	-0.10	-0.37
MW-63-35	0.51	0.19	-0.09	-0.40
MW-63-50	0.86	0.29	-0.38	-1.03
MW-63-91	1.16	0.48	-0.19	-0.87
MW-63-93	NA	0.55	-0.20	-0.87
MW-63-112	0.03	-0.82	-1.46	-2.05
MW-63-121	1.41	0.60	-0.18	-0.78
MW-63-163	0.70	-0.09	-0.83	-1.48
MW-63-174	0.88	0.05	-0.65	-1.29
MW-65-48	NA	NA	NA	NA
MW-65-80	NA	NA	NA	NA
MW-66-21	0.26	0.17	-0.22	-0.74
MW-66-36	0.81	0.48	-0.04	-0.51
MW-67-39	NA	1.02	0.34	-0.33
MW-67-105	NA	1.39	0.61	-0.04
MW-67-173	NA	0.75	-0.14	-0.83
MW-67-219	NA	0.74	-0.19	-0.91
MW-67-276	NA	1.61	0.60	-0.13
MW-67-323	NA	0.18	-0.96	-1.75
MW-67-340	NA	0.63	-0.52	-1.31
MW-107	116.85	113.87	117.48	121.79
MW-108	9.58	8.61	8.77	9.98
MW-109	9.52	6.80	7.22	9.50
MW-111	9.56	9.66	9.74	10.74
OUT1	NA	1.31	1.16	0.76
RW1	NA	NA	30.15	NA
UICSS	NA	8.98	NA	NA
U3-1	4.20	NA	NA	NA
U3-2	5.34	NA	NA	NA
U3-3	7.53	6.52	6.63	8.67
U3-4D	4.25	NA	3.35	3.22
U3-4S	3.91	4.13	3.80	3.74
U3-C1	NA	1.64	3.58	3.36
U3-T1	4.51	4.12	3.67	3.99
U3-T2	4.33	4.02	3.79	4.20

Notes:

NA: data not available

1. Quarter 2, 2007 groundwater elevations were measured on 6/1/07 at 6:20 am.
2. Quarter 3, 2007 groundwater elevations were measured on 9/25/07 at 4:32 am.
3. Quarter 4, 2007 groundwater elevations were measured on 12/9/07 at 4:15 am.
4. Quarter 1, 2008 groundwater elevations were measured on 1/3/08 at 1:14 a.m.
5. MW-32 groundwater elevations from the 2nd quarter, 2007 were part of a previous Waterloo Multi-Sampling System configuration in MW-32, prior to the new configuration installed on September 10th, 2007. Old configuration sampling intervals, listed in parenthesis, are representatively equivalent to the new configuration sampling interval immediately preceding it. The new configuration intervals MW-32-48 and MW-32-73 have no representative equivalent within the old configuration.

TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth ft Below Top of Casing <sup>3</sup>	SAMPLE ZONE CENTER, Elevation ft msd <sup>4</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS						YEARLY ROLLING AVERAGES <sup>5</sup>						Well ID		
					Date	Time	TRITIUM (pCi/l)	Result	Cs-137 (pCi/l)	Result	Co-60 (pCi/l)	Result	NI-63 (pCi/l)	Result	TRITIUM (pCi/l)	Average	Sr-90 (pCi/l)	Average		Cs-137 (pCi/l)	Average
MW-30-65 <sup>6</sup>	2	007	69.3	6.4	6/12/2007	10:20	2.97E+05	-2.63E-01	3.95E-01	6.88E-02	NA <sup>6</sup>	1.57E+05	ND	ND	ND	ND	ND	ND	ND	NA	MW-30-69
	3	008			7/18/2007	9:55	8.21E+04	NA	NA	NA	NA										
	3	009			7/25/2007	11:26	2.17E+05	1.00E-01	-1.13E+00	4.61E-01	NA										
	3	009			7/25/2007	11:26	2.32E+05	NA	NA	NA	NA										
	3	010			8/1/2007	11:44	1.03E+05	NA	NA	NA	NA										
	3	011			8/8/2007	10:00	9.56E+04	NA	NA	NA	NA										
	3	012			8/15/2007	11:00	2.33E+05	NA	NA	NA	NA										
	3	013			8/21/2007	9:45	1.07E+05	NA	NA	NA	NA										
	3	014			8/30/2007	11:32	9.80E+04	NA	NA	NA	NA										
	3	015			9/19/2007	11:00	9.20E+04	NA	NA	NA	NA										
	4	016			10/23/2007	11:48	1.32E+05	2.52E-01	2.42E+00	-5.09E-01	NA										
	1	017			2/4/2008	13:00	1.87E+05	1.57E-01	1.26E+00	-6.00E-01	NA										
MW-30-84	2	004	83.8	-8.1	6/12/2007	10:19	7.79E+03	-1.49E-01	-1.06E+00	-6.93E-01	-3.57E+00	5.24E+03	ND	5.95E-01	ND	ND	ND	ND	ND	MW-30-84	
	3	005			7/18/2007	10:25	4.80E+03	NA	NA	NA	NA										
	3	006			7/25/2007	13:00	5.02E+03	1.56E-01	2.83E+00	2.03E+00	NA										
	4	007			10/23/2007	12:49	4.27E+03	5.95E-01	1.56E+00	-1.17E+00	NA										
	1	008			2/4/2008	14:16	4.34E+03	-4.08E-01	-1.00E+00	-4.32E-01	NA										
MW-31-49	2	003	48.8	26.8	6/12/2007	14:24	1.48E+03	-1.51E-01	1.83E-01	1.26E-01	0.00E+00	5.91E+03	ND	8.83E-01	ND	ND	ND	ND	ND	MW-31-49	
	3	004			8/2/2007	10:23	1.19E+04	-5.17E-01	8.83E+01	1.89E-01	NA										
	3	005			9/11/2007	13:10	6.58E+03	-2.20E-01	-1.20E+00	0.00E+00	NA										
	4	006			10/24/2007	15:50	8.77E+03	5.14E-02	-6.76E-01	1.35E+00	NA										
	1	007			1/16/2008	10:31	3.97E+02	-9.14E-02	-1.17E+00	-9.76E-01	NA										
MW-31-63	2	003	63.3	12.3	6/12/2007	14:20	5.00E+03	4.72E-01	-5.01E-01	-8.78E-02	3.37E+00	2.63E+04	ND	ND	ND	ND	ND	ND	ND	MW-31-63	
	3	004			8/2/2007	11:15	4.06E+04	-1.41E-01	1.20E+00	-3.09E-02	NA										
	3	005			9/11/2007	13:25	3.77E+04	-1.37E-01	-4.39E-01	-8.64E-01	NA										
	4	006			10/24/2007	14:55	3.88E+04	-1.63E-01	1.07E+00	1.01E+00	NA										
	1	007			1/16/2008	11:32	1.24E+04	-6.88E-02	-2.49E-01	-9.08E-01	NA										
MW-31-85	2	003	84.8	-9.2	6/12/2007	14:05	3.17E+02	-3.83E-01	3.95E-01	-5.71E-01	NA	2.83E+03	ND	ND	ND	ND	ND	ND	NA	MW-31-85	
	3	004			8/2/2007	10:58	2.69E+03	-7.29E-01	-5.01E-02	-1.90E+00	NA										
	3	005			9/11/2007	13:20	4.32E+03	6.86E-01	-7.04E-01	-3.07E+00	NA										
	4	006			10/24/2007	14:40	5.51E+03	2.53E-01	5.68E-01	4.76E-01	NA										
	1	007			1/16/2008	11:26	1.31E+03	6.97E-01	2.88E+00	1.90E+00	NA										
MW-32-62 <sup>8</sup>	2	002	60.0	17.1	6/28/2007	14:25	2.40E+04	-1.65E-01	-1.74E+00	-1.42E+00	NA	1.70E+04	ND	ND	ND	ND	ND	ND	NA	MW-32-62	
	3	003			8/13/2007	13:07	1.42E+04	-2.71E-01	1.48E+00	-4.66E-01	NA										
(MW-32-59) <sup>9</sup>	4	001	58.8	18.3	10/26/2007	12:07	1.11E+04	3.22E-01	-1.94E-01	2.45E+00	NA									(MW-32-59)	
	1	005			1/18/2008	13:25	1.87E+04	4.67E-01	9.98E-01	1.99E+00	NA										
MW-32-92 <sup>8</sup>	2	002	90.5	-13.4	6/28/2007	15:05	5.42E+03	-4.15E-01	-1.70E-01	-3.05E-01	NA	8.61E+03	ND	ND	ND	ND	ND	ND	NA	MW-32-92	
	3	003			8/13/2007	10:48	5.70E+03	-2.45E-02	3.28E-01	9.90E-01	NA										
(MW-32-85) <sup>9</sup>	4	004	85.3	85.3	10/26/2007	11:12	1.26E+04	-1.17E-01	8.85E-01	-1.85E-02	NA									(MW-32-85)	
	1	005			1/18/2008	14:50	1.07E+04	-3.03E-01	3.57E-01	-5.37E-01	NA										
MW-32-140 <sup>8</sup>	2	002	138.0	-60.9	6/28/2007	12:45	3.02E+02	-1.39E-01	-1.46E+00	9.88E-01	NA	3.93E+02	ND	ND	ND	ND	ND	ND	NA	MW-32-140	
	3	003			8/13/2007	11:13	1.29E+02	2.69E-01	-8.09E-01	-1.19E+00	NA										
(MW-32-131) <sup>9</sup>	4	004	130.8	-53.7	10/26/2007	10:11	3.74E+02	2.47E-01	-1.81E-01	-2.55E-01	NA									(MW-32-131)	

TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth ft Below Top of Casing	SAMPLE ZONE CENTER, Elevation ft msd <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS						YEARLY ROLLING AVERAGES <sup>4</sup>						Well ID					
					Date	Time	TRITIUM (pCi/l)	Result	Sp-90 (pCi/l)	Result	Cs-137 (pCi/l)	Result	Co-60 (pCi/l)	Result	NI-63 (pCi/l)	Result	TRITIUM (pCi/l)	Average		Sp-90 (pCi/l)	Average	Cs-137 (pCi/l)	Average	Co-60 (pCi/l)
(MW-32-131) <sup>9</sup>	1	005				1/18/2008	11:23	5.04E+02	5.14E-01	8.47E-01	8.40E-02	NA	1.29E+03	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	MW-32-165
MW-32-165 <sup>8</sup>	2	002	163.0	-85.9		6/28/2007	13:06	5.81E+02	-2.82E-01	8.57E-01	8.16E-01	NA												(MW-32-149)
	3	003				8/13/2007	11:35	4.53E+02	-6.38E-01	1.42E+00	1.63E+00	NA												
	4	004	149.3	-72.2		10/26/2007	10:10	2.92E+03	-2.45E-01	1.99E-01	1.65E-01	NA												
	1	005				1/18/2008	11:18	1.15E+03	3.04E-01	2.94E+00	8.74E-01	NA												
MW-32-173 <sup>9</sup>	4	001	172.8	-95.7		10/26/2007	9:55	5.89E+03	1.86E-02	6.92E-01	-9.97E-01	NA												MW-32-173
	1	002				1/18/2008	11:05	3.40E+03	1.13E-01	-3.84E-01	-6.14E-01	NA												
MW-32-197 <sup>8</sup>	2	002	194.5	-117.4		6/28/2007	13:07	2.41E+03	-5.09E-02	1.52E+00	-1.29E+00	NA												MW-32-197
	3	003				8/13/2007	11:25	1.72E+03	-3.65E-01	6.21E-01	-1.19E+00	NA												
(MW-32-190) <sup>9</sup>	4	004	190.3	-113.7		10/26/2007	9:53	9.76E+03	-5.05E-01	-6.17E-01	-1.94E-01	NA												(MW-32-190)
	1	005				1/18/2008	11:35	8.89E+03	4.28E-01	6.57E-01	5.18E-01	NA												
MW-33	2	020	16	2.8		6/15/2007	15:48	9.65E+04	-2.82E-01	-2.78E-01	-1.64E+00	-8.12E-01	5.68E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	MW-33
	3	021				8/3/2007	10:20	2.30E+01	5.80E-01	8.18E-01	2.45E-01	NA												
MW-34	3	018	16.5	2.0		8/3/2007	10:21	2.22E+04	3.94E-02	-1.55E+00	2.12E+00	NA												MW-34
MW-35	2	016	15.0	3.6		6/15/2007	13:58	2.03E+03	2.26E-01	4.66E+01	-1.27E+00	6.18E+00	3.59E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	MW-35
	3	017				8/3/2007	10:22	5.95E+03	9.45E-02	-9.20E-01	5.74E-01	NA												
MW-36-24 <sup>10</sup>	2	007	17.0	-5.2		6/27/2007	10:40	1.54E+02	5.90E-01	3.31E-01	4.00E-01	NA												MW-36-24
	3	008				8/8/2007	13:45	1.63E+02	-5.35E-01	1.53E-01	3.56E+00	-7.46E+00												
	4	009				10/18/2007	10:06	2.86E+02	8.56E-02	7.20E-01	3.11E-01	NA												
MW-36-41	1	010				1/23/2008	14:18	2.16E+03	1.03E-01	2.92E-02	-4.84E-01	NA												
MW-36-52	2	007	37.0	-25.2		6/27/2007	12:30	6.11E+03	2.18E+00	4.30E-01	1.36E+00	NA												MW-36-41
	2	007	50.0	-38.2		6/27/2007	11:45	1.01E+04	2.62E+00	-3.82E-01	9.25E-01	NA												MW-36-52
	3	008				8/8/2007	14:15	1.25E+04	2.06E+00	1.30E+00	-8.82E-01	4.27E+00												
	1	009				1/23/2008	14:13	1.13E+04	4.85E+00	-2.89E-01	4.08E-01	NA												
MW-37-22	2	007	17.0	-2.0		6/27/2007	10:50	4.05E+03	1.49E+01	-2.26E+00	-1.12E+00	NA												MW-37-22
	3	008				8/7/2007	10:55	2.79E+03	1.83E+01	2.74E+00	4.23E-01	NA												
	4	009				10/15/2007	14:30	2.26E+03	2.29E+01	1.33E+00	-1.42E+00	NA												
	1	010				1/23/2008	10:42	6.52E+03	8.73E+00	-2.09E+00	2.34E-01	NA												
MW-37-32	2	007	29	-14		6/27/2007	12:20	3.13E+03	1.85E+01	-1.49E+00	1.63E+00	NA												MW-37-32
	3	008				8/7/2007	10:56	3.81E+03	1.89E+01	1.99E+00	1.88E+00	NA												
	4	009				10/15/2007	14:36	2.49E+03	2.13E+01	8.79E-01	2.53E+00	NA												
MW-37-40	1	010				1/23/2008	11:03	6.76E+03	1.52E+01	1.69E+00	-5.32E-02	NA												
MW-37-40	2	007	39	-24		6/27/2007	11:00	6.55E+03	4.69E+00	5.92E-01	-1.07E+00	NA												MW-37-40
	3	008				8/7/2007	13:45	5.85E+03	9.76E+00	1.10E+00	-2.48E-01	NA												
	4	009				10/15/2007	15:00	5.69E+03	5.98E+00	7.63E-01	5.99E-01	NA												
MW-37-57	1	010				2/1/2008	17:20	6.73E+03	9.48E-01	3.09E-01	-3.70E-01	-4.35E+00												
MW-37-57	2	007	55	-46		6/27/2007	12:20	5.89E+03	2.42E+01	-2.45E+00	-9.38E-02	NA												MW-37-57
	3	008				8/7/2007	12:55	6.68E+03	2.33E+01	-1.35E+00	3.61E-02	NA												
	4	009				10/15/2007	15:00	4.88E+03	2.78E+01	3.62E-01	1.20E-01	NA												
MW-38	1	010				2/1/2008	16:31	6.63E+03	2.89E+01	-9.11E-01	-2.93E-01	8.47E-01												
MW-38	3	020	25.4	-11.1		8/16/07	11:30	6.04E+02	-9.21E-02	1.21E+00	2.48E+00	NA												MW-38
MW-39-67	2	001	67.0	13.0		5/22/2007	9:53	4.73E+02	2.76E+00	1.23E-01	1.84E+00	NA												MW-39-67
	3	002				8/7/2007	16:30	3.25E+02	4.78E+00	2.59E+00	2.62E-01	NA												

TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth Ft Below Top of Casing	SAMPLE ZONE CENTER, Elevation Ft msl <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS						YEARLY ROLLING AVERAGES <sup>4</sup>						Well ID
					Date	Time	TRITIUM (pCi/l)	Sp-90 (pCi/l)	Cs-137 (pCi/l)	Co-60 (pCi/l)	Ni-63 (pCi/l)	TRITIUM (pCi/l)	Sp-90 (pCi/l)	Cs-137 (pCi/l)	Co-60 (pCi/l)	Ni-63 (pCi/l)	Average	Average	
MW-39-67	1	003			1/17/2008	14:35	3.57E+02	3.52E+00	-1.28E-01	1.76E+00	NA	4.22E+02	1.43E+00	ND	ND	ND	MW-39-84		
MW-39-84	2	001	83.5	-3.5	5/22/2007	10:38	5.91E+02	1.72E+00	-9.07E-02	5.61E-01	-1.68E+00								
	3	002			8/7/2007	15:30	2.52E+02	7.97E-01	3.55E+01	-1.11E+00	NA								
	1	003			1/17/2008	13:25	1.43E+02	1.78E+00	-2.74E+00	8.36E-01	NA								
MW-39-102	2	001	101.5	-21.5	5/22/2007	10:40	8.05E+02	1.32E+00	-3.99E-02	6.54E-01	6.39E-02	5.63E+02	1.15E+00	ND	ND	ND			
	3	002			8/7/2007	14:25	3.21E+02	4.71E-01	-7.63E-01	-2.47E+00	NA								
	1	003			1/17/2008	13:32	1.54E+02	9.88E-01	7.43E-01	7.91E-01	NA								
MW-39-124	2	001	124.0	-44.0	5/22/2007	9:30	2.61E+02	9.26E-01	-1.13E-01	-5.31E-01	3.55E+00	2.27E+02	1.48E+00	ND	ND	ND			
	3	002			8/7/2007	13:40	1.92E+02	5.90E-01	-1.14E+00	4.97E-01	NA								
	1	003			1/17/2008	15:40	1.67E+02	1.48E+00	6.55E-01	9.83E-01	NA								
MW-39-183	2	001	182.5	-102.5	5/22/2007	10:08	2.47E+02	6.51E-01	6.42E-01	3.09E-02	0.00E+00	2.47E+02	8.29E-01	ND	ND	ND			
	3	002			8/7/2007	12:40	1.88E+02	7.11E-01	1.38E+00	2.34E+00	NA								
	1	003			1/17/2008	11:55	4.65E+01	8.29E-01	-3.72E-01	0.00E+00	NA								
MW-39-195	2	001	195.0	-115.0	5/22/2007	12:45	2.55E+02	1.30E+00	0.00E+00	3.54E-01	-2.52E+00	2.28E+02	1.10E+00	ND	ND	ND			
	3	002			8/7/2007	12:00	2.00E+02	5.92E-01	-4.08E-02	-2.76E-01	NA								
	1	003			1/17/2008	17:28	9.63E+01	8.97E-01	7.57E-01	8.13E-01	NA	ND	ND	ND	ND	ND			
MW-40-27	2	001	26.7	46.5	6/5/2007	11:00	1.56E+02	-7.82E-04	2.70E-02	1.48E+00	NA	ND	ND	ND	ND	ND			
	3	002			7/23/2007	12:35	1.62E+02	3.32E-01	2.52E+00	-5.97E-02	NA								
	1	003			1/7/2008	16:28	1.44E+02	-4.39E-01	-4.17E-01	6.09E-01	NA								
MW-40-46	2	001	46.2	27.0	6/5/2007	11:50	1.42E+02	-3.17E-01	7.90E-01	-2.35E+00	NA	ND	ND	ND	ND	NA			
	3	002			7/23/2007	12:15	9.48E+01	3.50E-01	-9.08E-01	-1.72E+00	NA								
	4	003			10/12/2007	14:45	-1.59E+01	-2.14E-02	-3.80E-01	4.94E-01	NA								
	1	004			1/7/2008	14:42	-1.96E+01	8.04E-01	-1.21E+00	1.16E+00	NA	ND	ND	ND	ND	NA			
MW-40-81	2	001	80.7	-7.5	6/5/2007	12:37	1.63E+02	-2.93E-02	-1.00E+00	-4.70E-03	NA	ND	ND	ND	ND	NA			
	3	002			7/23/2007	13:00	6.95E+01	2.45E-01	-7.08E-01	2.31E+00	NA								
	4	003			10/12/2007	10:52	6.99E+01	-9.65E-02	5.47E-01	7.73E-01	NA								
	1	004			1/7/2008	14:35	1.69E+02	2.87E-01	-7.49E-01	-2.66E-01	NA								
MW-40-100	2	001	100.2	-27.0	6/5/2007	11:15	1.76E+02	3.40E-01	-1.92E+00	-1.98E+00	NA	1.76E+02	ND	ND	ND	NA			
	3	002			7/23/2007	13:20	8.12E+01	2.91E-01	-4.67E-01	1.78E-01	NA								
	4	003			10/12/2007	11:03	5.95E+01	-7.39E-02	1.99E+00	8.90E-01	NA								
	1	004			1/7/2008	11:55	1.58E+01	-7.69E-02	3.13E-01	8.84E-02	NA	1.87E+02	ND	ND	ND	NA			
MW-40-127	2	001	127.2	-54.0	6/5/2007	12:55	1.87E+02	2.60E-01	7.57E-01	-5.59E-03	NA	1.87E+02	ND	ND	ND	NA			
	3	002			7/23/2007	15:15	4.26E+01	3.83E-01	-1.17E+00	2.04E-01	NA								
	4	003			10/12/2007	11:30	2.83E+01	1.01E-01	-2.32E+00	-1.51E+00	NA								
	1	004			1/7/2008	12:30	9.75E+00	5.17E-01	6.45E-01	3.24E-01	NA								
MW-40-162	2	001	161.7	-88.5	6/5/2007	14:45	1.40E+02	2.94E-01	-1.67E+00	3.83E-01	NA	ND	ND	ND	ND	NA			
	3	002			7/23/2007	17:40	2.59E+01	1.19E-01	-2.51E-01	7.27E-01	NA								
	4	003			10/12/2007	12:54	4.45E+01	-5.48E-02	-1.11E+00	-1.01E+00	NA								
MW-41-40	1	004			1/7/2008	13:10	4.96E+01	7.93E-02	4.17E-01	3.63E-01	NA	1.50E+03	5.00E+00	2.67E+00	ND	ND			
	2	008	36.0	18.9	6/19/2007	14:45	3.91E+03	5.99E+00	-3.09E+00	-3.47E-01	2.21E-01								
	3	009			8/14/2007	14:35	3.80E+02	5.96E+00	0.00E+00	1.40E+00	NA								
	1	010			1/24/2008	16:28	2.15E+02	3.03E+00	2.67E+00	-5.18E-01	NA								
MW-41-63	2	007	61.0	-6.1	6/20/2007	11:05	5.52E+02	7.08E+00	-3.10E-01	-1.06E-02	-4.39E-01	4.67E+02	4.80E+00	ND	ND	ND			
	3	008			8/14/2007	16:10	5.47E+02	3.55E+00	-2.83E+00	1.32E-01	NA								
	1	009			1/25/2008	10:05	3.03E+02	3.76E+00	0.00E+00	5.24E-02	NA								



TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth ft Below Top of Casing	SAMPLE ZONE CENTER, Elevation ft msd <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS						YEARLY ROLLING AVERAGES <sup>4</sup>						Well ID
					Date	Time	TRITIUM (pCi/l)	Sp-90 (pCi/l)	Cs-137 (pCi/l)	Co-60 (pCi/l)	Ni-63 (pCi/l)	TRITIUM (pCi/l)	Sp-90 (pCi/l)	Cs-137 (pCi/l)	Co-60 (pCi/l)	Ni-63 (pCi/l)			
MW-42-49	2	004	41.0	28.7	6/18/2007	15:00	1.34E+03	7.73E+01	1.90E+04	4.29E+00	1.03E+03	1.69E+03	4.55E+01	2.68E+04	1.59E+01	8.06E+02	MW-42-49		
	3	005			8/2/2007	14:37	1.50E+03	5.02E+01	2.48E+04	3.55E+02	8.05E+00								
	3	006			8/17/2007	9:30	1.60E+03	2.01E+01	1.96E+04	-4.63E+01	5.26E+02								
	4	007			10/4/2007	12:40	2.46E+03	4.65E+01	3.69E+04	1.59E+01	1.17E+03								
MW-42-78	2	003	74.0	-4.3	1/21/2008	16:11	1.32E+03	3.34E+01	3.38E+04	0.00E+00	5.01E+02	3.88E+02	ND	1.30E+02	ND	ND	MW-42-78		
	3	004			6/18/2007	14:40	3.78E+02	3.83E+01	6.28E+01	2.31E+00	2.48E+00								
	3	005			7/27/2007	11:30	3.19E+02	-2.21E+01	0.00E+00	1.25E+00	6.81E+00								
	3	005			8/17/2007	9:36	4.61E+02	2.69E+01	4.51E+01	-7.27E+01	3.04E+00								
	4	006			10/4/2007	13:25	4.34E+02	2.33E+01	3.04E+02	3.10E+00	6.86E+01								
	1	007			1/21/2008	15:33	3.46E+02	-2.51E+01	1.08E+02	1.71E+01	9.73E+00								
MW-43-28	2	007	25.0	25.8	6/18/2007	13:30	2.78E+02	1.07E+00	-3.68E+01	-3.72E+01	3.58E+00	2.92E+02	1.07E+00	ND	ND	ND	MW-43-28		
	3	008			8/13/2007	11:33	9.56E+01	-6.25E+01	-7.36E+01	-2.77E+01	NA								
	1	009			1/25/2008	11:11	3.06E+02	1.46E+01	1.88E+00	1.46E+00	8.44E+00	ND	9.28E+01	ND	ND	ND	MW-43-62		
	2	007	54.0	-5.2	6/19/2007	9:36	1.97E+02	8.53E+01	-6.77E+01	-8.52E+01	1.38E+00								
	3	008			8/13/2007	12:42	1.14E+02	1.29E+01	-1.18E+00	1.53E+01	NA								
MW-44-66	2	004	65.0	30.5	1/25/2008	10:57	1.23E+02	1.00E+00	4.31E+01	-1.11E+00	3.76E+00	3.72E+02	ND	1.73E+01	ND	NA	MW-44-66		
	3	005			6/29/2007	15:00	2.68E+02	-4.25E+01	2.64E+01	7.78E+01	NA								
	4	006			8/14/2007	13:10	4.17E+02	9.30E+02	-8.93E+01	-3.92E+01	NA								
	1	007			10/31/2007	13:30	5.13E+02	3.77E+01	2.76E+00	1.91E+00	NA								
	2	008	80.0	13.5	1/2/2008	12:55	2.91E+02	2.85E+01	1.73E+01	1.40E+00	NA								
MW-44-102	2	005			6/19/2007	17:46	2.88E+02	-1.33E+01	1.88E+00	6.41E+01	-4.92E+00	3.38E+02	ND	1.18E+01	ND	ND	MW-44-102		
	3	006			8/14/2007	14:55	2.84E+02	1.97E+01	-1.46E+00	-1.35E+00	NA								
	4	007			10/31/2007	12:01	3.54E+02	-2.58E+01	-6.60E+01	-1.23E+00	NA								
MW-45-42	1	007			1/24/2008	13:05	4.17E+02	2.06E+01	1.18E+01	-4.44E+03	3.8E+00	1.79E+03	ND	ND	ND	ND	MW-45-42		
	2	008	37.0	16.6	6/21/2007	15:05	2.32E+03	-6.08E+02	1.31E+01	2.51E+00	3.58E+00								
	3	009			8/15/2007	11:30	1.16E+03	-3.79E+01	1.92E+00	1.19E+00	NA								
	4	010			1/25/2008	12:15	1.44E+03	2.08E+01	1.60E+00	5.96E+01	NA								
MW-45-61	2	008	58.0	-4.4	6/21/2007	12:55	1.47E+03	-7.02E+02	3.52E+00	-7.21E+01	3.35E+00	1.95E+03	ND	ND	ND	ND	MW-45-61		
	3	009			8/15/2007	11:55	1.50E+03	4.74E+02	3.33E+00	-6.51E+01	NA								
	4	010			10/5/2007	11:30	2.15E+03	4.87E+01	-1.73E+01	6.59E+02	NA								
MW-46	1	011			1/25/2008	11:55	2.66E+03	4.26E+01	2.42E+00	-2.05E+01	NA								
	2	008	10.5	7.6	6/14/2007	13:50	3.43E+03	2.15E+01	3.08E+01	8.52E+02	-1.05E+00	1.58E+03	ND	ND	ND	ND	MW-46		
	3	009			8/1/2007	11:35	6.62E+02	7.89E+02	6.63E+01	6.33E+02	NA								
	4	010			10/22/2007	14:20	1.67E+03	2.17E+01	4.68E+01	-7.20E+01	NA								
	1	011			1/22/2008	12:19	5.49E+02	5.30E+01	-3.99E+01	1.73E+00	NA								
MW-47-56	2	004	52.0	18.3	6/20/2007	10:07	5.29E+02	5.93E+01	0.00E+00	3.57E+00	NA	4.00E+02	5.93E+01	ND	ND	ND	MW-47-56		
	3	004			6/20/2007	10:07	NA	NA	0.00E+00	1.63E+00	3.81E+00								
	3	005			8/10/2007	11:00	2.70E+02	5.07E+01	-3.84E+01	1.49E+01	NA								
MW-47-80	2	003	72.0	-1.7	6/19/2007	11:00	2.46E+03	3.27E+00	2.05E+00	-2.27E+00	4.08E+01	2.94E+03	3.41E+00	ND	ND	ND	MW-47-80		
	3	004			8/10/2007	12:21	3.51E+03	3.55E+00	-9.39E+02	-8.20E+02	NA								
MW-48-23	3	011	15.8	-0.4	8/16/07	11:00	3.53E+02	-3.94E+01	1.66E+00	5.36E+01	NA	3.53E+02	ND	ND	ND	NA	MW-48-23		
MW-48-37	3	011	35.8	-20.4	8/16/07	11:07	1.79E+02	4.11E+02	1.78E+00	-4.00E+01	NA	ND	ND	ND	ND	NA	MW-48-37		
MW-49-26	2	009	20.0	-5.3	6/26/2007	12:30	7.76E+03	1.27E+01	1.36E+00	-8.28E+01	-1.92E+00	6.23E+03	1.66E+01	ND	ND	ND	MW-49-26		
	3	010			8/9/2007	11:17	6.72E+03	1.43E+01	4.09E+01	2.50E+00	7.93E+01								

TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth ft Below Top of Casing	SAMPLE ZONE CENTER, Elevation ft msd <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS				YEARLY ROLLING AVERAGES <sup>4</sup>				Well ID		
					Date	Time	TRITIUM (pCi/l)	Sp-90 (pCi/l)	Cs-137 (pCi/l)	Co-60 (pCi/l)	Result	Result	Result	Result		TRITIUM (pCi/l)	Sp-90 (pCi/l)
MW-49-26	1	011			16:28	1/28/2008	4.21E+03	2.29E+01	-1.19E+00	4.31E-01	5.16E+00	3.85E+03	2.55E+01	ND	ND	MW-49-42	
MW-49-42	2	009	37.0	-22.3	6/26/2007	12:30	4.44E+03	2.08E+01	-3.62E-01	-2.09E+00	-5.19E+00						
	3	010			8/9/2007	12:05	4.30E+03	2.56E+01	-1.17E+00	2.77E+00	4.03E-01						
	1	011			1/28/2008	15:49	2.81E+03	2.94E+01	8.68E-01	8.96E-01	5.79E+00						
MW-49-65	2	009	61.0	-46.4	6/26/2007	12:30	2.62E+03	1.58E+01	-1.36E-03	-3.59E+00	-7.43E+00	2.29E+03	2.13E+01	ND	ND	MW-49-65	
	3	010			8/9/2007	11:20	2.41E+03	2.08E+01	3.44E-01	1.68E+00	3.50E+00						
	1	011			1/28/2008	16:52	1.85E+03	2.73E+01	2.83E+00	-1.63E+00	1.01E+01						
MW-50-42 <sup>11</sup>	2	009	27.0	-12.1	6/26/2007	14:30	2.15E+02	1.16E+01	1.91E+00	-1.64E+00	-6.30E+00	5.92E+02	1.22E+01	ND	ND	MW-50-42	
	3	010			7/26/2007	11:20	1.45E+02	1.94E+01	-5.50E+00	2.53E+00	4.92E+00						
	4	011			10/18/2007	14:08	1.01E+02	2.45E+01	3.02E-01	6.25E-01	0.00E+00						
	1	012			1/15/2008	11:59	9.88E+02	2.93E+00	1.63E+01	-4.30E-01	1.24E+01						
	1	013			2/26/2008	12:19	6.13E+02	2.40E+00	-1.95E+00	1.77E+00	1.71E+01						
MW-50-66	2	009	60.0	-45.1	6/26/2007	14:02	4.21E+03	2.93E+01	-2.19E+00	1.63E-01	-6.05E-01	3.97E+03	3.38E+01	ND	ND	MW-50-66	
	3	010			7/26/2007	11:25	4.50E+03	3.10E+01	-1.12E+00	1.08E-02	1.93E+01						
	4	011			10/18/2007	14:38	3.85E+03	4.74E+01	-2.28E+00	1.65E+00	0.00E+00						
	1	012			1/15/2008	12:10	3.31E+03	3.56E+01	1.56E+01	6.31E-02	1.16E+01						
	1	013			2/26/2008	13:46	5.86E+01	1.57E-01	1.83E-02	7.71E-01	NA						
MW-51-40 <sup>12</sup>	2	001	39.7	28.0	5/30/2007	11:45	1.58E+02	-5.30E-01	1.04E-01	1.61E+00	NA	2.11E+02	ND	ND	NA	MW-51-40	
	3	002			7/24/2007	15:30	2.23E+02	7.09E-02	1.65E-02	-1.32E+00	NA						
	4	003			10/2/2007	13:48	1.34E+02	-2.63E-01	5.15E+00	7.44E-01	NA						
	4	004			11/9/2007	15:40	1.47E+02	-8.16E-02	1.68E+00	-5.71E-02	NA						
	1	005			1/8/2008	10:47	5.86E+01	1.57E-01	1.83E-02	7.71E-01	NA	ND	ND	ND	NA	MW-51-79	
MW-51-79	2	001	78.7	-11.0	5/30/2007	12:42	9.89E+01	-2.36E-01	2.20E+00	3.52E-01	NA						
	3	002			7/24/2007	17:00	4.24E+01	8.02E-03	-6.37E-01	-2.83E-01	NA						
	4	003			10/2/2007	13:54	-2.51E+01	6.94E-02	5.37E+00	1.84E+00	NA						
	4	004			11/9/2007	16:18	5.00E+01	-4.97E-02	2.60E+00	-2.49E-01	NA						
	1	005			1/8/2008	10:08	9.26E+01	-4.64E-01	-7.91E-01	2.58E-01	NA						
MW-51-104	2	001	103.7	-36.0	5/30/2007	11:05	5.71E+01	-6.74E-02	1.25E+00	7.70E-02	NA	ND	ND	ND	NA	MW-51-104	
	3	002			7/24/2007	17:06	9.07E+01	3.62E-01	-4.20E+00	1.42E+00	NA						
	4	003			10/2/2007	11:45	3.67E+01	4.21E-02	5.71E+00	-8.32E-01	NA						
	4	004			11/9/2007	14:35	5.17E+01	-2.40E-01	-1.26E+00	1.15E+00	NA						
	1	005			1/8/2008	12:15	-4.84E+00	-6.19E-02	-9.37E-01	-3.84E-01	NA	ND	ND	ND	NA	MW-51-135	
MW-51-135	2	001	135.2	-67.5	5/30/2007	13:00	8.24E+01	-4.68E-01	-4.01E-01	2.56E+00	NA						
	3	002			7/24/2007	12:40	9.31E+01	5.33E-02	-4.56E-01	3.42E-01	NA						
	4	003			10/2/2007	12:05	3.04E+01	-3.08E-02	2.16E+01	5.46E-01	NA						
	4	004			11/9/2007	11:55	9.83E+01	-2.42E-01	-7.27E-01	-3.14E-01	NA						
	1	005			1/8/2008	13:20	4.91E+01	3.47E-02	6.30E-02	1.43E-02	NA						
MW-51-163	2	001	162.7	-95.0	5/30/2007	14:40	1.18E+02	3.29E-01	-2.81E-01	1.77E-01	NA	ND	ND	ND	NA	MW-51-163	
	3	002			7/24/2007	14:05	4.98E+01	1.05E-01	-2.43E-01	8.64E-02	NA						
	4	003			10/2/2007	13:35	4.23E+01	8.07E-02	1.16E+01	2.11E+00	NA						
	4	004			11/9/2007	13:32	7.30E+01	2.08E-01	1.41E-01	-1.11E+00	NA						
	1	005			1/8/2008	13:57	-1.99E+01	4.40E-01	-1.74E+00	8.69E-02	NA						
MW-51-189	2	001	189.2	-121.5	5/30/2007	14:00	1.87E+02	-2.88E-02	-3.62E-02	4.56E+00	NA	1.87E+02	ND	ND	NA	MW-51-189	
	3	002			7/24/2007	13:15	9.49E+01	3.93E-01	-8.87E-01	1.57E+00	NA						
	4	003			10/2/2007	12:20	8.45E+00	-5.06E-02	1.38E+01	-4.14E-01	NA						

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TABLE 3 - Q1-08 Analytical Data & Averages.xls  
Table 3-Rolling Data & Averages







TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth Ft Below Top of Casing	SAMPLE ZONE CENTER, Elevation Ft msd <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS						YEARLY ROLLING AVERAGES <sup>4</sup>						Well ID	
					Date	Time	TRITIUM (pCi/l)	Result	Sp-90 (pCi/l)	Result	Cs-137 (pCi/l)	Result	Co-60 (pCi/l)	Result	TRITIUM (pCi/l)	Average	Sp-90 (pCi/l)	Average		Cs-137 (pCi/l)
MW-63-18	2	001	14.9	0.7	5/18/2007	10:35	2.30E+02	4.75E-02	8.56E-01	1.11E+00	7.36E+00	2.15E+02	ND	ND	ND	ND	ND	ND	ND	MW-63-18
	3	002			7/30/2007	13:10	2.00E+02	-2.18E-01	1.98E+00	-1.31E+00	NA									
	4	003			10/11/2007	12:43	1.49E+02	3.08E-01	1.52E+00	-1.41E-01	NA									
	1	004			1/9/2008	14:55	1.23E+02	-6.34E-02	2.55E+00	1.97E+00	NA									
MW-63-34	2	001	31.5	-17.3	5/18/2007	13:03	2.28E+02	-1.62E-01	4.10E-01	-3.25E-01	1.57E+00	2.66E+02	ND	ND	ND	ND	ND	ND	MW-63-34	
	3	002			7/30/2007	13:28	2.80E+02	-1.64E-01	1.73E-01	3.98E-01	NA									
	4	003			10/11/2007	12:50	2.31E+02	-2.75E-01	1.83E+00	-6.24E-01	NA									
	1	004			1/9/2008	14:20	3.56E+02	1.24E-01	1.83E+00	3.53E-01	NA									
MW-63-50	2	001	49.5	-37.2	5/15/2007	11:48	3.26E+02	-9.70E-02	-1.33E-01	6.64E-01	-2.41E+00	2.59E+02	ND	ND	ND	ND	ND	ND	MW-63-50	
	3	002			7/25/2007	14:00	2.55E+02	1.29E-01	2.08E+00	-1.58E-01	NA									
	4	003			10/11/2007	11:10	2.89E+02	-3.41E-01	6.21E-01	1.56E+00	NA									
	1	004			1/9/2008	12:32	3.56E+02	4.48E-01	3.37E-01	-1.42E+00	NA									
MW-63-93	2	002	93.0	-80.7	5/15/2007	14:34	2.81E+02	8.20E-02	1.87E-01	9.57E-01	NA	2.44E+02	ND	ND	ND	ND	ND	ND	MW-63-93	
	3	003			7/25/2007	14:45	2.37E+02	-4.43E-01	1.24E+00	9.28E-03	NA									
	4	004			10/11/2007	11:17	1.15E+02	8.19E-01	-6.98E-01	-1.77E+00	NA									
	1	005			1/9/2008	12:46	2.15E+02	1.86E-01	7.74E-01	1.05E-01	NA									
MW-63-112	2	001	111.5	-99.2	5/15/2007	13:10	4.24E+02	-5.27E-02	2.58E+00	9.59E-01	-5.14E+00	3.60E+02	ND	ND	ND	ND	ND	ND	MW-63-112	
	3	002			7/25/2007	14:52	2.69E+02	6.32E-02	6.92E-01	-6.35E-01	NA									
	4	003			10/11/2007	13:45	2.78E+02	-7.94E-02	-3.04E+00	7.65E-01	NA									
	1	004			1/9/2008	10:20	4.69E+02	2.19E-01	3.90E-01	2.87E-01	NA									
MW-63-121	2	001	121.0	-108.7	5/15/2007	13:42	3.11E+02	3.00E-01	6.30E-01	-1.19E+00	2.29E+00	4.02E+02	ND	ND	ND	ND	ND	ND	MW-63-121	
	3	002			7/25/2007	11:50	2.56E+02	3.19E-01	-1.31E+00	1.70E-01	NA									
	4	003			10/11/2007	13:51	4.62E+02	2.39E-01	2.48E+00	1.54E+00	NA									
	1	004			1/9/2008	10:42	5.40E+02	2.06E-02	2.54E+00	1.09E+00	NA									
MW-63-163	2	001	162.5	-150.2	5/15/2007	11:38	5.78E+02	-6.43E-02	-8.04E-01	9.51E-01	-9.58E-01	4.94E+02	ND	ND	ND	ND	ND	ND	MW-63-163	
	3	002			7/25/2007	12:13	4.79E+02	-7.20E-01	-3.18E+00	-4.54E-01	NA									
	4	003			10/11/2007	14:18	3.79E+02	7.93E-03	-4.16E-01	-1.91E-02	NA									
	1	004			1/9/2008	10:51	5.68E+02	3.19E-03	-4.52E-01	2.23E+00	NA									
MW-63-174	2	001	174.0	-161.7	5/15/2007	11:54	5.93E+02	2.64E-01	-6.91E-01	8.16E-03	1.30E+00	5.29E+02	ND	ND	ND	ND	ND	ND	MW-63-174	
	3	002			7/25/2007	12:00	5.28E+02	-2.78E-01	6.28E-01	-3.03E-01	NA									
	4	003			10/11/2007	14:22	3.70E+02	-2.85E-01	1.94E+00	-8.59E-01	NA									
	1	004			1/9/2008	10:45	6.23E+02	6.16E-01	-1.24E+00	1.48E+00	NA									
MW-66-21	3	001	14.1	0	7/30/2007	13:45	3.57E+03	1.79E+00	1.77E-01	2.21E+00	NA	1.81E+03	1.76E+00	ND	ND	ND	ND	MW-66-21		
	4	002			10/15/2007	10:45	1.04E+03	2.42E+00	-8.32E-01	1.01E-01	1.48E+01									
	1	003			1/4/2008	11:33	8.18E+02	1.09E+00	1.68E+00	2.35E+00	-5.07E+00									
	3	001	33.6	-19.5	7/30/2007	12:49	9.10E+03	6.20E+00	-9.84E-01	-5.59E-01	NA	8.44E+03	1.08E+01	ND	ND	ND	ND	MW-66-36		
MW-67-39	4	002			10/15/2007	10:16	8.95E+03	1.12E+01	0.00E+00	-2.92E-01	1.17E+01									
	1	003			1/4/2008	11:40	7.26E+03	1.51E+01	2.34E+00	-1.08E+00	7.19E+00									
	3	001	38.3	-25.8	8/31/2007	12:05	4.86E+03	1.86E+01	-1.93E-01	-9.45E-01	NA	4.61E+03	2.30E+01	1.02E+01	ND	ND	ND	MW-67-39		
	4	002			10/12/007	11:30	5.07E+03	2.71E+01	1.02E+01	3.69E-01	2.51E+00									
MW-67-105	1	004			1/11/2008	16:44	4.35E+03	2.59E+01	0.00E+00	1.77E+00	1.53E+01									
	3	001	104.8	-92.3	2/25/2008	15:38	4.17E+03	2.05E+01	-1.15E+00	1.99E+00	-5.41E-01									
	4	002			8/31/2007	12:35	1.86E+03	1.11E+00	2.26E-01	-3.08E-01	NA	2.33E+03	1.12E+00	ND	ND	ND	ND	MW-67-105		
	1	003			10/12/007	11:40	2.64E+03	4.12E-01	0.00E+00	-4.57E-01	1.05E+01									
				1/11/2008	15:15	2.43E+03	7.58E-01	9.32E+00	7.41E-01	1.81E+01										

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Table 3-Rolling Data & Averages

TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth ft Below Top of Casing	SAMPLE ZONE CENTER, Elevation ft msd <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS				YEARLY ROLLING AVERAGES <sup>4</sup>				Well ID			
					Date	Time	TRITIUM (pCi/l)	Result	Co-60 (pCi/l)	Result	Cs-137 (pCi/l)	Result	TRITIUM (pCi/l)	Average		Sr-90 (pCi/l)	Average	Cs-137 (pCi/l)
MW-67-105	1	004			2/25/2008	13:44	2.38E+03	1.13E+00	-1.27E+00	-1.27E+00	-4.79E-02	1.24E+01	9.27E+02	ND	ND	ND	ND	MW-67-173
MW-67-173	3	001	172.3	-159.8	8/31/2007	13:04	1.05E+03	3.73E-01	-1.46E+00	-1.46E+00	1.19E-02	NA						
	4	002			10/1/2007	12:30	1.01E+03	1.48E-01	-1.34E+00	-1.34E+00	2.82E+00	4.12E+00						
	1	003			1/11/2008	13:35	6.95E+02	2.14E-01	5.82E+00	-1.79E+00	-1.79E+00	1.36E+01						
MW-67-219	3	001	218.8	-206.3	2/25/2008	14:00	9.51E+02	-4.12E-01	6.65E-01	-3.63E-01	-3.63E-01	-5.55E+00	1.18E+03	ND	ND	ND	ND	MW-67-219
	4	002			8/31/2007	13:43	1.52E+03	3.27E-02	-1.58E-01	9.02E-01	9.02E-01	NA						
	1	003			10/1/2007	12:53	9.46E+02	-2.27E-01	1.48E-01	1.38E-01	1.38E-01	1.21E+01						
	1	004			1/11/2008	12:05	1.28E+03	4.22E-01	4.25E+00	-1.01E+00	-1.01E+00	9.12E+00						
MW-67-276	3	001	275.3	-262.8	2/25/2008	11:43	1.23E+03	-7.61E-02	-1.33E+00	1.08E+00	1.08E+00	1.23E+01	9.72E+02	ND	ND	ND	ND	MW-67-276
	4	002			8/31/2007	12:20	6.79E+02	-3.34E-01	1.36E+00	-9.09E-01	-9.09E-01	NA						
	1	003			10/1/2007	13:04	1.11E+03	3.82E-02	-3.32E+00	-3.17E-01	-3.17E-01	5.04E-01						
	1	004			1/11/2008	13:00	1.03E+03	9.99E-02	4.53E+00	-4.84E-01	-4.84E-01	8.92E+00						
MW-67-323	3	001	322.3	-309.8	8/31/2007	13:20	3.13E+02	-2.41E-01	1.14E+00	1.79E-01	1.79E-01	NA	5.87E+02	ND	ND	ND	ND	MW-67-323
	4	002			10/1/2007	14:08	1.29E+03	5.67E-01	-5.77E-01	-6.19E-01	-6.19E-01	5.25E-01						
	1	003			1/11/2008	13:52	3.74E+02	3.98E-01	3.85E+00	1.69E+00	1.69E+00	1.69E+00						
	1	004			2/25/2008	11:59	3.72E+02	3.61E-01	-2.08E-01	1.29E+00	1.29E+00	6.85E+00						
MW-67-340	3	001	339.8	-327.3	8/31/2007	12:54	3.69E+02	1.69E-01	6.52E-01	4.53E-01	4.53E-01	NA	4.32E+02	ND	ND	ND	ND	MW-67-340
	4	002			10/1/2007	14:00	3.90E+02	1.42E-01	7.29E-01	-1.22E+00	-1.22E+00	3.89E+00						
	1	003			1/11/2008	12:00	4.78E+02	-2.17E-01	-1.38E+00	-1.38E+00	-1.38E+00	5.72E+00						
	1	004			2/25/2008	12:00	4.78E+02	-2.17E-01	-1.38E+00	-1.38E+00	-1.38E+00	5.72E+00						
MW-107	3	005	32.7	110.1	7/23/2007	14:18	8.92E+01	1.66E-01	8.13E-01	1.03E-01	1.03E-01	NA	ND	ND	ND	ND	NA	MW-107
MW-111	2	024	16.5	2.4	6/15/2007	14:17	1.19E+03	9.74E-01	-7.53E-01	1.21E-01	1.21E-01	6.34E+00	8.85E+04	1.50E+00	ND	ND	ND	MW-111
	3	025			8/3/2007	9:53	9.88E+04	9.74E-01	4.24E-01	3.95E-01	3.95E-01	NA						
	1	026			1/28/2008	11:38	4.77E+04	2.56E+00	2.60E+00	-6.32E-01	-6.32E-01	1.33E+01						
U3-4D	1	015	25.6	-10.8	2/1/2008	12:40	3.75E+02	-1.78E-01	2.83E-01	1.41E+00	1.41E+00	NA	3.75E+02	ND	ND	ND	ND	U3-4D
U3-T1	2	016	5.7	2.8	6/12/2007	12:54	5.66E+02	6.25E-01	-8.51E-02	7.17E-01	7.17E-01	-1.76E+00	5.64E+02	ND	ND	ND	ND	U3-T1
	3	017			8/1/2007	13:20	4.90E+02	5.21E-02	8.49E-01	2.88E-01	2.88E-01	NA						
	4	018			10/22/2007	16:13	5.30E+02	3.41E-01	-1.08E+00	-1.34E+00	-1.34E+00	NA						
	1	019-B <sup>4</sup>			1/22/2008	16:11	7.29E+02	6.26E-01	1.21E+00	-1.79E-01	-1.79E-01	8.87E+00						
	1	019-D <sup>4</sup>			1/22/2008	16:11	2.54E+01	1.62E-01	7.29E-01	-2.53E-01	-2.53E-01	-1.42E+00						
	1	019-S <sup>4</sup>			1/22/2008	16:11	6.05E+02	6.43E-01	1.11E+00	2.38E-01	2.38E-01	1.14E+01						
U3-T2	2	021	5.7	2.6	6/12/2007	9:25	1.75E+03	-3.89E-01	2.03E-01	-2.33E-01	-2.33E-01	2.61E+02	1.30E+03	ND	ND	ND	ND	U3-T2
	3	022			8/1/2007	14:14	1.25E+03	-4.84E-02	-1.75E+00	1.99E-02	1.99E-02	NA						
	4	023			10/22/2007	15:07	1.17E+03	2.36E-01	-7.13E-02	2.53E+00	2.53E+00	NA						
U1-CSS	1	024			1/22/2008	16:16	1.33E+03	4.31E-01	7.39E-01	-1.14E+00	-1.14E+00	2.78E+00	1.67E+03	1.65E+01	ND	ND	ND	U1-CSS
	2	003	14.0	6.1	6/13/2007	11:39	1.53E+03	1.45E+01	8.50E+01	2.82E+00	2.82E+00	4.42E+00						
	3	004			8/6/2007	15:55	2.80E+03	2.68E+01	2.53E+00	-6.88E-02	-6.88E-02	NA						
LAF-002	1	005	NA	-22.3	1/15/2008	14:54	4.55E+02	7.73E+00	2.85E+00	7.80E-01	7.80E-01	NA	ND	ND	ND	ND	NA	LAF-002
	2	006			6/7/2007	13:18	-6.85E+00	3.19E-01	7.80E-01	6.55E-01	6.55E-01	NA						
	3	007			10/9/2007	9:35	7.46E+01	4.43E-01	-5.45E-01	-1.44E+00	-1.44E+00	NA						
	4	008			12/4/2007	10:50	9.00E+01	4.89E-01	-6.91E-01	-2.35E+00	-2.35E+00	NA						
MH-5 <sup>45</sup>	2	001	NA	NA	6/29/2007	12:15	1.41E+03	-3.26E-01	-9.57E-01	6.39E-02	6.39E-02	NA	1.28E+03	ND	ND	ND	NA	MH-5

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TABLE 3 - Q1-08 Analytical Data & Averages.xls  
Table 3-Rolling Data & Averages

TABLE 3  
2007-2008 GROUNDWATER ANALYTICAL RESULTS  
AND AVERAGES  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLING QUARTER <sup>2</sup>	SAMPLE ID	SAMPLE ZONE CENTER, Depth ft Below Top of Casing	SAMPLE ZONE CENTER, Elevation ft msl <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS				YEARLY ROLLING AVERAGES <sup>4</sup>				Well ID	
					Date	Time	TRITIUM (pCi/l)	Sr-90 (pCi/l)	Cs-137 (pCi/l)	Co-60 (pCi/l)	NI-63 (pCi/l)	TRITIUM (pCi/l)	Sr-90 (pCi/l)	Cs-137 (pCi/l)		Co-60 (pCi/l)
MIL-5 <sup>5</sup>	3	002			8/10/2007	15:15	1.17E+03	3.17E-02	-5.40E-01	-8.50E-01	NA					
	4	003			10/26/2007	13:30	1.62E+03	1.60E-01	2.15E-01	-6.20E-01	NA					
	1	004			1/16/2008	12:30	9.28E+02	4.62E-01	5.25E-01	5.97E-01	NA					
	2	001	NA		6/29/2007	12:35	7.93E+02	-3.83E-01	0.00E+00	-9.13E-01	NA					
B-1 <sup>6</sup>	3	002			8/14/2007	11:30	1.10E+03	1.29E-02	0.00E+00	9.94E-01	NA					
	4	003			10/22/2007	14:49	1.10E+03	-1.56E-01	1.68E+01	1.33E+00	NA					
	1	004			1/22/2008	13:08	2.27E+02	1.29E-01	3.13E-01	-9.46E-02	NA					
	2	001	NA		7/5/2007	9:00	4.03E+02	1.07E-01	1.29E+00	1.09E+00	NA					
B-6 <sup>15</sup>	3	002			8/14/2007	8:30	5.46E+01	-3.06E-01	5.63E-01	-2.88E+00	NA					
	4	003			10/22/2007	11:30	1.07E+02	-7.54E-02	2.39E+00	1.04E+00	NA					
	1	004			1/16/2008	16:50	4.72E+02	1.05E-01	3.96E+00	1.29E+00	NA					

Notes:

- For nested multi-level monitoring wells, suffix of well ID indicates depth (rounded to nearest foot) from reference point on casing to bottom of well screen. For Waterloo multi-level systems, suffix indicates depth (rounded to nearest foot) from reference point on casing to top of sampling port. Well IDs without a suffix are open bedrock wellbores.
- This sampling program began in May 2007, and thus, analytical results from only the last three quarters of 2007 (quarter 2, 3, and 4) are provided.
- Sampling depths within sampling intervals (i.e. location of pump intake) have been located adjacent to a transmissive zone where possible.
- Averages provided are analytical result averages of samples collected from each monitoring location within the last three sampling quarters. Monitoring locations are sampled quarterly, bi-annually, or annually. Thus some averages provided may be the average of one, two, three, or more samples.
- Select wells such as MW-30-69 were sampled more than once during a given quarter. In instances where more than one set of results appears for the same Sample ID, the sample was analyzed more than once for the same radionuclide. In these circumstances, only the higher result is used to calculate averages.
- NA indicates that the constituent was not analyzed.
- ND indicates that all of the analytical results used to calculate the average were less than MDC and/or 3 times the 1 sigma uncertainty.
- MW-32 sampling intervals from the 2nd and 3rd quarters were part of the previous Waterloo System configuration in MW-32, prior to the new configuration installed on September 10, 2007. New configuration sampling intervals are indicated by footnote 7.
- MW-32 currently contains a Waterloo Multilevel Sampling System configured with the 2007 4th quarter and 2008 1st quarter sampling intervals. A previous installation of a Waterloo System within MW-32 (prior to the September 10, 2007 installation of the new configuration) was configured with different sampling intervals (indicated by footnote 8). New configuration sampling intervals listed in parenthesis are representatively equivalent to the old configuration sampling interval immediately preceding it. New configuration sampling intervals not listed in parenthesis have no representative equivalent within the old configuration.
- Dot pattern denotes sampling interval is positioned within overburden. Open box indicates sampling interval is in bedrock.
- Due to unexpectedly high levels of Cs-137 detected in the original set of the 1st Quarter 2008 samples collected from MW-50, a second set of samples were collected and analyzed. Quality control review of the original analysis showed no evidence of error in laboratory analysis or field collection procedures. However, historical data and data for the second set of samples showed results below MDC and below three times the 1 sigma uncertainty (not positive) for Cs-137 at this location, suggesting that the first set of results do not appropriately characterize activity at this location. Thus, results for the first set of MW67 samples during Quarter 1 were not used to calculate yearly averages.
- Due to unexpectedly high levels of Cs-137 detected in the original set of the 4th Quarter 2007 samples collected from MW-51, a second set of samples were collected and analyzed. Quality control review of the original analysis showed no evidence of error in laboratory analysis or field collection procedures. However, historical data and the results of the second set of MW51 samples showed negative results for Cs-137 at this location, suggesting that the first set of results do not appropriately characterize activity at this location. Thus, results for the first set of MW51 samples during Quarter 4 were not used to calculate yearly averages.
- Due to unexpectedly high levels of Cs-137 detected in the original set of the 1st Quarter 2008 samples collected from MW-67, a second set of samples were collected and analyzed. Quality control review of the original analysis showed no evidence of error in laboratory analysis or field collection procedures. However, historical data and data for the second set of samples showed results below MDC and below three times the 1 sigma uncertainty (not positive) for Cs-137 at this location, suggesting that the first set of results do not appropriately characterize activity at this location. Thus, results for the first set of MW67 samples during Quarter 1 were not used to calculate yearly averages.
- At monitoring well U3T1, sample IDs 019-B, 019-D, and 019-S were collected for laboratory and field OAOQ (B=Blind, D=Duplicate, S=Spike). The greater value of duplicates or samples was used to calculate rolling averages. Blind and Spikes were n









TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msd <sup>3</sup>	SAMPLE COLLECTION				ANALYSIS RESULTS												Well ID <sup>1</sup>
				Date	Time	TRITIUM (pCi/L)		Sr-90 (pCi/L)		Cs-137 (pCi/L)		Co-60 (pCi/L)		Ni-63 (pCi/L)		MDC	MDC			
						Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result			Std. Dev.	MDC	
MW-32-62 <sup>5</sup>	001			8/13/2007	13:07	1.42E+04	6.00E+02	1.99E+02	-2.71E-01	5.58E-01	7.58E-01	1.48E+00	2.10E+00	3.22E+00	-4.66E-01	3.30E+00	3.65E+00	NA	NA	NA
(MW-32-59) <sup>4</sup>	001	58.8	18.3	10/26/2007	12:07	1.11E+04	4.61E+02	1.84E+02	3.22E-01	6.43E-01	7.36E-01	1.54E+00	3.87E+00	3.87E+00	2.45E+00	3.06E+00	4.08E+00	NA	NA	(MW-32-59) <sup>4</sup>
	005			1/18/2008	13:25	1.87E+04	9.11E+02	1.86E+02	4.67E-01	6.96E-01	7.57E-01	9.98E+00	4.25E+00	4.79E+00	1.99E+00	3.81E+00	4.65E+00	NA	NA	NA
MW-32-92 <sup>5</sup>	001	90.5	-13.4	1/19/2007	9:40	1.12E+04	8.40E+02	5.30E+02	3.20E-01	1.47E+00	1.60E+00	1.57E+00	2.82E+00	3.10E+00	9.00E-01	4.20E+00	4.80E+00	NA	NA	MW-32-92 <sup>5</sup>
	002			6/28/2007	15:05	5.42E+03	3.77E+02	1.95E+02	-4.15E-01	5.10E-01	6.75E-01	-1.70E-01	2.77E+00	3.03E+00	-3.05E-01	3.19E+00	3.21E+00	NA	NA	NA
	003			8/13/2007	10:48	5.70E+03	4.05E+02	2.01E+02	-2.45E-02	4.47E-01	5.75E-01	3.28E-01	2.11E+00	3.15E+00	9.90E-01	2.98E+00	3.53E+00	NA	NA	NA
(MW-32-85) <sup>4</sup>	004	85.3	85.3	10/26/2007	11:12	1.26E+04	4.79E+02	1.79E+02	-1.17E-01	4.27E-01	6.25E-01	8.85E-01	2.97E+00	3.45E+00	-1.85E-02	3.23E+00	3.63E+00	NA	NA	(MW-32-85) <sup>4</sup>
	005			1/18/2008	14:50	1.07E+04	6.90E+02	1.83E+02	-3.03E-01	4.38E-01	7.35E-01	3.57E-01	2.64E+00	2.67E+00	-5.37E-01	1.97E+00	2.13E+00	NA	NA	MW-32-140 <sup>5</sup>
MW-32-140 <sup>5</sup>	001	138.0	-60.9	1/19/2007	9:45	1.13E+04	8.40E+02	5.30E+02	-1.03E-00	1.47E+00	1.70E+00	-6.00E-02	2.04E+00	2.30E+00	3.00E-02	2.07E+00	2.40E+00	NA	NA	NA
	002			6/28/2007	12:45	3.02E+02	1.88E+02	1.97E+02	-1.39E-01	5.13E-01	5.94E-01	-1.46E+00	5.09E+00	4.92E+00	9.88E-01	3.76E+00	4.38E+00	NA	NA	NA
	003			8/13/2007	11:15	1.29E+02	1.70E+02	1.87E+02	2.69E-01	7.33E-01	8.51E-01	-8.09E-01	4.85E+00	4.83E+00	-1.19E+00	3.29E+00	3.22E+00	NA	NA	NA
(MW-32-131) <sup>4</sup>	004	130.8	-53.7	10/26/2007	10:11	3.74E+02	2.39E+02	2.42E+02	2.47E-01	6.03E-01	7.06E-01	-1.81E-01	3.48E+00	3.21E+00	-2.55E-01	3.92E+00	3.99E+00	NA	NA	(MW-32-131) <sup>4</sup>
	005			1/18/2008	11:23	5.04E+02	2.07E+02	1.79E+02	5.14E-01	7.79E-01	8.52E-01	8.47E-01	2.19E+00	2.21E+00	-8.40E-02	1.98E+00	2.18E+00	NA	NA	NA
MW-32-165 <sup>5</sup>	001	163.0	-85.9	1/19/2007	9:50	1.05E+04	8.70E+02	5.70E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-32-165 <sup>5</sup>
	002			6/28/2007	13:06	5.81E+02	2.03E+02	1.97E+02	-2.82E-01	7.33E-01	9.70E-01	8.54E-01	2.85E+00	2.94E+00	-8.16E-01	2.46E+00	2.60E+00	NA	NA	NA
	003			8/13/2007	11:35	4.93E+02	2.09E+02	2.08E+02	-6.38E-01	3.81E-01	6.52E-01	-1.42E+00	3.76E+00	3.37E+00	1.63E+00	1.69E+00	2.91E+00	NA	NA	NA
(MW-32-149) <sup>4</sup>	004	149.3	-72.2	10/26/2007	10:10	2.92E+03	2.94E+02	1.90E+02	-2.45E-01	4.89E-01	7.22E-01	1.99E-01	3.10E+00	3.51E+00	1.65E-01	3.56E+00	3.99E+00	NA	NA	(MW-32-149) <sup>4</sup>
	005			1/18/2008	11:18	1.15E+03	2.69E+02	1.85E+02	3.04E-01	8.25E-01	9.53E-01	2.94E+00	4.29E+00	3.08E+00	-8.74E-01	2.82E+00	2.93E+00	NA	NA	NA
MW-32-173 <sup>4</sup>	001	172.8	-95.7	10/26/2007	9:55	5.89E+03	3.87E+02	1.92E+02	1.86E-02	5.87E-01	7.54E-01	6.92E-01	3.00E+00	3.51E+00	-9.97E-01	2.91E+00	3.02E+00	NA	NA	MW-32-173 <sup>4</sup>
	002			1/18/2008	11:05	3.40E+03	4.07E+02	1.82E+02	1.13E-01	6.02E-01	7.63E-01	-3.84E-01	2.00E+00	2.18E+00	-6.14E-01	2.09E+00	2.25E+00	NA	NA	NA
MW-32-195 <sup>5</sup>	001	194.5	-117.4	1/19/2007	9:55	1.13E+04	8.40E+02	5.20E+02	4.20E-01	1.50E+00	1.70E+00	2.60E-01	1.26E+00	1.40E+00	7.10E-01	1.50E+00	1.70E+00	NA	NA	MW-32-195 <sup>5</sup>
	002			6/28/2007	13:07	2.41E+03	2.72E+02	1.87E+02	-5.69E-02	6.12E-01	8.20E-01	1.52E+00	3.07E+00	3.64E+00	-1.29E+00	3.27E+00	3.39E+00	NA	NA	NA
	003			8/13/2007	11:25	1.72E+03	2.67E+02	2.03E+02	-3.65E-01	8.12E-01	1.04E+00	6.21E-01	2.49E+00	2.93E+00	-1.19E+00	2.38E+00	2.37E+00	NA	NA	NA
(MW-32-190) <sup>4</sup>	004	190.3	-113.7	10/26/2007	9:53	9.76E+03	4.80E+02	1.93E+02	-5.05E-01	7.75E-01	9.73E-01	-6.17E-01	3.07E+00	3.27E+00	-1.94E-01	3.18E+00	3.57E+00	NA	NA	(MW-32-190) <sup>4</sup>
	005			1/18/2008	11:35	8.89E+03	6.32E+02	1.83E+02	4.28E-01	7.73E-01	8.69E-01	6.57E-01	1.71E+00	2.02E+00	5.18E-01	1.65E+00	1.96E+00	NA	NA	NA
	006			12/15/2005	8:00	1.42E+05	4.26E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-33
	002			12/19/2005	11:38	1.99E+05	5.97E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	003			12/29/2005	11:30	2.20E+05	6.60E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	004			1/6/2006	12:30	1.89E+05	5.67E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	005			1/13/2006	12:10	2.32E+05	6.96E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	006			1/20/2006	10:40	2.26E+05	6.78E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	007			1/27/2006	11:10	2.42E+05	7.26E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	008			2/7/2006	12:15	2.50E+05	2.84E+04	6.33E+02	1.36E-01	5.05E-01	6.25E-01	5.05E-01	6.25E-01	6.25E-01	6.25E-01	6.25E-01	6.25E-01	NA	NA	NA
	010			2/16/2006	13:55	2.61E+05	2.91E+04	6.36E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	011			3/3/2006	10:20	2.53E+05	7.59E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	012			4/7/2006	10:25	2.21E+05	6.63E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	014			5/17/2006	12:50	1.35E+05	2.01E+04	1.60E+03	7.79E-01	1.43E+00	1.47E+00	1.17E+01	1.19E+01	1.37E+01	4.62E+00	1.41E+01	1.28E+01	NA	NA	NA
	015			6/7/2006	10:15	1.41E+05	1.85E+04	1.32E+03	6.74E-01	5.63E-01	6.44E-01	6.98E-01	8.72E+00	9.58E+00	-6.11E+00	8.63E+00	8.02E+00	NA	NA	NA
	017			7/3/2006	9:50	2.64E+05	2.01E+04	3.85E+03	4.78E-01	1.37E+00	1.57E+00	-6.85E-01	1.17E+01	1.27E+01	-5.24E+00	1.28E+01	1.21E+01	NA	NA	NA
	018			8/4/2006	8:15	1.84E+05	2.54E+04	1.87E+03	NA	NA	NA	3.53E+00	6.31E+00	7.84E+00	-1.14E+00	7.35E+00	8.60E+00	NA	NA	NA
	019			8/30/2006	13:00	1.15E+05	1.77E+04	1.37E+03	NA	NA	NA	6.99E-01	8.47E+00	8.90E+00	3.71E+00	7.21E+00	9.60E+00	NA	NA	NA
	020	16	2.8	6/15/2007	15:48	9.06E+04	3.26E+03	3.61E+02	-2.82E-01	2.86E-01	4.85E-01	-2.78E-01	3.82E+00	3.76E+00	-1.64E+00	3.44E+00	3.39E+00	-8.12E-01	1.16E+01	1.37E+01
	021			8/3/2007	10:20	2.30E+04	7.08E+02	2.04E+02	5.80E-01	8.49E-01	9.33E-01	8.18E-01	2.37E+00	2.83E+00	2.45E-01	2.13E+00	2.46E+00	NA	NA	NA
MW-34	002	18.9	-0.4	12/13/2005	13:53	6.39E+04	1.92E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-34
	002			12/19/2005	10:35	1.21E+05	3.63E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 5 - Q1-08 Historic Contaminant Data.xls

Historic







TABLE 5  
 HISTORIC GROUNDWATER ANALYTICAL RESULTS  
 INDIAN POINT ENERGY CENTER  
 BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msl <sup>3</sup>	SAMPLE COLLECTION			ANALYSIS RESULTS												Well ID <sup>1</sup>						
				Date	Time	MDC	TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)				Ni-63 (pCi/L)					
							Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		Result	Std. Dev.	MDC			
MW-40-46	001	46.2	27.0	6/5/2007	11:50	1.42E+02	1.58E+02	1.56E+02	1.17E-01	5.82E-01	8.28E-01	7.90E-01	3.39E+00	-1.72E+00	2.70E+00	2.20E+00	NA	NA	NA	NA	NA	NA	NA	NA	MW-40-46
	002			7/23/2007	12:15	9.48E+01	1.53E+02	1.71E+02	3.50E-01	5.61E-01	6.88E-01	9.08E-01	3.79E+00	4.09E+00	2.97E+00	2.20E+00	NA	NA	NA	NA	NA	NA	NA	NA	
	003			10/12/2007	14:45	1.59E+01	1.52E+02	1.74E+02	2.21E+02	5.10E-01	6.85E-01	3.80E-01	3.72E+00	3.59E+00	4.94E-01	3.72E+00	4.26E+00	NA	NA	NA	NA	NA	NA	NA	
MW-40-81	001	80.7	-7.5	6/5/2007	12:37	1.96E+01	1.45E+02	1.80E+02	8.04E-01	8.53E-01	9.11E-01	1.21E+00	2.84E+00	3.00E+00	1.16E+00	2.58E+00	2.82E+00	NA	NA	NA	NA	NA	NA	NA	MW-40-81
	002			7/23/2007	13:00	6.95E+01	1.52E+02	1.72E+02	2.45E-01	6.00E-01	6.94E-01	5.74E-01	4.95E+00	5.20E+00	2.31E+00	3.81E+00	4.95E+00	NA	NA	NA	NA	NA	NA	NA	
	003			10/12/2007	10:52	6.99E+01	1.53E+02	1.73E+02	5.05E-01	7.10E-01	7.10E-01	5.47E-01	4.00E+00	4.48E+00	7.73E-01	4.02E+00	4.64E+00	NA	NA	NA	NA	NA	NA	NA	
	004			1/7/2008	14:35	1.09E+01	1.64E+02	1.81E+02	2.87E-01	7.05E-01	8.26E-01	7.49E-01	2.51E+00	2.38E+00	2.66E-01	1.77E+00	1.95E+00	NA	NA	NA	NA	NA	NA	NA	
MW-40-100	001	100.2	-27.0	6/5/2007	11:15	1.70E+02	1.61E+02	1.64E+02	3.40E-01	6.16E-01	6.94E-01	1.92E+00	3.02E+00	3.04E+00	1.58E+00	3.87E+00	3.29E+00	NA	NA	NA	NA	NA	NA	NA	MW-40-100
	002			7/23/2007	13:20	8.12E+01	1.55E+02	1.75E+02	2.91E-01	6.18E-01	6.96E-01	4.67E-01	1.91E+00	2.10E+00	1.78E-01	1.94E+00	2.50E+00	NA	NA	NA	NA	NA	NA	NA	
	003			10/12/2007	11:03	5.95E+01	1.53E+02	1.73E+02	7.39E-02	5.75E-01	7.69E-01	1.93E+00	3.57E+00	3.87E+00	8.90E-01	3.30E+00	3.61E+00	NA	NA	NA	NA	NA	NA	NA	
	004			1/7/2008	11:55	1.98E+01	1.52E+02	1.81E+02	7.69E-02	5.85E-01	8.00E-01	3.13E-01	2.27E+00	2.60E+00	8.84E-02	2.75E+00	2.86E+00	NA	NA	NA	NA	NA	NA	NA	
MW-40-127	001	127.2	-51.0	6/5/2007	12:55	1.87E+01	1.63E+02	1.63E+02	2.60E-01	5.05E-01	5.71E-01	7.57E-01	2.98E+00	3.41E+00	5.59E-03	2.94E+00	3.26E+00	NA	NA	NA	NA	NA	NA	NA	MW-40-127
	002			7/23/2007	15:15	4.26E+01	1.44E+02	1.68E+02	3.83E-01	5.15E-01	5.73E-01	1.17E+00	1.67E+00	1.76E+00	2.04E-01	1.59E+00	1.77E+00	NA	NA	NA	NA	NA	NA	NA	
	003			10/12/2007	11:30	2.83E+01	1.44E+02	1.64E+02	1.01E-01	4.97E-01	6.24E-01	2.32E+00	3.90E+00	4.06E+00	1.51E+00	3.72E+00	3.79E+00	NA	NA	NA	NA	NA	NA	NA	
	004			1/7/2008	12:30	9.75E+00	1.48E+02	1.79E+02	5.17E-01	6.83E-01	7.23E-01	6.45E-01	2.42E+00	2.77E+00	3.24E-01	2.28E+00	2.59E+00	NA	NA	NA	NA	NA	NA	NA	
MW-40-162	001	161.7	-88.5	6/5/2007	14:45	1.40E+02	1.56E+02	1.64E+02	2.94E-01	4.53E-01	5.04E-01	1.67E+00	5.33E+00	4.95E+00	3.85E-01	4.68E+00	4.53E+00	NA	NA	NA	NA	NA	NA	NA	MW-40-162
	002			7/23/2007	17:40	2.59E+01	1.46E+02	1.73E+02	1.19E-01	4.45E-01	5.07E-01	2.51E-01	2.81E+00	1.75E+00	7.27E-01	1.45E+00	1.69E+00	NA	NA	NA	NA	NA	NA	NA	
	003			10/12/2007	12:54	4.45E+01	1.49E+02	1.69E+02	5.48E-02	6.20E-01	8.19E-01	1.11E+00	4.47E+00	4.05E+00	1.01E+00	3.31E+00	3.47E+00	NA	NA	NA	NA	NA	NA	NA	
	004			1/7/2008	13:10	4.96E+01	1.56E+02	1.82E+02	7.93E-02	3.63E-01	4.48E-01	4.17E-01	2.52E+00	2.87E+00	3.63E-01	2.40E+00	2.72E+00	NA	NA	NA	NA	NA	NA	NA	
MW-41-40	002	34.4	20.5	4/12/2006	15:00	7.20E+02	2.07E+02	1.56E+02	2.63E+00	1.74E+00	1.38E+00	2.91E+00	2.62E+00	3.03E+00	-7.38E-01	2.55E+00	2.74E+00	NA	NA	NA	NA	NA	NA	MW-41-40	
	003			10/12/2007	10:00	6.07E+02	2.22E+02	1.88E+02	5.18E+00	1.46E+00	1.07E+00	4.33E+00	1.06E+00	1.24E-01	1.16E+00	1.07E+00	1.14E+00	NA	NA	NA	NA	NA	NA	NA	
	004			5/25/2006	10:00	9.83E+02	2.60E+02	1.51E+02	7.02E+00	3.83E+00	6.83E-01	5.30E+00	1.02E+01	1.19E-01	9.42E-02	9.32E+00	1.29E+01	NA	NA	NA	NA	NA	NA	NA	
	005			7/14/2006	8:45	8.16E+02	2.64E+02	2.07E+02	3.03E+00	2.83E+00	2.09E+00	3.44E+00	1.29E+01	1.63E-01	2.31E+00	1.07E+01	1.29E+01	NA	NA	NA	NA	NA	NA	NA	MW-41-40
	006			8/16/2006	13:15	4.47E+02	1.95E+02	1.68E+02	NA	NA	NA	7.39E-01	6.84E+00	8.78E+00	1.70E-01	5.46E+00	7.51E+00	NA	NA	NA	NA	NA	NA		
	007			11/13/2006	12:55	4.25E+02	1.38E+02	1.30E+02	4.64E+00	8.70E-01	6.90E-01	5.00E-01	5.70E+00	6.90E+00	1.30E+00	6.90E+00	8.20E+00	3.10E+00	5.70E+00	6.40E+00	6.40E+00	6.40E+00	6.40E+00		
	008			6/19/2007	14:45	3.91E+03	7.32E+02	3.60E+02	5.99E+00	1.13E+00	7.49E-01	-3.09E+00	4.42E+00	3.28E+00	-3.47E-01	2.81E+00	3.01E+00	2.21E-01	2.81E+00	3.01E+00	2.21E-01	2.21E-01	2.21E-01	1.49E+01	
	009			8/14/2007	14:35	3.80E+02	1.97E+02	2.00E+02	5.96E+00	1.17E+00	7.45E-01	0.00E+00	3.52E+00	3.31E+00	1.40E+00	4.08E+00	4.00E+00	NA	NA	NA	NA	NA	NA	NA	
MW-41-63	001	59.5	-4.6	4/12/2006	14:45	7.01E+02	2.03E+02	1.53E+02	5.49E+00	2.21E+00	1.60E+00	6.98E-01	2.27E+00	2.52E+00	-3.89E-02	2.68E+00	2.78E+00	NA	NA	NA	NA	NA	NA	NA	MW-41-63
	002			5/25/2006	10:20	3.61E+02	2.07E+02	1.92E+02	5.22E+00	1.53E+00	1.10E+00	7.91E-02	9.70E+00	1.13E-01	3.51E+00	7.87E+00	1.07E+01	NA	NA	NA	NA	NA	NA	NA	
	003			6/12/2006	10:05	2.68E+02	1.67E+02	1.52E+02	8.45E-01	5.28E-01	5.86E-01	8.20E-01	8.70E+00	9.55E+00	2.12E+00	7.05E+00	8.29E+00	NA	NA	NA	NA	NA	NA	NA	
	004			7/18/2006	13:04	2.43E+02	1.95E+02	1.92E+02	2.17E+00	9.90E-01	8.04E-01	3.04E+00	9.49E+00	1.11E+00	1.73E-01	8.00E+00	8.75E+00	NA	NA	NA	NA	NA	NA	NA	
	005			8/16/2006	13:00	3.56E+02	1.89E+02	1.70E+02	NA	NA	NA	3.69E+00	8.12E+00	1.03E-01	-1.55E+00	7.58E+00	7.11E+00	NA	NA	NA	NA	NA	NA	NA	
	006			11/13/2006	13:10	1.57E+02	1.55E+02	1.30E+02	2.06E+00	6.60E-01	6.60E-01	-1.69E+00	4.50E+00	5.70E+00	0.00E+00	5.40E+00	6.00E+00	3.00E+00	6.00E+00	6.00E+00	3.00E+00	6.00E+00	6.00E+00		
	007			6/20/2007	11:05	5.52E+02	1.97E+02	1.86E+02	7.08E+00	1.28E+00	6.27E-01	-3.10E-01	2.37E+00	2.65E+00	-1.06E-02	2.33E+00	2.65E+00	-4.39E-01	2.33E+00	2.65E+00	-4.39E-01	2.33E+00	2.65E+00		
	008			8/14/2007	16:10	5.47E+02	2.04E+02	1.99E+02	3.55E+00	9.02E-01	5.31E-01	-2.83E+00	3.40E+00	3.20E+00	1.32E-01	3.48E+00	3.87E+00	NA	NA	NA	NA	NA	NA	NA	
	009			1/25/2008	10:05	3.03E+02	2.79E+02	2.93E+02	3.76E+00	1.13E+00	8.22E-01	0.00E+00	3.33E+00	1.89E+00	5.24E-02	1.64E+00	1.88E+00	NA	NA	NA	NA	NA	NA	NA	
MW-42-19	001	42.6	27.1	3/23/2006	11:15	2.63E+03	6.60E+02	5.89E+02	5.19E-01	1.72E+00	4.88E-01	1.02E+05	7.14E+02	1.00E+02	1.91E+02	2.78E+01	2.32E+01	NA	NA	NA	NA	NA	NA	NA	MW-42-19
	002			3/31/2006	9:29	2.49E+03	4.49E+02	2.37E+02	2.10E+01	9.90E-01	3.67E-01	6.55E+03	1.24E+02	2.76E+01	2.29E+01	2.10E+01	2.50E+01	NA	NA	NA	NA	NA	NA	NA	
	003			4/7/2006	17:52	2.51E+03	7.88E+02	7.37E+02	1.09E+02	2.16E+00	4.09E-01	8.11E+04	7.08E+02	1.01E+02	8.81E+01	5.92E+01	1.97E+01	2.22E+03	1.76E+02	5.84E+01	1.03E+03	4.53E+01	1.44E+01		
	004			6/18/2007	15:00	1.34E+03	5.00E+02	3.74E+02	7.73E-01	4.04E+00	6.07E-01	1.90E+04	1.85E+03	1.31E+01	4.29E+00	3.71E+00	4.82E+00	1.03E+03	4.53E+01	1.03E+03	4.53E+01	1.03E+03	4.53E+01	2.19E+01	
	005			8/22/2007	14:37	1.50E+03	6.26E+02	5.53E+02	5.02E-01	2.98E+00	9.41E-01	2.48E+04	2.52E+03	2.17E+01	3.55E+00	4.61E+00	5.86E+00	8.05E+02	5.24E+01	2.19E+01	8.05E+02	5.24E+01	2.19E+01		
	006			8/17/2																					



TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft ms <sup>3</sup>	SAMPLE COLLECTION			ANALYSIS RESULTS												Well ID <sup>1</sup>		
				Date	Time	TRIITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)			Ni-63 (pCi/L)			
						Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result		Std. Dev.	MDC
MW-42-78	003			6/18/2007	14:40	3.78E+02	1.88E+02	1.88E+02	3.83E-01	5.34E-01	5.78E-01	6.28E+01	1.21E+01	4.11E+00	2.31E+00	3.40E+00	4.00E+00	2.48E+00	1.32E+01	1.52E+01	2.28E+01
	004			7/27/2007	11:30	3.19E+02	1.94E+02	1.82E+02	-2.21E-01	4.50E-01	5.87E-01	0.00E+00	4.72E+00	3.48E+00	1.25E+00	3.12E+00	3.12E+00	3.48E+00	6.81E+00	1.99E+01	2.28E+01
	005			8/17/2007	9:56	4.61E+02	1.85E+02	1.75E+02	2.69E-01	6.60E-01	7.62E-01	4.51E+01	8.54E+00	4.06E+00	-7.27E-01	3.18E+00	2.76E+00	3.04E+00	1.71E+01	1.98E+01	
	006			10/4/2007	13:25	3.43E+02	1.94E+02	1.94E+02	2.33E-01	3.09E-01	3.43E-01	3.04E+02	3.44E+01	4.71E+00	3.10E+00	4.04E+00	3.35E+00	1.71E+01	5.18E+00	1.33E+01	1.77E+01
	007	23.5	25.3		1/21/2008	15:33	3.46E+02	1.89E+02	1.96E+02	-2.51E-01	6.81E-01	9.32E-01	1.08E+02	3.44E+01	3.71E+00	1.71E+01	3.33E+00	3.61E+00	9.73E+00	2.42E+01	2.73E+01
	008				4/12/2006	12:45	3.46E+02	1.79E+02	1.59E+02	9.40E-02	7.40E-01	8.06E-01	-1.44E+00	2.52E+00	2.54E+00	1.56E+00	2.24E+00	2.56E+00	NA	NA	NA
MW-43-28	003			5/25/2006	12:45	1.20E+02	1.83E+02	1.89E+02	2.65E+00	1.89E+00	1.77E+00	-8.64E-01	9.47E+00	1.03E+01	-1.33E-01	9.42E+00	1.06E+01	NA	NA	NA	
	004			6/12/2006	12:45	2.30E+02	1.62E+02	1.52E+02	1.39E-01	4.27E-01	5.27E-01	2.83E+00	6.93E+00	7.82E+00	-7.53E-01	5.93E+00	6.39E+00	NA	NA	NA	
	005			7/12/2006	9:40	1.09E+02	1.83E+02	1.95E+02	1.10E+00	1.69E+00	1.72E+00	2.41E+00	9.87E+00	1.11E+01	-7.95E-01	8.58E+00	9.11E+00	NA	NA	NA	
	006			8/16/2006	12:10	2.60E+02	1.83E+02	1.72E+02	NA	NA	NA	5.47E-01	8.43E-01	9.56E-01	-5.16E-01	7.70E-01	8.30E-01	NA	NA	NA	
	007	23.0	25.8		6/18/2007	13:30	2.78E+02	1.70E+02	1.74E+02	1.07E+00	5.97E-01	4.86E-01	-3.68E-01	3.13E+00	3.39E+00	-3.72E-01	3.31E+00	3.46E+00	3.58E+00	1.50E+01	1.73E+01
	008			8/13/2007	11:35	9.56E+01	1.71E+02	1.93E+02	-6.25E-01	7.50E-01	1.02E+00	-7.36E-01	3.57E+00	3.68E+00	2.77E-01	2.70E+00	3.12E+00	NA	NA	NA	
MW-43-62	009			1/25/2008	11:11	3.06E+02	2.82E+02	2.96E+02	1.46E-01	6.05E-01	7.38E-01	1.88E+00	2.16E+00	2.66E+00	1.46E+00	2.51E+00	3.03E+00	8.44E+00	1.76E+01	1.99E+01	
	002	51.0	-2.2		4/12/2006	11:55	2.00E+02	1.65E+02	1.58E+02	4.34E-01	4.63E-01	4.83E-01	3.27E+00	4.04E+00	3.73E+00	1.82E+00	3.09E+00	3.47E+00	NA	NA	
	003			5/25/2006	12:30	1.24E+02	1.77E+02	1.82E+02	3.23E-01	1.64E+00	1.77E+00	1.21E+00	1.26E+01	1.36E+01	-2.10E+00	9.81E+00	1.02E+01	NA	NA	NA	
	004			6/12/2006	12:40	1.29E+02	1.40E+02	1.38E+02	1.25E+00	5.58E-01	5.86E-01	4.97E+00	7.02E+00	7.96E+00	-6.81E-01	1.19E+00	7.85E+00	NA	NA	NA	
	005			7/12/2006	10:05	2.04E+01	1.53E+02	1.63E+02	4.76E-01	1.46E+00	1.54E+00	1.34E-01	1.10E+01	1.36E+01	3.73E-01	1.01E+01	1.11E+01	NA	NA	NA	
	006			8/16/2006	11:55	1.08E+02	1.67E+02	1.70E+02	NA	NA	NA	2.23E-01	9.10E-01	1.01E+00	-1.95E-01	8.33E-01	9.13E-01	NA	NA	NA	
MW-44-66	007	54.0	-5.2		6/19/2007	9:36	1.97E+02	1.88E+02	2.02E+02	8.55E-01	6.40E-01	-6.77E-01	3.21E+00	3.42E+00	-8.52E-01	3.10E+00	3.26E+00	1.38E+00	1.33E+01	1.55E+01	
	008			8/15/2007	12:42	1.14E+02	1.73E+02	1.92E+02	1.29E-01	6.90E-01	8.27E-01	-1.18E+00	3.65E+00	3.89E+00	1.53E-01	3.31E+00	3.80E+00	NA	NA	NA	
	009	62.4	31.1		3/28/2006	14:05	3.38E+02	1.91E+02	1.73E+02	7.38E+00	1.67E+00	6.54E-01	1.05E+01	1.17E+01	-2.87E+00	1.02E+01	1.09E+01	NA	NA	NA	
	002			5/24/2006	9:05	2.37E+02	1.97E+02	1.92E+02	7.41E-01	4.11E-01	4.45E-01	-3.07E-01	1.97E+00	6.99E+00	4.85E+00	9.06E+00	1.11E+01	NA	NA	NA	
	003			7/20/2006	11:15	8.92E+02	2.27E+02	1.63E+02	7.55E-01	1.22E+00	1.31E+00	3.54E-01	1.74E+01	1.59E+00	6.24E-01	7.37E+00	8.48E+00	NA	NA	NA	
	004	63.0	30.5		6/29/2007	15:00	2.68E+02	1.73E+02	1.84E+02	-4.25E-01	7.28E-01	9.04E-01	2.64E-01	3.03E+00	3.47E+00	7.78E-01	3.40E+00	3.98E+00	NA	NA	
MW-44-102	005			8/14/2007	13:10	4.17E+02	1.98E+02	2.00E+02	9.30E-02	4.72E-01	5.75E-01	-8.53E-01	2.91E+00	3.08E+00	-3.39E-01	3.40E+00	3.11E+00	NA	NA	NA	
	006			10/31/2007	13:30	5.13E+02	1.82E+02	1.81E+02	3.77E-01	4.10E-01	4.21E-01	2.76E+00	4.29E+00	4.81E+00	1.91E+00	3.90E+00	4.71E+00	NA	NA	NA	
	007	91.0	2.5		1/24/2008	12:55	2.91E+02	2.00E+02	2.12E+02	2.85E-01	4.53E-01	4.99E-01	1.73E-01	4.35E+00	2.31E+00	1.40E+00	3.17E+00	2.43E+00	NA	NA	
	002			6/13/2006	10:35	2.53E+02	2.01E+02	1.96E+02	3.53E-01	9.93E-01	1.26E+00	-3.22E+00	8.26E+00	8.67E+00	-2.99E+00	9.39E+00	9.83E+00	-2.34E+00	9.50E+00	9.39E+00	
	003			8/4/2006	9:40	7.61E+02	2.30E+02	1.81E+02	NA	NA	NA	-4.04E+00	8.10E+00	7.76E+00	-2.00E+00	7.01E+00	6.82E+00	NA	NA	NA	
	004			9/13/2006	11:30	2.67E+02	1.94E+02	2.00E+02	NA	NA	NA	1.99E+00	6.68E+00	1.12E+01	4.76E-01	8.18E+00	8.99E+00	NA	NA	NA	
MW-45-42	005	80.0	13.5		6/19/2007	17:46	2.98E+02	1.76E+02	1.83E+02	-1.33E-01	4.81E-01	6.39E-01	1.88E+00	2.15E+00	2.63E+00	6.41E-01	2.02E+00	2.92E+00	-4.92E+00	1.31E+01	
	006			8/14/2007	14:55	2.84E+02	1.89E+02	1.99E+02	1.97E-01	7.63E-01	8.99E-01	-1.46E+00	2.76E+00	2.77E+00	-1.35E+00	2.79E+00	2.73E+00	NA	NA	NA	
	007			10/31/2007	12:01	3.54E+02	1.76E+02	1.82E+02	-2.38E-01	7.75E-01	9.60E-01	-6.60E-01	2.88E+00	3.11E+00	-1.23E+00	3.60E+00	3.11E+00	NA	NA	NA	
	008			1/24/2008	13:05	4.17E+02	2.94E+02	2.96E+02	2.06E-01	5.16E-01	6.04E-01	1.8E+01	4.64E+00	3.19E+00	-4.44E+03	2.85E+00	3.11E+00	NA	NA	NA	
	001	34.4	19.2		4/4/2006	17:20	5.18E+02	2.22E+02	2.17E+02	8.83E-01	5.94E-01	5.95E-01	1.41E+01	1.35E+01	1.54E+01	-4.38E+02	1.22E+01	1.34E+01	NA	NA	
	002			5/25/2006	9:25	1.82E+03	3.74E+02	2.45E+02	9.78E-01	1.14E+00	1.18E+00	-7.92E+00	1.21E+01	1.17E+01	-3.97E+00	1.21E+01	1.23E+01	NA	NA	NA	
MW-45-61	003			6/12/2006	10:45	2.27E+03	4.13E+02	2.15E+02	1.02E+00	6.80E-01	7.49E-01	9.06E-02	5.68E+00	6.29E+00	2.61E+00	5.68E+00	6.70E+00	NA	NA	NA	
	004			7/14/2006	9:30	4.19E+02	2.18E+02	2.00E+02	0.00E+00	1.43E+00	1.59E+00	1.22E+00	8.17E+00	9.27E+00	2.33E+00	9.82E+00	1.13E+01	NA	NA	NA	
	005			8/11/2006	10:00	3.16E+03	5.51E+02	2.71E+02	NA	NA	NA	-1.16E+01	1.51E+00	1.64E+00	-4.26E-01	1.40E+00	1.54E+00	NA	NA	NA	
	006			9/13/2006	11:30	4.13E+03	7.32E+02	3.27E+02	NA	NA	NA	-1.58E+00	5.85E+00	6.00E+00	-1.46E+00	5.39E+00	5.27E+00	NA	NA	NA	
	007			11/13/2006	13:20	5.25E+02	1.38E+02	1.40E+02	-7.10E-01	7.50E-01	8.50E-01	3.70E+00	5.40E+00	6.00E+00	5.00E+01	6.90E+00	8.30E+00	3.00E+01	3.60E+01	4.10E+01	
	008	37.0	16.6		6/21/2007	15:05	2.32E+03	6.27E+02	4.36E+02	-6.08E-02	6.25E-01	7.76E-01	1.31E-01	4.14E+00	4.59E+00	2.51E+00	2.82E+00	4.08E+00	3.8E+00	1.49E+01	
009			8/15/2007	11:30	1.16E+03	1.80E+02	1.47E+02	-3.79E-01	7.74E-01	9.47E-01	0.00E+00	4.13E+00	1.99E+00	1.19E+00	2.60E+00	3.23E+00	NA	NA	NA		
010			10/5/2007	11:05	2.22E+03	3.05E+02	1.50E+02	3.55E-01	5.10E-01	5.56E-01	1.00E+00	4.13E+00	1.99E+00	3.65E-01	1.94E+00	2.21E+00	NA	NA	NA		
011			1/25/2008	12:15	1.44E+03	3.90E+02	2.96E+02	2.08E-01	5.13E-01	6.03E-01	1.60E+00	2.43E+00	2.88E+00	5.96E-01	2.31E+00	2.66E+00	NA	NA	NA		
001			4/4/2006	17:00	2.98E+02	2.18E+02	2.23E+02	1.82E-01	5.39E-01	5.39E-01	8.62E+00	1.14E+01	1.32E+01	1.40E+00	1.02E+00	1.17E+00	NA	NA	NA		

TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msl <sup>3</sup>	SAMPLE COLLECTION				ANALYSIS RESULTS												Well ID <sup>1</sup>					
				Date	Time	TRITIUM (pCi/L)		Sr-90 (pCi/L)		Cs-137 (pCi/L)		Co-60 (pCi/L)		Ni-63 (pCi/L)											
						Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC								
MW-45-61	002			5/25/2006	9:10	1.71E+03	3.57E+02	2.37E+02	5.63E-01	1.03E+00	9.81E-01	1.03E+00	7.76E-01	0.14E+00	1.02E+01	5.35E+00	1.06E+00	1.31E+01	NA	NA	NA	NA			
	003			6/12/2006	11:00	1.02E+03	2.31E+02	1.56E+02	4.81E-01	6.90E-01	5.85E-01	4.60E+00	6.63E+00	7.11E+00	9.35E+02	6.22E+00	7.11E+00	9.35E+02	6.22E+00	7.11E+00	NA	NA	NA		
	004			7/20/2006	12:30	3.72E+02	1.88E+02	1.66E+02	0.00E+00	1.30E+00	1.59E+00	3.98E-01	5.08E+00	5.30E+00	1.33E+00	3.98E+00	5.02E+00	1.33E+00	3.98E+00	5.02E+00	NA	NA	NA		
	005			8/11/2006	9:45	1.45E+03	3.09E+02	2.91E+02	NA	NA	NA	6.45E+00	9.17E+00	1.16E+01	-8.33E-01	5.00E+00	9.75E+00	3.16E+00	7.35E+00	6.87E+00	NA	NA	NA		
	006			9/13/2006	9:30	1.35E+03	3.09E+02	2.91E+02	NA	NA	NA	6.45E+00	9.17E+00	1.16E+01	-8.33E-01	5.00E+00	9.75E+00	3.16E+00	7.35E+00	6.87E+00	NA	NA	NA		
	007			11/13/2006	11:20	9.57E+02	1.44E+02	1.40E+02	1.73E+00	7.50E-01	7.69E-01	3.60E-01	4.50E+00	5.30E+00	-3.20E+00	4.50E+00	6.30E+00	2.50E+00	6.60E+00	7.30E+00	NA	NA	NA		
	008	58.0	-4.4	6/21/2007	12:55	1.47E+03	5.42E+02	4.34E+02	7.02E+02	7.47E-01	9.67E-01	3.52E+00	4.25E+00	3.52E+00	-7.21E-01	3.56E+00	3.69E+00	3.55E+00	1.49E+01	1.71E+01	NA	NA	NA		
	009			8/15/2007	11:55	1.50E+03	1.88E+02	1.41E+02	4.74E-02	7.90E-01	9.41E-01	3.33E+00	4.75E+00	4.03E+00	-6.51E-01	3.86E+00	3.59E+00	3.86E+00	3.59E+00	3.59E+00	NA	NA	NA		
	010			10/5/2007	11:30	2.15E+03	3.03E+02	1.52E+02	4.87E-01	5.23E-01	5.30E-01	-1.73E-01	1.43E+00	1.56E+00	6.59E-02	1.46E+00	1.62E+00	6.59E-02	1.46E+00	1.62E+00	NA	NA	NA		
	011			1/25/2008	11:55	2.66E+03	4.80E+02	2.96E+02	4.26E-01	5.76E-01	6.21E-01	2.42E+00	3.60E+00	2.52E+00	-2.05E-01	2.88E+00	3.19E+00	2.88E+00	3.19E+00	3.19E+00	NA	NA	NA		
MW-46	002	18.1	0.0	4/12/2006	17:15	1.38E+03	2.81E+02	1.76E+02	6.24E-01	4.82E-01	4.89E-01	9.28E-01	2.98E+00	3.31E+00	-5.36E-01	2.67E+00	2.88E+00	2.67E+00	2.88E+00	2.88E+00	NA	NA	NA		
	003			5/24/2006	12:55	9.00E+02	1.71E+03	6.33E+02	3.07E-01	6.15E-01	7.47E-01	-7.16E-02	9.87E+00	1.18E+01	5.38E+00	8.80E+00	1.21E+01	5.38E+00	8.80E+00	1.21E+01	NA	NA	NA		
	004			6/13/2006	13:10	6.79E+01	1.80E+02	1.91E+02	3.46E-01	1.04E+00	1.33E+00	2.58E+00	7.28E+00	8.29E+00	-9.79E-01	8.23E+00	8.81E+00	8.23E+00	8.81E+00	8.81E+00	NA	NA	NA		
	005			7/12/2006	13:23	7.86E+02	2.36E+02	1.92E+02	5.77E-01	1.21E+00	1.23E+00	3.98E+00	9.37E+00	1.09E+01	4.49E+00	6.68E+00	1.06E+01	4.49E+00	6.68E+00	1.06E+01	NA	NA	NA		
	006			8/4/2006	8:40	1.15E+03	2.75E+02	1.98E+02	NA	NA	NA	1.91E+00	5.05E+00	6.52E+00	-3.50E+00	5.84E+00	5.97E+00	-3.50E+00	5.84E+00	5.97E+00	NA	NA	NA		
	007			9/13/2006	13:15	1.47E+03	3.30E+02	2.19E+02	NA	NA	NA	3.73E-01	6.01E+00	6.95E+00	2.75E+00	2.75E+00	6.27E+00	2.75E+00	6.27E+00	6.27E+00	NA	NA	NA		
	008	10.5	7.6	6/14/2007	13:30	3.43E+03	5.64E+02	2.95E+02	2.15E-01	4.65E-01	5.35E-01	3.08E-01	3.92E+00	4.37E+00	8.52E-02	3.65E+00	4.09E+00	8.52E-02	3.65E+00	4.09E+00	4.09E+00	1.52E+01	1.78E+01	NA	
	009			8/1/2007	11:35	6.62E+02	3.30E+02	2.44E+02	7.89E-02	3.66E-01	4.49E-01	6.63E-01	3.52E+00	3.80E+00	6.33E-02	2.43E+00	2.77E+00	6.33E-02	2.43E+00	2.77E+00	2.77E+00	NA	NA	NA	
	010			10/22/2007	14:20	1.67E+03	5.27E+02	4.01E+02	2.17E-01	4.72E-01	5.44E-01	3.68E-01	2.97E+00	3.34E+00	-7.20E-01	2.94E+00	3.09E+00	-7.20E-01	2.94E+00	3.09E+00	3.09E+00	NA	NA	NA	
	011			1/22/2008	12:19	5.49E+02	1.74E+02	1.70E+02	5.30E-01	7.71E-01	8.47E-01	8.27E-01	2.64E+00	2.84E+00	1.73E+00	2.61E+00	3.31E+00	1.73E+00	2.61E+00	3.31E+00	3.31E+00	NA	NA	NA	
MW-47-56	001	53.2	17.1	4/13/2006	12:05	7.60E+02	2.22E+02	1.67E+02	2.27E+00	7.30E-01	8.27E-01	8.27E-02	5.45E+00	5.95E+00	-4.53E-01	5.30E+00	5.77E+00	-4.53E-01	5.30E+00	5.77E+00	NA	NA	NA		
	002			7/18/2006	10:13	1.54E+02	1.95E+02	1.99E+02	1.91E-01	1.47E+00	1.59E+00	3.07E+00	6.65E+00	3.37E+00	0.00E+00	6.65E+00	3.37E+00	3.57E+00	3.71E+00	4.73E+00	3.81E+00	1.52E+01	1.51E+01	NA	
	003			6/20/2007	10:07	NA	NA	NA	5.93E-01	5.25E-01	5.10E-01	0.00E+00	4.28E+00	3.79E+00	1.63E+00	3.17E+00	3.79E+00	1.63E+00	3.17E+00	3.79E+00	3.79E+00	NA	NA	NA	
	004	52.0	18.3	8/10/2007	11:00	2.70E+02	1.88E+02	2.02E+02	5.07E-01	8.04E-01	8.91E-01	-3.84E-01	3.48E+00	3.73E+00	1.49E-01	2.94E+00	3.37E+00	1.49E-01	2.94E+00	3.37E+00	3.37E+00	NA	NA	NA	
MW-47-56	005			4/13/2006	11:45	2.33E+03	4.28E+02	2.29E+02	2.73E-01	7.35E-01	6.53E-01	-5.82E-01	4.48E+00	5.14E+00	2.25E-01	3.91E+00	4.76E+00	2.25E-01	3.91E+00	4.76E+00	4.76E+00	NA	NA	NA	
MW-47-80	001	74.0	-3.7	7/18/2006	8:51	1.87E+03	3.87E+02	2.58E+02	2.86E+00	1.43E+00	1.14E+00	1.67E+00	1.05E+01	1.19E+01	2.39E+00	9.21E+00	1.09E+01	2.39E+00	9.21E+00	1.09E+01	1.09E+01	NA	NA	NA	
	002			6/19/2007	11:00	2.36E+03	5.94E+02	3.58E+02	3.27E+00	8.98E-01	5.28E-01	2.03E+00	3.81E+00	4.58E+00	2.03E+00	3.81E+00	4.58E+00	2.03E+00	3.81E+00	4.58E+00	4.58E+00	4.08E-01	1.18E+01	1.38E+01	NA
MW-48-23	001	20.4	-5.0	2/8/06	10:10	1.66E+02	3.26E+02	3.42E+02	1.93E-01	5.04E-01	5.94E-01	-2.14E-01	1.04E+01	1.13E+01	1.46E+00	9.95E+00	1.12E+01	1.46E+00	9.95E+00	1.12E+01	1.12E+01	NA	NA	NA	
	002			4/12/06	9:58	1.24E+02	4.08E+02	4.52E+02	-1.10E-01	3.90E-01	4.49E-01	3.25E+00	9.75E+00	7.26E+00	2.49E+00	7.47E+00	6.18E+00	2.49E+00	7.47E+00	6.18E+00	6.18E+00	NA	NA	NA	
	003			4/27/06	13:42	2.38E+02	1.94E+02	2.03E+02	-2.50E-02	4.38E-01	5.04E-01	-1.88E+00	5.06E+00	5.65E+00	-1.19E-01	4.40E+00	5.27E+00	-1.19E-01	4.40E+00	5.27E+00	5.27E+00	NA	NA	NA	
	004			5/22/06	10:30	7.55E+02	4.26E+02	4.46E+02	2.42E-01	2.88E-01	3.10E-01	3.22E+00	9.67E+00	7.12E+00	4.29E+00	1.29E+01	9.62E+00	4.29E+00	1.29E+01	9.62E+00	9.62E+00	NA	NA	NA	
	005			6/9/06	11:15	2.95E+02	4.14E+02	4.53E+02	3.10E-01	9.88E-01	1.26E+00	1.09E+00	5.21E+00	5.80E+00	3.08E+00	5.41E+00	5.96E+00	3.08E+00	5.41E+00	5.96E+00	5.96E+00	NA	NA	NA	
	006			7/6/06	12:00	4.21E+02	4.17E+02	4.52E+02	-2.20E-01	4.90E-01	4.90E-01	2.53E+00	7.64E+00	5.49E+00	2.60E+00	7.79E+00	5.78E+00	2.60E+00	7.79E+00	5.78E+00	5.78E+00	NA	NA	NA	
	007-S1			8/8/06	10:30	1.40E+02	4.05E+02	4.47E+02	NA	NA	NA	2.41E+00	7.23E+00	5.17E+00	2.11E+00	6.34E+00	4.76E+00	2.11E+00	6.34E+00	4.76E+00	4.76E+00	NA	NA	NA	
	007			8/8/06	10:30	1.04E+02	1.08E+02	1.72E+02	7.00E-02	6.30E-01	7.03E-01	1.93E+00	4.76E+00	5.56E+00	1.99E+00	4.41E+00	5.37E+00	1.99E+00	4.41E+00	5.37E+00	5.37E+00	NA	NA	NA	
	008			9/5/06	10:05	2.44E+02	4.20E+02	4.49E+02	-6.00E-02	7.80E-01	8.60E-01	-2.90E+00	7.82E+00	8.12E+00	1.65E-01	8.58E+00	1.02E+01	-2.90E+00	7.82E+00	8.12E+00	8.12E+00	NA	NA	NA	
	008-S1			9/5/06	10:05	7.40E+02	4.20E+02	4.49E+02	NA	NA	NA	3.34E+00	1.00E+01	7.56E+00	3.32E+00	9.97E+00	8.01E+00	3.32E+00	9.97E+00	8.01E+00	8.01E+00	NA	NA	NA	
	009			11/22/06	9:23	1.67E+02	4.08E+02	4.50E+02	-7.00E-02	6.30E-01	7.10E-01	3.70E-01	1.80E+00	2.00E+00	8.30E-01	2.07E+00	2.30E+00	8.30E-01	2.07E+00	2.30E+00	2.30E+00	NA	NA	NA	
	010	15.8	-0.4	2/9/07	10:54	2.72E+02	1.68E+02	1.70E+02	-1.60E-01	1.53E+00	1.70E+00	3.01E+00	1.80E+00	2.00E+00	5.36E-01	3.03E+00	3.55E+00	5.36E-01	3.03E+00	3.55E+00	3.55E+00	NA	NA	NA	
	011			8/16/07	11:00	3.93E+02	1.64E+02	1.61E+02	-3.94E-01	5.69E-01	8.47E-01	1.66E+00	4.92E+00	3.58E+00	2.07E+00	6.21E+00	4.39E+00	2.07E+00	6.21E+00	4.39E+00	4.39E+00	NA	NA	NA	
MW-48-37	001	36.0	-20.6	2/10/06	14:10	1.00E+01	4.26E+02	4.73E+02	NA																



TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msl <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID <sup>1</sup>			
				Date	Time	TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)				Ni-63 (pCi/L)		
						Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		Result	Std. Dev.	MDC
MW-50-42	004			6/7/2006	9:30	1.79E+02	1.89E+02	1.56E+02	3.94E+00	7.62E-01	6.06E-01	1.15E+01	1.78E+00	8.62E+00	-1.70E+00	7.37E+00	7.69E+00	NA	NA	NA	
	005			7/3/2006	11:35	3.98E+02	2.18E+02	2.02E+02	3.45E+00	2.00E+00	1.63E+00	6.90E+00	1.38E+00	1.63E+01	4.75E+00	1.04E+01	1.30E+01	NA	NA	NA	
	006			8/1/2006	11:20	1.41E+03	6.42E+02	6.14E+02	NA	NA	NA	8.99E+00	1.01E+01	1.33E+01	6.21E+00	9.28E+00	1.24E+01	1.12E+01	1.53E+01	1.64E+01	
	007			8/28/2006	11:50	3.11E+02	1.89E+02	1.76E+02	1.13E+01	1.56E+00	8.30E-01	1.97E+00	5.84E+00	7.74E+00	3.49E+00	6.36E+00	7.93E+00	NA	NA	NA	
	008	27.0	-12.1	11/15/2006	11:50	2.15E+02	1.71E+02	1.86E+02	1.16E+01	1.35E+00	7.64E-01	1.91E+00	4.44E+00	5.12E+00	-1.64E+00	4.29E+00	3.94E+00	-6.30E+00	1.84E+01	2.19E+01	
	009			6/26/2007	14:30	1.45E+02	1.74E+02	1.93E+02	1.94E+01	1.81E+00	5.31E-01	-5.50E+00	4.71E+00	3.68E+00	2.53E+00	3.99E+00	4.32E+00	4.92E+00	1.91E+01	2.19E+01	
	010			7/26/2007	14:08	1.01E+02	1.76E+02	1.97E+02	2.45E+01	2.52E+00	3.74E-01	3.02E+01	3.38E+00	3.87E+00	6.26E+01	3.78E+00	3.81E+00	9.14E+01	1.62E+01	1.87E+01	
	011			1/15/2008	11:59	9.48E+02	4.79E+02	4.16E+02	2.93E+00	1.20E+00	8.57E-01	1.63E+01	5.79E+00	3.39E+00	-4.30E+01	3.47E+00	3.68E+00	1.24E+01	2.42E+01	2.72E+01	
	012			2/26/2008	12:19	6.13E+02	2.94E+02	2.87E+02	2.40E+00	8.61E-01	7.34E-01	1.95E+00	4.80E+00	4.66E+00	1.77E+00	3.90E+00	3.78E+00	1.71E+01	2.40E+01	2.67E+01	
MW-50-66	001	67.0	-52.1	3/22/2006	14:50	6.81E+03	4.94E+02	2.13E+02	2.55E+01	1.21E+00	4.99E-01	5.76E+00	1.69E+01	1.66E+01	-2.18E+00	1.68E+01	1.81E+01	5.33E+00	1.35E+01	1.47E+01	
	002			5/19/2007	15:20	1.08E+04	5.90E+03	6.30E+02	NA	NA	NA	3.23E+00	1.06E+01	1.23E+01	7.78E-01	1.12E+01	1.25E+01	NA	NA	NA	
	003			5/19/2007	15:20	9.61E+03	1.52E+03	4.94E+02	1.95E+01	1.22E+00	5.16E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	004			6/7/2006	9:20	1.05E+04	1.65E+03	4.29E+02	1.98E+01	1.18E+00	4.66E-01	-1.97E+00	8.71E+00	9.38E+00	2.49E+00	8.98E+00	1.04E+01	NA	NA	NA	
	005			7/3/2006	11:00	8.62E+03	2.00E+03	1.52E+03	2.53E+01	3.79E+00	1.67E+00	-2.04E+00	9.54E+00	1.02E+01	4.40E-01	8.34E+00	9.23E+00	NA	NA	NA	
	006			8/1/2006	9:28	7.93E+03	9.36E+02	6.16E+02	NA	NA	NA	5.59E-01	5.98E+00	6.68E+00	-4.31E+00	6.18E+00	5.00E+00	1.06E+01	1.06E+01	1.13E+01	
	007			8/28/2006	12:05	6.77E+03	1.59E+03	1.30E+03	NA	NA	NA	7.66E-02	4.67E+00	5.86E+00	1.34E+00	4.23E+00	5.88E+00	NA	NA	NA	
	008			11/15/2006	10:37	5.05E+03	1.32E+03	1.00E+03	2.15E+01	2.34E+00	8.10E-01	2.00E-01	1.39E+00	3.70E+00	2.60E+00	3.30E+00	3.50E+00	1.50E+00	5.70E+00	6.30E+00	
	009	60.0	-45.1	6/26/2007	14:02	4.21E+03	2.85E+02	1.86E+02	2.93E+01	1.86E+00	5.25E-01	-2.19E+00	2.64E+00	2.49E+00	1.63E-01	2.36E+00	2.74E+00	-6.05E+01	1.50E+01	1.74E+01	
	010			7/26/2007	11:25	4.50E+03	3.39E+02	2.04E+02	3.10E+01	2.50E+00	5.78E-01	-1.12E+00	4.61E+00	4.18E+00	1.08E-02	3.46E+00	3.94E+00	1.93E+01	1.86E+01	2.02E+01	
	011			10/18/2007	14:38	8.83E+03	6.53E+02	3.65E+02	4.74E+01	3.72E+00	7.97E-01	-2.28E+00	4.40E+00	4.36E+00	1.65E+00	4.20E+00	4.96E+00	-3.71E+00	1.58E+01	1.83E+01	
	012			1/15/2008	12:10	3.31E+03	7.20E+02	4.11E+02	3.56E+01	3.59E+00	7.13E-01	1.56E+01	5.00E+00	3.45E+00	6.31E+00	8.85E+00	3.18E+00	1.66E+01	2.25E+01	2.55E+01	
	013	39.7	28.0	2/26/2008	13:46	3.74E+03	7.98E+02	5.31E+02	3.58E+01	2.36E+00	7.40E-01	8.78E-01	3.18E+00	3.77E+00	2.54E-01	2.54E+00	3.76E+00	4.87E+00	1.80E+01	2.12E+01	
MW-51-40	001			5/30/2007	11:45	1.98E+02	1.65E+02	1.68E+02	-5.30E-01	6.73E-01	9.82E-01	1.04E-01	3.48E+00	3.77E+00	1.61E+00	3.23E+00	3.27E+00	NA	NA	NA	
	002			7/24/2007	15:30	2.23E+02	1.59E+02	1.60E+02	7.09E-02	4.71E-01	5.38E-01	1.65E-02	3.59E+00	8.85E+00	1.32E+00	4.02E+00	4.13E+00	NA	NA	NA	
	003			10/2/2007	13:48	1.34E+02	1.77E+02	1.96E+02	-2.63E-01	3.09E-01	3.73E-01	5.15E+00	4.05E+00	3.08E+00	7.44E-01	1.85E+00	2.55E+00	NA	NA	NA	
	004			11/9/2007	15:40	1.47E+02	1.55E+02	1.70E+02	-8.16E-02	3.87E-01	4.52E-01	1.68E+00	2.96E+00	3.52E+00	-5.71E-02	3.15E+00	3.49E+00	NA	NA	NA	
	005	78.7	-11.0	1/8/2008	10:47	5.80E+01	1.50E+02	1.79E+02	1.57E-01	6.77E-01	8.32E-01	1.83E-02	2.65E+00	2.93E+00	7.71E-01	2.75E+00	2.87E+00	NA	NA	NA	
MW-51-79	001			5/30/2007	12:42	9.89E+01	1.59E+02	1.72E+02	-2.36E-01	6.98E-01	9.58E-01	2.20E+00	3.63E+00	3.90E+00	3.52E-01	3.31E+00	3.76E+00	NA	NA	NA	
	002			7/24/2007	17:00	4.24E+01	1.43E+02	1.67E+02	8.02E-03	5.35E-01	6.15E-01	-6.37E-01	1.388E+00	4.21E+00	-2.83E-01	4.51E+00	4.93E+00	NA	NA	NA	
	003			10/2/2007	13:54	-2.51E+01	1.65E+02	1.94E+02	6.94E-02	2.85E-01	3.27E-01	5.37E+00	5.07E+00	3.26E+00	1.84E+00	2.82E+00	3.27E+00	NA	NA	NA	
	004			11/9/2007	16:18	5.00E+01	1.50E+02	1.71E+02	-4.97E-02	2.99E-01	3.52E-01	2.65E+00	2.97E+00	3.56E+00	-2.43E-01	4.02E+00	4.45E+00	NA	NA	NA	
	005			1/8/2008	10:08	9.26E+01	1.59E+02	1.79E+02	-4.64E-01	7.01E-01	9.74E-01	-7.91E-01	2.22E+00	2.42E+00	2.58E-01	2.37E+00	2.70E+00	NA	NA	NA	
MW-51-104	001	103.7	-36.0	5/30/2007	11:05	5.71E+01	1.48E+02	1.71E+02	-6.74E-02	7.59E-01	9.90E-01	1.23E+00	3.27E+00	3.35E+00	7.70E-02	3.25E+00	3.62E+00	NA	NA	NA	
	002			7/24/2007	17:06	9.07E+01	1.47E+02	1.64E+02	3.62E-01	4.86E-01	5.41E-01	-4.29E+00	4.62E+00	3.92E+00	1.42E+00	4.44E+00	5.33E+00	NA	NA	NA	
	003			10/2/2007	11:45	3.67E+01	1.68E+02	1.94E+02	4.21E-02	4.45E-01	5.08E-01	5.71E+00	5.87E+00	4.23E+00	-8.33E-01	4.11E+00	3.68E+00	NA	NA	NA	
	004			11/9/2007	14:35	5.17E+01	1.50E+02	1.70E+02	-2.40E-01	3.18E-01	3.86E-01	-1.25E+00	2.85E+00	2.26E+00	1.15E+00	2.61E+00	3.18E+00	NA	NA	NA	
	005			1/8/2008	12:15	-4.84E+00	1.45E+02	1.78E+02	-6.19E-02	7.22E-01	9.34E-01	-9.37E-01	2.09E+00	2.26E+00	-3.84E-01	2.54E+00	2.50E+00	NA	NA	NA	
MW-51-135	001	135.2	-67.5	5/30/2007	13:00	8.24E+01	1.50E+02	1.70E+02	-1.68E-01	5.53E-01	8.40E-01	-1.01E-01	3.62E+00	4.03E+00	2.56E+00	3.84E+00	4.48E+00	NA	NA	NA	
	002			7/24/2007	12:40	9.51E+01	1.43E+02	1.59E+02	5.33E-02	5.04E-01	5.76E-01	-4.56E+00	4.07E+00	4.36E+00	3.42E+01	3.30E+00	3.84E+00	NA	NA	NA	
	003			10/2/2007	12:05	3.04E+01	1.71E+02	1.96E+02	3.08E-02	4.26E-01	5.49E-01	2.15E+01	5.76E+00	2.86E+00	5.46E-01	2.50E+00	2.92E+00	NA	NA	NA	
	004			11/9/2007	11:55	9.83E+01	1.53E+02	1.72E+02	-2.42E-01	2.54E-01	3.18E-01	-7.27E-01	3.46E+00	3.70E+00	-3.14E-01	3.29E+00	3.65E+00	NA	NA	NA	
	005			1/8/2008	13:20	4.91E+01	1.55E+02	1.80E+02	3.47E-02	7.04E-01	8.79E-01	6.30E-02	1.88E+00	2.09E+00	1.43E-02	1.71E+00	3.30E+00	NA	NA	NA	
MW-51-163	001	162.7	-95.0	5/30/2007	14:40	1.18E+02	1.56E+02	1.69E+02	3.29E+01	1.16E+00	1.36E+00	-2.82E-01	1.09E+00	3.45E+00	1.77E-01	2.82E+00	1.20E+00	NA	NA	NA	
	002			7/24/2007	14:05	4.98E+01	1.44E+02	1.66E+02	1.05E-01	4.58E-01	5.21E-01	-2.43E+01	3.44E+00	3.78E+00	8.64E-02	3.25E+00	3.63E+00	NA	NA	NA	
	003			10/2/2007	13:35	4.23E+01	1.71E+02	1.96E+02	8.07E-02	3.20E-01	3.61E-01	1.16E+01	7.20E+00	4.99E+00	2.11E+00	4.02E+00	4.89E+00	NA	NA	NA	
	004			11/9/2007	13:32	7.30E+01	1.52E+02	1.71E+02	2.08E-01	2.82E-01	3.12E-01	-1.41E-01	3.54E+00	3.51E+00	-1.11E+00	3.01E+00	3.11E+00	NA	NA	NA	
	005			1/8/2008	13:57	-1.99E+01	1.47E+02	1.82E+02	4.40E-01	9.29E-01	8.22E-01	-1.74E+00	2.65E+00	2.46E+00	8.69E-02	2.15E+00	2.44E+00	NA	NA	NA	

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TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msd <sup>3</sup>	SAMPLE COLLECTION			ANALYSIS RESULTS												Well ID <sup>1</sup>					
				Date	Time	MDC	TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)				Ni-63 (pCi/L)				
							Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		Result	Std. Dev.	MDC		
MW-51-189	001	189.2	-121.5	5/30/2007	14:00		1.87E+02	1.67E+02	1.71E+02	2.88E+02	8.90E-01	1.11E+00	3.62E+02	3.98E+00	3.82E+00	4.56E+00	3.57E+00	3.57E+00	3.57E+00	NA	NA	NA	NA	MW-51-189
	002			7/24/2007	13:15		9.49E+01	1.46E+02	1.63E+02	3.93E-01	4.48E-01	8.87E-01	4.11E+00	3.58E+00	1.57E+00	4.02E+00	4.63E+00	4.63E+00	4.63E+00	NA	NA	NA	NA	
	003			10/2/2007	12:20		8.45E+00	1.70E+02	1.96E+02	-5.06E-02	2.16E-01	2.38E-01	1.38E+01	5.45E+00	2.92E+00	-4.14E-01	2.79E+00	3.04E+00	3.04E+00	NA	NA	NA	NA	
	004			1/8/2008	13:05		-6.26E+00	1.44E+02	1.71E+02	1.93E-01	3.61E-01	4.08E-01	3.04E+00	3.27E+00	4.07E+00	-8.07E-02	3.65E+00	4.05E+00	4.05E+00	NA	NA	NA	NA	
	005			1/29/2007	13:10		-4.82E+00	1.48E+02	1.77E+02	-3.17E-02	7.01E-01	8.92E-01	1.35E+00	1.21E+00	2.49E+00	1.42E+00	1.58E+00	2.41E+00	2.41E+00	NA	NA	NA	NA	
MW-52-11	001	10.0	6.8	6/20/2007	12:35		1.47E+02	1.68E+02	1.84E+02	-3.38E-01	6.33E-01	8.33E-01	1.96E+00	2.54E+00	2.99E+00	6.12E-01	2.29E+00	2.65E+00	2.65E+00	NA	NA	NA	NA	MW-52-11
	002			8/6/2007	16:18		7.71E+01	1.73E+02	1.94E+02	-5.43E-01	6.12E-01	9.38E-01	-2.16E+00	3.42E+00	3.23E+00	3.39E-02	2.79E+00	3.22E+00	3.22E+00	NA	NA	NA	NA	
	003			5/24/2007	10:44		1.62E+02	1.52E+02	1.65E+02	-2.20E-01	4.98E-01	7.30E-01	6.53E-01	3.19E+00	3.74E+00	3.13E+00	3.09E+00	3.42E+00	3.42E+00	NA	NA	NA	NA	MW-52-18
	004			8/6/2007	13:45		6.73E+01	1.74E+02	1.96E+02	-7.91E-02	6.92E-01	8.93E-01	-1.43E+00	3.54E+00	3.67E+00	1.11E-01	3.15E+00	3.54E+00	3.54E+00	NA	NA	NA	NA	
MW-52-48	001	48.0	-33.1	5/24/2007	11:35		7.02E+01	1.48E+02	1.67E+02	-3.61E-01	7.44E-01	1.01E+00	3.66E-01	2.94E+00	3.39E+00	-9.91E-01	3.03E+00	3.11E+00	3.11E+00	NA	NA	NA	NA	MW-52-48
	002			8/6/2007	14:00		1.15E+02	1.76E+02	1.96E+02	-5.59E-01	4.83E-01	7.33E-01	7.85E-01	3.24E+00	3.75E+00	4.31E-01	3.29E+00	3.75E+00	3.75E+00	NA	NA	NA	NA	MW-52-64
	003			5/24/2007	14:44		3.82E+00	1.70E+02	1.98E+02	-3.20E-01	7.68E-01	9.77E-01	-1.03E+00	3.25E+00	3.45E+00	8.00E-01	3.54E+00	4.11E+00	4.11E+00	NA	NA	NA	NA	
	004			8/6/2007	15:50		3.72E+01	1.71E+02	1.96E+02	-1.70E-02	7.22E-01	9.23E-01	5.10E-01	3.50E+00	3.68E+00	1.80E+00	3.68E+00	4.12E+00	4.12E+00	NA	NA	NA	NA	
MW-52-122	001	122.0	-107.1	5/24/2007	14:55		6.78E+01	1.47E+02	1.66E+02	-4.24E-01	6.62E-01	9.64E-01	2.52E+00	3.59E+00	3.62E+00	1.76E+00	3.38E+00	3.29E+00	3.29E+00	NA	NA	NA	NA	MW-52-122
	002			8/6/2007	12:05		4.82E+01	1.71E+02	1.96E+02	-4.19E-01	7.10E-01	9.69E-01	1.99E+00	4.09E+00	4.34E+00	2.10E-01	4.13E+00	4.70E+00	4.70E+00	NA	NA	NA	NA	
	003			5/24/2007	11:55		2.42E+02	1.95E+02	2.03E+02	-5.15E-01	4.87E-01	8.12E-01	-5.80E-01	3.59E+00	3.29E+00	1.59E+00	3.15E+00	3.88E+00	3.88E+00	NA	NA	NA	NA	MW-52-162
	004			8/6/2007	11:30		2.11E+02	1.80E+02	1.95E+02	1.53E-02	4.79E-01	6.03E-01	3.61E-02	3.44E+00	3.72E+00	-3.73E-02	3.12E+00	3.52E+00	3.52E+00	NA	NA	NA	NA	
	005			5/24/2007	12:06		2.48E+02	1.94E+02	2.04E+02	-3.19E-01	5.07E-01	7.38E-01	-5.99E-01	3.39E+00	3.52E+00	-2.81E-01	3.74E+00	4.19E+00	4.19E+00	NA	NA	NA	NA	MW-52-181
	006			8/6/2007	11:40		1.19E+02	1.77E+02	1.97E+02	5.84E-02	5.56E-01	6.77E-01	-1.21E+00	2.87E+00	2.97E+00	1.28E+00	2.96E+00	3.57E+00	3.57E+00	NA	NA	NA	NA	
MW-53-82	001	72.7	-2.4	8/23/2006	12:50		1.18E+04	1.85E+03	5.02E+02	6.68E+00	3.10E+00	2.74E+00	-3.52E+00	2.08E+00	6.64E+00	1.30E+00	1.02E+01	1.16E+01	1.16E+01	NA	NA	NA	NA	MW-53-82
	002			11/9/2006	12:30		1.32E+04	1.11E+03	6.12E+02	NA	NA	NA	9.35E-01	5.78E+00	6.37E+00	1.36E+00	5.70E+00	6.30E+00	6.30E+00	NA	NA	NA	NA	
	003			11/9/2006	11:15		4.54E+02	1.38E+02	1.40E+02	8.00E-02	8.10E-01	9.00E-01	-1.20E+00	3.00E+00	3.60E+00	-1.30E+00	3.30E+00	4.00E+00	4.00E+00	NA	NA	NA	NA	
	004			6/22/2007	15:30		8.68E+03	1.05E+03	4.31E+02	3.98E+00	1.45E+00	1.04E+00	3.81E+00	3.25E+00	3.45E+00	8.00E+00	3.54E+00	4.63E+00	4.63E+00	NA	NA	NA	NA	
	005			8/9/2007	11:31		7.76E+02	2.06E+02	2.04E+02	-3.41E-02	6.87E-01	8.82E-01	6.29E-01	2.33E+00	2.76E+00	-1.05E+00	2.17E+00	2.17E+00	2.17E+00	NA	NA	NA	NA	
	006			10/24/2007	13:53		1.11E+03	4.71E+02	4.03E+02	2.35E-01	3.11E-01	3.43E-01	3.07E-01	2.71E+00	3.03E+00	1.06E+00	2.44E+00	2.38E+00	2.38E+00	NA	NA	NA	NA	
MW-53-120	001	109.8	-39.5	8/30/2006	11:30		9.42E+02	1.86E+02	1.71E+02	2.19E-01	4.28E-01	4.87E-01	0.00E+00	5.42E+00	3.23E+00	-1.36E+00	2.84E+00	2.84E+00	2.84E+00	NA	NA	NA	NA	
	002			11/9/2006	11:20		7.90E+03	1.47E+03	1.00E+03	2.47E+01	1.83E+00	7.90E-01	-6.16E-01	2.70E+00	3.10E+00	-3.50E-01	2.76E+00	3.30E+00	3.30E+00	NA	NA	NA	NA	MW-53-120
	003			6/22/2007	14:22		9.61E+03	1.10E+03	4.32E+02	3.57E+01	3.69E+00	1.04E+00	7.93E+00	5.09E+00	2.84E+00	9.47E+01	3.15E+00	3.72E+00	3.72E+00	NA	NA	NA	NA	
	004			8/9/2007	12:45		8.05E+03	1.02E+03	4.59E+02	3.70E+01	3.18E+00	9.24E-01	1.37E+00	3.62E+00	4.27E+00	-1.59E-01	3.74E+00	4.17E+00	4.17E+00	NA	NA	NA	NA	
	005			10/24/2007	13:38		7.40E+03	9.29E+02	4.02E+02	3.81E+01	2.27E+00	4.82E-01	-5.34E-01	3.51E+00	3.29E+00	-2.23E-01	3.35E+00	3.72E+00	3.72E+00	NA	NA	NA	NA	
	006			1/21/2008	10:43		7.48E+03	3.48E+02	1.72E+02	3.12E+01	2.40E+00	6.46E-01	1.38E+00	3.02E+00	3.18E+00	1.14E-01	3.30E+00	3.71E+00	3.71E+00	NA	NA	NA	NA	
MW-54-37	001	36.5	-23.4	5/3/2007	16:19		8.01E+02	3.14E+02	3.02E+02	1.25E+01	2.12E+00	7.94E-01	2.44E+00	3.63E+00	4.42E+00	-1.43E+00	2.71E+00	2.51E+00	2.51E+00	NA	NA	NA	NA	MW-54-37
	002			7/31/2007	10:30		8.88E+02	4.14E+02	2.68E+02	5.30E+00	1.11E+00	6.26E-01	1.46E+00	2.54E+00	3.03E+00	6.61E-01	3.54E+00	4.19E+00	4.19E+00	NA	NA	NA	NA	
	003			10/19/2007	13:25		1.04E+03	4.26E+02	3.66E+02	6.19E+00	1.37E+00	6.14E-01	6.04E-01	3.50E+00	3.84E+00	6.61E-01	3.54E+00	4.19E+00	4.19E+00	NA	NA	NA	NA	
	004			1/15/2008	13:18		1.07E+03	4.97E+02	4.18E+02	5.79E+00	1.47E+00	7.26E-01	7.48E-02	2.81E+00	3.11E+00	1.03E+00	2.79E+00	3.00E+00	3.00E+00	NA	NA	NA	NA	
	005			5/3/2007	16:45		7.60E+02	3.11E+02	3.02E+02	2.22E+00	9.99E-01	7.02E-01	-3.77E-01	2.81E+00	3.07E+00	1.15E-01	2.71E+00	3.09E+00	3.09E+00	NA	NA	NA	NA	MW-54-58
	006			7/31/2007	9:55		6.93E+02	3.72E+02	2.62E+02	1.76E+00	8.53E-01	7.32E-01	-1.32E+00	3.12E+00	3.23E+00	8.17E-03	3.01E+00	3.35E+00	3.35E+00	NA	NA	NA	NA	
	007			10/19/2007	13:35		5.61E+02	2.00E+02	1.94E+02	4.38E-01	8.43E-01	9.56E-01	-2.08E-01	3.03E+00	3.40E+00	3.56E-01	2.95E+00	3.39E+00	3.39E+00	NA	NA	NA	NA	
	008			1/15/2008	13:45		6.47E+02	4.40E+02	4.18E+02	2.32E+00	1.09E+00	8.13E-01	2.16E+00	4.59E+00	3.18E+00	-7.34E-01	3.06E+00	3.27E+00	3.27E+00	NA	NA	NA	NA	
	009			5/3/2007	14:18		1.11E+03	3.75E+02	3.36E+02	2.19E+01	2.71E+00	8.06E-01	4.21E+00	3.50E+00	3.67E+00	-2.65E+00	7.07E+00	3.31E+00	3.31E+00	NA	NA	NA	NA	MW-54-123
	010			7/31/2007	11:10		9.63E+02	4.29E+02	3.69E+02	1.35E+01	1.47E+00	8.87E-01	0.00E+00	4.68E+00	4.49E+00	2.96E+00	4.02E+00	5.06E+00	5.06E+00	NA	NA	NA	NA	
	011			10/19/2007	12:09		7.01E+02	3.87E+02	3.62E+02	1.16E+01	1.88E+00	8.13E-01	4.02E+02	3.51E+00	3.88E+00	-1.72E+00	3.65E+00	3.68E+00	3.68E+00	NA	NA	NA	NA	
	012			1/15/2008	10:52																			

TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msd <sup>3</sup>	SAMPLE COLLECTION			ANALYSIS RESULTS												Well ID <sup>1</sup>		
				Date	Time	TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)			Ni-63 (pCi/L)			
						Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result		Std. Dev.	MDC
MW-54-173	001	172.5	-159.4	5/3/2007	14:43	1.90E+03	6.27E+02	4.71E+02	2.09E+01	3.82E+00	4.16E+00	-4.52E-01	3.82E+00	4.16E+00	1.92E+00	3.46E+00	4.27E+00	5.60E+00	1.94E+01	2.21E+01	MW-54-173
	002			7/31/2007	13:40	2.08E+03	5.94E+02	2.68E+02	1.45E+01	1.85E+00	8.29E+00	7.90E-01	2.63E+00	3.10E+00	7.55E-01	2.22E+00	2.74E+00	3.92E+00	1.81E+01	2.07E+01	
	003			10/19/2007	12:14	1.91E+03	5.07E+02	3.63E+02	1.49E+01	2.07E+00	6.21E+01	1.05E+00	3.29E+00	3.70E+00	-3.08E-01	2.87E+00	3.18E+00	1.37E+00	1.49E+01	1.70E+01	
MW-54-190	004	190.0	-176.9	1/15/2008	11:15	1.87E+03	5.84E+02	4.16E+02	1.41E+01	1.80E+00	9.29E+01	-3.68E-01	2.81E+00	3.08E+00	3.32E-01	3.00E+00	4.79E+00	4.79E+00	2.30E+01	2.65E+01	MW-54-190
	005			5/3/2007	15:00	1.87E+03	6.23E+02	4.71E+02	1.95E+01	2.56E+00	7.00E+01	1.82E+00	3.23E+00	3.90E+00	5.21E-01	2.90E+00	3.30E+00	1.54E+00	1.88E+01	2.18E+01	
	002			7/31/2007	13:45	2.25E+03	6.12E+02	2.66E+02	1.79E+01	2.15E+00	7.59E+01	-2.13E+00	3.35E+00	3.12E+00	9.32E-01	3.09E+00	3.67E+00	-3.07E+00	1.66E+01	1.94E+01	
	003			10/19/2007	12:20	2.13E+03	5.24E+02	3.60E+02	2.04E+01	2.46E+00	7.97E+01	-1.04E+00	3.45E+00	3.07E+00	7.41E-01	4.05E+00	3.38E+00	-3.38E+00	1.71E+01	1.97E+01	
	004			1/15/2008	11:37	2.24E+03	6.26E+02	4.16E+02	1.93E+01	2.54E+00	8.15E+01	6.45E-01	2.64E+00	3.11E+00	-3.88E-01	2.48E+00	2.80E+00	9.23E+00	2.42E+01	2.75E+01	
MW-55-24	001	191	-0.8	11/19/2006	13:20	2.00E+03	1.11E+03	1.00E+03	1.66E+01	2.40E+00	1.90E+00	-7.00E-01	4.50E+00	5.80E+00	4.00E-01	5.40E+00	6.70E+00	1.10E+00	5.40E+00	6.00E+00	MW-55-24
	002	16.0	2.3	6/28/2007	11:20	3.08E+03	2.96E+02	1.87E+02	3.25E+01	3.51E+00	1.06E+00	0.09E+00	4.00E+00	3.70E+00	1.16E+00	3.81E+00	4.60E+00	NA	NA	NA	
	003			8/22/2007	11:17	2.71E+03	7.28E+02	5.47E+02	2.31E+01	2.67E+00	9.19E+01	-4.91E-01	2.79E+00	3.02E+00	1.40E+00	2.94E+00	3.47E+00	2.79E+01	2.31E+01	2.31E+01	
	004			10/16/2007	10:15	2.20E+03	5.36E+02	3.68E+02	2.29E+01	2.61E+00	8.43E-01	6.26E-01	3.63E+00	4.21E+00	7.46E-01	3.29E+00	3.47E+00	NA	NA	NA	
	005			1/28/2008	12:57	1.14E+03	3.65E+02	2.96E+02	2.26E+01	2.46E+00	9.24E-01	3.33E-00	3.26E+00	2.50E+00	1.04E+00	1.55E+00	2.51E+00	1.44E+01	1.82E+01	2.00E+01	
MW-55-35	001	32.4	-14.2	11/9/2006	13:40	9.04E+03	1.50E+03	1.00E+03	4.04E+01	4.80E+00	3.30E+00	-1.10E+00	3.30E+00	3.90E+00	-5.00E-01	3.30E+00	4.10E+00	4.30E+00	5.40E+00	5.80E+00	MW-55-35
	002	32.0	-13.8	6/28/2007	11:50	3.09E+03	2.93E+02	1.84E+02	3.25E+01	3.31E+00	9.74E-01	-4.64E-01	3.46E+00	3.78E+00	9.35E-01	3.19E+00	3.24E+00	1.00E+00	1.23E+00	1.75E+00	
	003			8/22/2007	11:20	3.68E+03	7.91E+02	5.33E+02	3.40E+01	3.43E+00	8.95E-01	3.45E+00	3.36E+00	3.58E+00	7.69E-01	2.23E+00	2.70E+00	2.90E+00	1.50E+00	2.28E+00	
	004			10/16/2007	10:02	5.09E+03	7.34E+02	5.63E+02	3.16E+01	3.04E+00	1.04E+00	2.62E+00	3.36E+00	3.58E+00	1.44E+00	3.44E+00	4.20E+00	NA	NA	NA	
	005			1/28/2008	11:46	2.33E+03	4.59E+02	2.97E+02	2.64E+01	2.60E+00	5.21E-01	-5.28E-01	2.12E+00	2.26E+00	-6.90E-01	2.19E+00	2.32E+00	1.12E+00	1.76E+00	1.96E+00	
MW-55-54	001	49.0	-30.8	11/9/2006	13:30	1.31E+04	1.68E+03	1.06E+03	2.28E+01	1.35E+00	8.19E-01	1.05E+00	3.30E+00	3.80E+00	-3.20E+00	2.81E+00	2.30E+00	1.29E+00	1.80E+00	2.09E+00	MW-55-54
	002	47.0	-28.8	6/28/2007	11:40	1.04E+04	4.79E+02	1.84E+02	2.47E+01	2.88E+00	9.85E-01	1.30E-01	3.09E+00	3.43E+00	-4.69E-01	3.27E+00	3.48E+00	NA	NA	NA	
	003			8/22/2007	12:00	9.91E+03	1.19E+03	5.51E+02	2.22E+01	2.38E+00	9.10E-01	-1.09E+00	3.69E+00	3.80E+00	1.46E+00	2.87E+00	3.56E+00	6.13E+00	1.59E+00	2.28E+00	
	004			10/16/2007	10:05	1.03E+04	9.96E+02	3.61E+02	2.23E+01	2.49E+00	6.15E-01	-9.80E-01	2.82E+00	3.02E+00	8.80E-01	3.65E+00	4.20E+00	NA	NA	NA	
	005			1/28/2008	11:42	7.48E+03	7.35E+02	2.97E+02	2.28E+01	2.40E+00	5.39E-01	-8.47E-01	2.16E+00	2.30E+00	-1.29E+00	2.81E+00	2.20E+00	1.09E+00	1.80E+00	2.09E+00	MW-56-53
MW-56-53	001	52.5	17.8	1/4/2007	9:39	7.80E+02	5.40E+02	5.10E+02	-9.00E+02	7.80E+00	8.80E+00	1.36E+01	1.60E+00	4.20E+00	2.00E+00	3.60E+00	3.80E+00	3.70E+00	6.60E+00	7.80E+00	
	002	52.0	18.3	6/26/2007	10:51	2.89E+02	1.70E+02	1.82E+02	-4.49E+02	5.50E-01	6.66E-01	-5.30E-01	4.46E+00	4.11E+00	2.93E+00	4.88E+00	4.84E+00	1.30E+00	1.41E+00	1.62E+00	
	003			8/10/2007	12:25	2.16E+02	1.86E+02	2.03E+02	-5.66E-01	6.10E-01	9.04E-01	8.31E-01	2.79E+00	3.21E+00	3.99E+02	2.56E+00	2.85E+00	NA	NA	NA	
	004			1/31/2008	12:30	2.63E+02	1.27E+02	1.31E+02	5.70E-01	8.81E-01	9.77E-01	3.38E-01	3.69E+00	3.87E+00	5.97E-01	3.48E+00	3.99E+00	1.74E+00	1.55E+00	1.80E+00	
MW-56-83	001	75.8	-5.5	9/8/2006	11:15	5.40E+02	1.62E+02	1.26E+02	2.70E+00	1.05E+00	9.39E-01	9.15E-01	3.86E+00	4.02E+00	1.87E-01	2.75E+00	3.15E+00	NA	NA	NA	MW-56-83
	002			11/9/2006	10:20	1.65E+02	1.35E+02	1.40E+02	7.00E+02	7.20E+00	8.10E-01	7.70E-01	2.70E+00	3.10E+00	-2.20E+00	2.91E+00	3.50E+00	3.30E+00	5.40E+00	5.80E+00	
	003			1/4/2007	13:20	1.28E+03	5.70E+02	5.20E+02	2.30E+00	9.09E-01	8.90E-01	1.18E+01	4.80E+00	4.40E+00	1.00E-01	3.00E+00	3.60E+00	7.90E-01	7.80E+00	8.80E+00	
	004	74.0	-3.7	6/22/2007	10:44	1.85E+03	5.76E+02	4.30E+02	1.87E+00	1.33E+00	1.09E+00	1.47E-01	3.39E+00	3.85E+00	-1.87E+00	2.82E+00	2.46E+00	3.95E+00	1.27E+00	1.46E+00	
	005			8/10/2007	11:10	1.49E+03	5.52E+02	4.55E+02	2.43E+00	1.05E+00	9.23E-01	9.15E-01	3.86E+00	4.02E+00	1.87E-01	2.75E+00	3.15E+00	NA	NA	NA	
	006			1/31/2008	9:30	1.94E+03	1.97E+02	1.34E+02	3.56E+00	1.34E+00	9.49E-01	-8.03E-01	3.69E+00	3.23E+00	1.60E+00	2.78E+00	3.15E+00	6.37E-01	1.79E+00	1.85E+00	
MW-57-11	001	10.0	5.0	6/22/2007	12:30	4.09E+03	3.21E+06	1.97E+02	3.79E+01	2.77E+00	5.36E-01	1.15E+00	3.78E+00	4.16E+00	3.95E-03	3.01E+00	3.41E+00	-5.75E-01	2.16E+00	2.50E+00	MW-57-11
	002			6/22/2007	12:30	1.65E+03	5.58E+02	4.32E+02	1.96E+00	1.07E+00	9.67E-01	-1.33E+00	3.69E+00	3.90E+00	-9.51E-01	3.65E+00	3.84E+00	4.77E-01	1.56E+00	1.59E+00	MW-57-20
	002			8/6/2007	12:15	9.96E+02	2.15E+02	1.96E+02	1.23E+00	6.67E-01	5.78E-01	1.21E+00	3.59E+00	3.64E+00	6.05E-01	2.75E+00	3.22E+00	-1.19E+00	1.22E+00	2.46E+00	
MW-57-45	001	40.0	-25.0	8/24/2006	9:30	4.00E+03	6.98E+02	3.17E+02	1.88E+01	3.51E+00	2.11E+00	-5.40E-01	6.75E+00	7.36E+00	1.19E+00	6.35E+00	7.50E+00	8.29E+00	9.69E+00	9.70E+00	MW-57-45
	001			8/21/2006	9:30	4.06E+03	8.82E+02	7.71E+02	NA	NA	NA	2.85E-01	4.41E+00	4.80E+00	-1.81E-01	3.89E+00	4.37E+00	NA	NA	NA	
	002			6/22/2007	12:55	9.55E+02	4.85E+02	4.35E+02	1.90E+00	1.05E+00	8.65E-01	-1.97E-01	3.40E+00	3.82E+00	-8.51E-01	3.50E+00	3.65E+00	6.46E+00	1.23E+00	1.43E+00	
	003			8/6/2007	12:17	7.40E+02	2.07E+02	1.98E+02	2.55E+00	8.77E-01	6.09E-01	-3.91E-01	3.15E+00	3.42E+00	-1.89E-01	3.59E+00	3.35E+00	-1.15E+00	2.69E+00	2.49E+00	
MW-58-26	001	21.6	-7.0	11/16/2006	13:25	-2.60E+00	1.59E+02	1.60E+02	3.70E-01	7.50E-01	8.20E-01	2.27E+00	4.40E+00	4.50E+00	-9.00E-01	3.30E+00	4.30E+00	-3.20E+00	5.70E+00	6.40E+00	MW-58-26
	002			1/5/2017	8:57	2.60E+02	1.80E+02	1.80E+02	-8.00E+02	7.50E-01	8.50E-01	3.24E+00	2.97E+00	3.20E+00	9.50E-01	2.73E+00	3.10E+00	-3.90E+00	6.30E+00	7.40E+00	
MW-58-26	003	20.0	-5.4	6/21/2007	11:10	5.97E+02	2.00E+02	1.86E+02	1.04E+00	6.09E-01	5.25E-01	1.62E+00	2.42E+00	2.86E+00	-3.90E+00	2.42E+00	2.60E+00	1.07E+00	1.45E+00	1.45E+00	
	004			7/31/2007	11:00	8.56E+02	3.99E+02	2.58E+02													

TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msd <sup>3</sup>	SAMPLE COLLECTION				ANALYSIS RESULTS												Well ID <sup>1</sup>		
				Date	Time	TRITIUM (pCi/L)		Sr-90 (pCi/L)		Cs-137 (pCi/L)		Co-60 (pCi/L)		Ni-63 (pCi/L)		MDC	Std. Dev.	Result	MDC		Std. Dev.	Result
						Result	Std. Dev.	Result	Std. Dev.	Result	Std. Dev.	Result	Std. Dev.	Result	Std. Dev.							
MW-58-65	003	54.0	-39.4	6/21/2007	11:10	3.15E+02	1.77E+02	1.81E+02	1.90E+01	3.96E-01	5.69E-01	-2.19E+01	2.37E+00	2.68E+00	-2.89E+00	3.17E+00	2.36E+00	2.80E+00	1.45E+01			
	004			7/31/2007	11:00	3.42E+02	3.02E+02	2.72E+02	6.20E-03	5.19E-01	6.52E-01	1.28E+00	3.39E+00	3.37E+00	1.02E+00	3.24E+00	3.24E+00	3.39E+00	NA	NA		
	005			1/22/2008	12:00	3.13E+02	1.62E+02	1.69E+02	1.21E-01	5.85E-01	7.22E-01	5.54E-01	3.93E+00	3.92E+00	-1.23E-01	3.29E+00	3.05E+00	NA	NA	NA		
MW-59-32	001	26.2	-11.7	1/16/2006	11:05	2.80E+01	1.77E+02	1.80E+02	-6.00E-02	7.20E-01	7.99E-01	3.60E-01	2.29E+00	4.10E+00	3.00E+00	4.20E+00	4.30E+00	-2.60E+00	6.60E+00	7.50E+00		
	002			1/5/2007	9:41	1.35E+02	1.77E+02	1.80E+02	3.00E-01	7.50E-01	8.20E-01	1.50E+00	3.60E+00	4.00E+00	1.30E+00	3.90E+00	4.40E+00	-1.90E+00	6.90E+00	8.10E+00		
	003	27.0	-12.5	6/21/2007	15:25	4.67E+02	4.23E+02	4.36E+02	-6.68E-02	6.78E-01	9.11E-01	6.01E-01	3.95E+00	4.59E+00	-4.19E-01	4.46E+00	4.71E+00	-4.37E-01	1.54E+01	1.45E+01		
	004			7/31/2007	14:35	1.69E+02	1.59E+02	1.63E+02	2.00E-01	6.72E-01	7.96E-01	2.26E-01	3.30E+00	3.73E+00	7.97E-01	3.19E+00	3.75E+00	NA	NA	NA		
MW-59-45	001	40.4	-25.9	1/16/2006	11:18	5.50E+01	1.74E+02	1.70E+02	2.40E-01	7.20E-01	8.00E-01	3.74E-01	8.70E+00	4.50E+00	1.60E+00	4.20E+00	4.50E+00	-1.60E+00	5.70E+00	6.60E+00		
	002			1/5/2007	9:48	8.80E+01	1.80E+02	1.80E+02	0.00E+00	7.80E-01	8.70E-01	1.49E+02	1.20E+01	4.90E+00	2.00E+00	3.90E+00	4.00E+00	-2.50E+00	7.50E+00	8.60E+00		
	003	42.0	-27.5	6/21/2007	15:25	7.50E+02	4.59E+02	4.34E+02	-2.74E-01	6.88E-01	9.10E-01	-1.10E-01	2.50E+00	2.83E+00	8.14E-02	2.16E+00	2.49E+00	7.74E-01	1.47E+01	1.71E+01		
	004			7/31/2007	13:38	2.49E+02	1.74E+02	1.65E+02	1.64E-01	5.90E-01	7.05E-01	4.48E-01	3.52E+00	3.70E+00	7.64E-01	3.35E+00	3.94E+00	NA	NA	NA		
MW-59-68	001	60.6	-46.1	1/16/2006	11:30	5.50E+01	1.74E+02	1.80E+02	1.20E-01	7.20E-01	8.10E-01	1.15E+02	1.11E+01	5.60E+00	-8.00E-01	3.60E+00	4.10E+00	1.90E+00	7.50E+00	8.40E+00		
	002			1/5/2007	10:05	1.56E+02	1.83E+02	1.80E+02	3.30E-01	8.10E-01	8.90E-01	6.75E+01	6.60E+00	4.10E+00	-8.00E-01	3.60E+00	4.10E+00	1.90E+00	7.50E+00	8.40E+00		
	003	58.0	-43.5	6/21/2007	15:25	5.90E+02	4.41E+02	4.39E+02	2.97E-01	8.79E-01	1.03E+00	6.26E-01	3.50E+00	3.80E+00	1.27E+00	2.91E+00	3.62E+00	-4.23E+00	1.30E+01	1.56E+01		
	004			7/31/2007	13:38	8.19E+02	4.02E+02	2.68E+02	3.66E-01	7.08E-01	7.98E-01	9.02E-01	2.88E+00	2.98E+00	3.72E-01	3.17E+00	3.17E+00	0.00E+00	1.81E+01	2.12E+01		
MW-60-35	001	34.9	-22.4	5/8/2007	13:27	-9.12E+02	1.49E+02	1.79E+02	-1.79E-01	5.28E-01	7.62E-01	1.41E+00	4.84E+00	3.30E+00	2.45E+00	3.72E+00	4.67E+00	0.00E+00	1.81E+01	2.12E+01		
	002			7/27/2007	13:07	7.61E+02	2.40E+02	1.78E+02	6.48E-02	3.80E-01	4.66E-01	5.95E-01	4.25E+00	3.23E+00	-3.31E-01	3.07E+00	3.39E+00	NA	NA	NA		
	003			10/9/2007	13:20	1.84E+02	1.48E+02	1.51E+02	3.01E-01	5.97E-01	6.78E-01	1.51E+00	6.06E+00	3.54E+00	0.00E+00	2.64E+00	2.61E+00	NA	NA	NA		
	004			1/14/2008	17:05	7.78E+01	1.58E+02	1.78E+02	5.05E-01	8.10E-01	8.98E-01	1.11E+00	3.21E+00	3.79E+00	-9.16E-01	3.36E+00	3.54E+00	NA	NA	NA		
MW-60-53	001	53.4	-40.9	5/8/2007	11:32	5.32E+01	1.58E+02	1.82E+02	-4.92E-01	5.52E-01	8.96E-01	-2.83E+00	4.86E+00	4.07E+00	2.15E-01	3.59E+00	4.12E+00	3.58E+00	1.84E+01	2.12E+01		
	002			7/27/2007	12:30	1.23E+02	1.71E+02	1.87E+02	-4.72E-01	7.31E-01	7.31E-01	1.46E-01	3.01E+00	3.34E+00	7.87E-01	3.25E+00	3.79E+00	NA	NA	NA		
	003			10/9/2007	12:22	1.13E+02	1.44E+02	1.56E+02	6.19E-01	6.50E-01	6.79E-01	-2.11E+00	3.39E+00	3.51E+00	3.62E-01	2.79E+00	3.21E+00	NA	NA	NA		
	004	72.4	-59.9	1/14/2008	15:40	5.33E+01	1.53E+02	1.78E+02	-1.69E-01	5.28E-01	7.59E-01	-1.10E+00	2.78E+00	2.88E+00	-1.89E+00	2.94E+00	2.76E+00	NA	NA	NA		
MW-60-72	001	72.4		5/8/2007	12:17	-9.26E+00	1.52E+02	1.82E+02	2.87E-01	8.13E-01	9.71E-01	1.61E+00	4.72E+00	3.33E+00	9.40E-01	3.21E+00	3.82E+00	8.28E-01	1.69E+01	1.97E+01		
	002			7/27/2007	13:22	1.10E+02	1.64E+02	1.81E+02	-3.27E-01	4.92E-01	5.76E-01	4.79E-01	3.96E+00	4.51E+00	1.10E+00	3.94E+00	4.17E+00	NA	NA	NA		
	003			10/9/2007	14:15	1.24E+02	1.43E+02	1.54E+02	1.64E-01	7.12E-01	7.48E-01	1.78E+00	3.78E+00	4.27E+00	6.12E-01	3.76E+00	4.33E+00	NA	NA	NA		
	004			1/14/2008	14:12	1.36E+02	1.65E+02	1.78E+02	1.58E-01	5.93E-01	7.23E-01	5.42E-03	3.33E+00	3.56E+00	8.47E-01	2.97E+00	3.54E+00	NA	NA	NA		
MW-60-135	001	134.9	-122.4	5/8/2007	12:03	2.54E+01	1.55E+02	1.81E+02	3.35E-01	6.77E-01	7.4E-01	-1.05E+00	3.50E+00	3.08E+00	1.74E-01	3.12E+00	3.52E+00	4.54E+00	1.77E+01	2.02E+01		
	002			7/27/2007	16:00	3.92E+02	2.03E+02	1.81E+02	-2.13E-01	3.09E-01	4.69E-01	2.78E-02	2.70E+00	3.07E+00	1.78E-01	2.63E+00	3.04E+00	NA	NA	NA		
	003			10/9/2007	14:20	5.20E+02	1.83E+02	1.50E+02	-2.59E-01	4.46E-01	6.31E-01	-1.55E+00	3.40E+00	3.52E+00	-8.88E-02	3.57E+00	3.94E+00	NA	NA	NA		
	004			1/14/2008	14:19	3.79E+02	1.89E+02	1.74E+02	-1.70E-01	6.17E-01	8.52E-01	-1.33E+00	3.14E+00	3.23E+00	4.22E-01	3.17E+00	3.59E+00	NA	NA	NA		
MW-60-154	001	154.4	-141.9	5/8/2007	12:33	4.13E+01	1.55E+02	1.80E+02	3.06E-01	8.13E-01	9.50E-01	1.97E-01	3.46E+00	3.86E+00	1.46E+00	3.75E+00	4.46E+00	5.52E-01	1.68E+01	1.97E+01		
	002			7/27/2007	16:18	4.62E+02	2.09E+02	1.79E+02	-1.53E-01	3.46E-01	4.09E-01	8.09E-01	4.23E+00	4.60E+00	3.74E+00	2.42E+00	3.80E+00	NA	NA	NA		
	003			10/9/2007	14:23	5.80E+02	1.88E+02	1.50E+02	-1.92E-02	4.98E-01	6.33E-01	-1.63E+00	3.58E+00	3.68E+00	2.20E-01	3.30E+00	3.76E+00	NA	NA	NA		
	004			1/14/2008	12:35	5.59E+02	2.13E+02	1.79E+02	1.10E+00	1.17E+00	1.24E+00	1.59E+00	3.84E+00	4.46E+00	2.92E-01	4.33E+00	4.82E+00	NA	NA	NA		
MW-60-176	001	175.9	-163.4	5/8/2007	15:16	5.30E+02	2.01E+02	1.80E+02	6.88E-02	5.66E-01	7.29E-01	3.69E-01	4.54E+00	4.38E+00	1.14E+00	3.90E+00	3.98E+00	7.69E+00	1.73E+01	1.96E+01		
	002			7/27/2007	17:35	8.49E+02	2.49E+02	1.78E+02	-4.60E-01	5.84E-01	7.87E-01	2.00E+00	3.29E+00	4.00E+00	3.91E-01	2.71E+00	3.09E+00	NA	NA	NA		
	003			10/9/2007	14:57	7.02E+02	2.01E+02	1.53E+02	-5.93E-02	5.11E-01	6.64E-01	-2.68E-01	2.63E+00	2.83E+00	3.91E-01	2.71E+00	3.02E+00	NA	NA	NA		
	004			1/14/2008	12:25	6.68E+02	2.25E+02	1.83E+02	-7.68E-02	7.89E-01	1.01E+00	2.22E-01	3.99E+00	4.52E+00	5.49E-01	3.54E+00	4.09E+00	NA	NA	NA		
MW-62-18	001	13.5	1.2	5/17/2007	13:10	4.52E+02	1.83E+02	1.55E+02	2.98E-02	5.33E-01	7.27E-01	-5.10E-01	2.61E+00	2.89E+00	1.00E+00	2.79E+00	3.19E+00	4.61E+00	1.52E+01	1.74E+01		
	002			7/26/2007	15:45	5.08E+02	2.13E+02	1.78E+02	4.68E-01	4.93E-01	5.35E-01	9.04E-01	3.75E+00	4.88E+00	2.80E+00	4.80E+00	3.80E+00	NA	NA	NA		
	003			10/10/2007	13:30	3.70E+02	1.73E+02	1.55E+02	1.80E+00	6.67E-01	4.87E-01	0.00E+00	3.39E+00	3.71E+00	7.14E-02	1.71E+00	1.92E+00	NA	NA	NA		
	004			1/31/2008	15:15	3.50E+02	1.34E+02	1.34E+02	4.90E-01	7.55E-01	8.27E-01	1.98E+00	4.39E+00	4.46E+00	5.24E-01	3.38E+00	3.96E+00	NA	NA	NA		
MW-62-37	001	34.5	-19.8	5/17/2007	11:10	2.97E+02	1.70E+02	1.59E+02	3.30E-01	8.28E-01	9.66E-01	1.81E+00	2.00E+00	2.37E+00	-1.12E+00	2.25E+00	2.31E+00	1.01E+01	1.81E+01	2.04E+01		
	002			7/26/2007	14:50	3.02E+02	1.58E+02	1.47E+02	-2.57E-01	4.14E-01	5.18E-01	-6.88E-02	2.64E+00	2.94E+00	-4.23E-01	2.60E+00	2.81E+00	NA	NA	NA		
	003			10/10/2007	14:50	3.97E+02	1.68E+02	1.71E+02	1.34E-01	6.08E-01	7.24E-01	8.35E-0										







TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft ms <sup>3</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID <sup>1</sup>						
				Date	Time	TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)				Ni-63 (pCi/L)					
						Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		Result	Std. Dev.	MDC			
MW-108	002			5/13/2006	10:53	2.78E+02	1.82E+02	1.68E+02	6.89E-01	8.26E-01	8.08E-01	3.12E+00	8.86E+00	1.05E+01	-1.45E+01	1.23E+01	1.34E+01	NA	NA	NA	NA	NA	NA	MW-109
MW-109	003	8.5	6.1	9/29/2005	12:00	1.54E+02	3.81E+02	4.20E+02	NA	NA	NA	3.74E+00	1.12E+01	8.45E+00	2.19E+00	9.57E+00	7.88E+00	NA	NA	NA	NA	NA	MW-110	
	004			11/3/2005	12:00	1.01E+02	4.23E+02	4.76E+02	NA	NA	NA	3.59E+00	1.08E+01	7.89E+00	2.59E+00	7.78E+00	6.25E+00	NA	NA	NA	NA	NA	MW-111	
MW-111	001	14.1	4.8	5/13/2006	10:10	3.39E+02	1.89E+02	1.70E+02	2.98E-01	8.24E-01	9.27E-01	2.00E-01	5.68E+00	6.24E+00	-2.50E+00	6.12E+00	6.08E+00	NA	NA	NA	NA	NA	MW-112	
	002			9/29/2005	10:00	2.15E+05	2.76E+03	4.20E+02	NA	NA	NA	4.48E+00	1.34E+01	1.02E+01	1.81E+00	5.42E+00	5.57E+00	NA	NA	NA	NA	NA	MW-113	
	001			9/29/2005	10:00	2.05E+05	2.56E+04	6.24E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-114	
	002			10/14/2005	10:00	6.81E+03	4.73E+03	6.41E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-115	
	003			10/21/2005	10:00	2.84E+05	3.05E+04	6.41E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-116	
	004			10/28/2005	8:30	2.18E+05	6.54E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-117	
	005			11/1/2005	9:00	3.02E+05	9.06E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-118	
	006			11/22/2005	10:00	1.80E+05	5.40E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-119	
	007			12/2/2005	10:15	1.25E+05	3.75E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-120	
	008			12/8/2005	16:50	2.71E+05	8.13E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-121	
	009			12/15/2005	11:00	2.96E+05	8.88E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-122	
	010			12/19/2005	9:45	1.92E+05	5.76E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-123	
	011			12/29/2005	10:00	2.12E+05	6.36E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-124	
MW-111	012			1/6/2006	10:45	1.13E+05	3.39E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-125	
	013			1/13/2006	10:30	1.99E+05	5.97E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-126	
	014			1/20/2006	9:30	1.19E+05	3.57E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-127	
	015			1/27/2006	10:05	5.78E+05	1.73E+02	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-128	
	016			2/3/2006	12:20	2.95E+05	3.09E+04	6.33E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-129	
	017			2/7/2006	16:10	2.38E+05	2.78E+04	6.37E+02	1.17E+00	6.03E-01	6.31E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-130	
	018			2/16/2006	13:40	2.94E+05	3.09E+04	6.36E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-131	
	019			3/3/2006	9:00	2.36E+05	7.08E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-132	
	020			4/7/2006	9:50	1.45E+05	4.35E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-133	
	021			5/17/2006	14:05	4.31E+04	6.51E+03	9.10E+02	2.49E+00	1.40E+00	1.24E+00	-2.32E-01	1.34E+01	1.51E+01	4.25E+00	1.30E+01	1.49E+01	NA	NA	NA	NA	NA	MW-134	
	022			6/23/2006	8:35	2.63E+05	3.92E+04	2.35E+03	6.23E-01	1.07E+00	1.32E+00	4.18E+00	1.40E+01	1.46E+01	-1.60E-01	1.38E+01	1.52E+01	NA	NA	NA	NA	NA	MW-135	
	023			9/21/2006	10:25	1.59E+05	2.07E+04	1.42E+03	8.79E-01	1.23E+00	1.33E+00	9.50E-02	1.13E+00	1.26E+00	1.21E-01	2.79E+00	3.17E+00	6.34E+00	1.26E+01	1.43E+01	NA	NA	MW-136	
MW-111	025	16.5	2.4	6/15/2007	14:17	1.19E+05	3.69E+03	3.52E+02	9.74E-01	6.30E-01	6.27E-01	4.24E-01	2.75E+00	3.15E+00	3.95E-01	2.60E+00	3.02E+00	NA	NA	NA	NA	NA	MW-137	
	026			8/3/2007	9:53	9.88E+04	2.95E+03	3.68E+02	9.74E-01	6.73E-01	6.27E-01	4.24E-01	2.75E+00	3.15E+00	3.95E-01	2.60E+00	3.02E+00	NA	NA	NA	NA	NA	MW-138	
	027			1/28/2008	11:38	4.77E+04	1.77E+03	2.97E+02	2.56E+00	9.45E-01	6.18E-01	2.60E+00	4.05E+00	3.90E+00	-6.32E-01	2.58E+00	2.63E+00	1.33E+01	1.58E+01	1.73E+01	NA	NA	MW-139	
	028	21.7	-14.7	10/16/2005	12:00	3.70E+02	4.05E+02	4.38E+02	NA	NA	NA	4.72E+00	1.41E+01	1.01E+01	3.72E+00	1.12E+01	8.50E+00	NA	NA	NA	NA	NA	MW-140	
	029			10/21/2005	12:00	3.99E+02	3.90E+02	4.27E+02	NA	NA	NA	3.11E+00	9.34E+00	6.88E+00	2.98E+00	8.95E+00	8.58E+00	NA	NA	NA	NA	NA	MW-141	
	030			10/28/2005	12:00	4.05E+02	4.29E+02	4.72E+02	NA	NA	NA	3.91E+00	1.17E+01	8.54E+00	4.30E+00	1.31E+01	9.84E+00	NA	NA	NA	NA	NA	MW-142	
	031			11/4/2008	12:00	1.18E+02	4.23E+02	4.76E+02	NA	NA	NA	3.17E+00	9.51E+00	6.90E+00	3.34E+00	1.00E+01	7.54E+00	NA	NA	NA	NA	NA	MW-143	
	032			11/10/2008	12:00	3.16E+02	4.14E+02	4.61E+02	NA	NA	NA	4.10E+00	1.23E+01	8.95E+00	4.07E+00	1.22E+01	9.41E+00	NA	NA	NA	NA	NA	MW-144	
	033			11/18/2005	12:00	1.10E+02	4.35E+02	4.81E+02	NA	NA	NA	3.04E+00	9.13E+00	6.67E+00	2.04E+00	6.11E+00	4.97E+00	NA	NA	NA	NA	NA	MW-145	
	034			12/2/2005	12:00	2.73E+02	4.23E+02	4.63E+02	NA	NA	NA	2.97E+00	8.92E+00	6.62E+00	2.00E+00	6.01E+00	5.05E+00	NA	NA	NA	NA	NA	MW-146	
	035			12/15/2005	13:10	3.99E+02	4.32E+02	4.70E+02	NA	NA	NA	2.73E+00	8.20E+00	6.05E+00	2.88E+00	8.64E+00	6.66E+00	NA	NA	NA	NA	NA	MW-147	
	036			12/30/2005	9:25	4.42E+02	4.35E+02	4.71E+02	NA	NA	NA	3.53E+00	1.06E+01	7.76E+00	3.96E+00	1.19E+01	8.99E+00	NA	NA	NA	NA	NA	MW-148	
	037			1/12/2006	11:00	5.73E+02	4.38E+02	4.72E+02	NA	NA	NA	3.29E+00	9.80E+00	7.12E+00	3.42E+00	1.03E+01	7.75E+00	NA	NA	NA	NA	NA	MW-149	
	038			2/15/2006	13:45	2.71E+02	9.39E+02	6.36E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-150	
	039			4/26/2006	14:20	5.75E+02	2.19E+02	1.87E+02	-1.48E-01	6.11E-01	7.91E-01	3.01E-01	8.38E+00	9.11E+00	3.10E+00	8.21E+00	8.71E+00	NA	NA	NA	NA	NA	MW-151	
	040			6/22/2006	10:20	7.10E+02	2.15E+02	1.68E+02	1.27E-01	5.73E-01	7.39E-01	-2.41E+00	1.15E+01	1.21E+01	-2.48E+00	8.42E+00	8.34E+00	NA	NA	NA	NA	NA	MW-152	
	041			2/1/2008	12:40	3.75E+02	1.36E+02	1.35E+02	-1.78E-01	7.83E-01	9.77E-01	2.83E-01	2.69E+00	3.10E+00	1.41E+00	3.26E+00	3.97E+00	NA	NA	NA	NA	NA	MW-153	
	042			10/7/2005	12:00	1.59E+03	4.20E+02	4.15E+02	NA	NA	NA	2.71E+00	8.14E+00	6.09E+00	2.77E+00	8.30E+00	6.55E+00	NA	NA	NA	NA	NA	MW-154	
	043	25.6	2.8	10/21/2005	12:00	3.09E+02	3.87E+02	4.27E+02	NA	NA	NA	3.92E+00	1.18E+01	8.66E+00	3.87E+00	1.16E+01	9.03E+00	NA	NA	NA	NA	NA	MW-155	
	044			10/28/2005	12:00	3.40E+02	4.29E+02	4.72E+02	NA	NA	NA	3.53E+00	1.06E+01	8.06E+00	5.35E+00	1.61E+01	1.23E+01	NA	NA	NA	NA	NA	MW-156	

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TABLE 5 - Q1-08 Historic Contaminant Data.xls  
Historic



TABLE 5  
HISTORIC GROUNDWATER ANALYTICAL RESULTS  
INDIAN POINT ENERGY CENTER  
BUCHANAN, NY

Well ID <sup>1</sup>	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing <sup>2</sup>	SAMPLE ZONE CENTER, elevation ft msl <sup>2</sup>	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID <sup>1</sup>				
				Date	Time	TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)				Ni-63 (pCi/L)			
				Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	
LAF-002	001	NA	-22.3	6/6/2006	12:47	3.98E+01	1.38E+02	6.98E+02	1.38E+01	1.85E+00	1.93E+00	-3.88E+00	1.53E+00	-2.24E+00	1.59E+00	-2.24E+00	1.25E+00	1.34E+01	-2.84E-01	2.13E+01	2.34E+01	LAF-002
	001	NA	-22.3	6/6/2006	12:47	5.20E+01	1.71E+02	1.83E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	003			9/19/2006	13:14	-4.71E+01	1.50E+02	1.70E+02	-5.08E-01	8.90E-01	1.07E+00	6.45E-02	9.05E+00	1.01E+00	-2.76E+00	6.35E+00	4.99E+00	NA	NA	NA	NA	
	004			12/4/2006	13:38	-1.20E+01	1.62E+02	1.60E+02	-1.20E-01	7.80E-01	8.50E-01	NA	NA	NA	9.00E-01	5.40E+00	6.30E+00	-2.50E+00	7.20E+00	8.10E+00	NA	
	005			3/7/2007	14:45	-8.30E+01	1.56E+02	1.60E+02	8.20E-01	1.50E+00	1.60E+00	3.10E+00	4.80E+00	5.10E+00	-1.20E+00	5.40E+00	7.30E+00	NA	NA	NA	NA	
	006			6/7/2007	13:18	-6.85E+00	1.33E+02	1.54E+02	3.19E-01	6.02E-01	6.79E-01	7.80E-01	2.63E+00	3.04E+00	6.55E-01	1.78E+00	3.04E+00	NA	NA	NA	NA	
	007			10/9/2007	9:35	7.46E+01	1.37E+02	1.55E+02	4.43E-01	4.98E-01	5.18E-01	-5.45E-01	2.10E+00	1.69E+00	-1.44E+00	1.78E+00	1.39E+00	NA	NA	NA	NA	
	008			12/4/2007	10:50	9.00E+01	1.46E+02	1.62E+02	4.89E-01	6.20E-01	6.62E-01	-6.91E-01	4.59E+00	4.37E+00	-2.35E+00	3.72E+00	3.39E+00	NA	NA	NA	NA	
RW-1	001	107.5	-30.0	10/25/2006	11:37	6.41E+04	4.88E+03	8.52E+02	-8.44E-01	1.29E+00	1.52E+00	9.50E-01	4.75E+00	5.45E+00	8.01E-01	4.62E+00	5.32E+00	NA	NA	NA	NA	RW-1
	002			10/25/2006	14:15	2.95E+04	2.28E+03	5.85E+02	3.10E-01	8.79E-01	9.23E-01	1.99E+00	5.23E+00	5.98E+00	4.31E-01	4.74E+00	5.22E+00	NA	NA	NA	NA	
	003			10/31/2006	12:27	1.07E+05	8.06E+03	1.10E+03	-3.70E-01	9.51E-01	1.09E+00	7.18E-01	4.23E+00	4.71E+00	7.34E+01	3.04E+00	3.61E+00	NA	NA	NA	NA	
	004			10/31/2006	15:55	2.63E+04	2.04E+03	5.51E+02	-1.06E+00	1.15E+00	1.39E+00	-2.26E-01	3.86E+00	3.99E+00	-6.22E-03	2.86E+00	3.21E+00	NA	NA	NA	NA	
	005			10/31/2006	20:00	1.89E+04	1.49E+03	4.73E+02	9.06E-01	1.15E+00	1.14E+00	5.93E-01	4.51E+00	5.21E+00	1.65E+00	5.31E+00	6.60E+00	NA	NA	NA	NA	
	006			11/1/2006	12:00	1.84E+04	1.45E+03	4.66E+02	3.64E-01	1.03E+00	1.08E+00	-3.39E+00	4.14E+00	3.90E+00	-5.25E-01	4.01E+00	4.19E+00	NA	NA	NA	NA	
	007			11/2/2006	12:00	2.40E+04	2.13E+03	1.00E+03	1.50E-01	6.00E-01	6.70E-01	1.12E+00	2.37E+00	2.60E+00	-8.50E-01	2.37E+00	2.90E+00	NA	NA	NA	NA	
	008			11/3/2006	9:00	3.06E+04	2.34E+03	1.00E+03	4.80E-01	7.20E-01	7.80E-01	-1.05E+00	2.19E+00	2.60E+00	8.20E-01	2.40E+00	2.70E+00	NA	NA	NA	NA	
MH-5 <sup>9</sup>	001	NA	NA	6/29/2007	12:15	1.41E+03	2.33E+02	1.87E+02	-3.26E-01	6.21E-01	9.20E-01	9.57E-01	3.40E+00	3.60E+00	6.39E-02	3.13E+00	3.49E+00	NA	NA	NA	NA	MH-5 <sup>9</sup>
	002			8/10/2007	15:15	1.17E+03	5.21E+02	4.56E+02	3.17E-02	7.84E-01	7.38E-01	-5.40E-01	3.17E+00	2.87E+00	-8.50E-01	2.84E+00	2.93E+00	NA	NA	NA	NA	
	003			10/26/2007	13:30	1.62E+03	2.30E+02	1.84E+02	1.60E-01	6.06E-01	7.10E-01	2.15E-01	2.64E+00	2.95E+00	-6.20E-01	2.90E+00	3.05E+00	NA	NA	NA	NA	
	004			1/16/2008	12:30	9.28E+02	2.45E+02	1.77E+02	4.62E-01	8.33E-01	9.37E-01	5.23E-01	2.78E+00	3.09E+00	5.97E-01	2.55E+00	2.90E+00	NA	NA	NA	NA	
B-1 <sup>9</sup>	001	NA	NA	6/29/2007	12:35	7.93E+02	2.07E+02	1.89E+02	-3.83E-01	6.75E-01	9.80E-01	0.00E+00	7.01E+00	4.41E+00	-9.13E-01	3.30E+00	3.40E+00	NA	NA	NA	NA	B-1 <sup>9</sup>
	002			8/14/2007	11:30	1.10E+03	2.25E+02	1.90E+02	1.29E-02	5.93E-01	6.71E+00	0.00E+00	6.71E+00	3.93E+00	9.94E-01	3.54E+00	4.16E+00	NA	NA	NA	NA	
	003			10/22/2007	14:49	1.10E+03	4.68E+02	4.01E+02	-1.56E-01	3.72E-01	5.51E-01	1.68E+01	5.82E+00	3.82E+00	1.33E+00	3.23E+00	3.53E+00	NA	NA	NA	NA	
	004			1/22/2008	13:08	2.27E+02	1.61E+02	1.71E+02	1.29E-01	5.00E-01	6.12E-01	3.13E-01	2.54E+00	2.83E+00	-9.46E-02	2.72E+00	3.01E+00	NA	NA	NA	NA	
B-6 <sup>9</sup>	001	NA	NA	7/5/2007	9:00	4.03E+02	1.67E+02	1.69E+02	1.01E-01	4.97E-01	5.67E-01	1.29E+00	3.46E+00	4.04E+00	1.09E+00	3.51E+00	4.15E+00	NA	NA	NA	NA	B-6 <sup>9</sup>
	002			8/14/2007	8:30	5.46E+01	1.68E+02	1.92E+02	-3.06E-01	6.20E-01	8.32E-01	5.63E-01	2.97E+00	3.42E+00	-2.88E+00	3.31E+00	2.35E+00	NA	NA	NA	NA	
	003			10/22/2007	11:30	1.07E+02	1.70E+02	1.90E+02	-7.54E-02	4.34E-01	5.83E-01	2.39E+00	2.33E+00	3.04E+00	1.04E+00	2.46E+00	3.05E+00	NA	NA	NA	NA	
	004			1/16/2008	16:50	4.72E+02	2.04E+02	1.79E+02	1.03E-01	7.03E-01	8.83E-01	3.96E+00	4.41E+00	3.32E+00	1.29E+00	3.15E+00	3.65E+00	NA	NA	NA	NA	

Notes:

- For nested multi-level monitoring wells, suffix of well ID indicates depth (rounded to nearest foot) from reference point on casing to bottom of well screen. For Waterloo multi-level systems, suffix indicates depth (rounded to nearest foot) from reference point on casing to top of sampling port. Well IDs without a suffix are open bedrock wellbores.
- Sampling depths within sampling intervals (location of pump intake) have been established at location of most transmissive zone to the extent possible.
- NA indicates that the constituent was not analyzed.
- MW-32 currently contains a Waterloo Multilevel Sampling System configured with these sampling intervals. A previous installation of a Waterloo System within MW-32 (prior to the September 10, 2007 installation of the new configuration) was configured with different sampling intervals (indicated by footnote 5). New configuration sampling intervals listed in parenthesis are representative equivalent to the old configuration sampling interval immediately preceding it. New configuration sampling intervals not listed in parenthesis have no representative equivalent within the old configuration.
- These sampling intervals were part of the previous Waterloo System configuration in MW-32, prior to the new configuration installed on September 10, 2007. New configuration sampling intervals are indicated by footnote 4.
- Dot pattern denotes sampling interval is positioned within overburden soils. Open box indicates sampling interval is in bedrock.
- Sample IDs for this well were not assigned in chronological order.
- At monitoring well U311, sample IDs 019-D, 019-L, and 019-S were collected for laboratory and field QA/QC (B-Duplicate, S-Spike). QA/QC samples were not included in calculations for rolling averages.
- These locations are storm drains, not monitoring wells.



## FIGURES

- Figure 1** Site Location Plan
- Figure 2** Site Plan
- Figure 3** Lower Hudson Valley Geologic Map
- Figure 4** Current and Potential Future SSC Source Locations
- Figure 5A** 1<sup>st</sup> Quarter 2008 Shallow and Deep Groundwater Contours
- Figure 6** 1<sup>st</sup> Quarter 2008 Average Tritium Activity Map
- Figure 7** 1<sup>st</sup> Quarter 2008 Average Strontium-90 Activity Map
- Figure 8** 1<sup>st</sup> Quarter 2008 Average Cesium, Cobalt, and Nickel Activity Map



**LEGEND**

- Storm Drain
- Storm Drain - Connection Terminated
- Footing / Curtain Drain

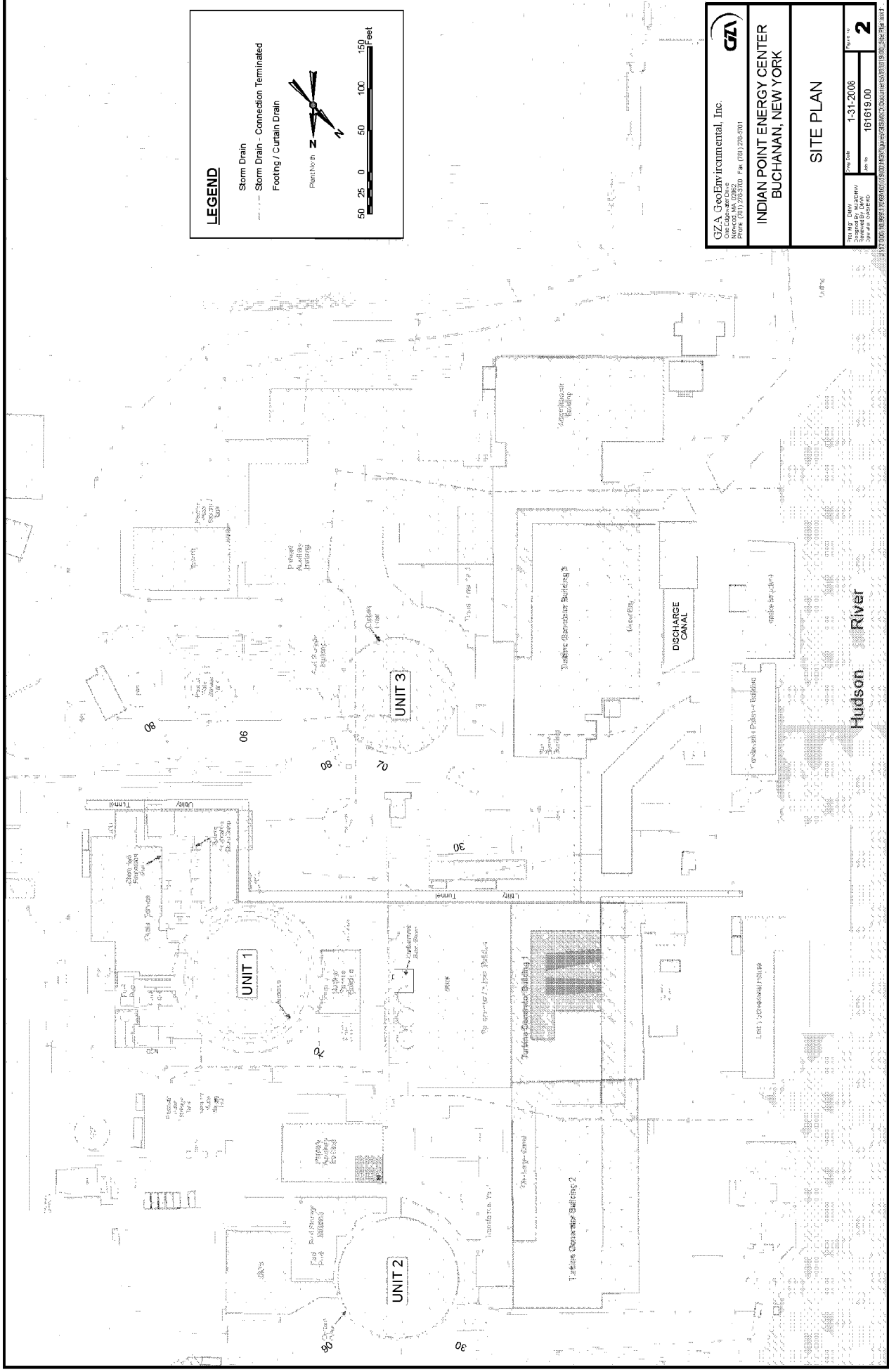


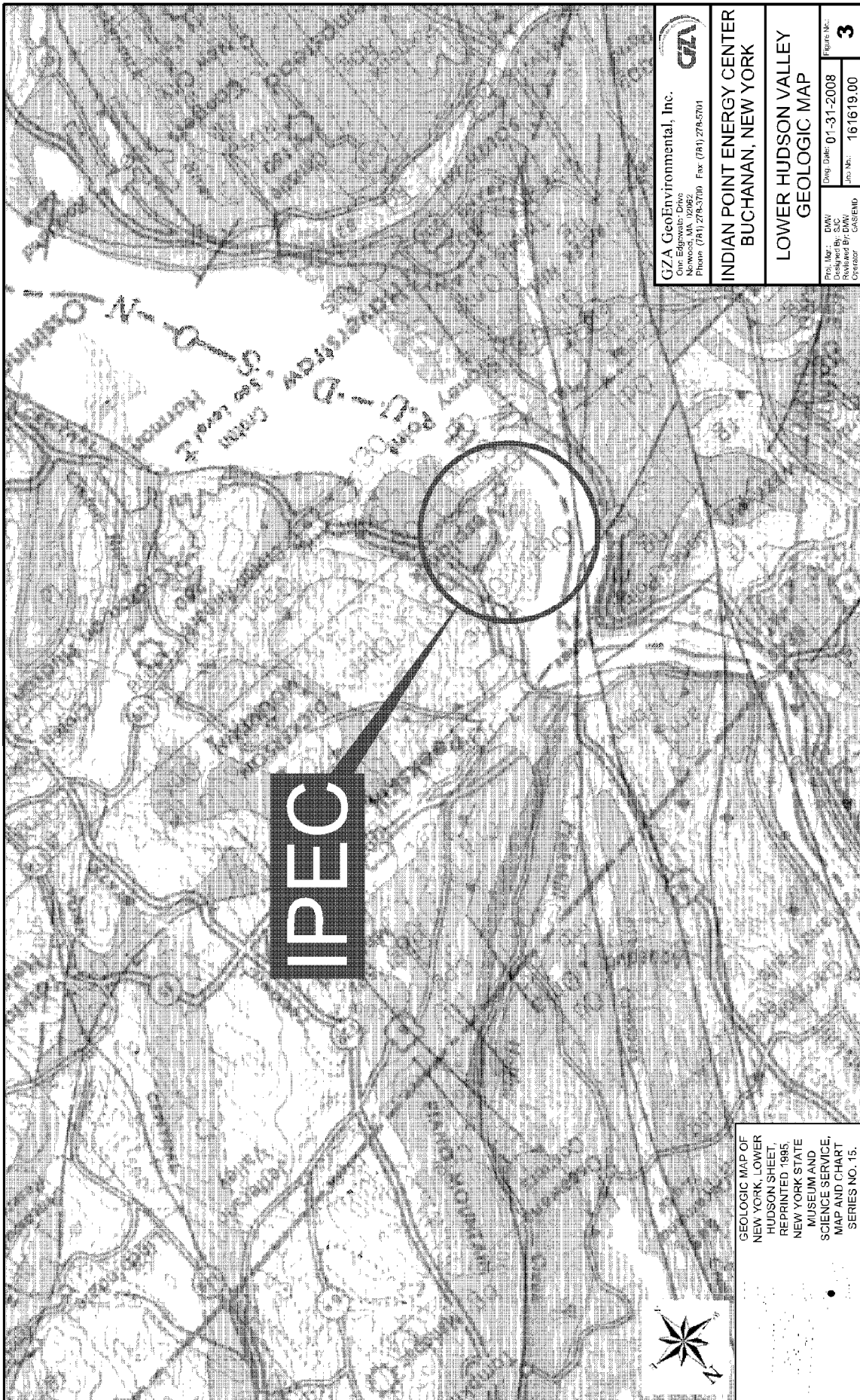
**GZA GeoEnvironmental, Inc.**  
 One Cape Ann Circle  
 New Bedford, MA 02745  
 Phone: (508) 552-3333 Fax: (508) 278-3701

**INDIAN POINT ENERGY CENTER  
 BUCHANAN, NEW YORK**

**SITE PLAN**

Project No.	1-31-2008
Scale	10/16/19/00
Sheet No.	<b>2</b>





GZA GeoEnvironmental, Inc.  
 One Edgewater Drive  
 Phone (781) 276-3700 Fax (781) 276-5701

INDIAN POINT ENERGY CENTER  
 BUCHANAN, NEW YORK

LOWER HUDSON VALLEY  
 GEOLOGIC MAP

Proj. No.:	DWV	Figure No.:	<b>3</b>	
Drawn By:	SKC	Orig. Date:		01-31-2008
Checked By:	SKC	Proj. No.:		161619.00

GEOLOGIC MAP OF  
 NEW YORK, LOWER  
 HUDSON SHEET,  
 REPRINTED 1995  
 NEW YORK STATE  
 MUSEUM AND  
 SCIENCE SERVICE,  
 MAP AND CHART  
 SERIES NO. 15.



GZA-3\17000-16,998\17868\161619-00.mxd\Figures\CAD00\161619-00\_Lower Hudson Valley Geologic Map.dwg [16-2] February 04, 2008 - 9:59am gregory.scott











# 1st QUARTER 2008 ROLLING AVERAGE CESIUM, COBALT, AND NICKEL ACTIVITY MAP

Sample ID	Depth (ft)	Cesium (dpm/100g)	Cobalt (dpm/100g)	Nickel (dpm/100g)
101	12-25	10	10	10
102	12-25	10	10	10
103	12-25	10	10	10
104	12-25	10	10	10
105	12-25	10	10	10
106	12-25	10	10	10
107	12-25	10	10	10
108	12-25	10	10	10
109	12-25	10	10	10
110	12-25	10	10	10
111	12-25	10	10	10
112	12-25	10	10	10
113	12-25	10	10	10
114	12-25	10	10	10
115	12-25	10	10	10
116	12-25	10	10	10
117	12-25	10	10	10
118	12-25	10	10	10
119	12-25	10	10	10
120	12-25	10	10	10
121	12-25	10	10	10
122	12-25	10	10	10
123	12-25	10	10	10
124	12-25	10	10	10
125	12-25	10	10	10
126	12-25	10	10	10
127	12-25	10	10	10
128	12-25	10	10	10
129	12-25	10	10	10
130	12-25	10	10	10
131	12-25	10	10	10
132	12-25	10	10	10
133	12-25	10	10	10
134	12-25	10	10	10
135	12-25	10	10	10
136	12-25	10	10	10
137	12-25	10	10	10
138	12-25	10	10	10
139	12-25	10	10	10
140	12-25	10	10	10
141	12-25	10	10	10
142	12-25	10	10	10
143	12-25	10	10	10
144	12-25	10	10	10
145	12-25	10	10	10
146	12-25	10	10	10
147	12-25	10	10	10
148	12-25	10	10	10
149	12-25	10	10	10
150	12-25	10	10	10
151	12-25	10	10	10
152	12-25	10	10	10
153	12-25	10	10	10
154	12-25	10	10	10
155	12-25	10	10	10
156	12-25	10	10	10
157	12-25	10	10	10
158	12-25	10	10	10
159	12-25	10	10	10
160	12-25	10	10	10
161	12-25	10	10	10
162	12-25	10	10	10
163	12-25	10	10	10
164	12-25	10	10	10
165	12-25	10	10	10
166	12-25	10	10	10
167	12-25	10	10	10
168	12-25	10	10	10
169	12-25	10	10	10
170	12-25	10	10	10
171	12-25	10	10	10
172	12-25	10	10	10
173	12-25	10	10	10
174	12-25	10	10	10
175	12-25	10	10	10
176	12-25	10	10	10
177	12-25	10	10	10
178	12-25	10	10	10
179	12-25	10	10	10
180	12-25	10	10	10
181	12-25	10	10	10
182	12-25	10	10	10
183	12-25	10	10	10
184	12-25	10	10	10
185	12-25	10	10	10
186	12-25	10	10	10
187	12-25	10	10	10
188	12-25	10	10	10
189	12-25	10	10	10
190	12-25	10	10	10
191	12-25	10	10	10
192	12-25	10	10	10
193	12-25	10	10	10
194	12-25	10	10	10
195	12-25	10	10	10
196	12-25	10	10	10
197	12-25	10	10	10
198	12-25	10	10	10
199	12-25	10	10	10
200	12-25	10	10	10

Sample ID	Depth (ft)	Cesium (dpm/100g)	Cobalt (dpm/100g)	Nickel (dpm/100g)
201	12-25	10	10	10
202	12-25	10	10	10
203	12-25	10	10	10
204	12-25	10	10	10
205	12-25	10	10	10
206	12-25	10	10	10
207	12-25	10	10	10
208	12-25	10	10	10
209	12-25	10	10	10
210	12-25	10	10	10
211	12-25	10	10	10
212	12-25	10	10	10
213	12-25	10	10	10
214	12-25	10	10	10
215	12-25	10	10	10
216	12-25	10	10	10
217	12-25	10	10	10
218	12-25	10	10	10
219	12-25	10	10	10
220	12-25	10	10	10
221	12-25	10	10	10
222	12-25	10	10	10
223	12-25	10	10	10
224	12-25	10	10	10
225	12-25	10	10	10
226	12-25	10	10	10
227	12-25	10	10	10
228	12-25	10	10	10
229	12-25	10	10	10
230	12-25	10	10	10
231	12-25	10	10	10
232	12-25	10	10	10
233	12-25	10	10	10
234	12-25	10	10	10
235	12-25	10	10	10
236	12-25	10	10	10
237	12-25	10	10	10
238	12-25	10	10	10
239	12-25	10	10	10
240	12-25	10	10	10
241	12-25	10	10	10
242	12-25	10	10	10
243	12-25	10	10	10
244	12-25	10	10	10
245	12-25	10	10	10
246	12-25	10	10	10
247	12-25	10	10	10
248	12-25	10	10	10
249	12-25	10	10	10
250	12-25	10	10	10

Sample ID	Depth (ft)	Cesium (dpm/100g)	Cobalt (dpm/100g)	Nickel (dpm/100g)
251	12-25	10	10	10
252	12-25	10	10	10
253	12-25	10	10	10
254	12-25	10	10	10
255	12-25	10	10	10
256	12-25	10	10	10
257	12-25	10	10	10
258	12-25	10	10	10
259	12-25	10	10	10
260	12-25	10	10	10
261	12-25	10	10	10
262	12-25	10	10	10
263	12-25	10	10	10
264	12-25	10	10	10
265	12-25	10	10	10
266	12-25	10	10	10
267	12-25	10	10	10
268	12-25	10	10	10
269	12-25	10	10	10
270	12-25	10	10	10
271	12-25	10	10	10
272	12-25	10	10	10
273	12-25	10	10	10
274	12-25	10	10	10
275	12-25	10	10	10
276	12-25	10	10	10
277	12-25	10	10	10
278	12-25	10	10	10
279	12-25	10	10	10
280	12-25	10	10	10
281	12-25	10	10	10
282	12-25	10	10	10
283	12-25	10	10	10
284	12-25	10	10	10
285	12-25	10	10	10
286	12-25	10	10	10
287	12-25	10	10	10
288	12-25	10	10	10
289	12-25	10	10	10
290	12-25	10	10	10
291	12-25	10	10	10
292	12-25	10	10	10
293	12-25	10	10	10
294	12-25	10	10	10
295	12-25	10	10	10
296	12-25	10	10	10
297	12-25	10	10	10
298	12-25	10	10	10
299	12-25	10	10	10
300	12-25	10	10	10

**LEGEND**

- Bromo / Micromerite Insulator: Deposition
- Bromo / Micromerite Insulator: Location
- Active Storm Drain
- Abandoned Storm Drain
- Catch Basin
- Utility Churn

**Probable Legacy Release Locations**

- Remnant of former tin / tin sulfide plant
- Drain Exfiltration
- Under Structure Area / Utility Area
- Contaminated Storm Drain
- Unit 1 West Fuel Pool
- Unit 2 Fuel Pool

**Depth-Specific Data**

Average depth is 12.5 ft (0.75 ft for each 100 ft interval) for each 100 ft interval. Average activity is in Bq (dpm/100g) for each 100 ft interval.

Multiple Intervals w/ Depth

Screened in Soil

Screened in Backlog

200 ft interval is shown for each 100 ft interval of data in 1/2008

**Cesium Data<sup>1</sup>**

Average Cs, dpm/100g

- No Depth Specific
- Samples
- Not Detected (ND)
- ND - 1C
- 10 - 50
- 50 - 100
- 100 - 200
- 200 - 300
- 300 - 500
- > 500

**Cobalt Data<sup>1</sup>**

Average Co, dpm/100g

- No Depth Specific
- Samples
- Not Detected (ND)
- ND - 25
- 25 - 100
- 100 - 200
- 200 - 300
- 300 - 500
- > 500

**Nickel Data<sup>1</sup>**

Average Ni, dpm/100g

- No Depth Specific
- Samples
- Not Detected (ND)
- ND - 12
- 12 - 25
- 25 - 50
- 50 - 100
- 100 - 250
- 250 - 500
- > 500

**Groundwater Elevation Contours**

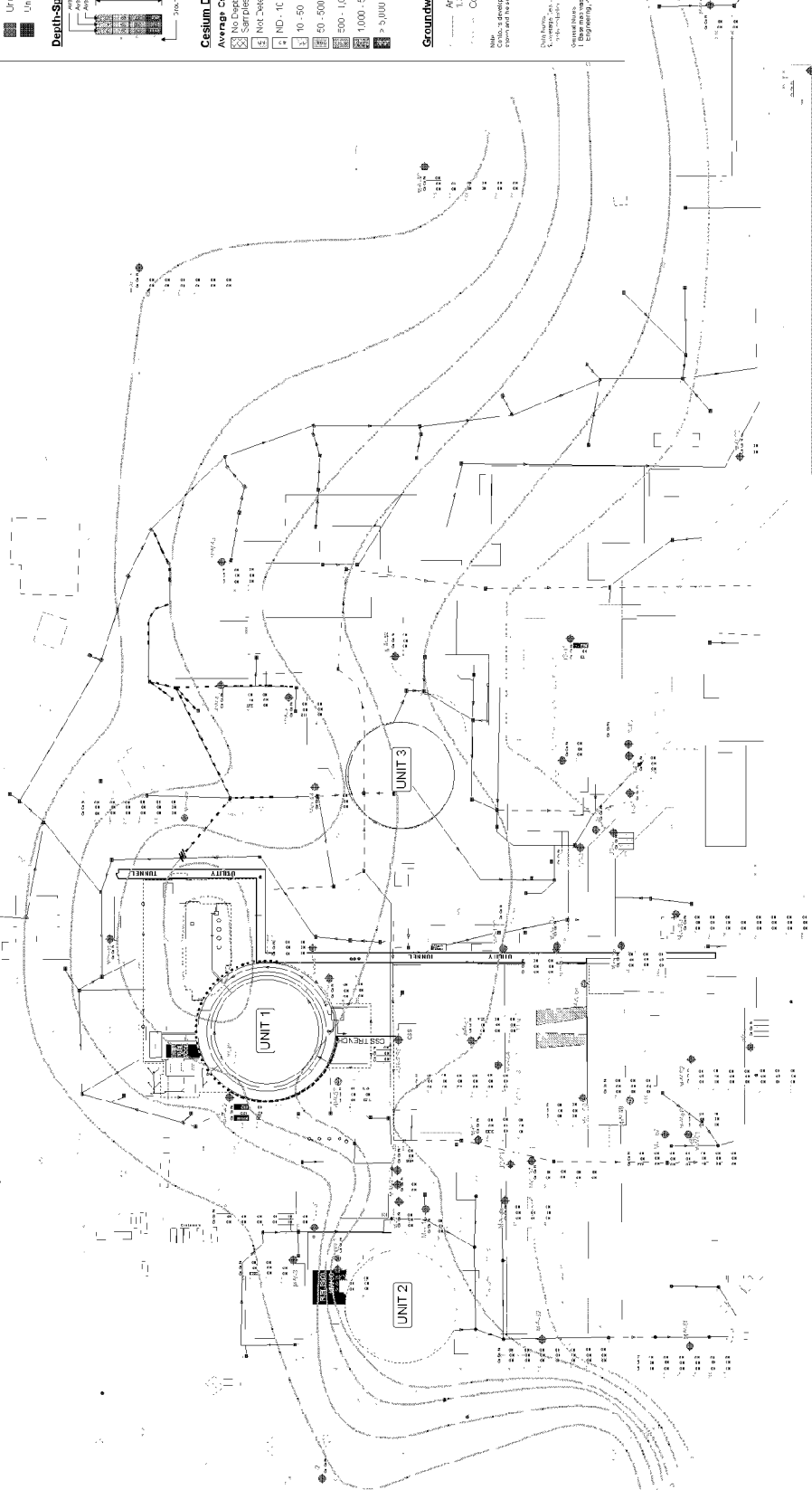
- Ambient "Waterable" Contour
- 1.5C (US) (10' Head)
- Contours Other Than 10' Interval

**Notes:**

1. This map was developed from unfiltered data as reported by GZA's various field-based engineering, geology, and hydrology staff.
2. This map was developed from unfiltered data as reported by GZA's various field-based engineering, geology, and hydrology staff.
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**Scale:** 1" = 100'

**North Arrow:** True North



**GZA** GeoEnvironmental, Inc.  
 100 West 10th Street, Suite 200  
 New York, NY 10011-3603  
 Phone: (212) 904-2000  
 Fax: (212) 904-2001  
 Email: gza@geosyntec.com

**INDIAN POINT ENERGY CENTER**  
 BUCHANAN, NEW YORK

**1st QUARTER 2008 ROLLING AVERAGE CESIUM, COBALT AND NICKEL ACTIVITY MAP**

Rev. No. 05-12-2008  
 Date: 10/16/09  
 Page No. 8



## **APPENDIX A: LIMITATIONS**

## HYDROGEOLOGICAL LIMITATIONS

1. The conclusions and recommendations submitted in this report are based in part upon the radiological, chemical and physical data from water analyses. These data were obtained from specific sampling locations at specific times. The full nature and extent of variations in the data between these specific locations and times are not known. The conditions existing between these specific locations and times have only been inferred using interpolation and extrapolation based on judgment.
2. The subsurface profiles described in the text and presented in the report figures are intended to convey anticipated trends in subsurface conditions. The conditions shown are approximate and generalized and were developed, in part, based on judgment. For specific information at specific locations, refer to the individual subsurface investigation logs.
3. Water level readings (piezometric pressures) have been made in the specific borings, monitoring wells, and Waterloo installations at times and under conditions stated. These data have been reviewed and interpretations have been made in the text and on the figures of this report. However, it must be noted that temporal and spatial fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time and location measurements were made.
4. Where quantitative laboratory testing has been conducted by an outside laboratory, GZA has relied upon the validity of the data provided, and has not conducted an independent laboratory evaluation of the reliability of these data.
5. Radiological and chemical analyses have been performed for specific parameters during the course of this study, as summarized in the text. Additional constituents not searched for may be present in soil and groundwater at the site.
6. Variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past and current plant operational practices, the passage of time, and other factors. Should additional data (water analyses, water elevations, subsurface deposits, plant construction and operation, etc.) become available in the future, these data should be reviewed by GZA, and the conclusions and recommendations presented herein modified accordingly.
7. This monitoring report was developed by GZA GeoEnvironmental Inc for the exclusive of Entergy Nuclear Northeast (Entergy) at the Indian Point Energy Center. Any use of data or information provided in the report, by parties other than Entergy, is prohibited without the prior written permission of Entergy and GZA.



## **APPENDIX B: TRANSDUCER INSTALLATION LOGS**



**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-37-57
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	57.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	15.021	DATE	2/27/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.788		
SERIAL NUMBER	11802	CASING DIAMETER (INCH)	1		

STATIC GROUNDWATER TABLE ELEVATION (FT)

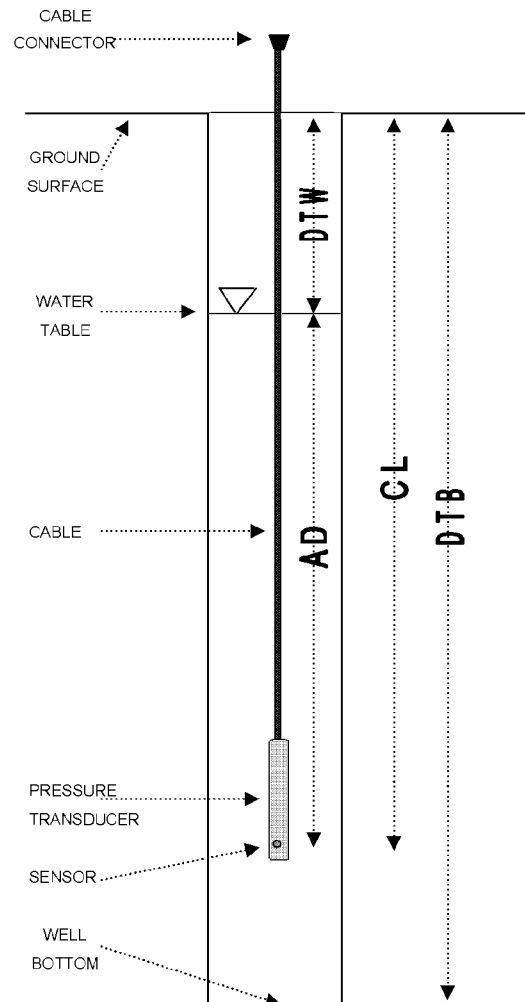
7.04

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	56.50	FT
<b>GROUND ELEVATION:</b>	15.021	FT M.S.L.
<b>CASING ELEVATION:</b>	14.788	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.233	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1236	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	7.75	FT
<b>ACTUAL DEPTH:</b>	+ 42.815	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 50.565	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	14.788	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 7.75	FT
<b>REFERENCE ELEVATION:</b>	= 7.038	FT M.S.L.
<b>TEST NAME:</b>	MW-37-57	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1237	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-37-57
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	57.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	15.021	DATE	3/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.788		
SERIAL NUMBER	11802	CASING DIAMETER (INCH)	1		

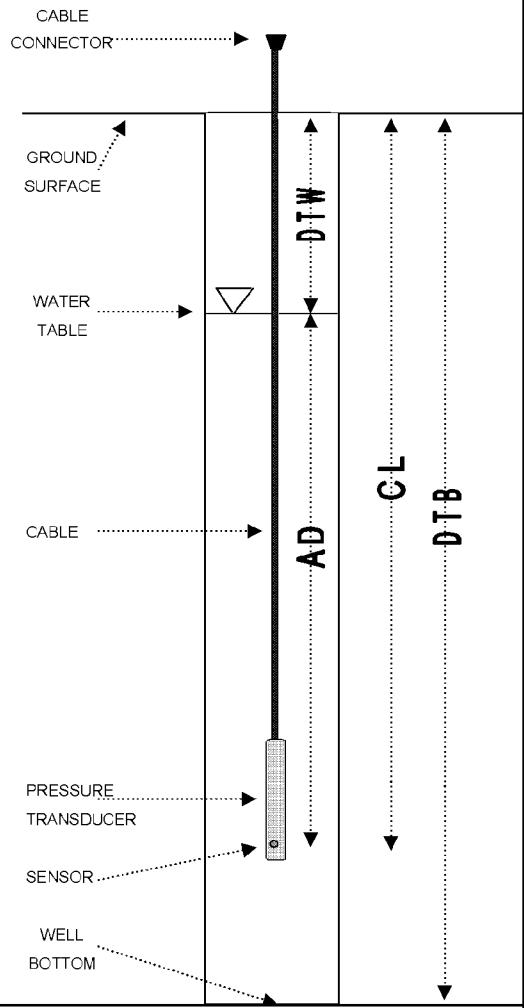
STATIC GROUNDWATER TABLE ELEVATION (FT) 6.92

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	56.50	FT
<b>GROUND ELEVATION:</b>	15.021	FT M.S.L.
<b>CASING ELEVATION:</b>	14.788	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.233	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1412	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	7.87	FT
<b>ACTUAL DEPTH:</b>	+ 42.790	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 50.660	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	14.788	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 7.87	FT
<b>REFERENCE ELEVATION:</b>	= 6.918	FT M.S.L.
<b>TEST NAME:</b>	MW-37-57	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1418	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-38
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	40.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.342	DATE	3/21/08
PSI CAPACITY	30	CASING ELEVATION (FT)	13.999		
SERIAL NUMBER	4386	CASING DIAMETER (INCH)	4		

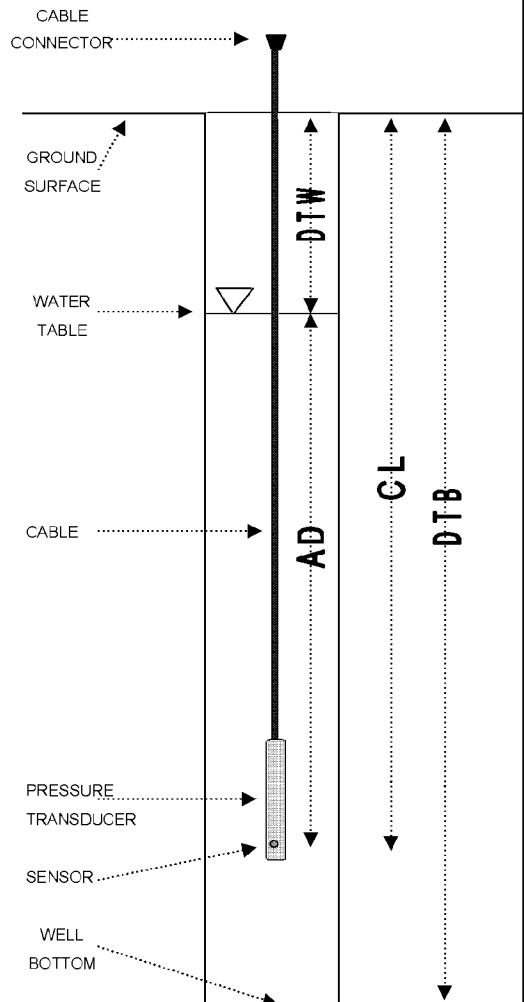
STATIC GROUNDWATER TABLE ELEVATION (FT) 1.69

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	39.02	FT
<b>GROUND ELEVATION:</b>	14.342	FT M.S.L.
<b>CASING ELEVATION:</b>	13.999	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.34	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	949	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	12.30	FT
<b>ACTUAL DEPTH:</b>	+ 26.247	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 38.547	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	13.990	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 12.30	FT
<b>REFERENCE ELEVATION:</b>	= 1.690	FT M.S.L.
<b>TEST NAME:</b>	MW-38	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	950	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-41-40
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	64.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	54.87	DATE	2/8/08
PSI CAPACITY	30	CASING ELEVATION (FT)	54.13		
SERIAL NUMBER	15147	CASING DIAMETER (INCH)	2		

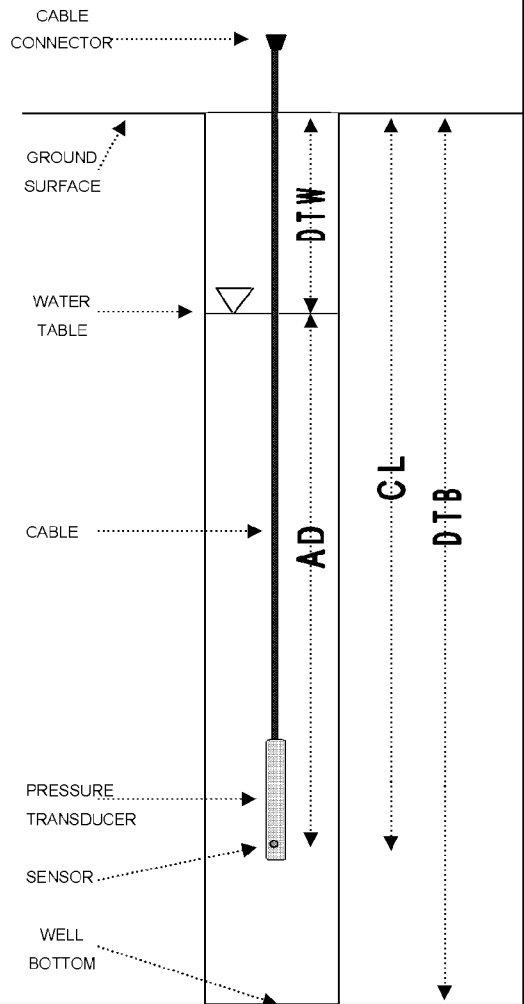
STATIC GROUNDWATER TABLE ELEVATION (FT) 33.12

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>40.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>54.87</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>54.13</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.74</u>	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	<u>955</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>21.01</u>	FT
<b>ACTUAL DEPTH:</b>	+ <u>NA</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	= <u>NA</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>54.13</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	- <u>21.01</u>	FT
<b>REFERENCE ELEVATION:</b>	= <u>33.12</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW-41-42</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>956</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-41-40
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	64.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	54.87	DATE	2/21/08
PSI CAPACITY	30	CASING ELEVATION (FT)	54.13		
SERIAL NUMBER	13981	CASING DIAMETER (INCH)	2		

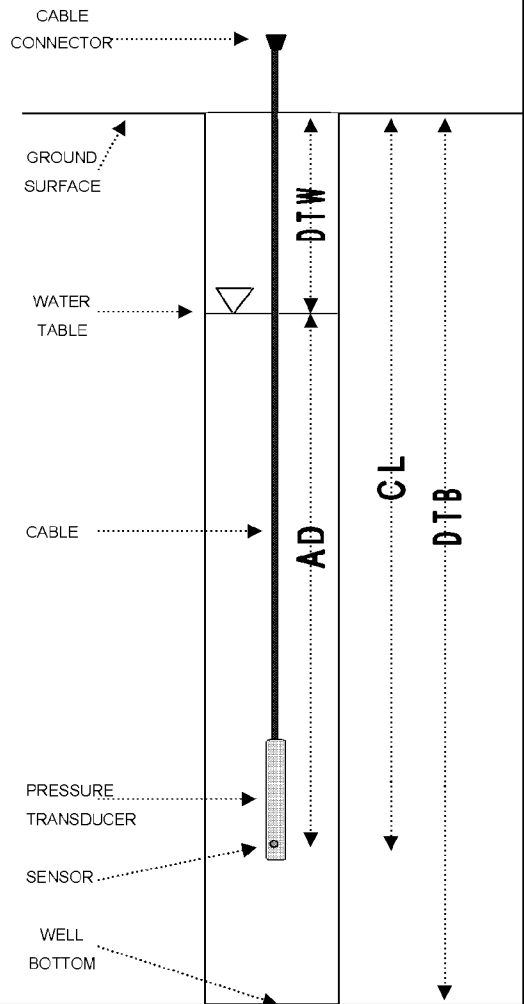
STATIC GROUNDWATER TABLE ELEVATION (FT) 34.38

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	40.00	FT
<b>GROUND ELEVATION:</b>	54.87	FT M.S.L.
<b>CASING ELEVATION:</b>	54.13	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.74	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1649	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	19.75	FT
<b>ACTUAL DEPTH:</b>	+ 15.365	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 35.115	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	54.13	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 19.75	FT
<b>REFERENCE ELEVATION:</b>	= 34.38	FT M.S.L.
<b>TEST NAME:</b>	MW-41-42	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1650	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: MW-41-40

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-41-40
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	64.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	54.87	DATE	3/20/08
PSI CAPACITY	30	CASING ELEVATION (FT)	54.13		
SERIAL NUMBER	13981	CASING DIAMETER (INCH)	2		

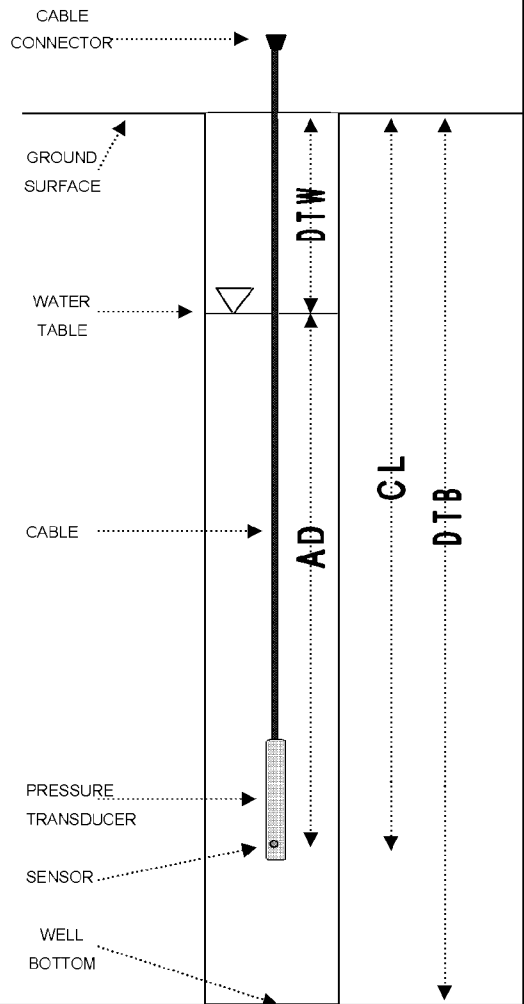
STATIC GROUNDWATER TABLE ELEVATION (FT) 34.71

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	40.00	FT
<b>GROUND ELEVATION:</b>	54.87	FT M.S.L.
<b>CASING ELEVATION:</b>	54.13	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.74	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	0952	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	19.42	FT
<b>ACTUAL DEPTH:</b>	+ 16.634	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 36.054	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	54.13	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 19.42	FT
<b>REFERENCE ELEVATION:</b>	= 34.71	FT M.S.L.
<b>TEST NAME:</b>	MW-41-40	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	0953	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-43-28
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	63.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	48.760	DATE	2/8/08
PSI CAPACITY	30	CASING ELEVATION (FT)	48.021		
SERIAL NUMBER	11331	CASING DIAMETER (INCH)	2		

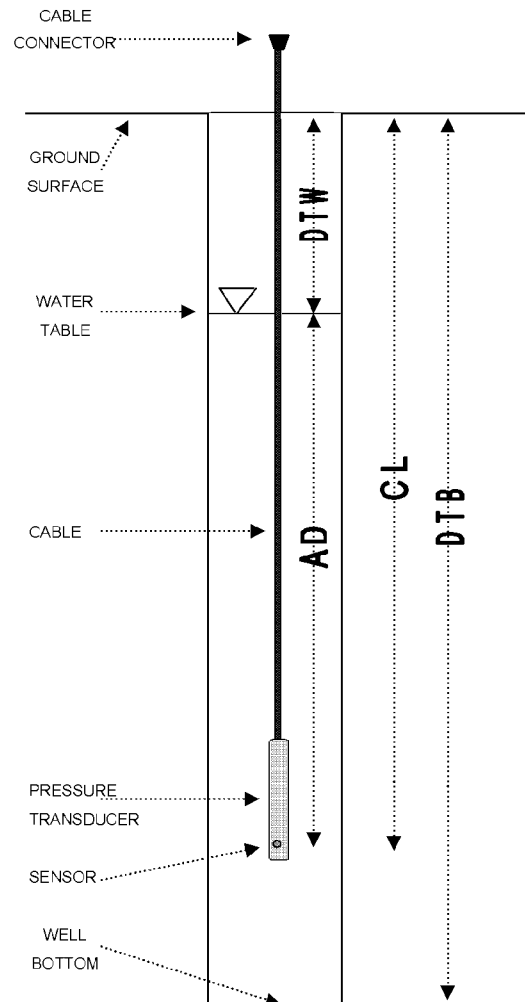
STATIC GROUNDWATER TABLE ELEVATION (FT) 32.70

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	28.00	FT
<b>GROUND ELEVATION:</b>	48.760	FT M.S.L.
<b>CASING ELEVATION:</b>	48.021	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.739	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1033	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	15.32	FT
<b>ACTUAL DEPTH:</b>	+ 10.962	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 26.282	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	48.021	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 15.32	FT
<b>REFERENCE ELEVATION:</b>	= 32.701	FT M.S.L.
<b>TEST NAME:</b>	MW-43-28	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1034	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: MW-43-28

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-43-62
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	63.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	48.761	DATE	3/20/08
PSI CAPACITY	30	CASING ELEVATION (FT)	47.821		
SERIAL NUMBER	16236	CASING DIAMETER (INCH)	2		

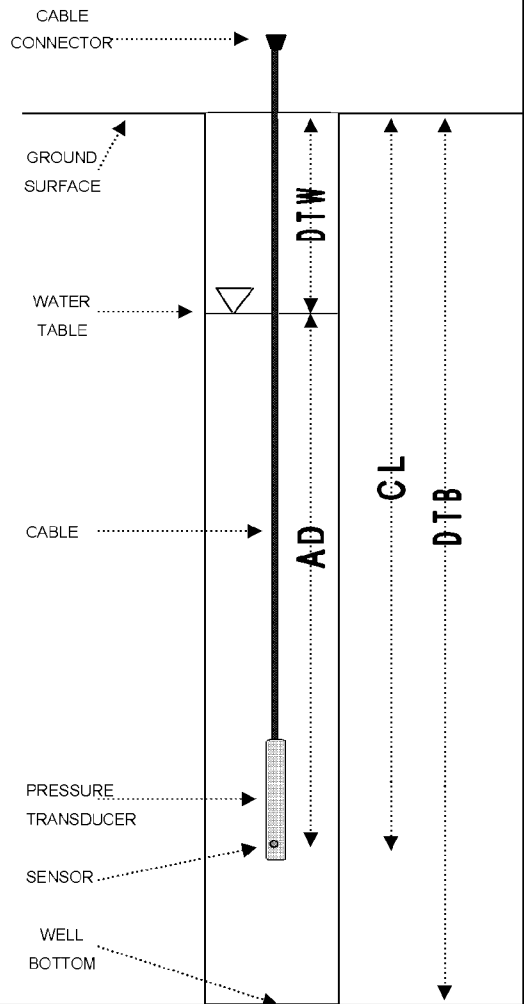
STATIC GROUNDWATER TABLE ELEVATION (FT) 32.25

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	63.00	FT
<b>GROUND ELEVATION:</b>	48.761	FT M.S.L.
<b>CASING ELEVATION:</b>	47.821	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.940	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1037	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	15.57	FT
<b>ACTUAL DEPTH:</b>	+ 35.230	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 50.800	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	47.821	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 15.57	FT
<b>REFERENCE ELEVATION:</b>	= 32.251	FT M.S.L.
<b>TEST NAME:</b>	MW-43-62	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1038	HRS



LEGEND:	<b>DTW</b> - DEPTH TO WATER
	<b>DTB</b> - DEPTH TO BOTTOM OF WELL
	<b>AD</b> - ACTUAL DEPTH OF TRANSDUCER UNDER WATER
	<b>CL</b> - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:



**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-44-67
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	105.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	93.52	DATE	2/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	93.02		
SERIAL NUMBER	16108	CASING DIAMETER (INCH)	2		

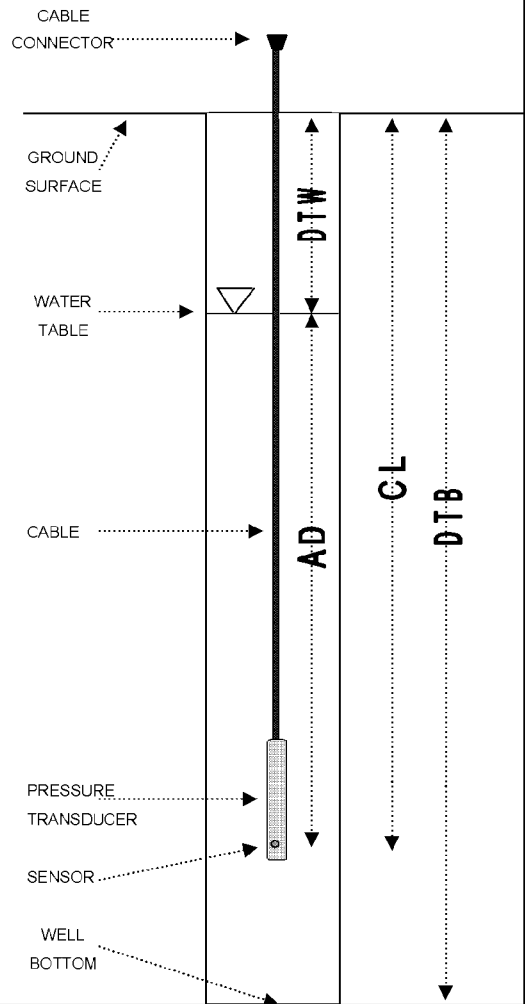
STATIC GROUNDWATER TABLE ELEVATION (FT) 41.19

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	67.00	FT
<b>GROUND ELEVATION:</b>	93.52	FT M.S.L.
<b>CASING ELEVATION:</b>	93.02	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	0.50	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1229	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	51.83	FT
<b>ACTUAL DEPTH:</b>	+ 10.960	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 62.790	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	93.02	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 51.83	FT
<b>REFERENCE ELEVATION:</b>	= 41.19	FT M.S.L.
<b>TEST NAME:</b>	MW-44-67	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1230	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-44-102
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	<u>In-Situ</u>	FINAL BORING DEPTH (FT)	<u>102.00</u>	DATUM	<u>NGVD 29</u>
MAKE	<u>MiniTroll</u>	GROUND ELEVATION (FT)	<u>93.52</u>	DATE	<u>2/14/08</u>
PSI CAPACITY	<u>30</u>	CASING ELEVATION (FT)	<u>93.09</u>		
SERIAL NUMBER	<u>15940</u>	CASING DIAMETER (INCH)	<u>1</u>		

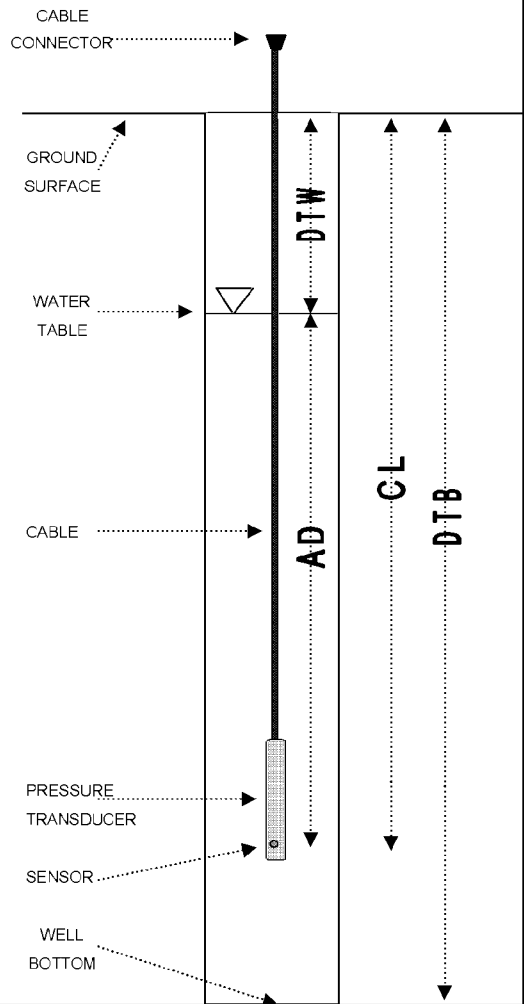
STATIC GROUNDWATER TABLE ELEVATION (FT) 32.49

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>102.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>93.52</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>93.09</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	<u>below</u>	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.43</u>	FT
<b>MEASURED CABLE LENGTH:</b>	<u>--</u>	FT
<b>TIME OF MEASUREMENT:</b>	<u>1216</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>60.60</u>	FT
<b>ACTUAL DEPTH:</b>	<u>+ 38.075</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	<u>= 98.675</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>93.09</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	<u>- 60.60</u>	FT
<b>REFERENCE ELEVATION:</b>	<u>= 32.49</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW-44-102</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1217</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: MW-44-102

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-47-56
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	<u>In-Situ</u>	FINAL BORING DEPTH (FT)	<u>80.00</u>	DATUM	<u>NGVD 29</u>
MAKE	<u>MiniTroll</u>	GROUND ELEVATION (FT)	<u>70.32</u>	DATE	<u>2/8/08</u>
PSI CAPACITY	<u>30</u>	CASING ELEVATION (FT)	<u>69.81</u>		
SERIAL NUMBER	<u>15843</u>	CASING DIAMETER (INCH)	<u>2</u>		

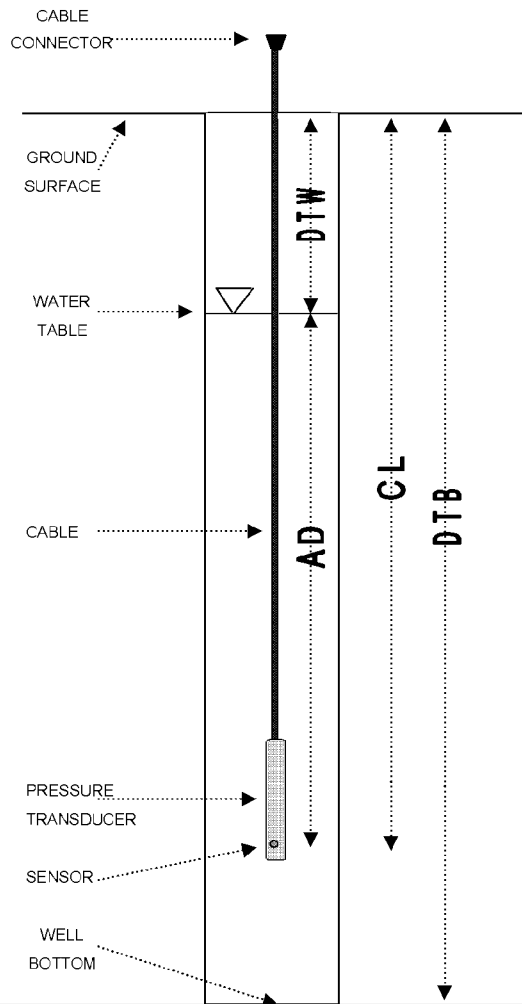
STATIC GROUNDWATER TABLE ELEVATION (FT) 25.85

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>56.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>70.32</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>69.81</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	<u>below</u>	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.51</u>	FT
<b>MEASURED CABLE LENGTH:</b>	<u>--</u>	FT
<b>TIME OF MEASUREMENT:</b>	<u>1151</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>43.96</u>	FT
<b>ACTUAL DEPTH:</b>	<u>+ 6.36</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	<u>= 50.32</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>69.81</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	<u>- 43.96</u>	FT
<b>REFERENCE ELEVATION:</b>	<u>= 25.85</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW47-57</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1152</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-49-26
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	26.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.650	DATE	2/15/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.171		
SERIAL NUMBER	11948	CASING DIAMETER (INCH)	2		

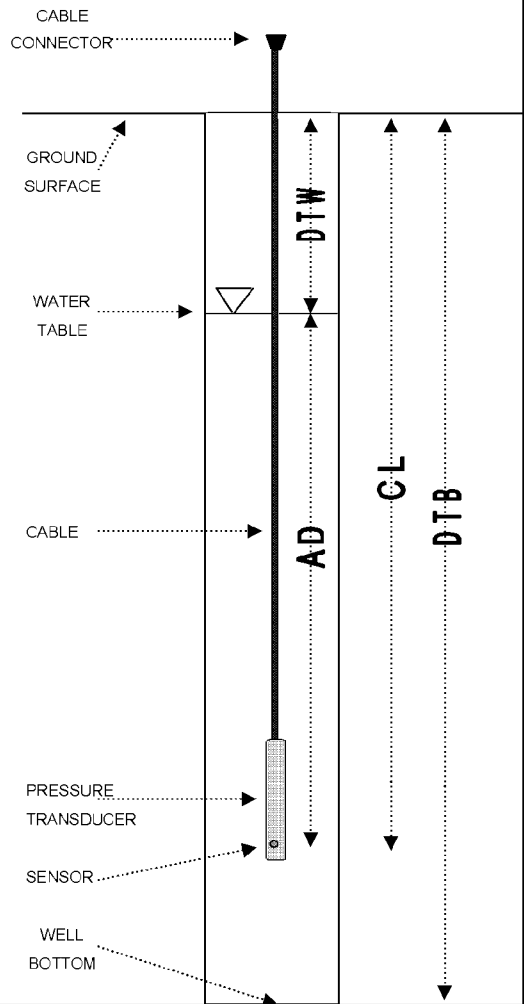
STATIC GROUNDWATER TABLE ELEVATION (FT) 0.77

GZA ENGINEER M.Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>26.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>14.650</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>14.171</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.48</u>	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	<u>1228</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>13.40</u>	FT
<b>ACTUAL DEPTH:</b>	+ <u>10.941</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	= <u>24.341</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>14.17</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	- <u>13.40</u>	FT
<b>REFERENCE ELEVATION:</b>	= <u>0.77</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW-49-26</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1229</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-50-42
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	67.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.92	DATE	3/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.45		
SERIAL NUMBER	9904	CASING DIAMETER (INCH)	2		

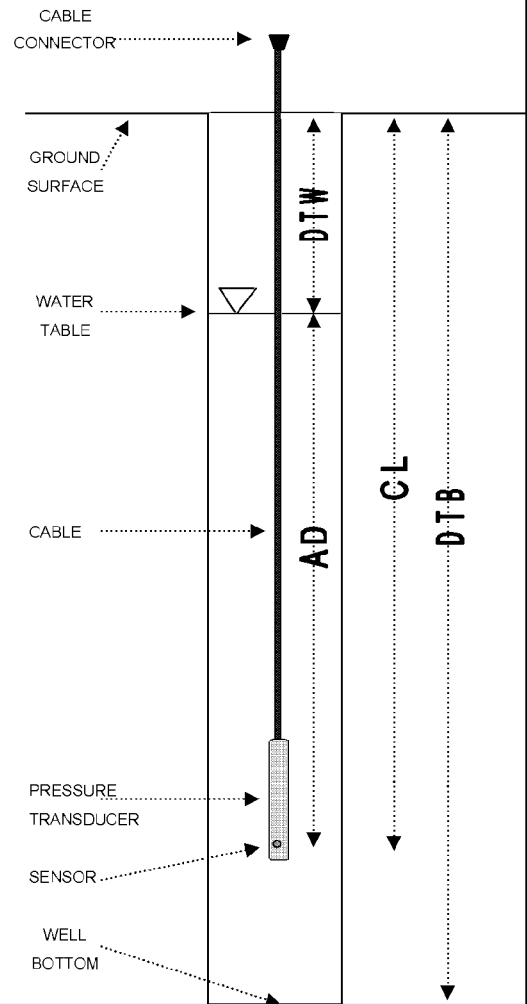
STATIC GROUNDWATER TABLE ELEVATION (FT) 6.53

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	42.00	FT
<b>GROUND ELEVATION:</b>	14.92	FT M.S.L.
<b>CASING ELEVATION:</b>	14.45	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.47	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1022	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	7.92	FT
<b>ACTUAL DEPTH:</b>	+ 33.120	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 41.040	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	14.45	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 7.92	FT
<b>REFERENCE ELEVATION:</b>	= 6.53	FT M.S.L.
<b>TEST NAME:</b>	MW-50-42	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1023	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-56-53
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	88.50	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	70.26	DATE	3/20/08
PSI CAPACITY	30	CASING ELEVATION (FT)	69.32		
SERIAL NUMBER	11952	CASING DIAMETER (INCH)	2		

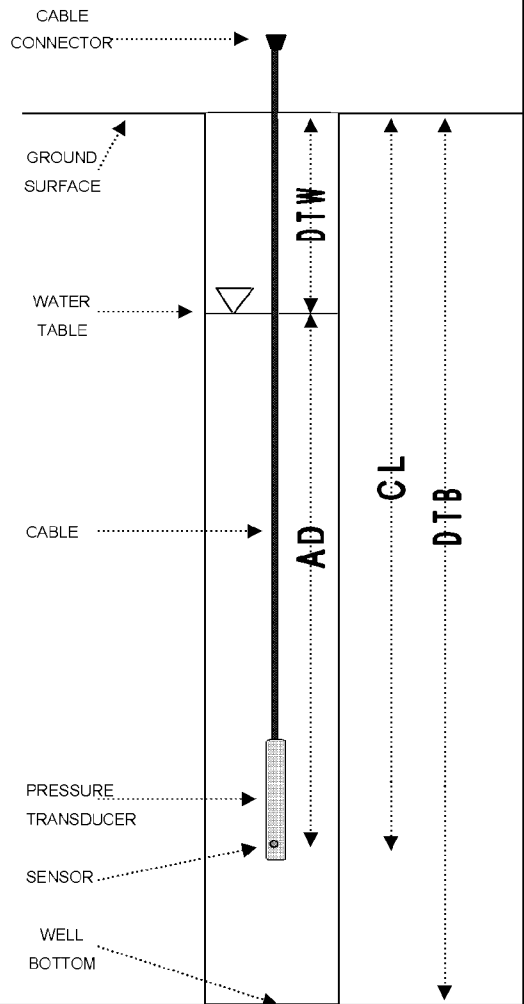
STATIC GROUNDWATER TABLE ELEVATION (FT) 26.28

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	53.00	FT
<b>GROUND ELEVATION:</b>	70.26	FT M.S.L.
<b>CASING ELEVATION:</b>	69.32	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.94	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1148	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	43.04	FT
<b>ACTUAL DEPTH:</b>	+ 7.599	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 50.639	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	69.32	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 43.04	FT
<b>REFERENCE ELEVATION:</b>	= 26.28	FT M.S.L.
<b>TEST NAME:</b>	MW-56-53	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1149	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-57-20
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	46.50	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.98	DATE	3/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.75		
SERIAL NUMBER	9411	CASING DIAMETER (INCH)	1		

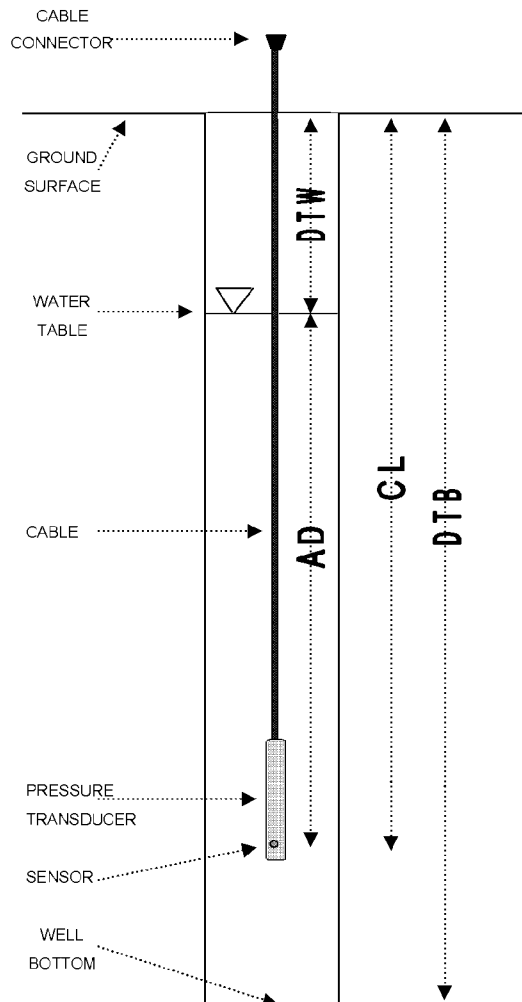
STATIC GROUNDWATER TABLE ELEVATION (FT) 11.38

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	20.00	FT
<b>GROUND ELEVATION:</b>	14.98	FT M.S.L.
<b>CASING ELEVATION:</b>	14.75	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.23	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1135	HRS
<b>MEASUREMENT TAKEN FROM:</b>	casing	
<b>DEPTH TO WATER:</b>	3.37	FT
<b>ACTUAL DEPTH:</b>	+ 16.698	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 20.068	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	14.75	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 3.37	FT
<b>REFERENCE ELEVATION:</b>	= 11.38	FT M.S.L.
<b>TEST NAME:</b>	MW-57-20	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1136	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-57-45
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	46.50	DATUM	NGVD 29
MAKE	Nonvented MiniTroll	GROUND ELEVATION (FT)	14.98	DATE	2/6/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.81		
SERIAL NUMBER	16389	CASING DIAMETER (INCH)	1		

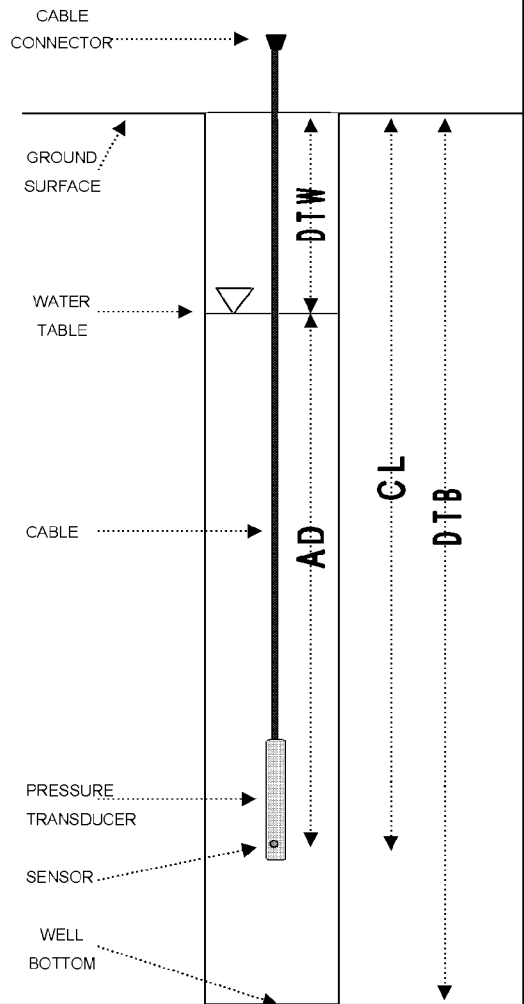
STATIC GROUNDWATER TABLE ELEVATION (FT) 9.91

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>45.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>14.98</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>14.81</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.17</u>	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	<u>1505</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>4.90</u>	FT
<b>ACTUAL DEPTH:</b>	+ <u>NA</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	= <u>NA</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>14.81</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	- <u>4.90</u>	FT
<b>REFERENCE ELEVATION:</b>	= <u>9.91</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW-57-45</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1506</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:



**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-57-45
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	46.50	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.98	DATE	2/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.81		
SERIAL NUMBER	4386	CASING DIAMETER (INCH)	1		

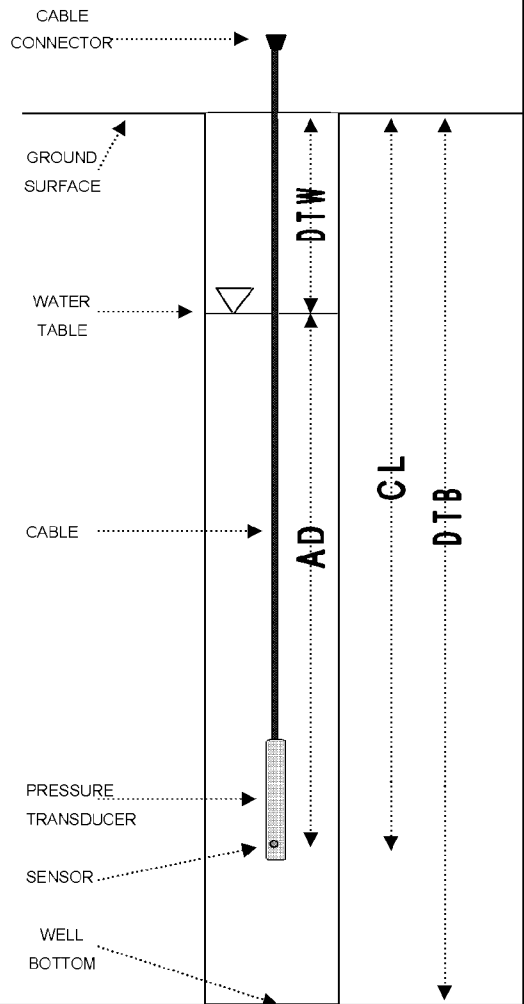
STATIC GROUNDWATER TABLE ELEVATION (FT) 10.85

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	45.00	FT
<b>GROUND ELEVATION:</b>	14.98	FT M.S.L.
<b>CASING ELEVATION:</b>	14.81	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.17	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1427	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	3.96	FT
<b>ACTUAL DEPTH:</b>	+ 40.831	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 44.791	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	14.81	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 3.96	FT
<b>REFERENCE ELEVATION:</b>	= 10.85	FT M.S.L.
<b>TEST NAME:</b>	MW-57-45	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1428	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-57-45
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	46.50	DATUM	NGVD 29
MAKE	NonVented MiniTroll	GROUND ELEVATION (FT)	14.98	DATE	3/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.81		
SERIAL NUMBER	16563	CASING DIAMETER (INCH)	1		

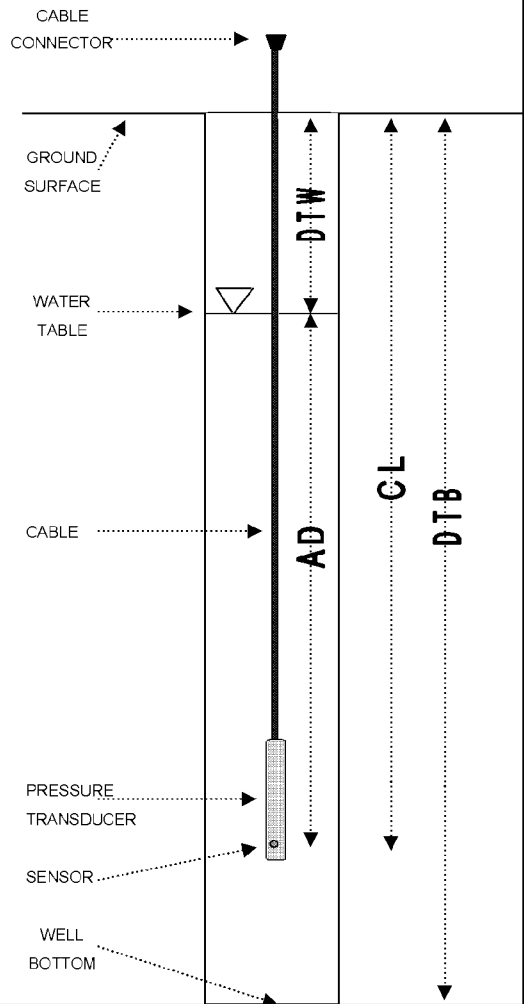
STATIC GROUNDWATER TABLE ELEVATION (FT) 10.50

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	45.00	FT
<b>GROUND ELEVATION:</b>	14.98	FT M.S.L.
<b>CASING ELEVATION:</b>	14.81	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.17	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1300	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	4.31	FT
<b>ACTUAL DEPTH:</b>	+ NA	FT
<b>THEORETICAL CABLE LENGTH:</b>	= NA	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	14.81	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 4.31	FT
<b>REFERENCE ELEVATION:</b>	= 10.50	FT M.S.L.
<b>TEST NAME:</b>	MW-57-45	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1301	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-58-65
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	<u>In-Situ</u>	FINAL BORING DEPTH (FT)	<u>72.00</u>	DATUM	<u>NGVD 29</u>
MAKE	<u>MiniTroll</u>	GROUND ELEVATION (FT)	<u>14.57</u>	DATE	<u>3/14/08</u>
PSI CAPACITY	<u>30</u>	CASING ELEVATION (FT)	<u>14.25</u>		
SERIAL NUMBER	<u>5619</u>	CASING DIAMETER (INCH)	<u>1</u>		

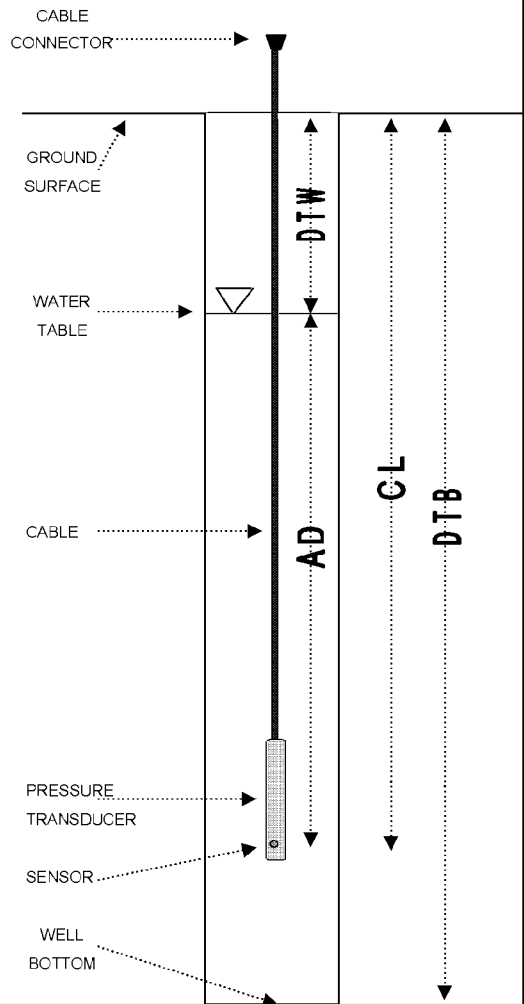
STATIC GROUNDWATER TABLE ELEVATION (FT) 7.42

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>65.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>14.57</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>14.25</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	<u>below</u>	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.32</u>	FT
<b>MEASURED CABLE LENGTH:</b>	<u>--</u>	FT
<b>TIME OF MEASUREMENT:</b>	<u>1331</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>6.83</u>	FT
<b>ACTUAL DEPTH:</b>	<u>+ 59.808</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	<u>= 66.638</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>14.25</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	<u>- 6.83</u>	FT
<b>REFERENCE ELEVATION:</b>	<u>= 7.42</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW-58-65</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1332</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-59-32
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	<u>In-Situ</u>	FINAL BORING DEPTH (FT)	<u>77.00</u>	DATUM	<u>NGVD 29</u>
MAKE	<u>NonVented MiniTroll</u>	GROUND ELEVATION (FT)	<u>14.52</u>	DATE	<u>2/15/08</u>
PSI CAPACITY	<u>30</u>	CASING ELEVATION (FT)	<u>14.41</u>		
SERIAL NUMBER	<u>16489</u>	CASING DIAMETER (INCH)	<u>1</u>		

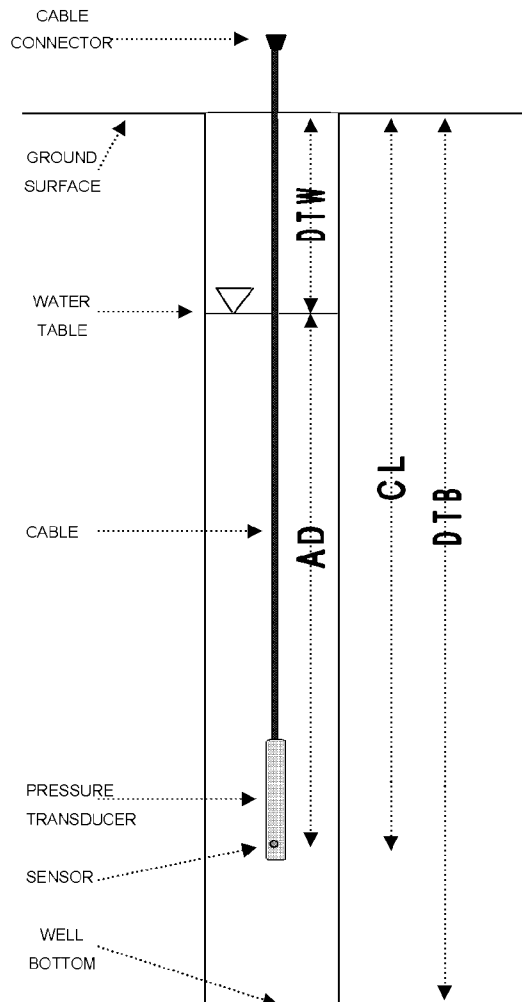
STATIC GROUNDWATER TABLE ELEVATION (FT) 0.75

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>32.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>14.52</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>14.41</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	<u>below</u>	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.11</u>	FT
<b>MEASURED CABLE LENGTH:</b>	<u>--</u>	FT
<b>TIME OF MEASUREMENT:</b>	<u>1329</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>13.66</u>	FT
<b>ACTUAL DEPTH:</b>	<u>+ NA</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	<u>= NA</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>14.41</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	<u>- 13.66</u>	FT
<b>REFERENCE ELEVATION:</b>	<u>= 0.75</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW-59-32</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1330</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-59-45
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	77.00	DATUM	NGVD 29
MAKE	NonVented MiniTroll	GROUND ELEVATION (FT)	14.52	DATE	2/15/08
PSI CAPACITY	30	CASING ELEVATION (FT)	13.90		
SERIAL NUMBER	14340	CASING DIAMETER (INCH)	1		

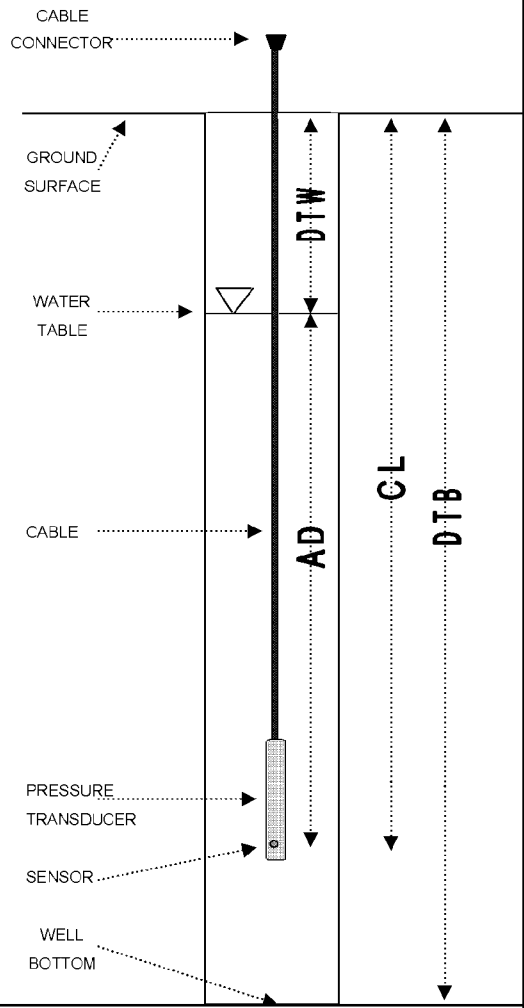
STATIC GROUNDWATER TABLE ELEVATION (FT) 12.54

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>45.00</u>	FT
<b>GROUND ELEVATION:</b>	<u>14.52</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>13.90</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.62</u>	FT
<b>MEASURED CABLE LENGTH:</b>	<u>--</u>	FT
<b>TIME OF MEASUREMENT:</b>	<u>1518</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>1.36</u>	FT
<b>ACTUAL DEPTH:</b>	<b>+</b> <u>NA</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	<b>=</b> <u>NA</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>13.90</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	<b>-</b> <u>1.36</u>	FT
<b>REFERENCE ELEVATION:</b>	<b>=</b> <u>12.54</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW-59-45</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1519</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW59-68
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	<u>In-Situ</u>	FINAL BORING DEPTH (FT)	<u>77.00</u>	DATUM	<u>NGVD 29</u>
MAKE	<u>NonVented MiniTroll</u>	GROUND ELEVATION (FT)	<u>14.52</u>	DATE	<u>2/15/08</u>
PSI CAPACITY	<u>30</u>	CASING ELEVATION (FT)	<u>14.23</u>		
SERIAL NUMBER	<u>14361</u>	CASING DIAMETER (INCH)	<u>1</u>		

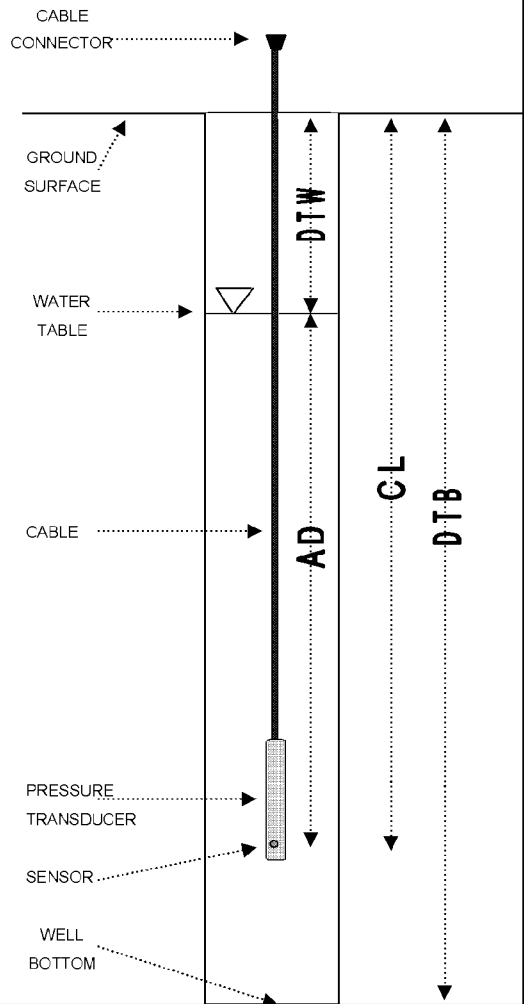
STATIC GROUNDWATER TABLE ELEVATION (FT) 2.23

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>68.30</u>	FT
<b>GROUND ELEVATION:</b>	<u>14.52</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>14.23</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	<u>-</u>	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>-0.29</u>	FT
<b>MEASURED CABLE LENGTH:</b>	<u>--</u>	FT
<b>TIME OF MEASUREMENT:</b>	<u>1430</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>12.00</u>	FT
<b>ACTUAL DEPTH:</b>	<u>+ NA</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	<u>= NA</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>14.23</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	<u>- 12.00</u>	FT
<b>REFERENCE ELEVATION:</b>	<u>= 2.23</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>MW59-68</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1431</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: MW59-68

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	OUT-1
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	--	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	8.20	DATE	2/6/08
PSI CAPACITY	30	CASING ELEVATION (FT)	11.89		
SERIAL NUMBER	16642	CASING DIAMETER (INCH)	2		

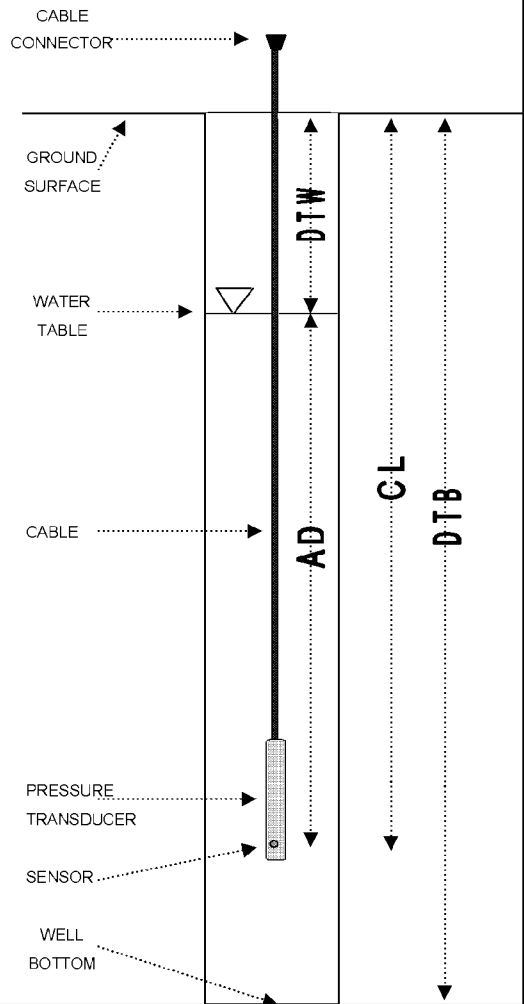
STATIC GROUNDWATER TABLE ELEVATION (FT) 5.70

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	--	FT
<b>GROUND ELEVATION:</b>	8.20	FT M.S.L.
<b>CASING ELEVATION:</b>	11.89	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	above	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	3.69	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1113	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	6.19	FT
<b>ACTUAL DEPTH:</b>	+ 5.722	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 11.912	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	11.891	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 6.190	FT
<b>REFERENCE ELEVATION:</b>	= 5.701	FT M.S.L.
<b>TEST NAME:</b>	OUT-1	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1115	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: OUT-1

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	OUT-1
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	--	DATUM	NGVD 29
MAKE	NonVented MiniTroll	GROUND ELEVATION (FT)	8.20	DATE	2/15/08
PSI CAPACITY	30	CASING ELEVATION (FT)	11.89		
SERIAL NUMBER	16599	CASING DIAMETER (INCH)	2		

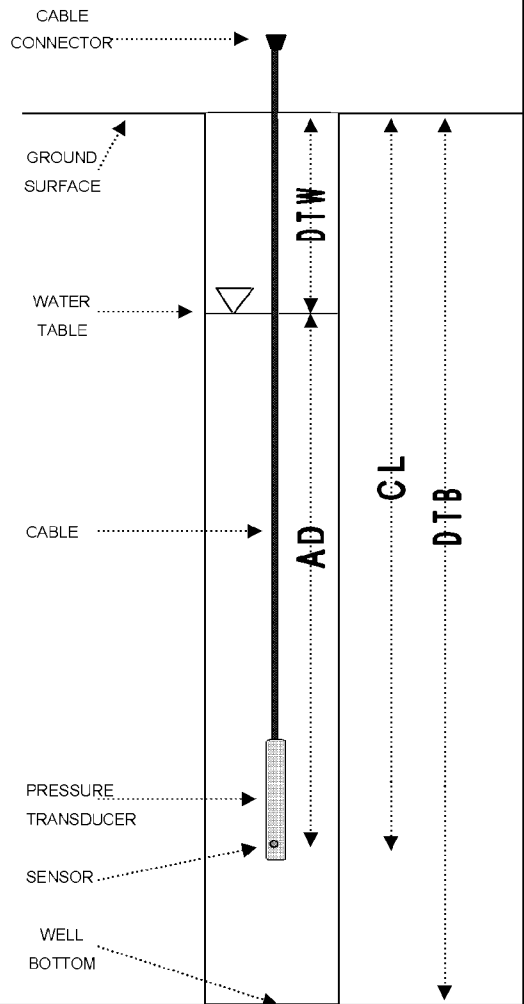
STATIC GROUNDWATER TABLE ELEVATION (FT) 1.65

GZA ENGINEER S. Covelli, M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	--	FT
<b>GROUND ELEVATION:</b>	8.20	FT M.S.L.
<b>CASING ELEVATION:</b>	11.89	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	above	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	3.69	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1114	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	10.24	FT
<b>ACTUAL DEPTH:</b>	+ NA	FT
<b>THEORETICAL CABLE LENGTH:</b>	= NA	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	11.891	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 10.240	FT
<b>REFERENCE ELEVATION:</b>	= 1.651	FT M.S.L.
<b>TEST NAME:</b>	OUT-1	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1115	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: OUT-1



**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	U1CSS
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	<u>In-Situ</u>	FINAL BORING DEPTH (FT)	<u>NA</u>	DATUM	<u>NGVD 29</u>
MAKE	<u>MiniTroll</u>	GROUND ELEVATION (FT)	<u>15.088</u>	DATE	<u>3/21/08</u>
PSI CAPACITY	<u>30</u>	CASING ELEVATION (FT)	<u>20.073</u>		
SERIAL NUMBER	<u>13911</u>	CASING DIAMETER (INCH)	<u>4</u>		

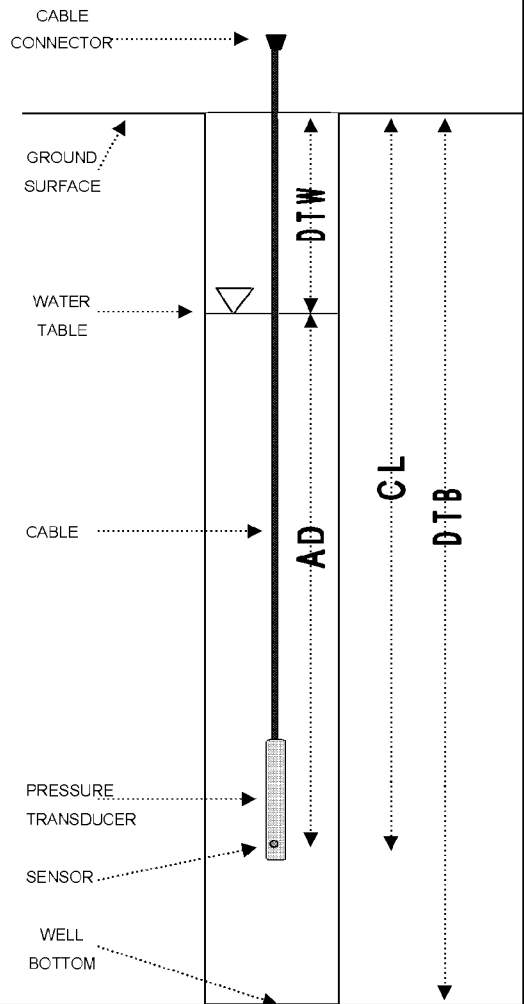
STATIC GROUNDWATER TABLE ELEVATION (FT) 18.60

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	<u>NA</u>	FT
<b>GROUND ELEVATION:</b>	<u>15.088</u>	FT M.S.L.
<b>CASING ELEVATION:</b>	<u>20.073</u>	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	<u>above</u>	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	<u>4.985</u>	FT
<b>MEASURED CABLE LENGTH:</b>	<u>--</u>	FT
<b>TIME OF MEASUREMENT:</b>	<u>1332</u>	HRS
<b>MEASUREMENT TAKEN FROM:</b>	<u>TOC</u>	
<b>DEPTH TO WATER:</b>	<u>1.47</u>	FT
<b>ACTUAL DEPTH:</b>	<u>+ 11.377</u>	FT
<b>THEORETICAL CABLE LENGTH:</b>	<u>= 12.847</u>	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	<u>20.073</u>	FT M.S.L.
<b>DEPTH TO WATER:</b>	<u>- 1.47</u>	FT
<b>REFERENCE ELEVATION:</b>	<u>= 18.603</u>	FT M.S.L.
<b>TEST NAME:</b>	<u>U1CSS</u>	
<b>LOGGING INTERVAL:</b>	<u>20</u>	MIN
<b>TEST START TIME:</b>	<u>1533</u>	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: U1CSS

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	U3-C1
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	NA	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	15.003	DATE	2/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	18.060		
SERIAL NUMBER	11998	CASING DIAMETER (INCH)	2		

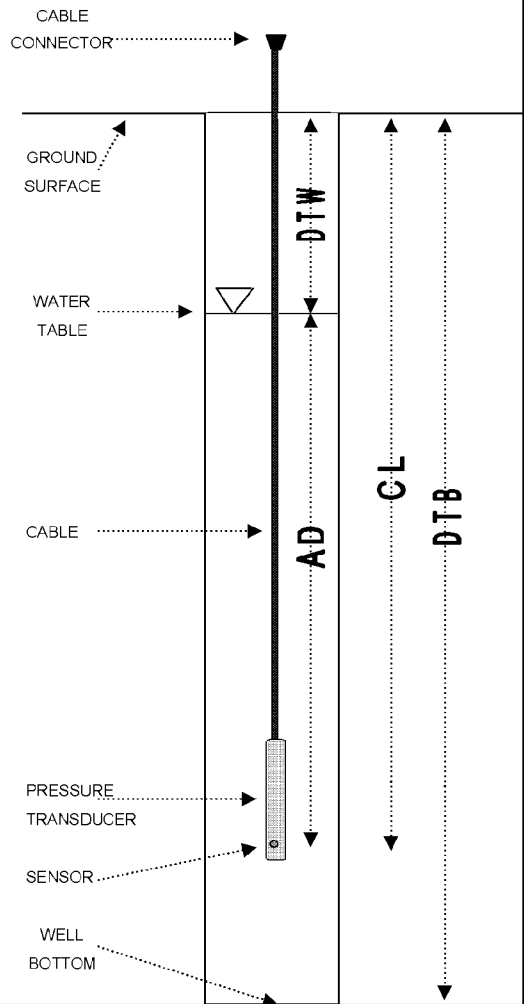
STATIC GROUNDWATER TABLE ELEVATION (FT) 3.16

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	NA	FT
<b>GROUND ELEVATION:</b>	15.003	FT M.S.L.
<b>CASING ELEVATION:</b>	18.060	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	above	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	3.057	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1510	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	14.90	FT
<b>ACTUAL DEPTH:</b>	+ 3.217	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 18.117	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	18.060	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 14.90	FT
<b>REFERENCE ELEVATION:</b>	= 3.160	FT M.S.L.
<b>TEST NAME:</b>	U3-C1	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1511	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:

**GZA** WELL ID: U3-C1

**TRANSDUCER INSTALLATION LOG**

<b>GZA GEOENVIRONMENTAL OF NEW YORK</b> 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	U3-4S
	Entergy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	41.0161619.00
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	17.35	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.653	DATE	2/14/08
PSI CAPACITY	30	CASING ELEVATION (FT)	13.943		
SERIAL NUMBER	9401	CASING DIAMETER (INCH)	4		

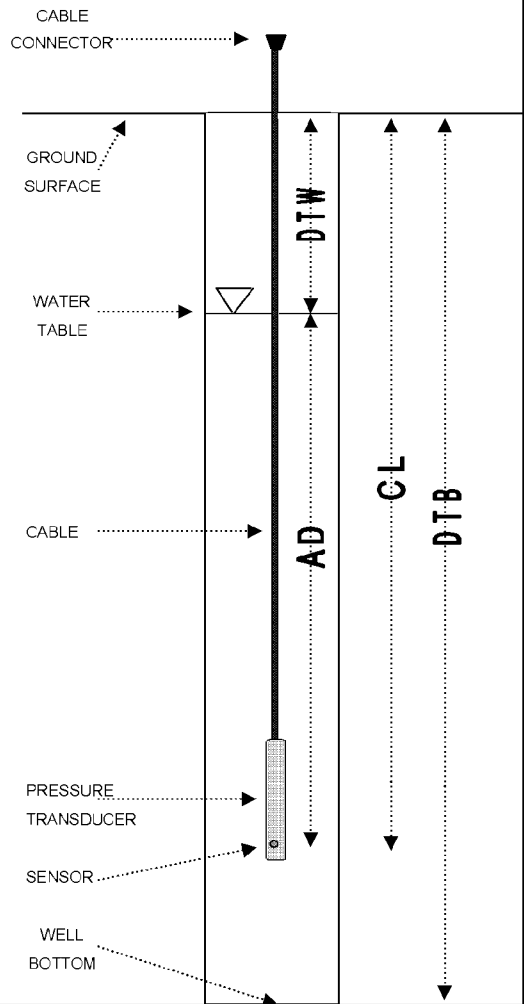
STATIC GROUNDWATER TABLE ELEVATION (FT) 4.76

GZA ENGINEER M. Britos

**ELEVATION OF MEASURING POINT - DEPTH TO WATER = REFERENCE ELEVATION (WATER TABLE ELEVATION)**

**DEPTH TO WATER + ACTUAL DEPTH = CABLE LENGTH (if transducer is functioning properly)**

<b>DEPTH TO BOTTOM:</b>	17.35	FT
<b>GROUND ELEVATION:</b>	14.653	FT M.S.L.
<b>CASING ELEVATION:</b>	13.943	FT M.S.L.
<b>CASING ABOVE (+) OR BELOW (-) GROUND:</b>	below	
<b>DISTANCE FROM CASING TO GROUND (+ OR -):</b>	-0.530	FT
<b>MEASURED CABLE LENGTH:</b>	--	FT
<b>TIME OF MEASUREMENT:</b>	1550	HRS
<b>MEASUREMENT TAKEN FROM:</b>	TOC	
<b>DEPTH TO WATER:</b>	9.18	FT
<b>ACTUAL DEPTH:</b>	+ 7.406	FT
<b>THEORETICAL CABLE LENGTH:</b>	= 16.586	FT
<b>HAVE CLOCKS BEEN SYNCHRONIZED?</b>	<input checked="" type="checkbox"/>	check
<b>IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?</b>	<input checked="" type="checkbox"/>	check
<b>ELEVATION OF MEASURING POINT:</b>	13.943	FT M.S.L.
<b>DEPTH TO WATER:</b>	- 9.18	FT
<b>REFERENCE ELEVATION:</b>	= 4.763	FT M.S.L.
<b>TEST NAME:</b>	U3-4S	
<b>LOGGING INTERVAL:</b>	20	MIN
<b>TEST START TIME:</b>	1551	HRS



LEGEND: **DTW** - DEPTH TO WATER  
**DTB** - DEPTH TO BOTTOM OF WELL  
**AD** - ACTUAL DEPTH OF TRANSDUCER UNDER WATER  
**CL** - CABLE LENGTH FROM SENSOR TO GROUND SURFACE/ TOP OF CASING

NOTES:



## **APPENDIX C: CHAINS OF CUSTODY**

# 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) 760-1178

Client Name: Entergy Project Name: Indian Point Energy Center Address: 450 Broadway, Suite 3, Buchanan, NY 10511 Collected by Client: Patrick Donohue	Phone #: (914) 736-8405 Fax #: (914) 734-6247	Sample Analysis Requested (b) (Fill in the number of containers for each test)	Preservative Type (b)	Comments Note: extra sample is required for sample specific QC				
Date Collected (mm-dd-yy) Time Collected (hh:mm) OC Code (b) Field Filtered (b) Sample Matrix (b)	TSCA Regulated Radiative	Total number of containers TSCA Regulated Radiative	Sample Analysis Requested (b) (Fill in the number of containers for each test)	Preservative Type (b)				
MW-40-162-(004) MW-40-127-(004) MW-40-100-(004) MW-40-81-(004) MW-40-46-(004) MW-40-27-(003)	01/07/08 01/07/08 01/07/08 01/07/08 01/07/08 01/07/08	1310 1230 1455 1435 1442 1623	N N N N N N	N N N N N N	GW GW GW GW GW GW	Y Y Y Y Y Y	1 1 1 1 1 1	1 Gal Poly 1 Gal Poly 1 Gal Poly 1 Gal Poly 1 Gal Poly 1 Gal Poly
(A) Res: (x) (b) Normal <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		(B) Res: (x) (b) Specific (Subject to Surcharge)		(C) Res: (x) (b) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		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.								
Chain of Custody Signatures Received by (Signed): SECURED SITE RACE Date: 1/7/08 Time: 1701				Sample Shipping and Delivery Details GEL PM: Cheryl Duffy Method of Shipment: FEDEX Date Shipped:				
Refill # (b) (1)				Aurbill # (b) (1)				
Client Performance				For Lab Receiving Use Only				
Equipment Blank, MS- Matrix Spike Sample, MSD- Matrix Spike Duplicate Sample, G- Grab, C - Composite				Custody Seal Intact? YES NO				
Equipment Blank, MS- Matrix Spike Sample, MSD- Matrix Spike Duplicate Sample, G- Grab, C - Composite				Cooler Temp: C				

# GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC  
2040 Savage Road  
Charleston, SC 29407  
Phone: (843) 556-8174  
Fax: (843) 766-1173

Project #: Energy Ground Water Monitoring Program  
GEL Order #: 50013510  
COC Number: 50013510  
PO Number: 50013510  
Client Name: Energy  
Phone #: (914) 736-8405  
Fax #: (914) 734-6247

Project Site Name: Indian Point Energy Center  
Address: 450 Broadway, Suite 3, Buchanan, NY 10511  
Collected by: Chem  
Send Results To: Patrick Donahue

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code (if any)	Field Filtered (Y/N)	Sample Matrix (e.g. GW)	Should this sample be considered:		Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Preservative Type (6)	Comments
						Radioactive	TSCA Regulated					
MW-51-40-(005)	01/08/08	1047	N	N	GW	Y	Y	1	1	1		1 Gal Poly
MW-51-79-(005)	01/08/08	1008	N	N	GW	Y	Y	1	1	1		1 Gal Poly
MW-51-104-(005)	01/08/08	1215	N	N	GW	Y	Y	1	1	1		1 Gal Poly
MW-51-135-(005)	01/08/08	1320	N	N	GW	Y	Y	1	1	1		1 Gal Poly
MW-51-163-(005)	01/08/08	1357	N	N	GW	Y	Y	1	1	1		1 Gal Poly
MW-51-189-(005)	01/08/08	1310	N	N	GW	Y	Y	1	1	1		1 Gal Poly

LAI 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  
 Sample Collection Time Zone: Eastern Pacific Other: Mountain

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards.  
 Chain of Custody Signatures: Received by (Signed) Date Time  
 SECURED 01/08/08 1520  
 STORAGE 01/08/08 1520  
 2  
 3

Sample Shipping and Delivery Details  
 GEL PM: Cheryl Duffy  
 Method of Shipment: FEDEX  
 Date Shipped:  
 Airbill #: Airbill #:  
 For Lab Receipt: Yes/No  
 Custody Seal Intact? YES/NO  
 Cooler Temp: C

1) Chain of Custody Number: Client Determined  
 2) QC Codes: N - Normal Sample, LB - Tap Blank, FD - Field Duplicate, EB - Equipment Blank, MB - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, G - Grab, C - Composite  
 3) Field Filtered: For liquid matrices, indicate with a Y - for yes if the sample was field filtered or N - for sample was not field filtered.  
 4) Matrix Codes: BW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, W-Water, ML - Mix - Liquid, SO - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, O-GH - Filter, P - Wipe, I - Urine, P - Fecal, N - Nails  
 5) Sample Analysis Requested: Analytical method requested (e.g. 8200B, 8010B, 7470) and number of containers provided for each (e.g. 8200B 3, 8010B 7, 7470 1).  
 6) Preservative Type: BA - Hydrobromic Acid, M - Nitric Acid, SIP - Sodium Hydroxide, SA - Sulfuric Acid, AA - Acetic Acid, HA - Hexane, ST - Sodium Thiosulfate. If no preservative is added = leave field blank  
 WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: 1 of 1  
 Project #: Energy Ground Water Monitoring Program  
 GEL Quote #  
 COC Number: 50013510  
 PO Number: 50013510

# GEL Chain of Custody and Analytical Request

\*\*See www.gel.com for GEL's Sample Acceptance SOPs\*\*

**GEL Work Order Number:**

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

Client Name: Entergy  
 Project/Site Name: Indian Point Energy Center  
 Address: 450 Broadway, Suite 3, Buchanan, NY 10511  
 Phone #: (914) 736-8406  
 Fax #: (914) 734-6247

Send Results To: Patrick Donahue  
 Collected by: Client  
 Sample ID: *For composites - indicate start and stop dates*

Sample ID	Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (m)	Field Filtered (Y/N)	Sample Matrix	Should this sample be considered	Radiative	TSCA Regulated	Total number of containers	Triium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Preservative Type (6)	Comments
MW-63-18-(004)	01/09/08	1455	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	
MW-63-34-(004)	01/09/08	1420	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	
MW-63-50-(004)	01/09/08	1232	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	
MW-63-93-(004)	01/09/08	1246	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	
MW-63-112-(004)	01/09/08	1020	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	
MW-63-121-(004)	01/09/08	1042	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	
MW-63-163-(004)	01/09/08	1051	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	
MW-63-174-(004)	01/09/08	1045	N	N	GW	Y	Y	Y	1	1	1	1	1 Gal Poly	

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

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

Sample Collection Time Zone: Eastern Pacific Other Mountain

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

Chain of Custody Signatures  
 Received by (signed) Date Time  
 SECURED 19/08 1550  
 STORAGE 19/08 1550

GEL PM: Cheryl Duffy  
 Method of Shipment: FEDEX  
 Date Shipped:  
 Airbill #:   
 Airbill #:

For Lab Receiving Use Only  
 Chain of Custody  
 YES  
 COC Number: 50013510  
 Cooler Temp:   
 WHITE - LABORATORY  
 YELLOW - FILE  
 PINK - CLIENT

1) Chain of Custody Number - Chem Determined  
 2) QC Codes N - Normal Sample, TB - Trip Blank, FD - Field Duplicate, FR - Equipment Blank, MS - Matrix Spike Sample, MSB - 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, P - Filter, P - Waste, L - Urine, F - Fecal, N - Nasal  
 5) Sample Analysis Requested - Analytical method requested (if e - 8260B, 6010B, 7090A) and number of containers provided for analysis (e - 8260B - 3, 6010B/7090A - 1).  
 6) Preservative Type BA - Hydrochloric Acid, BI - Boric Acid, SF - Sodium Hydroxide, SA - Sulfuric Acid, AA - Ascorbic Acid, HA - Hexamine, ST - Sodium Thiosulfate. If no preservative is added - leave field blank

# GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC  
2040 Savage Road  
Charleston, SC 29407  
Phone: (843) 556 8171  
Fax: (843) 760-1178

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

GEL Work Order Number:

Phone #: (914) 736-8405

Fax #: (914) 734-6247

Client Name: Entergy

Project Site Name: Indian Point Energy Center

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

Collected by: Client

Send Results To: Patrick Donahue

Sample Analysis Requested (5) (1-11) in the number of containers for each test:

Sample ID	*Time Collected (mm-dd-yy)	*Time Collected (Military) (hh-mm)	QC Code (0)	Field Inhibited (0)	Sample Matrix (0)	Should this sample be considered:	Total number of containers			Preservative Type (0)	Comments Note: extra sample is required for sample specific QC	
							TSCA Regulated	Gamma Spec (GS)	Strontium 90 (S9)			
MW-62-18 (004)	01/10/08	NO	SNAMPL	GW	Y	Y	1	1	1	NO SAMPLE	1 Gal Poly	
MW-62-37 (004)	01/10/08	1355	N	N	GW	Y	1	1	1		1 Gal Poly	
MW-62-53 (003)	01/10/08	1537	N	N	GW	Y	1	1	1		1 Gal Poly	
MW-62-71 (004)	01/10/08	1404	N	N	GW	Y	1	1	1		1 Gal Poly	
MW-62-92 (004)	01/10/08	1109	N	N	GW	Y	1	1	1		1 Gal Poly	
MW-62-138 (004)	01/10/08	1055	N	N	GW	Y	1	1	1		1 Gal Poly	
MW-62-182 (004)	01/10/08	1115	N	N	GW	Y	1	1	1		1 Gal Poly	

FAI Requested: Normal  Rush  Specific  (Subject to Surcharge) Fax Results: Yes  No

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

Sample Collection Time Zone: Eastern Pacific Other

### Chain of Custody Signatures

Relinquished By: Signature	Date	Time	Received by: Signature	Date	Time
	1/10/08	1600	SECURE STORAGE	1/10/08	1600

### Sample Shipping and Delivery Details

GEL PM: Cheryl Duffy	Date Shipped:
Method of Shipment: FEDEX	
Airbill #:	

Chain of Custody Number: Client Determined	For Lab Review (See Only)
QC Codes: N - Normal Sample, EB - Field Duplicate, MS - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, G - Grids, C - Composite	Chain of Custody Number:
Field Filtered: For liquid matrices, indicate with a Y - for solids, sample was field filtered or N - for sample was not field filtered	YES
Matrix Codes: MW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, ML - Milk, LIQ - Liquid, SO - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, O - Oil, F - Fiber, P - Pipe, U - Urine, F - Food, N - Nail	COOLING TEMP:
Sample Analysis Requested: Analytical method requested for: #260B, #080B, #700B and number of containers provided for each (i.e. #260B: 3, #080B: 2, #700B: 1)	
PRESERVATIVE TYPE: HA - Hydrochloric Acid, NI - Nitric Acid, SF - Sulfuric Acid, SA - Sulfuric Acid, AA - Acetic Acid, BV - Boric Acid, ST - Sodium Thiosulfate. If no preservative is added, leave field blank	

WHITE = LABORATORY      YELLOW = FILE      PINK = CLIENT



# 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 #: \_\_\_\_\_ of \_\_\_\_\_  
GEL Order # \_\_\_\_\_  
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 Client: **Send Results To: Patrick Donahue**

### Sample ID

\*For compatibility, indicate structure, top date/time

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code #	Field Filtered (N)	Sample Matrix (M)
MW-67-39-(004)	01/11/08	16:44	N	N	GW
MW-67-105-(004)	01/11/08	15:15	N	N	GW
MW-67-173-(004)	01/11/08	13:35	N	N	GW
MW-67-219-(004)	01/11/08	12:05	N	N	GW
MW-67-276-(004)	01/11/08	13:00	N	N	GW
MW-67-323-(004)	01/11/08	13:52	N	N	GW
MW-67-340-(004)	01/11/08	13:15	N	N	GW

Should be considered:  Radioactive  TSCA Regulated

Total number of containers: \_\_\_\_\_

Sample Analysis Requested (6) (Fill in the number of containers for each test)

Test Name	Number of Containers	Preservative Type (6)	Comments
Tritium (H3)	1		Note: extra sample is required for sample specific QC
Gamma Spec (GS)	1		
Strontium 90 (S90)	1		
Nickel 63 (N63)	1		
	1		
	1		
	1		
	1		

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

Sample Collection Time Zone: Eastern Pacific Other

### Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (Signed)	Date	Time
<i>[Signature]</i>	1/11/08	16:52	<i>[Signature]</i>	1/11/08	16:52

GEL PM: **Cheryl Duffy**

Method of Shipment: **FEDEX**

Date Shipped: \_\_\_\_\_

Airbill #: \_\_\_\_\_

Airbill #: \_\_\_\_\_

### Sample Shipping and Delivery Details

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

1) Chain of Custody Number - Client Determined  
2) QC Codes: N - Normal Sample, TB - Trip Blank, FDE - 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 no sample was not field filtered  
4) Matrix Code: DW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, W - Water, ML - Misc 1 liquid, SO - Soil, SD - Sediment, ST - Sludge, SS - Solid Waste, O - Oil, F - Filter, P - Filter, U - Urine, F - Fecal, N - Nal  
5) Sample Analysis Requested - Analytical method abbreviation: 8200R, 8210R, 740R and number of containers provided for each (i.e. 8200R-3, 6610R/740R-1)  
6) Preservative Type: BA - Hydrochloric Acid, NI - Nitric Acid, SH - Sodium Hydroxide, SV - Sulfuric Acid, AV - Acetic Acid, IX - Hexaur, ST - Sodium Thiosulfate. If no preservative is added - leave field blank

**WHITE = LABORATORY**

**YELLOW = FILE**

**PINK = CLIENT**

# GEL Chain of Custody and Analytical Request

Project #: Energy Ground Water Monitoring Program  
 GEL Code #:   
 COC Number:   
 PO Number: 50013510

GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 765-1178

**GEL Work Order Number:**

**Phone #:** (914) 736-8405  
**Fax #:** (914) 734-6247

Client Name: Energy  
 Project/Site Name: Indian Point Energy Center  
 Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos  
 Send Results To: Patrick Donehue

Sample ID  
 \* For composite - indicate start and stop date/time

Sample ID	*Type Collected (M/L/S) (hh:mm)	QC Code or Field Filtered <sup>(b)</sup>	Field Filtered <sup>(b)</sup>	Sample Matrix <sup>(b)</sup>	Should this sample be analyzed:	Total number of containers	Comments
					Radioactive		Note: extra sample is required for sample specific QC.
					TSCA Regulated		
MW-60-35-(004)	01/14/08 17:05	N	N	GW	Y	1	1 Gal Poly
MW-60-53-(004)	01/14/08 15:40	N	N	GW	Y	1	1 Gal Poly
MW-60-72-(004)	01/14/08 14:12	N	N	GW	Y	1	1 Gal Poly
MW-60-135-(004)	01/14/08 14:11	N	N	GW	Y	1	1 Gal Poly
MW-60-154-(004)	01/14/08 12:35	N	N	GW	Y	1	1 Gal Poly
MW-60-176-(004)	01/14/08 12:25	N	N	GW	Y	1	1 Gal Poly

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

Sample Collection Time Zone: Eastern Pacific Other Mountain

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

Chain of Custody Signatures

Received By (Signed): *Miguel Britos* Date: 1/14/08 Time: 17:20  
 Received By (Signed): *SECURED* Date: 1/14/08 Time: 17:20

Method of Shipment: FEDEX Date Shipped:   
 Airbill #:   
 Airbill #:

For Lab Receiving Use Only  
 Custody Seal Broken?   
 YES  NO    
 Cytoker-1000   
 C

1) Chain of Custody Number - Client Determined  
 2) QC Code: N - Normal Sample, TB - Trip Blank, PD - Field Duplicate, ER - 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 - Milk, 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. 8160B, 6010B, 7470B) and number of containers provided for each (i.e. 8160B, 3, 6010B/7470B - 1)  
 6) Preservative Type: BA - Hydrochloric Acid, VI - Nitric Acid, SF - Sulfuric Acid, AA - Acetic Acid, HX - Hexane, S1 - Sodium Thiosulfate. If no preservative is added - leave field blank  
**WHITE = LABORATORY YELLOW = FILE PINK = CLIENT**











# 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) 556-8178  
Fax: (843) 766-1178

**GEL Work Order Number:**

Phone #: (914) 736-8405  
Fax #: (914) 734-6247

**Client Name:** Entergy

**Project/Site Name:** Indian Point Energy Center

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

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

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

Should the sample be analyzed:

TS/CA Regulated

Radioactive

Yes

No

Total number of containers

Tritium (H3)

Cesium Spec (CS)

Strontium 90 (Sr90)

Preservative Type (6)

Comments

Note: extra sample is required for sample-specific QA

1 Gal Poly

1 Gal Poly

1 Gal Poly

TAT Requested: Normal  Rush  Specific: (Subject to Surcharge) Fax Results: Yes  No

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

Sample Collection Time Zone: Eastern Pacific Other

### Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Date	Time
<i>Stephan A. De</i>	1/6/08	1701	1/6/08	1701

### Sample Shipping and Delivery Details

GEL PM: Cheryl Duffy	Date Shipped:
Method of Shipment: FEDEX	
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, GS - 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, CW - Groundwater, SW - Surface Water, WW - Waste Water, W - Water, ML - Milk Liquid, SO - Solid, SP - Solvent, SL - Sludge, SW - Solid Waste, O - Oil, P - Filter, P - Wipe, U - Uncollected, N - Visual
- Sample Analysis Requested - Analytical method requested (i.e. 8260B 6910B/7479) and number of containers provided for each (i.e. 8260B 3, 6910B/7479 1)
- Preservative Type: BA - Hydrochloric Acid, NI - Nitric Acid, SH - Sodium Hydroxide, SA - Sulfuric Acid, AA - Ascorbic Acid, HK - Hexane, SF - Selenium Trisulfide. If no preservative is added - leave field blank

WHITE = LABORATORY

PINK = CLIENT





# 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 Salvage Road  
Charleston, SC 29407  
Phone: (843) 576-8111  
Fax: (843) 766-1178

Page: 1 of 1  
Project #: Entergy Ground Water Monitoring Program  
GEL Quote #:   
CCX Number:   
PO Number: 50013510

Client Name: <b>Entergy</b>		Phone #: (914) 736-8405												
Project/Site Name: <b>Indian Point Energy Center</b>		Fax #: (914) 734-6247												
Address: <b>450 Broadway, Suite 3, Buchanan, NY 10511</b>														
Collected by: <b>Client</b> Send Results To: <b>Patrick Donahue</b>														
Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code in	Field Filtered <sup>(5)</sup>	Sample Matrix <sup>(6)</sup>	Should this sample be considered:	Radioactive	TSCA Registered	Total number of containers	Trium (ID)	Gamma Spec (GS)	Strontium 90 (S90)	Preservative Type (6)	Comments
B-6-(004)	01/16/08	1650	N	N	GW	Y	Y	Y	1	1	1	1		Note: extra sample is required for sample specific QA.  I Cal Poly
TAT Requested: Normal: <input checked="" type="checkbox"/> Rush: <input type="checkbox"/> Specify: <input type="checkbox"/> Fax Results: <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No / <input type="checkbox"/>														
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards.														
Chain of Custody Signatures														
Requested By (Signed)		Date	Time	Received by (Signed)		Date	Time							
<i>[Signature]</i>		1/16/08	1700	<i>[Signature]</i>		1/16/08	1700							
3				2										
Sample Shipping and Delivery Details														
GEL PM: Cheryl Duffy										Date Shipped:				
Method of Shipment: PEDEX										Airbill #:				
For Lab Receipt Use Only Custody Seal Applied: PES: <input type="checkbox"/> Y/O Cooler Temp: <input type="checkbox"/>														

# GEL Chain of Custody and Analytical Request

\*\*See www.gel.com for GEL's Sample Acceptance SOPs\*\*

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

**GEL Work Order Number:**

Phone #: (914) 736-8405  
Fax #: (914) 734-6247

Client Name: **Energy**  
Project Name: **Indian Point Energy Center**  
Address: **450 Broadway, Suite 3, Buchanan, NY 10511**

Collected by: **M. J. G. / J. G. L.** Sent Results To: **Patrick Donahue**

Sample ID: **MW-39-67-(003)**  
*\*For copy dates indicate start and stop date/time.*

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code	Field Filtered <sup>(a)</sup>	Sample Mark <sup>(b)</sup>	Shielding		Total number of containers	Sample Analysis Requested <sup>(c)</sup> (Fill in the number of containers for each test)		Preservative Type (6)	Comments	
						TSCA Regulated	Radiative		Gamma Spec (GS)	Stronium 90 (SR90)			
MW-39-67-(003)	01/17/08	14:35	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly	Note: extra sample is required for sample specific QC
MW-39-84-(003)	01/17/08	13:25	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly	
MW-39-102-(003)	01/17/08	13:32	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly	
MW-39-124-(003)	01/17/08	15:40	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly	
MW-39-183-(003)	01/17/08	11:55	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly	
MW-39-195-(003)	01/17/08	17:28	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly	

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

Sample Collection Time Zone:  
 Eastern  
 Pacific  
 Other \_\_\_\_\_  
 Mountain

**Sample Shipping and Delivery Details**

GEL PM: **Cheryl Duffy**  
 Method of Shipment: **FEDEX**  
 Date Shipped: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_

**Chain of Custody Signatures**

Received by (Signed)	Date	Time
<i>[Signature]</i>	1/17/08	18:10
<b>SECURED STORAGE</b>	1/17/08	18:10
2		
3		

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

1) Chain of Custody Number: \_\_\_\_\_ Client Determined  
 2) QC Codes: N - Neutral sample, DR - Trip Blank, FD - Field Duplicate, FB - Empty Blank, MS - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, C - Grab, C+ - Composite  
 3) In-111 Inlet: For liquid matrices indicate with a Y - for yes the sample was field filtered or N - for no sample was not field filtered  
 4) Matrix Codes: DW - Drinking Water, GW - Ground Water, SW - Surface Water, WW - Waste Water, W - Water, ML - Misc Liquid, SD - Solid, SS - Solid Waste, O - Oil, P - Filter, P - Wipe, U - Urine, F - Fecal, N - Nasal  
 5) Sample Analysis Requested: Analytical methods indicated by # 82608, 80108, 74708 and number of containers provided for each: e.g. 82608, 3, 69108/4764 - 11  
 6) Preservative Type: HA - Hydrofluoric Acid, NI - Nitric Acid, SH - Section Hydrochloric Acid, SA - Sulfuric Acid, AA - Acetic 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

# GEL Chain of Custody and Analytical Request

Project #: \_\_\_\_\_ of \_\_\_\_\_  
 GEL Quote # \_\_\_\_\_  
 CUC Number # \_\_\_\_\_  
 FO Number: 50013510

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: Energy      Phone #: (914) 736-8435  
 Project/Site Name: Indian Point Energy Center      Fax #: (914) 734-6247  
 Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Sample Analysis Requested <sup>(6)</sup>: (Fill in the number of containers for each test)

Sample ID	Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	*Time Collected (hh:mm)	QC Code <sup>(2)</sup>	Field Filtered <sup>(3)</sup>	Sample Matrix <sup>(4)</sup>	Should the sample be considered		Total number of containers	Sample Analysis Requested <sup>(6)</sup>			Preservative Type <sup>(6)</sup>	Comments Note: extra sample is required for sample specific QC	
							Radon-free	TSCA Required		Tritium (H3)	Gamma Spec (G5)	Sr-90 (S90)			
MW-32-48-(004)	01/18/08	1326	1326	N	N	GW	Y	Y	1	1	1	1	1	1 Gal Poly	
MW-32-59-(002)	01/18/08	1325	1325	N	N	GW	Y	Y	1	1	1	1	1	1 Gal Poly	
MW-32-85-(005)	01/18/08	1450	1450	N	N	GW	Y	Y	1	1	1	1	1	1 Gal Poly	
MW-32-131-(005)	01/18/08	1123	1123	N	N	GW	Y	Y	1	1	1	1	1	1 Gal Poly	
MW-32-149-(005)	01/18/08	1118	1118	N	N	GW	Y	Y	1	1	1	1	1	1 Gal Poly	
MW-32-173-(002)	01/18/08	1105	1105	N	N	GW	Y	Y	1	1	1	1	1	1 Gal Poly	
MW-32-190-(005)	01/18/08	1135	1135	N	N	GW	Y	Y	1	1	1	1	1	1 Gal Poly	

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

Sample Collection Time Zone: Eastern / Pacific / Mountain

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

Chain of Custody Signatures		Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Received by (Signed)	Date
<i>Miguel Britos</i>	1/18/08 1645	SECURED IS TO RAGE	1/18/08 1645

Method of Shipment: FEDEX  
 Airbill #: \_\_\_\_\_  
 For Lab Recovery Use Only:  
 Custody Seal Intact: YES / NO  
 Cooler Temp: \_\_\_\_\_

1) Chain of Custody Number: Client Determined  
 2) QC Codes: N - Normal Sample; FB - Trip Blank; PD - Field Duplicate; ER - 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 the sample was field filtered or N - for sample was not field filtered  
 4) Matrix Code: DW - Drinking Water; GW - Groundwater; SW - Surface Water; WW - Waste Water; ML - Milk; LI - Liquid; SO - Solid; SD - Sediment; SL - Sludge; SS - Solid Waste; DC - Oil; F - Filter; P - Pipe; U - Urine; Fecal - N - Nasal  
 5) Sample Analysis Requested: Analytical method requested (e.g. RM08, RM09, RM10, RM11, RM12, RM13, RM14, RM15, RM16, RM17, RM18, RM19, RM20, RM21, RM22, RM23, RM24, RM25, RM26, RM27, RM28, RM29, RM30, RM31, RM32, RM33, RM34, RM35, RM36, RM37, RM38, RM39, RM40, RM41, RM42, RM43, RM44, RM45, RM46, RM47, RM48, RM49, RM50, RM51, RM52, RM53, RM54, RM55, RM56, RM57, RM58, RM59, RM60, RM61, RM62, RM63, RM64, RM65, RM66, RM67, RM68, RM69, RM70, RM71, RM72, RM73, RM74, RM75, RM76, RM77, RM78, RM79, RM80, RM81, RM82, RM83, RM84, RM85, RM86, RM87, RM88, RM89, RM90, RM91, RM92, RM93, RM94, RM95, RM96, RM97, RM98, RM99, RM100)  
 6) Preservative Type: HA - Hydrochloric Acid; NI - Nitric Acid; NH - Sodium Hydroxide; SA - Sulfuric Acid; AA - Ascorbic Acid; BX - Bacteriostatic; ST - Sodium Thiosulfate. If no preservative is added, leave field blank.

WHITE - LABORATORY      YELLOW - FILE      PINK - CLIENT







# GEL Chain of Custody and Analytical Request

Gel Laboratories, LLC  
2940 Savage Road  
Cockeysville, MD 21037  
Phone: (843) 530-8171  
Fax: (843) 766-1178

Page: 1 of 1  
Project: Energy Ground Water Monitoring Program  
Client Name: Energy  
Address: Indian Point Energy Center  
450 Broadway, Suite 3, Buchanan, NY 10511

GEL Work Order Number: (914) 796-8405  
Fax #: (914) 734-6247

Sample Analysis Requested (9) (fill in the number of containers for each test)

Sample ID	Time Collected (Military (h:mm))	Time Collected (mm dd-yy)	Time Collected (Military (h:mm))	Sample Matrix	Should this sample be considered	Total number of containers		Tritium (H3)	Gamma Spec (GSI)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	Preservative Type (6)	Comments	
						Radioactive	TSCA Regulated							
U3-11-0191	1611	01/22/08	1611	GW	Y	Y	1	1	1	1	1	1	1 Gal Poly	
U3-11-0191-B	1611	01/22/08	1611	GW	Y	Y	1	1	1	1	1	1	1 Gal Poly	
U3-11-0191-D	1611	01/22/08	1611	GW	Y	Y	1	1	1	1	1	1	1 Gal Poly	
U3-11-0191-S	1611	01/22/08	1611	GW	Y	Y	1	1	1	1	1	1	1 Gal Poly	
U3-11-0241	1616	01/22/08	1616	GW	Y	Y	1	1	1	1	1	1	1 Gal Poly	

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4  
 Sample Collection Type/Zone:  Laboratory  Pacific  Other  
 Mountain

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards.  
 No  
 Chain of Custody Signatures: Received by (signature) Date Time  
 GEL PM: Cheryl Duffy  
 Method of shipment: FedEx  
 Date Shipped:  
 Airbill #:  
 Airbill #:

For Lab Receiving Use Only  
 Chain of Custody  
 FAX  
 Cash or Check  
 WHITE LABORATORY  
 YELLOW = FILE  
 PINK = CLIENT







# GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC  
 2046 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 760-1178

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

GEL Work Order Number:

Phone #: (914) 736-8405

Sample Analysis Requested <sup>(6)</sup> (Fill in the number of containers for each test)

Fax #: (914) 734-6247

Preservative Type (6)

Comments

Client Name: **Energy**

Notes: extra sample is required for sample specific QC

Project/Site Name: **Indian Point Energy Center**

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

Collected by: **Send Results To: Patrick Donehue**

Sample ID: **MW-58-26-(005)**

Time Collected (mm-dd-yy): **01/22/08**

Time Filtered (mm-dd-yy): **01/22/08**

QC Code: **N**

Field Filtered: **N**

Sample Matrix: **GW**

Radon/Total number of containers: **Y**

TSCA Registered: **Y**

Should this sample be considered: **Y**

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

Sample Collection Time Zone: **Eastern**

Method of Shipment: **FEDEX**

Date Shipped:

Airbill #:

Airbill #:

For Lab Receiving Use Only

Custody Seal Intact?

Cooler Temp:

Sample Shipping and Delivery Details

Received by (signed): **Cheryl Duffy**

Date: **1/22/08**

Time: **1730**

Received by (signed): **1/22/08**

Date: **1/22/08**

Time: **1730**

Received by (signed): **1/22/08**

Date: **1/22/08**

Time: **1730**

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Time: **1730**

Received by (signed): **1/22/08**

Date: **1/22/08**

Time: **1730**

























# GEL Chain of Custody and Analytical Request

HEI Laboratories, LLC  
2940 Savage Road  
Charleston, SC 29437  
Phone: (843) 556-8171  
Fax: (843) 766-1178

Project: Energy Ground Water Monitoring Program  
GEL Order #  
GEL Number: 50013510  
GEL Work Order Number:

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

Phone #: (914) 736-8405

Fax #: (914) 734-6247

Project/Site Name: Indian Point Energy Center  
Address: 450 Broadway, Suite 3, Buchanan, NY 10511

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample ID

\*For composite, indicate start and stop date/time

MW-111-026

Date Collected (mm-dd-yy)

Time Collected (Military) (hh:mm)

QC Code

Field Filtered?

Sample Matrix

Radioactive

TSCA Required

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

1 Gal Poly

FAI Requested: Normal	✓	Rush	Specify	is subject to Surcharge	Fax Results:	Yes	No	Level 1	Level 2	Level 3	Level 4
<p>Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards</p>											
<p>Circle Deliverable: C of A / QC Summary / Sample Collection Time Zone</p> <p>Eastern / Pacific / Central / Mountain</p>											
<p>Received by (signed)</p> <p><u>SECURE STORAGE</u> 1/28/08 1715</p>						<p>Date</p> <p>1/28/08 1715</p>					
<p>Received by (signed)</p> <p><u>Cheryl Duffy</u> 1/28/08 1715</p>						<p>Date</p> <p>1/28/08 1715</p>					
<p>Method of Shipment: FEDEX</p>						<p>Date Shipped:</p>					
<p>Airbill #:</p>						<p>Airbill #:</p>					
<p>Chain of Custody Signatures</p>											
<p>For Lab Receiving Use Only</p> <p>Correctly Seal Intact? YES NO</p> <p>Contam. Temp. °C</p>											





# GEL Chain of Custody and Analytical Request

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

GEL Laboratories, LLC  
 2940 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 Brites Send Results To: Patrick Donahue

Sample ID <small>* For composite, indicate start and stop date/time</small>	Date Collected (mm-dd-yy)	Volume Collected (liters) (gallons)	QC Code (if applicable)	Field Filtered (Y/N)	Sample Matrix	Should this sample be considered:		Sample Analysis Requested <sup>5b</sup> (Fill in the number of containers for each test)						Comments Note: extra sample is required for sample specific QR	
						Radioactive	TCA Regulated	Strontium 90 (Sr90)	Gamma Spec (GS)	Tritium (H3)	Level 1	Level 2	Level 3		Level 4
MW-37-40-(010)	2/1/08	1720	N	N	GW	Y	Y	1	1	1	1	1	1	1	1 Gal Poly
MW-37-57-(010)	2/1/08	1631	N	N	GW	Y	Y	1	1	1	1	1	1	1	1 Gal Poly

TAT Requested: Normal  Rush: Specify: (Subject to Surcharges) Tax Results: Yes / No

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

Sample Collection Time Zone: Eastern Pacific Other Mountain

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

Chain of Custody Signatures		Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date / Time	GEL PM	Cheryl Duffy
Miguel Brites	2/1/08 1730	Method of Shipment:	FEDEX
		Date Shipped:	
		Bill #: 2	
		Bill #: 3	

For Lab Reviewing Use Only:  
 Custody No. of Initial: YES  
 Custody No. of Final: NO

1) Chain of Custody Number - Client Determined  
 2) QC Codes: N - Normal Sample, FB - Trip Blank, FD - Field Duplicate, ER - 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 no, the sample was not field filtered.  
 4) Matrix Codes: DW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Wastewater, W - Water, ML - Milk Liquid, SF - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, D - Oil, F - Fiber, P - Paper, E - Other, F - Fuel, N - Fuel  
 5) Sample Analysis Requested - Analytical method requested (i.e. 8260B, 6010B, 7470B) and number of containers provided for each (i.e. 8260B, 6010B, 7470B)  
 6) Preservation Type: BA - Bismuth Acid, NI - Nitric Acid, SF - Sulfuric Acid, AA - Acetic Acid, HS - Hexane, ST - Sodium Thiosulfate. If no preservative is added - leave field blank  
**WHITE = LABORATORY YELLOW = FILE PINK = CLIENT**









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 comparison - indicate source and approximate</small>	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code (#)	Field Filtered <sup>1)</sup>	Sample Matrix <sup>2)</sup>	Should this sample be considered:		Sample Analysis Requested <sup>3)</sup> (Fill in the number of containers for each test)		Preservative Type (p)	Comments Note: extra sample is required for sample specific QC	
						Reductive	TSCA Required	Tritium (H3)	Gamma Spec (GS)			Strontium 90 (Sr90)
MW-67-105-(004)	2/25/08	1344	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly
MW-67-173-(004)	2/25/08	1400	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly
MW-67-219-(004)	2/25/08	1143	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly
MW-67-276-(004)	2/25/08	1148	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly
MW-67-323-(004)	2/25/08	1159	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly
MW-67-340-(004)	2/25/08	1200	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly
MW-67-39-(004)	2/25/08	1538	N	N	GW	Y	Y	1	1	1	1	1 Gal Poly

TAT Requested: Normal  Rush  Specify (Subject to surcharge) Fax Results: Yes /  No  
 Cycle Deliverable: C of A / OK Summary / Level 1 / Level 2 / Level 3 / Level 4  
 Sample Collection Time Zone: Eastern / Pacific / Other / Mountain

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards  
 Chain of Custody Signatures  
 Relinquished By (Signed) Date Time Received By (Signed) Date Time  
 [Signature] 2/25/08 1625 [Signature] 2/25/08 1625  
 GEL PM: Cheryl Duffy  
 Method of Shipment: FEDEX  
 Date Shipped:  
 Airbill #:  
 Airbill #:

Per Lab Receipt (see copy)  
 Custody Seal (check)  
 YES  
 NO  
 Custody Seal (check)  
 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; N - for sample was not field filtered  
 4) Matrix Codes: MW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Wastewater, Me - Water, ML - Mine Liquid, SD - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, O - Oil, P - Filter, P - Paper, L - Glass, F - Food, N - Food  
 5) Sample Analysis Requested: Analytical methods requested (i.e. R208, 6016R, 470K) number of containers provided for each (i.e. 2, 2003, 3, 6016R, 2, 2004 - 8)  
 6) Preservative Type: BA - Hydrochloric Acid, NI - Nitric Acid, SF - Sulfuric Acid, AA - Acetic Acid, HV - Hexane, ST - Sodium Thiosulfate. F - No preservative is added. Leave field blank  
**WHITE = LABORATORY**  
**YELLOW = FILE**  
**PINK = CLIENT**





## **APPENDIX D: 1<sup>ST</sup> QUARTER 2008 SAMPLING DATA SHEETS**



# Waterloo Sampling Data Sheet

MW-30-84(008)

CLIENT: Entergy - IPEC  
 SUT: Buchanan, NY  
 WEATHER: Showers 45°F

PROJECT N: 47-15029-0  
 DATE: 2/4/08  
 SAMPLER S: M. B.

SAMPLING INTERVAL (depth in ft below top of casing):  
77.3 to 85.4  
 SAMPLING PORT: 84

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length: 7.9

TOTAL VOLUME PURGED:  
0.37 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
1145		PUMP ON							
1150	0	7.10	0.752	—	2.46	7.48	-22.9	3.3/40	40
1155	0.05	7.12	1.401	—	2.55	16.86	-33.3		
1200	0.10	7.07	1.440	—	1.36	16.14	-32.0		
1205	0.20	7.07	1.446	—	1.19	15.47	-22.0		
1208	0.25	7.07	1.446	—	1.22	14.88	-14.2		
1212	0.26	7.14	1.443	—	1.44	4.63	-11.9		
1225	0.39	7.07	1.442	—	0.97	14.80	-7.8		
1228	0.30	7.07	1.442	—	0.95	14.74	-6.7		
1232	0.32	7.07	1.442	—	0.90	14.67	-0.1		
1235	0.35	7.07	1.434	—	0.87	14.78	-0.6		
1238	0.37	7.07	1.426	—	0.85	14.72	-0.9		
1240		START SAMPLE							
1416		SAMPLE COMPLETED							
		: 1-1 gal IPEC							

Equipment Used	Equipment Serial Number Identification Number
YSI Reader & Set #	2

NOTES AND OBSERVATIONS:

Data Sheet

CLIENT: Entergy - IPEC  
 SITE: Bachutan, NY  
 WEATHER: Sunny 32°F

PROJECT NO.: 4010101900  
 DATE: 11/21/05  
 SAMPLER S#: A.A. 1119

SAMPLING INTERVAL (depth in ft below top of casing) \_\_\_\_\_ to \_\_\_\_\_

GALLONS OF WATER PER WELL VOLUME: \_\_\_\_\_  
 Sampling Interval Length \_\_\_\_\_

SAMPLING PORT: \_\_\_\_\_

TOTAL VOLUME PURGED: \_\_\_\_\_ gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

WATER QUALITY:

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
8:27	1.00	7.2	1.20	0	7.2	12.5	210		
8:33	1.00	7.2	1.20	0	7.2	12.5	210		
8:39	1.00	7.2	1.20	0	7.2	12.5	210		
8:45	1.00	7.2	1.20	0	7.2	12.5	210		
8:51	1.00	7.2	1.20	0	7.2	12.5	210		
8:57	1.00	7.2	1.20	0	7.2	12.5	210		
9:03	1.00	7.2	1.20	0	7.2	12.5	210		
9:09	1.00	7.2	1.20	0	7.2	12.5	210		
9:15	1.00	7.2	1.20	0	7.2	12.5	210		
9:21	1.00	7.2	1.20	0	7.2	12.5	210		
9:27	1.00	7.2	1.20	0	7.2	12.5	210		
9:33	1.00	7.2	1.20	0	7.2	12.5	210		
9:39	1.00	7.2	1.20	0	7.2	12.5	210		
9:45	1.00	7.2	1.20	0	7.2	12.5	210		
9:51	1.00	7.2	1.20	0	7.2	12.5	210		
9:57	1.00	7.2	1.20	0	7.2	12.5	210		
10:03	1.00	7.2	1.20	0	7.2	12.5	210		
10:09	1.00	7.2	1.20	0	7.2	12.5	210		
10:15	1.00	7.2	1.20	0	7.2	12.5	210		
10:21	1.00	7.2	1.20	0	7.2	12.5	210		
10:27	1.00	7.2	1.20	0	7.2	12.5	210		
10:33	1.00	7.2	1.20	0	7.2	12.5	210		
10:39	1.00	7.2	1.20	0	7.2	12.5	210		
10:45	1.00	7.2	1.20	0	7.2	12.5	210		
10:51	1.00	7.2	1.20	0	7.2	12.5	210		
10:57	1.00	7.2	1.20	0	7.2	12.5	210		
11:03	1.00	7.2	1.20	0	7.2	12.5	210		
11:09	1.00	7.2	1.20	0	7.2	12.5	210		
11:15	1.00	7.2	1.20	0	7.2	12.5	210		
11:21	1.00	7.2	1.20	0	7.2	12.5	210		
11:27	1.00	7.2	1.20	0	7.2	12.5	210		
11:33	1.00	7.2	1.20	0	7.2	12.5	210		
11:39	1.00	7.2	1.20	0	7.2	12.5	210		
11:45	1.00	7.2	1.20	0	7.2	12.5	210		
11:51	1.00	7.2	1.20	0	7.2	12.5	210		
11:57	1.00	7.2	1.20	0	7.2	12.5	210		
12:03	1.00	7.2	1.20	0	7.2	12.5	210		
12:09	1.00	7.2	1.20	0	7.2	12.5	210		
12:15	1.00	7.2	1.20	0	7.2	12.5	210		
12:21	1.00	7.2	1.20	0	7.2	12.5	210		
12:27	1.00	7.2	1.20	0	7.2	12.5	210		
12:33	1.00	7.2	1.20	0	7.2	12.5	210		
12:39	1.00	7.2	1.20	0	7.2	12.5	210		
12:45	1.00	7.2	1.20	0	7.2	12.5	210		
12:51	1.00	7.2	1.20	0	7.2	12.5	210		
12:57	1.00	7.2	1.20	0	7.2	12.5	210		
13:03	1.00	7.2	1.20	0	7.2	12.5	210		
13:09	1.00	7.2	1.20	0	7.2	12.5	210		
13:15	1.00	7.2	1.20	0	7.2	12.5	210		
13:21	1.00	7.2	1.20	0	7.2	12.5	210		
13:27	1.00	7.2	1.20	0	7.2	12.5	210		
13:33	1.00	7.2	1.20	0	7.2	12.5	210		
13:39	1.00	7.2	1.20	0	7.2	12.5	210		
13:45	1.00	7.2	1.20	0	7.2	12.5	210		
13:51	1.00	7.2	1.20	0	7.2	12.5	210		
13:57	1.00	7.2	1.20	0	7.2	12.5	210		
14:03	1.00	7.2	1.20	0	7.2	12.5	210		
14:09	1.00	7.2	1.20	0	7.2	12.5	210		
14:15	1.00	7.2	1.20	0	7.2	12.5	210		
14:21	1.00	7.2	1.20	0	7.2	12.5	210		
14:27	1.00	7.2	1.20	0	7.2	12.5	210		
14:33	1.00	7.2	1.20	0	7.2	12.5	210		
14:39	1.00	7.2	1.20	0	7.2	12.5	210		
14:45	1.00	7.2	1.20	0	7.2	12.5	210		
14:51	1.00	7.2	1.20	0	7.2	12.5	210		
14:57	1.00	7.2	1.20	0	7.2	12.5	210		
15:03	1.00	7.2	1.20	0	7.2	12.5	210		
15:09	1.00	7.2	1.20	0	7.2	12.5	210		
15:15	1.00	7.2	1.20	0	7.2	12.5	210		
15:21	1.00	7.2	1.20	0	7.2	12.5	210		
15:27	1.00	7.2	1.20	0	7.2	12.5	210		
15:33	1.00	7.2	1.20	0	7.2	12.5	210		
15:39	1.00	7.2	1.20	0	7.2	12.5	210		
15:45	1.00	7.2	1.20	0	7.2	12.5	210		
15:51	1.00	7.2	1.20	0	7.2	12.5	210		
15:57	1.00	7.2	1.20	0	7.2	12.5	210		
16:03	1.00	7.2	1.20	0	7.2	12.5	210		
16:09	1.00	7.2	1.20	0	7.2	12.5	210		
16:15	1.00	7.2	1.20	0	7.2	12.5	210		
16:21	1.00	7.2	1.20	0	7.2	12.5	210		
16:27	1.00	7.2	1.20	0	7.2	12.5	210		
16:33	1.00	7.2	1.20	0	7.2	12.5	210		
16:39	1.00	7.2	1.20	0	7.2	12.5	210		
16:45	1.00	7.2	1.20	0	7.2	12.5	210		
16:51	1.00	7.2	1.20	0	7.2	12.5	210		
16:57	1.00	7.2	1.20	0	7.2	12.5	210		
17:03	1.00	7.2	1.20	0	7.2	12.5	210		
17:09	1.00	7.2	1.20	0	7.2	12.5	210		
17:15	1.00	7.2	1.20	0	7.2	12.5	210		
17:21	1.00	7.2	1.20	0	7.2	12.5	210		
17:27	1.00	7.2	1.20	0	7.2	12.5	210		
17:33	1.00	7.2	1.20	0	7.2	12.5	210		
17:39	1.00	7.2	1.20	0	7.2	12.5	210		
17:45	1.00	7.2	1.20	0	7.2	12.5	210		
17:51	1.00	7.2	1.20	0	7.2	12.5	210		
17:57	1.00	7.2	1.20	0	7.2	12.5	210		
18:03	1.00	7.2	1.20	0	7.2	12.5	210		
18:09	1.00	7.2	1.20	0	7.2	12.5	210		
18:15	1.00	7.2	1.20	0	7.2	12.5	210		
18:21	1.00	7.2	1.20	0	7.2	12.5	210		
18:27	1.00	7.2	1.20	0	7.2	12.5	210		
18:33	1.00	7.2	1.20	0	7.2	12.5	210		
18:39	1.00	7.2	1.20	0	7.2	12.5	210		
18:45	1.00	7.2	1.20	0	7.2	12.5	210		
18:51	1.00	7.2	1.20	0	7.2	12.5	210		
18:57	1.00	7.2	1.20	0	7.2	12.5	210		
19:03	1.00	7.2	1.20	0	7.2	12.5	210		
19:09	1.00	7.2	1.20	0	7.2	12.5	210		
19:15	1.00	7.2	1.20	0	7.2	12.5	210		
19:21	1.00	7.2	1.20	0	7.2	12.5	210		
19:27	1.00	7.2	1.20	0	7.2	12.5	210		
19:33	1.00	7.2	1.20	0	7.2	12.5	210		
19:39	1.00	7.2	1.20	0	7.2	12.5	210		
19:45	1.00	7.2	1.20	0	7.2	12.5	210		
19:51	1.00	7.2	1.20	0	7.2	12.5	210		
19:57	1.00	7.2	1.20	0	7.2	12.5	210		
20:03	1.00	7.2	1.20	0	7.2	12.5	210		
20:09	1.00	7.2	1.20	0	7.2	12.5	210		
20:15	1.00	7.2	1.20	0	7.2	12.5	210		
20:21	1.00	7.2	1.20	0	7.2	12.5	210		
20:27	1.00	7.2	1.20	0	7.2	12.5	210		
20:33	1.00	7.2	1.20	0	7.2	12.5	210		
20:39	1.00	7.2	1.20	0	7.2	12.5	210		
20:45	1.00	7.2	1.20	0	7.2	12.5	210		
20:51	1.00	7.2	1.20	0	7.2	12.5	210		
20:57	1.00	7.2	1.20	0	7.2	12.5	210		
21:03	1.00	7.2	1.20	0	7.2	12.5	210		
21:09	1.00	7.2	1.20	0	7.2	12.5	210		
21:15	1.00	7.2	1.20	0	7.2	12.5	210		
21:21	1.00	7.2	1.20	0	7.2	12.5	210		
21:27	1.00	7.2	1.20	0	7.2	12.5	210		
21:33	1.00	7.2	1.20	0	7.2	12.5	210		
21:39	1.00	7.2	1.20	0	7.2	12.5	210		
21:45	1.00	7.2	1.20	0	7.2	12.5	210		
21:51	1.00	7.2	1.20	0	7.2	12.5	210		
21:57	1.00	7.2	1.20	0	7.2	12.5	210		
22:03	1.00	7.2	1.20	0	7.2	12.5	210		
22:09	1.00	7.2	1.20	0	7.2	12.5	210		
22:15	1.00	7.2	1.20	0	7.2	12.5	210		
22:21	1.00	7.2	1.20	0	7.2	12.5	210		
22:27	1.00	7.2	1.20	0	7.2	12.5	210		
22:33	1.00	7.2	1.20	0	7.2	12.5	210		
22:39	1.00	7.2	1.20	0	7.2	12.5	210		
22:45	1.00	7.2	1.20	0	7.2	12.5	210		
22:51	1.00	7.2	1.20	0	7.2	12.5	210		
22:57	1.00	7.2	1.20	0	7.2	12.5	210		
23:03	1								





# Waterloo Sampling Data Sheet

1126-1125

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY  
 WEATHER: sunny 32°F

PROJECT NO: 417161619.00  
 DATE: 11/26/09  
 SAMPLER: S/A

SAMPLING INTERVAL (depth in ft below top of casing):  
 1.0 to 1.0

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length: 1.0

SAMPLING PORT: 1.0

TOTAL VOLUME PURGED: 1.6 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:22	0.1	7.2	1.2	0	2.0	12.5	150		
11:23	0.1	7.2	1.2	0	2.0	12.5	150		
11:24	0.1	7.2	1.2	0	2.0	12.5	150		
11:25	0.1	7.2	1.2	0	2.0	12.5	150		
11:26	0.1	7.2	1.2	0	2.0	12.5	150		
11:27	0.1	7.2	1.2	0	2.0	12.5	150		
11:28	0.1	7.2	1.2	0	2.0	12.5	150		
11:29	0.1	7.2	1.2	0	2.0	12.5	150		
11:30	0.1	7.2	1.2	0	2.0	12.5	150		
11:31	0.1	7.2	1.2	0	2.0	12.5	150		
11:32	0.1	7.2	1.2	0	2.0	12.5	150		
11:33	0.1	7.2	1.2	0	2.0	12.5	150		
11:34	0.1	7.2	1.2	0	2.0	12.5	150		
11:35	0.1	7.2	1.2	0	2.0	12.5	150		
11:36	0.1	7.2	1.2	0	2.0	12.5	150		
11:37	0.1	7.2	1.2	0	2.0	12.5	150		
11:38	0.1	7.2	1.2	0	2.0	12.5	150		
11:39	0.1	7.2	1.2	0	2.0	12.5	150		
11:40	0.1	7.2	1.2	0	2.0	12.5	150		
11:41	0.1	7.2	1.2	0	2.0	12.5	150		
11:42	0.1	7.2	1.2	0	2.0	12.5	150		
11:43	0.1	7.2	1.2	0	2.0	12.5	150		
11:44	0.1	7.2	1.2	0	2.0	12.5	150		
11:45	0.1	7.2	1.2	0	2.0	12.5	150		
11:46	0.1	7.2	1.2	0	2.0	12.5	150		
11:47	0.1	7.2	1.2	0	2.0	12.5	150		
11:48	0.1	7.2	1.2	0	2.0	12.5	150		
11:49	0.1	7.2	1.2	0	2.0	12.5	150		
11:50	0.1	7.2	1.2	0	2.0	12.5	150		
11:51	0.1	7.2	1.2	0	2.0	12.5	150		
11:52	0.1	7.2	1.2	0	2.0	12.5	150		
11:53	0.1	7.2	1.2	0	2.0	12.5	150		
11:54	0.1	7.2	1.2	0	2.0	12.5	150		
11:55	0.1	7.2	1.2	0	2.0	12.5	150		
11:56	0.1	7.2	1.2	0	2.0	12.5	150		
11:57	0.1	7.2	1.2	0	2.0	12.5	150		
11:58	0.1	7.2	1.2	0	2.0	12.5	150		
11:59	0.1	7.2	1.2	0	2.0	12.5	150		
12:00	0.1	7.2	1.2	0	2.0	12.5	150		
12:01	0.1	7.2	1.2	0	2.0	12.5	150		
12:02	0.1	7.2	1.2	0	2.0	12.5	150		
12:03	0.1	7.2	1.2	0	2.0	12.5	150		
12:04	0.1	7.2	1.2	0	2.0	12.5	150		
12:05	0.1	7.2	1.2	0	2.0	12.5	150		
12:06	0.1	7.2	1.2	0	2.0	12.5	150		
12:07	0.1	7.2	1.2	0	2.0	12.5	150		
12:08	0.1	7.2	1.2	0	2.0	12.5	150		
12:09	0.1	7.2	1.2	0	2.0	12.5	150		
12:10	0.1	7.2	1.2	0	2.0	12.5	150		
12:11	0.1	7.2	1.2	0	2.0	12.5	150		
12:12	0.1	7.2	1.2	0	2.0	12.5	150		
12:13	0.1	7.2	1.2	0	2.0	12.5	150		
12:14	0.1	7.2	1.2	0	2.0	12.5	150		
12:15	0.1	7.2	1.2	0	2.0	12.5	150		
12:16	0.1	7.2	1.2	0	2.0	12.5	150		
12:17	0.1	7.2	1.2	0	2.0	12.5	150		
12:18	0.1	7.2	1.2	0	2.0	12.5	150		
12:19	0.1	7.2	1.2	0	2.0	12.5	150		
12:20	0.1	7.2	1.2	0	2.0	12.5	150		
12:21	0.1	7.2	1.2	0	2.0	12.5	150		
12:22	0.1	7.2	1.2	0	2.0	12.5	150		
12:23	0.1	7.2	1.2	0	2.0	12.5	150		
12:24	0.1	7.2	1.2	0	2.0	12.5	150		
12:25	0.1	7.2	1.2	0	2.0	12.5	150		
12:26	0.1	7.2	1.2	0	2.0	12.5	150		
12:27	0.1	7.2	1.2	0	2.0	12.5	150		
12:28	0.1	7.2	1.2	0	2.0	12.5	150		
12:29	0.1	7.2	1.2	0	2.0	12.5	150		
12:30	0.1	7.2	1.2	0	2.0	12.5	150		
12:31	0.1	7.2	1.2	0	2.0	12.5	150		
12:32	0.1	7.2	1.2	0	2.0	12.5	150		
12:33	0.1	7.2	1.2	0	2.0	12.5	150		
12:34	0.1	7.2	1.2	0	2.0	12.5	150		
12:35	0.1	7.2	1.2	0	2.0	12.5	150		
12:36	0.1	7.2	1.2	0	2.0	12.5	150		
12:37	0.1	7.2	1.2	0	2.0	12.5	150		
12:38	0.1	7.2	1.2	0	2.0	12.5	150		
12:39	0.1	7.2	1.2	0	2.0	12.5	150		
12:40	0.1	7.2	1.2	0	2.0	12.5	150		
12:41	0.1	7.2	1.2	0	2.0	12.5	150		
12:42	0.1	7.2	1.2	0	2.0	12.5	150		
12:43	0.1	7.2	1.2	0	2.0	12.5	150		
12:44	0.1	7.2	1.2	0	2.0	12.5	150		
12:45	0.1	7.2	1.2	0	2.0	12.5	150		
12:46	0.1	7.2	1.2	0	2.0	12.5	150		
12:47	0.1	7.2	1.2	0	2.0	12.5	150		
12:48	0.1	7.2	1.2	0	2.0	12.5	150		
12:49	0.1	7.2	1.2	0	2.0	12.5	150		
12:50	0.1	7.2	1.2	0	2.0	12.5	150		
12:51	0.1	7.2	1.2	0	2.0	12.5	150		
12:52	0.1	7.2	1.2	0	2.0	12.5	150		
12:53	0.1	7.2	1.2	0	2.0	12.5	150		
12:54	0.1	7.2	1.2	0	2.0	12.5	150		
12:55	0.1	7.2	1.2	0	2.0	12.5	150		
12:56	0.1	7.2	1.2	0	2.0	12.5	150		
12:57	0.1	7.2	1.2	0	2.0	12.5	150		
12:58	0.1	7.2	1.2	0	2.0	12.5	150		
12:59	0.1	7.2	1.2	0	2.0	12.5	150		
13:00	0.1	7.2	1.2	0	2.0	12.5	150		
13:01	0.1	7.2	1.2	0	2.0	12.5	150		
13:02	0.1	7.2	1.2	0	2.0	12.5	150		
13:03	0.1	7.2	1.2	0	2.0	12.5	150		
13:04	0.1	7.2	1.2	0	2.0	12.5	150		
13:05	0.1	7.2	1.2	0	2.0	12.5	150		
13:06	0.1	7.2	1.2	0	2.0	12.5	150		
13:07	0.1	7.2	1.2	0	2.0	12.5	150		
13:08	0.1	7.2	1.2	0	2.0	12.5	150		
13:09	0.1	7.2	1.2	0	2.0	12.5	150		
13:10	0.1	7.2	1.2	0	2.0	12.5	150		
13:11	0.1	7.2	1.2	0	2.0	12.5	150		
13:12	0.1	7.2	1.2	0	2.0	12.5	150		
13:13	0.1	7.2	1.2	0	2.0	12.5	150		
13:14	0.1	7.2	1.2	0	2.0	12.5	150		
13:15	0.1	7.2	1.2	0	2.0	12.5	150		
13:16	0.1	7.2	1.2	0	2.0	12.5	150		
13:17	0.1	7.2	1.2	0	2.0	12.5	150		
13:18	0.1	7.2	1.2	0	2.0	12.5	150		
13:19	0.1	7.2	1.2	0	2.0	12.5	150		
13:20	0.1	7.2	1.2	0	2.0	12.5	150		
13:21	0.1	7.2	1.2	0	2.0	12.5	150		
13:22	0.1	7.2	1.2	0	2.0	12.5	150		
13:23	0.1	7.2	1.2	0	2.0	12.5	150		
13:24	0.1	7.2	1.2	0	2.0	12.5	150		
13:25	0.1	7.2	1.2	0	2.0	12.5	150		
13:26	0.1	7.2	1.2	0	2.0	12.5	150		
13:27	0.1	7.2	1.2	0	2.0	12.5	150		
13:28	0.1	7.2	1.2	0	2.0	12.5	150		
13:29	0.1	7.2	1.2	0	2.0	12.5	150		
13:30	0.1	7.2	1.2	0	2.0	12.5	150		
13:31	0.1	7.2	1.2	0	2.0	12.5	150		
13:32	0.1	7.2	1.2	0	2.0	12.5	150		
13:33	0.1	7.2	1.2	0	2.0	12.5	150		
13:34	0.1	7.2	1.2	0	2.0	12.5	150		
13:35	0.1	7.2	1.2	0	2.0	12.5	150		
13:36	0.1	7.2	1.2	0	2.0	12.5	150		
13:37	0.1	7.2	1.2	0	2.0	12.5	150		
13:38	0.1	7.2	1.2	0	2.0	12.5	150		
13:39	0.1	7.2	1.2	0	2.0	12.5	150		
13:40	0.1	7.2	1.2	0	2.0	12.5	150		
13:41	0.1	7.2	1.2	0	2.0	12.5	150		
13:42	0.1	7.2	1.2	0	2.0	12.5	150		
13:43	0.1	7.2	1.2	0	2.0	12.5	150		
13:44	0.1	7.2	1.2	0	2.0	12.5	150		
13:45	0.1	7.2	1.2	0	2.0	12.5	150		
13:46	0.1	7.2	1.2	0	2.0	12.5	150		
13:47	0.1	7.2	1.2	0	2.0	12.5	150		
13:48	0.1	7.2	1.2	0	2.0	12.5	150		
13:49	0.1	7.2	1.2	0	2.0	12.5	150		
13:50	0.1	7.2	1.2	0	2.0	12.5	150		
13:51									



# Waterloo Sampling Data Sheet

MW - 32 - 59 (002)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY  
WEATHER: Drizzle / Sun 40°F

PROJECT NO: 41 0161619 00  
DATE: 1/18/08  
SAMPLER(S): M.B

SAMPLING INTERVAL (depth in ft below top of casing) 28.3 to 61.3  
SAMPLING PORT 59

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 33 c

TOTAL VOLUME PURGED: 355 gal

PURGE RATE: variable (gal/min) 6 PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:40	0	7.20	1024	0.0	3.05	15.12	16	75/12	24
12:50	0.25	7.20	1024	0.0	3.05	15.12	16	75/12	24
12:50	0.65	7.27	1056	0.0	3.07	15.12	17.9	75/12	24
12:50	0.95	7.32	1056	0.0	3.15	15.12	15.7		
12:52	1.35	7.25	1055	0.0	3.15	15.00	15.7		
12:54	1.70	7.26	1055	0.0	3.05	15.12	15.7		
12:55	2.05	7.27	1055	0.0	3.05	15.12	15.7		
12:55	2.4	7.37	1055	0.0	3.12	15.12	15.7		
12:55	2.75	7.36	1055	0.0	3.16	15.12	15.7		
12:57		7.20	1024						
12:57		7.20	1024						
12:57		7.20	1024						

Equipment Used	Equipment Serial Number / Identification Number
YSI / set #	3
Turbidity meter	10000000

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-32-85 (005)

CLIENT: Emery - IPEC  
SITE: Buchanan, NY  
WEATHER: Drizzle / Sun 40°F

PROJECT NO: 41.0161619.00  
DATE: 1/18/08  
SAMPLER(S): MB

SAMPLING INTERVAL (depth in ft below top of casing) 79.3 to 92.8  
SAMPLING PORT 85

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 13.5

TOTAL VOLUME PURGED: 30 gal

PURGE RATE: variable (gal min)

5

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:40	0		PURGE OFF					750	45
11:50	0		PURGE OFF						
12:00	0		PURGE OFF					750	45
12:05	0.5	7.92	0.250		7.20	12.5	100		
12:10	0.25	7.85	0.252	0.50	7.20	12.5	100		
12:15	3.00	7.80	0.252	0.50	7.20	12.5	100		
12:20	3.50	7.67	0.250	0.50	7.10	12.5	100		
12:25	4.00	7.58	0.250	0.50	7.0	12.5	100		
12:30	4.50	7.25	0.250	0.50	7.0	12.5	100		
12:35	5.25	7.23	0.250	0.50	7.0	12.5	100		
12:40	6.00	7.20	0.250	0.50	7.0	12.5	100		
12:45	6.75	7.18	0.250	0.50	7.0	12.5	100		
12:50	7.50								
12:55		PUMP OFF							
13:00		PUMP OFF							
13:05		PUMP OFF							
13:10		PUMP OFF							

Equipment Used	Equipment Serial Number/ Identification Number
YSI Reader / Set #	
Turbidity meter	

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-32-131 (005)

CLIENT: Entergy - IPEC  
SIT: Buchanan, NY  
WEATHER: Drizzle / Sun 40°F

PROJECT NO: 410161619.00  
DATE: 1/18/08  
SAMPLER(S): M.B

SAMPLING INTERVAL (depth in ft below top of casing):  
125.8 to 138.3  
SAMPLING PORT: 131

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 12.5

TOTAL VOLUME PURGED:  
2.50 gal

PURGE RATE: variable (gal/min)

4

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
07:00	0.00	6.00	1.500	20.00	0.00	15.00	193.0		
07:05	0.05	6.00	1.500	20.00	0.00	15.00	193.0		
07:10	0.10	6.00	1.500	20.00	0.00	15.00	193.0		
07:15	0.15	6.00	1.500	20.00	0.00	15.00	193.0		
07:20	0.20	6.00	1.500	20.00	0.00	15.00	193.0		
07:25	0.25	6.00	1.500	20.00	0.00	15.00	193.0		
07:30	0.30	6.00	1.500	20.00	0.00	15.00	193.0		
07:35	0.35	6.00	1.500	20.00	0.00	15.00	193.0		
07:40	0.40	6.00	1.500	20.00	0.00	15.00	193.0		
07:45	0.45	6.00	1.500	20.00	0.00	15.00	193.0		
07:50	0.50	6.00	1.500	20.00	0.00	15.00	193.0		
07:55	0.55	6.00	1.500	20.00	0.00	15.00	193.0		
08:00	0.60	6.00	1.500	20.00	0.00	15.00	193.0		
08:05	0.65	6.00	1.500	20.00	0.00	15.00	193.0		
08:10	0.70	6.00	1.500	20.00	0.00	15.00	193.0		
08:15	0.75	6.00	1.500	20.00	0.00	15.00	193.0		
08:20	0.80	6.00	1.500	20.00	0.00	15.00	193.0		
08:25	0.85	6.00	1.500	20.00	0.00	15.00	193.0		
08:30	0.90	6.00	1.500	20.00	0.00	15.00	193.0		
08:35	0.95	6.00	1.500	20.00	0.00	15.00	193.0		
08:40	1.00	6.00	1.500	20.00	0.00	15.00	193.0		
08:45	1.05	6.00	1.500	20.00	0.00	15.00	193.0		
08:50	1.10	6.00	1.500	20.00	0.00	15.00	193.0		
08:55	1.15	6.00	1.500	20.00	0.00	15.00	193.0		
09:00	1.20	6.00	1.500	20.00	0.00	15.00	193.0		
09:05	1.25	6.00	1.500	20.00	0.00	15.00	193.0		
09:10	1.30	6.00	1.500	20.00	0.00	15.00	193.0		
09:15	1.35	6.00	1.500	20.00	0.00	15.00	193.0		
09:20	1.40	6.00	1.500	20.00	0.00	15.00	193.0		
09:25	1.45	6.00	1.500	20.00	0.00	15.00	193.0		
09:30	1.50	6.00	1.500	20.00	0.00	15.00	193.0		
09:35	1.55	6.00	1.500	20.00	0.00	15.00	193.0		
09:40	1.60	6.00	1.500	20.00	0.00	15.00	193.0		
09:45	1.65	6.00	1.500	20.00	0.00	15.00	193.0		
09:50	1.70	6.00	1.500	20.00	0.00	15.00	193.0		
09:55	1.75	6.00	1.500	20.00	0.00	15.00	193.0		
10:00	1.80	6.00	1.500	20.00	0.00	15.00	193.0		
10:05	1.85	6.00	1.500	20.00	0.00	15.00	193.0		
10:10	1.90	6.00	1.500	20.00	0.00	15.00	193.0		
10:15	1.95	6.00	1.500	20.00	0.00	15.00	193.0		
10:20	2.00	6.00	1.500	20.00	0.00	15.00	193.0		
10:25	2.05	6.00	1.500	20.00	0.00	15.00	193.0		
10:30	2.10	6.00	1.500	20.00	0.00	15.00	193.0		
10:35	2.15	6.00	1.500	20.00	0.00	15.00	193.0		
10:40	2.20	6.00	1.500	20.00	0.00	15.00	193.0		
10:45	2.25	6.00	1.500	20.00	0.00	15.00	193.0		
10:50	2.30	6.00	1.500	20.00	0.00	15.00	193.0		
10:55	2.35	6.00	1.500	20.00	0.00	15.00	193.0		
11:00	2.40	6.00	1.500	20.00	0.00	15.00	193.0		
11:05	2.45	6.00	1.500	20.00	0.00	15.00	193.0		
11:10	2.50	6.00	1.500	20.00	0.00	15.00	193.0		
11:15	2.55	6.00	1.500	20.00	0.00	15.00	193.0		
11:20	2.60	6.00	1.500	20.00	0.00	15.00	193.0		
11:25	2.65	6.00	1.500	20.00	0.00	15.00	193.0		
11:30	2.70	6.00	1.500	20.00	0.00	15.00	193.0		
11:35	2.75	6.00	1.500	20.00	0.00	15.00	193.0		
11:40	2.80	6.00	1.500	20.00	0.00	15.00	193.0		
11:45	2.85	6.00	1.500	20.00	0.00	15.00	193.0		
11:50	2.90	6.00	1.500	20.00	0.00	15.00	193.0		
11:55	2.95	6.00	1.500	20.00	0.00	15.00	193.0		
12:00	3.00	6.00	1.500	20.00	0.00	15.00	193.0		

Equipment Used	Equipment Serial Number/ Identification Number
YSI	
Reader / Set #	
Turbidity meter	

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-32-149 (005)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY  
WEATHER: Drizzle Sun 40°F

PROJECT NO: 41 0161619.00  
DATE: 1/18/08  
SAMPLER(S): MB

SAMPLING INTERVAL (depth in ft below top of casing)  
147.8 to 156.8  
SAMPLING PORT 149

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 9.5

TOTAL VOLUME PURGED:  
2.15 gal

PURGE RATE: variable (gal/min)

3

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
08:10	0.25	6.71	1.01					5.14	25
08:15	0.25	6.60	1.05		3.20	12.90	173.7		
08:20	0.25	6.28	1.01		1.01	12.43	50.3		
08:25	0.25	6.32	2.00	8.85	0.70	12.25	111.2		
08:30	0.25	6.25	2.00	7.36	0.50	12.20	120.7		
08:35	0.25	6.27	2.00	4.23	0.47	12.25	122.1		
08:40	0.25	6.26	2.03	2.69	0.38	12.05	125.2		
08:45	0.25	6.26	2.11	2.37	0.41	12.19	127.5		
08:50	0.25	6.27	2.22	2.22	0.50	12.30	126.4		
08:55	0.25	6.27	2.23	2.22	0.52	12.31	127.0		
09:00		6.21	2.11						
09:05		6.21	2.00	4.23					
09:10		6.21	2.00	4.23	1.00	12.10			

Equipment Used	Equipment Serial Number/ Identification Number
YSI	3
Beckman / Set #	
Turbidity meter	2001010005

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW - 32 - 173 (002)

CLIENT: Energy - IPEC  
SITE: Buchanan, NY  
WEATHER: Drizzle / Sun 40°F

PROJECT NO: 41 0161619.00  
DATE: 1/18/08  
SAMPLER(S): M.B

SAMPLING INTERVAL (depth in ft below top of casing) 165.8 to 174.3  
SAMPLING PORT 173

GALLONS OF WATER PER WELL VOLUME:  
Sampling interval Length 8.5

TOTAL VOLUME PURGED: 50 gal

PURGE RATE: variable (gal/min)

2

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
08:00	0.22	7.20	142.6			8.24	110.0	30	20
08:15	0.22	7.20	142.6			8.24	110.0	30	20
08:30	0.55	7.20	142.6		0.27	8.25	110.0	30	20
08:45	0.70	7.20	142.6	0.14	0.28	8.25	110.0	30	20
09:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
09:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
09:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
09:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
10:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
10:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
10:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
10:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
11:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
11:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
11:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
11:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
12:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
12:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
12:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
12:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
13:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
13:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
13:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
13:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
14:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
14:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
14:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
14:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
15:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
15:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
15:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
15:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
16:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
16:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
16:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
16:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
17:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
17:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
17:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
17:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
18:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
18:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
18:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
18:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
19:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
19:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
19:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
19:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
20:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
20:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
20:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
20:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
21:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
21:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
21:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
21:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
22:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
22:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
22:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
22:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
23:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
23:15	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
23:30	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
23:45	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20
24:00	0.70	7.20	142.6	0.15	0.29	8.25	110.0	30	20

Equipment Used	Equipment Serial Number/ Identification Number
YS1 Reader / Set #	0
Turbidity meter	2000000000

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW - 32 - 190 (005)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY  
WEATHER: Drizzle / Sun 40°F

PROJECT NO: 41 0161619.00  
DATE: 1/18/08  
SAMPLER(S): MB

SAMPLING INTERVAL (depth in ft below top of casing):  
180.3 to 193.4  
SAMPLING PORT: 190

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 13.6

TOTAL VOLUME PURGED: \_\_\_\_\_ gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
0910	0	7.00	117						
0915	0.05	7.07	117			5.07	211.7	2.14	50
0920	0.10	7.13	115		3.83	5.07	211.7	2.14	50
0925	0.15	7.18	116.4	0.08	3.81	5.07	211.7	2.14	50
0930	0.20	7.24	108	0.08	3.82	5.07	211.7	2.14	50
0935	0.25	7.29	106	0.08	3.82	5.07	211.7	2.14	50
0940	0.30	7.35	108	0.08	3.81	5.07	211.7	2.14	50
0945	0.35	7.41	108	0.08	3.81	5.07	211.7	2.14	50
0950	0.40	7.47	108	0.08	3.81	5.07	211.7	2.14	50
0955	0.45	7.53	108	0.08	3.81	5.07	211.7	2.14	50
1000	0.50	7.59	108	0.08	3.81	5.07	211.7	2.14	50
1005	0.55	7.65	108	0.08	3.81	5.07	211.7	2.14	50
1010	0.60	7.71	108	0.08	3.81	5.07	211.7	2.14	50
1015	0.65	7.77	108	0.08	3.81	5.07	211.7	2.14	50
1020	0.70	7.83	108	0.08	3.81	5.07	211.7	2.14	50
1025	0.75	7.89	108	0.08	3.81	5.07	211.7	2.14	50
1030	0.80	7.95	108	0.08	3.81	5.07	211.7	2.14	50
1035	0.85	8.01	108	0.08	3.81	5.07	211.7	2.14	50
1040	0.90	8.07	108	0.08	3.81	5.07	211.7	2.14	50
1045	0.95	8.13	108	0.08	3.81	5.07	211.7	2.14	50
1050	1.00	8.19	108	0.08	3.81	5.07	211.7	2.14	50
1055	1.05	8.25	108	0.08	3.81	5.07	211.7	2.14	50
1100	1.10	8.31	108	0.08	3.81	5.07	211.7	2.14	50
1105	1.15	8.37	108	0.08	3.81	5.07	211.7	2.14	50
1110	1.20	8.43	108	0.08	3.81	5.07	211.7	2.14	50
1115	1.25	8.49	108	0.08	3.81	5.07	211.7	2.14	50
1120	1.30	8.55	108	0.08	3.81	5.07	211.7	2.14	50
1125	1.35	8.61	108	0.08	3.81	5.07	211.7	2.14	50
1130	1.40	8.67	108	0.08	3.81	5.07	211.7	2.14	50
1135	1.45	8.73	108	0.08	3.81	5.07	211.7	2.14	50
1140	1.50	8.79	108	0.08	3.81	5.07	211.7	2.14	50
1145	1.55	8.85	108	0.08	3.81	5.07	211.7	2.14	50
1150	1.60	8.91	108	0.08	3.81	5.07	211.7	2.14	50
1155	1.65	8.97	108	0.08	3.81	5.07	211.7	2.14	50
1200	1.70	9.03	108	0.08	3.81	5.07	211.7	2.14	50
1205	1.75	9.09	108	0.08	3.81	5.07	211.7	2.14	50
1210	1.80	9.15	108	0.08	3.81	5.07	211.7	2.14	50
1215	1.85	9.21	108	0.08	3.81	5.07	211.7	2.14	50
1220	1.90	9.27	108	0.08	3.81	5.07	211.7	2.14	50
1225	1.95	9.33	108	0.08	3.81	5.07	211.7	2.14	50
1230	2.00	9.39	108	0.08	3.81	5.07	211.7	2.14	50
1235	2.05	9.45	108	0.08	3.81	5.07	211.7	2.14	50
1240	2.10	9.51	108	0.08	3.81	5.07	211.7	2.14	50
1245	2.15	9.57	108	0.08	3.81	5.07	211.7	2.14	50
1250	2.20	9.63	108	0.08	3.81	5.07	211.7	2.14	50
1255	2.25	9.69	108	0.08	3.81	5.07	211.7	2.14	50
1300	2.30	9.75	108	0.08	3.81	5.07	211.7	2.14	50
1305	2.35	9.81	108	0.08	3.81	5.07	211.7	2.14	50
1310	2.40	9.87	108	0.08	3.81	5.07	211.7	2.14	50
1315	2.45	9.93	108	0.08	3.81	5.07	211.7	2.14	50
1320	2.50	9.99	108	0.08	3.81	5.07	211.7	2.14	50
1325	2.55	10.05	108	0.08	3.81	5.07	211.7	2.14	50
1330	2.60	10.11	108	0.08	3.81	5.07	211.7	2.14	50
1335	2.65	10.17	108	0.08	3.81	5.07	211.7	2.14	50
1340	2.70	10.23	108	0.08	3.81	5.07	211.7	2.14	50
1345	2.75	10.29	108	0.08	3.81	5.07	211.7	2.14	50
1350	2.80	10.35	108	0.08	3.81	5.07	211.7	2.14	50
1355	2.85	10.41	108	0.08	3.81	5.07	211.7	2.14	50
1400	2.90	10.47	108	0.08	3.81	5.07	211.7	2.14	50
1405	2.95	10.53	108	0.08	3.81	5.07	211.7	2.14	50
1410	3.00	10.59	108	0.08	3.81	5.07	211.7	2.14	50
1415	3.05	10.65	108	0.08	3.81	5.07	211.7	2.14	50
1420	3.10	10.71	108	0.08	3.81	5.07	211.7	2.14	50
1425	3.15	10.77	108	0.08	3.81	5.07	211.7	2.14	50
1430	3.20	10.83	108	0.08	3.81	5.07	211.7	2.14	50
1435	3.25	10.89	108	0.08	3.81	5.07	211.7	2.14	50
1440	3.30	10.95	108	0.08	3.81	5.07	211.7	2.14	50
1445	3.35	11.01	108	0.08	3.81	5.07	211.7	2.14	50
1450	3.40	11.07	108	0.08	3.81	5.07	211.7	2.14	50
1455	3.45	11.13	108	0.08	3.81	5.07	211.7	2.14	50
1500	3.50	11.19	108	0.08	3.81	5.07	211.7	2.14	50
1505	3.55	11.25	108	0.08	3.81	5.07	211.7	2.14	50
1510	3.60	11.31	108	0.08	3.81	5.07	211.7	2.14	50
1515	3.65	11.37	108	0.08	3.81	5.07	211.7	2.14	50
1520	3.70	11.43	108	0.08	3.81	5.07	211.7	2.14	50
1525	3.75	11.49	108	0.08	3.81	5.07	211.7	2.14	50
1530	3.80	11.55	108	0.08	3.81	5.07	211.7	2.14	50
1535	3.85	11.61	108	0.08	3.81	5.07	211.7	2.14	50
1540	3.90	11.67	108	0.08	3.81	5.07	211.7	2.14	50
1545	3.95	11.73	108	0.08	3.81	5.07	211.7	2.14	50
1550	4.00	11.79	108	0.08	3.81	5.07	211.7	2.14	50
1555	4.05	11.85	108	0.08	3.81	5.07	211.7	2.14	50
1600	4.10	11.91	108	0.08	3.81	5.07	211.7	2.14	50
1605	4.15	11.97	108	0.08	3.81	5.07	211.7	2.14	50
1610	4.20	12.03	108	0.08	3.81	5.07	211.7	2.14	50
1615	4.25	12.09	108	0.08	3.81	5.07	211.7	2.14	50
1620	4.30	12.15	108	0.08	3.81	5.07	211.7	2.14	50
1625	4.35	12.21	108	0.08	3.81	5.07	211.7	2.14	50
1630	4.40	12.27	108	0.08	3.81	5.07	211.7	2.14	50
1635	4.45	12.33	108	0.08	3.81	5.07	211.7	2.14	50
1640	4.50	12.39	108	0.08	3.81	5.07	211.7	2.14	50
1645	4.55	12.45	108	0.08	3.81	5.07	211.7	2.14	50
1650	4.60	12.51	108	0.08	3.81	5.07	211.7	2.14	50
1655	4.65	12.57	108	0.08	3.81	5.07	211.7	2.14	50
1700	4.70	12.63	108	0.08	3.81	5.07	211.7	2.14	50
1705	4.75	12.69	108	0.08	3.81	5.07	211.7	2.14	50
1710	4.80	12.75	108	0.08	3.81	5.07	211.7	2.14	50
1715	4.85	12.81	108	0.08	3.81	5.07	211.7	2.14	50
1720	4.90	12.87	108	0.08	3.81	5.07	211.7	2.14	50
1725	4.95	12.93	108	0.08	3.81	5.07	211.7	2.14	50
1730	5.00	12.99	108	0.08	3.81	5.07	211.7	2.14	50
1735	5.05	13.05	108	0.08	3.81	5.07	211.7	2.14	50
1740	5.10	13.11	108	0.08	3.81	5.07	211.7	2.14	50
1745	5.15	13.17	108	0.08	3.81	5.07	211.7	2.14	50
1750	5.20	13.23	108	0.08	3.81	5.07	211.7	2.14	50
1755	5.25	13.29	108	0.08	3.81	5.07	211.7	2.14	50
1800	5.30	13.35	108	0.08	3.81	5.07	211.7	2.14	50
1805	5.35	13.41	108	0.08	3.81	5.07	211.7	2.14	50
1810	5.40	13.47	108	0.08	3.81	5.07	211.7	2.14	50
1815	5.45	13.53	108	0.08	3.81	5.07	211.7	2.14	50
1820	5.50	13.59	108	0.08	3.81	5.07	211.7	2.14	50
1825	5.55	13.65	108	0.08	3.81	5.07	211.7	2.14	50
1830	5.60	13.71	108	0.08	3.81	5.07	211.7	2.14	50
1835	5.65	13.77	108	0.08	3.81	5.07	211.7	2.14	50
1840	5.70	13.83	108	0.08	3.81	5.07	211.7	2.14	50
1845	5.75	13.89	108	0.08	3.81	5.07	211.7	2.14	50
1850	5.80	13.95	108	0.08	3.81	5.07	211.7	2.14	50
1855	5.85	14.01	108	0.08	3.81	5.07	211.7	2.14	50
1900	5.90	14.07	108	0.08	3.81	5.07	211.7	2.14	50
1905	5.95	14.13	108	0.08	3.81	5.07	211.7	2.14	50
1910	6.00	14.19	108	0.08	3.81	5.07	211.7	2.14	50
1915	6.05	14.25	108	0.08	3.81	5.07	211.7	2.14	50
1920	6.10	14.31	108	0.08	3.81	5.07	211.7	2.14	50
1925	6.15	14.37	108	0.08	3.81	5.07	211.7	2.14	50
1930	6.20	14.43	108	0.08	3.81	5.07	211.7	2.14	50
1935	6.25								



# Low-Flow Sampling Data Sheet

MW 36-24(010)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 1616-19-00  
DATE: 4/23/08  
SAMPLER(S): A.A. / M.B.

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1141	19.184	7.91	2.572	4.32	0.95	19.71	-141.2			
1142	Pump down									
1146	19.170	7.91	2.572	1.36	0.95	19.71	-141.2		#	0.3
1151	19.180	7.73	2.630	0.93	0.95	19.72	-152.8			0.35
1156	19.181	7.88	2.686	0.88	0.70	20.38	-148.2			0.4
1201	19.181	7.90	2.712	1.01	0.60	21.09	-120.7			0.45
1208	19.183	8.12	2.722	0.94	0.65	21.50	-124.2			0.55
1213	19.183	8.08	2.768	1.25	0.63	20.58	-150.9			0.65
1218	19.183	8.11	2.713	0.93	0.37	20.12	-150.0			0.75
1225	19.187	8.11	2.733	0.91	0.36	20.27	-175.7			0.85
1235	19.185	8.12	2.773	0.87	0.34	20.02	-180.4			0.95
1245	19.185	8.13	2.713	1.06	0.32	19.31	-182.4			1.05
1250	19.078	8.12	2.685	1.65	0.29	18.55	-173.2			1.35
1255	19.079	8.12	2.658	1.42	0.32	19.27	-174.5			1.50
1300	19.089	8.12	2.667	1.70	0.37	19.67	-176.4			1.65
1315	19.090	8.13	2.692	0.97	0.44	19.92	-170.0			1.80
1310	19.208	8.13	2.716	0.71	0.35	20.14	-166.3			2
1315	19.197	8.13	2.760	1.24	0.44	20.38	-152.8			2.25
1320	19.206	8.12	2.772	1.02	0.34	20.10	-158.8			2.35
1325	19.206	8.11	2.972	1.13	0.31	20.47	-122.6			2.45
1330	19.206	8.11	3.011	1.25	0.41	21.28	-102.8			2.50
1335	19.203	8.12	2.949	1.23	0.37	21.78	-101.6			2.55
1340	19.203	8.13	2.876	1.35	0.31	22.23	-114.5			2.60
1345	19.203	8.13	2.864	1.41	0.29	22.33	-122.7			2.65
1350	19.209	8.13	2.852	1.47	0.30	22.32	-133.4			2.70
1352	Stop Sample									
1358	Final Sample									

Equipment Used	Equipment Serial Number/ Identification Number
YSI set	2
Turbidity Meter	2106701254

**NOTES AND OBSERVATIONS:**  
All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MW 30-52 (009)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 161609.00  
DATE: 11/23/08  
SAMPLER(S): M8/A7

**WATER QUALITY:** *depth*

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (e.l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1140	46.195									DTW: 51.3'
1142										Pump on
1146	42.445	7.02	1.789	27.65	1.94	22.09	99.9			0.25
1152	44.337	7.14	1.785	18.89	1.19	21.82	128.9			0.3
1157	44.394	7.17	1.723	20.05	0.98	22.59	102.9			0.33
1202	44.583	7.20	1.765	20.27	1.02	23.51	116.6			0.35
1209	44.456	7.21	1.760	19.95	0.92	24.82	104.4			0.4
1214	44.456	7.22	1.696	16.23	0.85	25.30	108.1			0.43
1219	44.502	7.21	1.692	16.75	0.69	25.77	114.6			0.45
1228	44.874	7.23	1.685		0.63	25.63	145.8			0.48
1235	44.819	7.30	1.664	17.44	0.94	18.59	164.2			0.50
1246	44.659	7.27	1.553	11.20	1.18	19.44	198.3			0.55
1249										Pump turned off
										changed Resistor for Pump Ammeter. See MW 30-52 (009) page 2
										Go to next page

Equipment Used	Equipment Serial Number/ Identification Number
YSI set	3
Turbidity meter	203701254

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.



# Low-Flow Sampling Data Sheet

MW-37-222(010)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 11-1019-03  
 DATE: 11-18-08  
 SAMPLER(S): MGA.A

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
8:56	11.853		0.2	98						Ant A (500 ft)
9:00	11.846	7.14	3.149	2.39	1.76	22.38	-13.3	1/4		0.25
9:03	11.853	7.22	3.214	2.28	1.66	22.47	-24.6			0.35
9:08	11.861	7.31	3.218	2.51	0.59	22.72	-139.6			0.45
9:13	11.861	7.33	3.241	2.38	0.46	22.53	-71.2			0.55
9:18	11.861	7.30	3.252	2.13	0.37	21.74	-226.1			0.65
9:23	11.861	7.32	3.222	2.17	0.34	21.41	-49.2			0.75
9:28	11.862	7.29	3.281	2.11	0.40	21.35	-200.1			0.85
9:43	11.872	7.30	3.308	2.63	0.37	21.67	-186.0			0.95
9:48	11.882	7.29	3.318	2.23	0.34	22.01	-205.6			1.05
9:53	11.882	7.24	3.329	2.65	0.30	22.27	-219.8			1.15
9:58	11.892	7.29	3.344	2.10	0.29	22.40	-216.4			1.25
10:03	11.902	7.28	3.359	2.09	0.30	22.46	-217.2			1.35
10:08	11.912	7.27	3.370	2.27	0.29	22.74	-230.2			1.45
10:13	11.913	7.27	3.350	1.29	0.31	22.73	-231.3			1.55
10:19	5/2	7.30								
10:44	FPA Sample			1.1 gal	IPEC					
				1.5 gal	ml Reagent					

Equipment Used	Equipment Serial Number/ Identification Number
YSI 80+	3
Flowmeter	202701254

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MLW-37 32 (010)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 01-01-01-01-006  
DATE: 1/24/08  
SAMPLER(S): V B 11.A

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
8:59	21.425	7.985	2.120							Start record
9:04	21.310	7.27	2.058	2.49	0.98	22.11	74.1			2.3
9:04	21.322	7.27	2.054	2.44	0.92	22.28	54.6			2.45
9:14	21.749	7.37	2.023	4.11	1.77	22.36	70.4			2.60
9:24	21.751	7.37	2.076	3.25	2.56	21.84	-77.4			2.60
9:27	21.771	7.35	2.045	2.71	1.67	21.41	-144.4			2.0
9:37	21.772	7.37	2.024	1.75	1.51	21.59	-15.9			2.15
9:37	21.782	7.37	2.020	1.69	1.72	21.21	-79.3			1.30
9:41	21.763	7.41	2.060	1.48	0.66	21.67	-110.1			1.45
9:49	21.776	7.41	2.059	3.94	0.62	21.93	-23.3			1.60
9:54	21.780	7.42	2.060	3.99	0.60	22.11	-1.6			1.75
9:59	21.824	7.43	2.059	1.02	0.59	22.22	11.1			1.70
10:04	21.808	7.43	2.060	0.71	0.58	22.31	21.4			2.05
10:09	21.804	7.44	2.060	0.57	0.56	22.35	31.3			2.20
10:14	21.812	7.44	2.061	0.55	0.52	22.33	41.3			2.35
10:19	21.830	7.44	2.062	1.51	0.53	22.36	51.2			2.50
10:24	21.802	7.44	2.163	2.49	0.52	22.37	54.9			2.65
10:29	21.803	7.44	2.163	1.54	0.51	22.41	59.0			2.80
10:34	21.816	7.44	2.164	0.53	0.51	22.42	63.0			3.0
10:38	21.802	7.44	2.064		0.50	22.42	67.7			
10:43	Stop sample									
10:53	1.1 gal IPEC									

Equipment Used	Equipment Serial Number/ Identification Number
Y11 808	
Resistivity meter	2 212711-01

**NOTES AND OBSERVATIONS:**  
All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MW-37-40 (010)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 4:0161619.00  
DATE: 2/1/08  
SAMPLER(S): Miguel Britos

Rain 30°F

WATER QUALITY: 9.29 30.239 level surface

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Purged Notes (gal)
1400	29.734		PUMP	0.4						
1415	29.724	7.45	1.794	-	2.35	17.78	-188.4	0.4		0
1423	29.581	7.44	3.527	-	2.95	17.64	-205.7			0
1438	29.42	7.43	3.556	16.06	2.02	17.37	-215.1			0
1454	29.384	7.42	3.540	14.22	3.03	17.15	-213.1			0
1466	29.268	7.41	3.651	12.07	1.0	17.25	-205.4			0.01
1447	29.799	7.46	3.668	16.21	0.95	17.39	-216.2			0.1
1456	29.680	7.43	3.670	19.36	0.92	17.28	-220.8			0.1
1503	29.760	7.42	3.672	20.59	0.89	17.21	-222.9			0.1
1510	29.708	7.41	3.675	28.36	0.88	17.18	-225.8			0.28
1520	29.61	7.40	3.682	24.29	0.86	17.36	-234.8			0.35
1530	29.52	7.40	3.685	30.40	0.88	17.5	-240.6			0.40
1533		START SAMPLE								0.45
1720	29.53	SAMPLE COMPLETE								0.55
										Total vol purged 0.55

Equipment Used	Equipment Serial Number/ Identification Number
YSI Reader	2
Turbidity meter	200704243

NOTES AND OBSERVATIONS:  
All depth to water measurements are taken from top of casing.



**Water100 Sampling  
Data Sheet**

MW-39-67 (003)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY  
 WEATHER: Cold 25°F

PROJECT NO:  
 DATE: 1/17/08  
 SAMPLER(S): M B

SAMPLING INTERVAL (depth in ft below top of casing)  
65.0 to 70.5  
 SAMPLING PORT: 67

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 5.5

TOTAL VOLUME PURGED: \_\_\_\_\_ gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
13:25	0							6/6	36
13:40	0.25	7.48	2309		5.09	11.72	130.1	6/6	36
13:47	0.75	7.21	2337	0.0	5.23	12.71	126.5	6/9	34
13:52	0.90	7.18	2344	0.0	5.30	12.63	123.0		
13:55	0.93	7.13	2344	0.0	5.49	12.00	127.3		
13:56		PUMP OFF							
14:07		START SAMPLE							
14:35		SAMPLE COMPLETED				11.20	131.0		

Equipment Used	Equipment Serial Number / Identification Number
VST	
Pendulum Jet #	
Turbidity meter	200704273

NOTES AND OBSERVATIONS:



# waterloo Sampling Data Sheet

MW-39-37 (003)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY  
 WEATHER: Cold 25°F

PROJECT NO: 41-16149-02  
 DATE: 1/17/08  
 SAMPLER(S): M B

SAMPLING INTERVAL (depth in ft below top of casing) 26.5 to 85.0  
 SAMPLING PORT 2.5

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 5.5

TOTAL VOLUME PURGED: 2.0 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
12:01	0.00	7.04	2.20	0.00	2.00	12.00	180	1.0	4.5
12:04	0.25	7.21	2.20	0.00	2.00	12.00	180	1.0	
12:07	0.50	7.12	2.20	0.00	2.00	12.00	180	1.0	
12:10	0.75	7.01	2.20	0.00	2.00	12.00	180	1.0	
12:13	1.00	7.04	2.20	0.00	2.00	12.00	180	1.0	
12:16	1.25	7.04	2.20	0.00	2.00	12.00	180	1.0	
12:19	1.50	7.04	2.20	0.00	2.00	12.00	180	1.0	
12:22	1.75	7.03	2.20	0.00	2.00	12.00	180	1.0	
12:25	2.00	7.04	2.20	0.00	2.00	12.00	180	1.0	
12:50		PUMP OFF							
13:01		START SAMPLE							
13:25		SAMPLE COMPLETE							

Equipment Used	Equipment Serial Number / Identification Number
YSI	
Penetration / set #	
Turbidity meter	

NOTES AND OBSERVATIONS:

# water100 Sampling Data Sheet

MW-39-102 (003)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY  
 WEATHER: Cold 25°F

PROJECT NO: 41011819-00  
 DATE: 1/17/08  
 SAMPLER(S): M B

SAMPLING INTERVAL (depth in ft below top of casing)  
43.0 to 103.0  
 SAMPLING PORT: 02

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 10.0

TOTAL VOLUME PLURGED:  
1.95 gal

PURGE RATE: variable (gal/min)      PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
12:12	0.00	7.00	2.30	0.0	0.00	12.00	120		4.7
12:20	0.45	7.00	2.30	0.0	0.00	12.17	120		
12:25	0.75	7.00	2.30	0.0	0.00	12.18	120		
12:30	1.00	7.00	2.30	0.0	0.00	12.42	120		
12:38	1.30	7.00	2.30	0.0	0.00	12.42	120		
12:47	1.60	7.00	2.30	0.0	0.00	12.42	120		
12:51	1.75	7.00	2.30	0.0	0.00	12.42	120		
12:53		PUMP OFF							
12:54		START SAMPLE							
13:32		SAMPLE COMPLETE							

Equipment Used	Equipment Serial Number / Identification Number
YSI	
Reader / set #	
Turbidity meter	

NOTES AND OBSERVATIONS:



# Water100 Sampling Data Sheet

MW-39-188 (003)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY  
 WEATHER: Cold 25°F

PROJECT NO: 4101619 W  
 DATE: 1/17/08  
 SAMPLER: M B

SAMPLING INTERVAL (depth in ft below top of casing)  
167.5 to 180.0

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 16.5

SAMPLING PORT  
183

TOTAL VOLUME PURGED:  
2.5 gal

PURGE RATE: variable gal/min

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
1045	0.0	PUMP ON							
1135	0.4	7.23	1430	0.0	1.32	4.75	200.4	7.0	
1140	0.45	7.16	1432	0.0	1.32	5.14	200.4	7.5	
1145	0.5	7.16	1432	0.0	1.32	5.14	200.4	7.5	
1150	0.6	7.17	1432	0.0	1.32	5.14	200.4	7.5	
1151	0.75	7.14	1420	0.0	1.46	4.99	218.0		
1154	0.95	7.13	1427	0.0	1.47	4.77	218.0		
1158	1.0	7.14	1431	0.0	1.46	4.16	218.0		
1159		PUMP OFF							
1159		STOPPED SAMPLING							
1155		Sample from 183"				gal 1 PLC			

Equipment Used	Equipment Serial Number/Identification Number
YSI	
Sampler	set #
Turbidity meter	

NOTES AND OBSERVATIONS:





**GZA GeoEnvironmental of New York  
Waterloo Sampling  
Data Sheet**

WELL ID: MW-      -     

MW-40-41-004

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY  
WEATHER: Sunny 80°

PROJECT NO:  
DATE:  
SAMPLER(S):

41.00178-0030 41.00178-0030

SAMPLING INTERVAL (depth in ft below top of casing)

GALLONS OF WATER PER WELL VOLUME:

SAMPLING PORT

Sampling Interval Length

TOTAL VOLUME PURGED:

PURGE RATE: variable (gal/min)

PURGE METHOD:

Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH(SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
1:10	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:15	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:20	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:25	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:30	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:35	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:40	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:45	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:50	0.0	7.2	250	0.1	1.0	15.0	150	10	10
1:55	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:00	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:05	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:10	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:15	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:20	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:25	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:30	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:35	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:40	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:45	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:50	0.0	7.2	250	0.1	1.0	15.0	150	10	10
2:55	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:00	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:05	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:10	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:15	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:20	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:25	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:30	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:35	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:40	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:45	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:50	0.0	7.2	250	0.1	1.0	15.0	150	10	10
3:55	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:00	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:05	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:10	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:15	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:20	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:25	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:30	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:35	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:40	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:45	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:50	0.0	7.2	250	0.1	1.0	15.0	150	10	10
4:55	0.0	7.2	250	0.1	1.0	15.0	150	10	10
5:00	0.0	7.2	250	0.1	1.0	15.0	150	10	10

Equipment Used	Equipment Serial Number/ Identification Number

NOTES AND OBSERVATIONS:

**GZA GeoEnvironmental of New York  
Waterloo Sampling  
Data Sheet**

WELL ID: MW- \_\_\_\_\_

MW-40-81 (204)

CLIENT: Entergy - IPEC  
SITL: Buchanan, NY  
WEATHER: Partly Cloudy

PROJECT NO: 108  
DATE: 10/12/10  
SAMPLER(S): M6

SAMPLING INTERVAL (depth in ft below top of casing) 24.7 to 24.2

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 9.5

SAMPLING PORT 01

TOTAL VOLUME PURGED: \_\_\_\_\_ gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
10:00	0.0	7.5	250	0.1	8.5	13.5	250	10	100
10:05	0.5	7.5	250	0.1	8.5	13.5	250	10	100
10:10	1.0	7.5	250	0.1	8.5	13.5	250	10	100
10:15	1.5	7.5	250	0.1	8.5	13.5	250	10	100
10:20	2.0	7.5	250	0.1	8.5	13.5	250	10	100
10:25	2.5	7.5	250	0.1	8.5	13.5	250	10	100
10:30	3.0	7.5	250	0.1	8.5	13.5	250	10	100
10:35	3.5	7.5	250	0.1	8.5	13.5	250	10	100
10:40	4.0	7.5	250	0.1	8.5	13.5	250	10	100
10:45	4.5	7.5	250	0.1	8.5	13.5	250	10	100
10:50	5.0	7.5	250	0.1	8.5	13.5	250	10	100
10:55	5.5	7.5	250	0.1	8.5	13.5	250	10	100
11:00	6.0	7.5	250	0.1	8.5	13.5	250	10	100
11:05	6.5	7.5	250	0.1	8.5	13.5	250	10	100
11:10	7.0	7.5	250	0.1	8.5	13.5	250	10	100
11:15	7.5	7.5	250	0.1	8.5	13.5	250	10	100
11:20	8.0	7.5	250	0.1	8.5	13.5	250	10	100
11:25	8.5	7.5	250	0.1	8.5	13.5	250	10	100
11:30	9.0	7.5	250	0.1	8.5	13.5	250	10	100
11:35	9.5	7.5	250	0.1	8.5	13.5	250	10	100
11:40	10.0	7.5	250	0.1	8.5	13.5	250	10	100
11:45	10.5	7.5	250	0.1	8.5	13.5	250	10	100
11:50	11.0	7.5	250	0.1	8.5	13.5	250	10	100
11:55	11.5	7.5	250	0.1	8.5	13.5	250	10	100
12:00	12.0	7.5	250	0.1	8.5	13.5	250	10	100
12:05	12.5	7.5	250	0.1	8.5	13.5	250	10	100
12:10	13.0	7.5	250	0.1	8.5	13.5	250	10	100
12:15	13.5	7.5	250	0.1	8.5	13.5	250	10	100
12:20	14.0	7.5	250	0.1	8.5	13.5	250	10	100
12:25	14.5	7.5	250	0.1	8.5	13.5	250	10	100
12:30	15.0	7.5	250	0.1	8.5	13.5	250	10	100
12:35	15.5	7.5	250	0.1	8.5	13.5	250	10	100
12:40	16.0	7.5	250	0.1	8.5	13.5	250	10	100
12:45	16.5	7.5	250	0.1	8.5	13.5	250	10	100
12:50	17.0	7.5	250	0.1	8.5	13.5	250	10	100
12:55	17.5	7.5	250	0.1	8.5	13.5	250	10	100
13:00	18.0	7.5	250	0.1	8.5	13.5	250	10	100
13:05	18.5	7.5	250	0.1	8.5	13.5	250	10	100
13:10	19.0	7.5	250	0.1	8.5	13.5	250	10	100
13:15	19.5	7.5	250	0.1	8.5	13.5	250	10	100
13:20	20.0	7.5	250	0.1	8.5	13.5	250	10	100
13:25	20.5	7.5	250	0.1	8.5	13.5	250	10	100
13:30	21.0	7.5	250	0.1	8.5	13.5	250	10	100
13:35	21.5	7.5	250	0.1	8.5	13.5	250	10	100
13:40	22.0	7.5	250	0.1	8.5	13.5	250	10	100
13:45	22.5	7.5	250	0.1	8.5	13.5	250	10	100
13:50	23.0	7.5	250	0.1	8.5	13.5	250	10	100
13:55	23.5	7.5	250	0.1	8.5	13.5	250	10	100
14:00	24.0	7.5	250	0.1	8.5	13.5	250	10	100

Equipment Used	Equipment Serial Number/ Identification Number
Double Valve Pump	108

NOTES AND OBSERVATIONS:



Waterloo Sampling

Data Sheet

MW-40-100 (004)  
 41-0017889.00 4 01/16/19.00  
 1.00  
 0.6

CLIENT: Entergy - IPEC  
 SITE: Bachanan, NY  
 WEATHER: 6/16/19

PROJECT NO:  
 DATE:  
 SAMPLER(S):

SAMPLING INTERVAL (depth in ft below top of casing)

SAMPLING PORT

TOTAL VOLUME PURGED:

PURGE RATE: variable (gal/min)

GALLONS OF WATER PER WELL VOLUME:

Sampling Interval Length

PURGE METHOD: Double Valve Pump

WATER QUALITY:

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
6:35	20	7.10	2.13						
6:37	20	6.87	2.13						
6:39	20	6.87	2.13						
6:41	20	7.10	2.13						
6:43	20	7.10	2.13						
6:45	20	7.10	2.13						
6:47	20	7.10	2.13						
6:49	20	7.10	2.13						
6:51	20	7.10	2.13						
6:53	20	7.10	2.13						
6:55	20	7.10	2.13						
6:57	20	7.10	2.13						
6:59	20	7.10	2.13						
7:01	20	7.10	2.13						
7:03	20	7.10	2.13						
7:05	20	7.10	2.13						
7:07	20	7.10	2.13						
7:09	20	7.10	2.13						
7:11	20	7.10	2.13						
7:13	20	7.10	2.13						
7:15	20	7.10	2.13						
7:17	20	7.10	2.13						
7:19	20	7.10	2.13						
7:21	20	7.10	2.13						
7:23	20	7.10	2.13						
7:25	20	7.10	2.13						
7:27	20	7.10	2.13						
7:29	20	7.10	2.13						
7:31	20	7.10	2.13						
7:33	20	7.10	2.13						
7:35	20	7.10	2.13						
7:37	20	7.10	2.13						
7:39	20	7.10	2.13						
7:41	20	7.10	2.13						
7:43	20	7.10	2.13						
7:45	20	7.10	2.13						
7:47	20	7.10	2.13						
7:49	20	7.10	2.13						
7:51	20	7.10	2.13						
7:53	20	7.10	2.13						
7:55	20	7.10	2.13						
7:57	20	7.10	2.13						
7:59	20	7.10	2.13						
8:01	20	7.10	2.13						
8:03	20	7.10	2.13						
8:05	20	7.10	2.13						
8:07	20	7.10	2.13						
8:09	20	7.10	2.13						
8:11	20	7.10	2.13						
8:13	20	7.10	2.13						
8:15	20	7.10	2.13						
8:17	20	7.10	2.13						
8:19	20	7.10	2.13						
8:21	20	7.10	2.13						
8:23	20	7.10	2.13						
8:25	20	7.10	2.13						
8:27	20	7.10	2.13						
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8:49	20	7.10	2.13						
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8:53	20	7.10	2.13						
8:55	20	7.10	2.13						
8:57	20	7.10	2.13						
8:59	20	7.10	2.13						
9:01	20	7.10	2.13						
9:03	20	7.10	2.13						
9:05	20	7.10	2.13						
9:07	20	7.10	2.13						
9:09	20	7.10	2.13						
9:11	20	7.10	2.13						
9:13	20	7.10	2.13						
9:15	20	7.10	2.13						
9:17	20	7.10	2.13						
9:19	20	7.10	2.13						
9:21	20	7.10	2.13						
9:23	20	7.10	2.13						
9:25	20	7.10	2.13						
9:27	20	7.10	2.13						
9:29	20	7.10	2.13						
9:31	20	7.10	2.13						
9:33	20	7.10	2.13						
9:35	20	7.10	2.13						
9:37	20	7.10	2.13						
9:39	20	7.10	2.13						
9:41	20	7.10	2.13						
9:43	20	7.10	2.13						
9:45	20	7.10	2.13						
9:47	20	7.10	2.13						
9:49	20	7.10	2.13						
9:51	20	7.10	2.13						
9:53	20	7.10	2.13						
9:55	20	7.10	2.13						
9:57	20	7.10	2.13						
9:59	20	7.10	2.13						
10:01	20	7.10	2.13						
10:03	20	7.10	2.13						
10:05	20	7.10	2.13						
10:07	20	7.10	2.13						
10:09	20	7.10	2.13						
10:11	20	7.10	2.13						
10:13	20	7.10	2.13						
10:15	20	7.10	2.13						
10:17	20	7.10	2.13						
10:19	20	7.10	2.13						
10:21	20	7.10	2.13						
10:23	20	7.10	2.13						
10:25	20	7.10	2.13						
10:27	20	7.10	2.13						
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10:31	20	7.10	2.13						
10:33	20	7.10	2.13						
10:35	20	7.10	2.13						
10:37	20	7.10	2.13						
10:39	20	7.10	2.13						
10:41	20	7.10	2.13						
10:43	20	7.10	2.13						
10:45	20	7.10	2.13						
10:47	20	7.10	2.13						
10:49	20	7.10	2.13						
10:51	20	7.10	2.13						
10:53	20	7.10	2.13						
10:55	20	7.10	2.13						
10:57	20	7.10	2.13						
10:59	20	7.10	2.13						
11:01	20	7.10	2.13						
11:03	20	7.10	2.13						
11:05	20	7.10	2.13						
11:07	20	7.10	2.13						
11:09	20	7.10	2.13						
11:11	20	7.10	2.13						
11:13	20	7.10	2.13						
11:15	20	7.10	2.13						
11:17	20	7.10	2.13						
11:19	20	7.10	2.13						
11:21	20	7.10	2.13						
11:23	20	7.10	2.13						
11:25	20	7.10	2.13						
11:27	20	7.10	2.13						
11:29	20	7.10	2.13						
11:31	20	7.10	2.13						
11:33	20	7.10	2.13						
11:35	20	7.10	2.13						
11:37	20	7.10	2.13						
11:39	20	7.10	2.13						
11:41	20	7.10	2.13						
11:43	20	7.10	2.13						
11:45	20	7.10	2.13						
11:47	20	7.10	2.13						
11:49	20	7.10	2.13						
11:51	20	7.10	2.13						
11:53	20	7.10	2.13						
11:55	20	7.10	2.13						
11:57	20	7.10	2.13						
11:59	20	7.10	2.13						

Equipment Used	Equipment Serial Number/ Identification Number

NOTES AND OBSERVATIONS:

**GZA GeoEnvironmental of New York  
Waterloo Sampling  
Data Sheet**

WELL ID: MW-\_\_\_ - \_\_\_

100-100-107 (204)

CLIENT: Energy - IPEC  
SITE: Buchanan, NY  
WEATHER: 100

PROJECT NO: 100-100-107  
DATE: 10/27/09  
SAMPLER(S): 100E

4100109974

SAMPLING INTERVAL (depth in ft below top of casing)  
125.2 to 136.7

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 11.5

SAMPLING PORT  
100E

TOTAL VOLUME PURGED:  
13.3 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
09:15	0	7.0	120	0.1	1.0	15.0	100	10	50
09:20	0	7.0	120	0.1	1.0	15.0	100	10	50
09:25	0	7.0	120	0.1	1.0	15.0	100	10	50
09:30	0	7.0	120	0.1	1.0	15.0	100	10	50
09:35	0	7.0	120	0.1	1.0	15.0	100	10	50
09:40	0	7.0	120	0.1	1.0	15.0	100	10	50
09:45	0	7.0	120	0.1	1.0	15.0	100	10	50
09:50	0	7.0	120	0.1	1.0	15.0	100	10	50
09:55	0	7.0	120	0.1	1.0	15.0	100	10	50
10:00	0	7.0	120	0.1	1.0	15.0	100	10	50
10:05	0	7.0	120	0.1	1.0	15.0	100	10	50
10:10	0	7.0	120	0.1	1.0	15.0	100	10	50
10:15	0	7.0	120	0.1	1.0	15.0	100	10	50
10:20	0	7.0	120	0.1	1.0	15.0	100	10	50
10:25	0	7.0	120	0.1	1.0	15.0	100	10	50
10:30	0	7.0	120	0.1	1.0	15.0	100	10	50
10:35	0	7.0	120	0.1	1.0	15.0	100	10	50
10:40	0	7.0	120	0.1	1.0	15.0	100	10	50
10:45	0	7.0	120	0.1	1.0	15.0	100	10	50
10:50	0	7.0	120	0.1	1.0	15.0	100	10	50
10:55	0	7.0	120	0.1	1.0	15.0	100	10	50
11:00	0	7.0	120	0.1	1.0	15.0	100	10	50
11:05	0	7.0	120	0.1	1.0	15.0	100	10	50
11:10	0	7.0	120	0.1	1.0	15.0	100	10	50
11:15	0	7.0	120	0.1	1.0	15.0	100	10	50
11:20	0	7.0	120	0.1	1.0	15.0	100	10	50
11:25	0	7.0	120	0.1	1.0	15.0	100	10	50
11:30	0	7.0	120	0.1	1.0	15.0	100	10	50
11:35	0	7.0	120	0.1	1.0	15.0	100	10	50
11:40	0	7.0	120	0.1	1.0	15.0	100	10	50
11:45	0	7.0	120	0.1	1.0	15.0	100	10	50
11:50	0	7.0	120	0.1	1.0	15.0	100	10	50
11:55	0	7.0	120	0.1	1.0	15.0	100	10	50
12:00	0	7.0	120	0.1	1.0	15.0	100	10	50

Equipment Used	Equipment Serial Number/ Identification Number

NOTES AND OBSERVATIONS:



# Low-Flow Sampling Data Sheet

MW-41-40(010)

CLIENT: Energy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 4.1016.0100  
 DATE: 1-24-08  
 SAMPLER(S): H.A. P.C.

Colo - 25"

WATER QUALITY: DTU1 - 21.05'

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1428		7.16	2.637	3.34	4.56	10.61	344.2			
1433	21.23	7.16	2.637	3.34	4.56	10.61	344.2			0.35
1438	21.18	7.16	2.637	2.73	4.38	10.01	343.7			0.3
1443	21.17	7.06	2.666	1.68	4.58	7.71	340.7			0.25
1448	21.7	7.21	2.650	1.34	4.72	10.01	349.9			0.4
1453	21.17	7.21	2.615	1.36	5.02	10.11	348.2			0.45
1458	21.18	7.26	2.645	1.68	5.55	10.15	348.0			0.5
1503	21.18	7.29	2.612	2.95	5.21	10.43	347.5			0.6
1508	21.21	7.37	2.647	1.65	5.21	10.23	348.4			0.75
1513	21.23	7.39	2.613	1.59	5.29	11.52	348.9			0.85
1519	21.26	7.33	2.646	1.63	5.34	11.76	348.1			0.95
1522	Stop of sampling									
1525	Stop of sampling									

Equipment Used	Equipment Serial Number/ Identification Number
DTU1	1
Handheld pH and DO	210701054

NOTES AND OBSERVATIONS:  
 All depth to water measurements are taken from top of casing.

Modified Traditional Purge

Sampling Data Sheet

MW-41-63(004)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41 0161619.00  
DATE: 1/25/08  
SAMPLER(S): A.A. M.B.

WATER COLUMN HEIGHT (ft)

23.0 DTB - 24.96 DTW

38.04 Well Column Height

Well Diameter: 1 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 38.04 x 0.041 Multiplier = 1.56 gallons  
Well Volume

DESIGNED PURGE VOLUME: 1.56 x 1.5 = 2.34 gallons  
Designed Purge Volume

TOTAL VOLUME PURGED: 2.34 gal

PURGE METHOD: Waterra Footvalve

WATER QUALITY:

Time	Volume Purged (gal)	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
0945	0	PUMP								
0948	0.2		7.22	240	3.07	2.0	10.0	250	2.0	
0951	0.4		7.25	1380	1.0	2.0	10.0	250	2.0	
0954	0.6		7.27	1500	1.0	2.0	10.0	250	2.0	
0957	0.8		7.28	2300	1.0	2.0	10.0	250	2.0	
1000	1.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1003	1.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1006	1.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1009	1.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1012	1.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1015	2.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1018	2.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1021	2.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1024	2.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1027	2.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1030	3.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1033	3.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1036	3.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1039	3.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1042	3.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1045	4.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1048	4.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1051	4.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1054	4.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1057	4.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1100	5.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1103	5.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1106	5.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1109	5.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1112	5.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1115	6.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1118	6.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1121	6.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1124	6.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1127	6.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1130	7.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1133	7.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1136	7.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1139	7.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1142	7.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1145	8.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1148	8.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1151	8.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1154	8.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1157	8.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1200	9.0		7.27	2300	1.0	2.0	10.0	250	2.0	
1203	9.2		7.27	2300	1.0	2.0	10.0	250	2.0	
1206	9.4		7.27	2300	1.0	2.0	10.0	250	2.0	
1209	9.6		7.27	2300	1.0	2.0	10.0	250	2.0	
1212	9.8		7.27	2300	1.0	2.0	10.0	250	2.0	
1215	10.0		7.27	2300	1.0	2.0	10.0	250	2.0	

Equipment Used	Equipment Serial Number/ Identification Number
YSI 6000	
YSI 6000	
YSI 6000	

NOTES AND OBSERVATIONS:

All depth to water measurements are taken from top of casing.



Modified Traditional Purge  
Sampling Data Sheet

MW-42-73 (007)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
DATE: 1/21/09  
SAMPLER(S): Miguel Britos

Cold 17°F

WATER COLUMN HEIGHT (ft)  $\frac{78.0}{DTB} - \frac{33.4}{DTW} = \frac{44.6}{\text{Well Column Height}}$  Well Diameter: 1 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 44.6 x 0.041 = 1.82 gallons  
Well Volume

DESIGNED PURGE VOLUME: 1.82 x 1.5 = 2.74 gallons  
Designed Purge Volume

TOTAL VOLUME PURGED:  
2.85 gal

PURGE METHOD: Waterra/ Footvalve

WATER QUALITY:

Time	Volume Purged (gal)	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1530	0.1	33.6	6.98	1380	-	1.40	13.03	382		
1531	0.1		7.01	1490	-	4.25	12.83	549.5		
1532	0.1		7.02	1337	2.45	2.32	12.46	520.1		
1533	0.1		7.02	1337	2.70	3.75	12.04	593.4		
1534	0.1		7.20	1252	3.00	3.53	11.61	510.8		
1535	0.1		7.22	1207	1.00	3.40	11.28	53.3		
1536	0.1		7.25	1633	1.05	2.31	11.22	544.2		
1537	0.1		START SAMPLE							
1538	0.1		SAMPLE OBTAINED							

Equipment Used	Equipment Serial Number/ Identification Number
YSI / Set #	3
Purges / Turbidity meter	205704293

NOTES AND OBSERVATIONS:  
All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

A-1013-08 (009)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 141619.001  
 DATE: 1/25/05  
 SAMPLER(S): ABB/ME

**WATER QUALITY:**

ORU 15.61 - IN 647 Transducer

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
850	10.647									
855	Pump on									
911	10.298	6.69	4.253	2.81	1.91	11.82	335.4			6.25
916	10.164	6.70	4.259	2.81	1.51	11.1	334.1			6.30
921	10.117	6.73	4.237	2.17	1.27	9.38	337.0			6.25
928	11.051	6.75	4.212	17.5	1.42	7.56	339.0			6.45
933	9.998	6.77	4.164	1.76	1.28	7.51	340.2			6.55
933	9.902	6.81	4.152	2.7	1.31	7.52	340.2			6.60
935	9.871	6.89	4.141	0.69	1.22	7.47	341.2			6.65
939	9.807	6.93	4.141	0.61	1.2	8.23	340.7			6.7
940	9.757	6.98	4.144	0	1.39	9.01	339.4			6.75
949	9.672	7.01	4.135	0	2.99	9.97	338.9			6.85
953	9.557	7.01	4.126	0	1.56	7.67	338.9			6.91
958	9.471	7.01	4.126	0	1.56	7.67	338.9			7.0
1001	Final Sample			1.1 gal IPEC						
				1.500 ml Rel. density						

Equipment Used	Equipment Serial Number/ Identification Number
WTI 301	
Model 1000	201011093

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.



## Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.06 619 00  
 DATE: 1/25/07  
 SAMPLER(S): 111111 (2) (009)

**WATER QUALITY:** *Flow 16.67\* 14.271*

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
8:55	14.29									
9:09	14.29									
9:11	13.75	6.87	2.483	2.14	5.72	11.02	287.2			0.3
9:16	13.75	6.73	2.471	2.17	4.46	8.06	22.2			2.35
9:18	13.40	6.74	2.453	2.14	4.39	7.71	214.2			3.25
9:22	14.10	6.74	2.475	3.29	2.82	10.21	259.2			0.60
9:25	15.28	6.86	2.484	3.87	2.2	7.56	267.2			0.90
9:30	15.83	6.85	2.474	3.51	1.65	7.20	254.2			1.0
9:35	15.20	6.85	2.472	0.61	4.66	11.13	287.2			1.15
9:39	16.17	6.97	2.554	0	1.79	8.48	234.2			1.30
9:41	16.48	7.05	2.451	0	1.69	7.85	257.4			1.4
9:42	16.20	7.04	2.451	0	1.64	7.71	218.2			1.5
9:44	16.20	7.06	2.452	0	1.51	7.52	210.2			1.6
9:50	16.46	7.05	2.462	0	1.31	7.28	219.7			1.7
10:02	16.20	7.06	2.451	0	1.51	7.52	210.2			1.6
10:07	16.20	7.06	2.451	1.1	1.51	7.52	210.2			1.6

Equipment Used	Equipment Serial Number/ Identification Number

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 100019  
DATE: 10/10/07  
SAMPLER(S): 100110

(007)

## WATER QUALITY:

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
7:30	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
7:35	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
7:40	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
7:45	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
7:50	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
7:55	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:00	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:05	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:10	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:15	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:20	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:25	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:30	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:35	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:40	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:45	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:50	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
8:55	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:00	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:05	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:10	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:15	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:20	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:25	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:30	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:35	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:40	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:45	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:50	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
9:55	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	
10:00	11.2	7.8	250	0.1	0.2	12.5	100	100	11.2	

Equipment Used	Equipment Serial Number/ Identification Number
100110	100110

NOTES AND OBSERVATIONS:  
All depth to water measurements are taken from top of casing.

# GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

WELL ID: MW- -

11.11.07 67(007)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
DATE: 11/27/07  
SAMPLER(S): 2.2, M.B.

WATER COLUMN HEIGHT (ft)

67 DTB - 59.2 DTW

7.82 Well Column Height

Well Diameter: \_\_\_\_\_ inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 7.82 x 0.163 Multiplier = 1.27 Well Volume gallons

DESIGNED PURGE VOLUME: 25 x 1.5 = 37.5 gallons  
Designed Purge Volume

TOTAL VOLUME PURGED:

1.6 gal

PURGE METHOD: Waterra/ Footvalve

WATER QUALITY:

Time	Volume Purged (gal)	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	GRP	Pump Depth (ft)	Notes
11:33	1.0	38.26	7.34	1.066	12.30	1.17	9.28	197.1		
11:37	1.35		7.33	1.058	9.44	1.16	10.65	197		
11:41	1.7		7.33	1.074		2.35	10.65	197.3		
11:45										
11:49										
11:53	1.8	38.26	7.34	1.084		1.15	9.12	197.4		
11:57	6	38.26	7.35	1.074		1.12	12.5	197.7		
12:01										
12:05										
12:09										
12:13										
12:17										
12:21										
12:25										
12:29										
12:33										
12:37										
12:41										
12:45										
12:49										
12:53										
12:57										
13:01										
13:05										
13:09										

Equipment Used	Equipment Serial Number/ Identification Number
YS-1000	
Yoder	
Transducer	200704743

NOTES AND OBSERVATIONS:

All depth to water measurements are taken from top of casing.

11/27/07 11:33 AM - 11:37 AM - 11:41 AM - 11:45 AM - 11:49 AM - 11:53 AM - 11:57 AM - 12:01 PM - 12:05 PM - 12:09 PM - 12:13 PM - 12:17 PM - 12:21 PM - 12:25 PM - 12:29 PM - 12:33 PM - 12:37 PM - 12:41 PM - 12:45 PM - 12:49 PM - 12:53 PM - 12:57 PM - 13:01 PM - 13:05 PM - 13:09 PM - 13:13 PM - 13:17 PM - 13:21 PM - 13:25 PM - 13:29 PM - 13:33 PM - 13:37 PM - 13:41 PM - 13:45 PM - 13:49 PM - 13:53 PM - 13:57 PM - 14:01 PM - 14:05 PM - 14:09 PM - 14:13 PM - 14:17 PM - 14:21 PM - 14:25 PM - 14:29 PM - 14:33 PM - 14:37 PM - 14:41 PM - 14:45 PM - 14:49 PM - 14:53 PM - 14:57 PM - 15:01 PM - 15:05 PM - 15:09 PM - 15:13 PM - 15:17 PM - 15:21 PM - 15:25 PM - 15:29 PM - 15:33 PM - 15:37 PM - 15:41 PM - 15:45 PM - 15:49 PM - 15:53 PM - 15:57 PM - 16:01 PM - 16:05 PM - 16:09 PM - 16:13 PM - 16:17 PM - 16:21 PM - 16:25 PM - 16:29 PM - 16:33 PM - 16:37 PM - 16:41 PM - 16:45 PM - 16:49 PM - 16:53 PM - 16:57 PM - 17:01 PM - 17:05 PM - 17:09 PM - 17:13 PM - 17:17 PM - 17:21 PM - 17:25 PM - 17:29 PM - 17:33 PM - 17:37 PM - 17:41 PM - 17:45 PM - 17:49 PM - 17:53 PM - 17:57 PM - 18:01 PM - 18:05 PM - 18:09 PM - 18:13 PM - 18:17 PM - 18:21 PM - 18:25 PM - 18:29 PM - 18:33 PM - 18:37 PM - 18:41 PM - 18:45 PM - 18:49 PM - 18:53 PM - 18:57 PM - 19:01 PM - 19:05 PM - 19:09 PM - 19:13 PM - 19:17 PM - 19:21 PM - 19:25 PM - 19:29 PM - 19:33 PM - 19:37 PM - 19:41 PM - 19:45 PM - 19:49 PM - 19:53 PM - 19:57 PM - 20:01 PM - 20:05 PM - 20:09 PM - 20:13 PM - 20:17 PM - 20:21 PM - 20:25 PM - 20:29 PM - 20:33 PM - 20:37 PM - 20:41 PM - 20:45 PM - 20:49 PM - 20:53 PM - 20:57 PM - 21:01 PM - 21:05 PM - 21:09 PM - 21:13 PM - 21:17 PM - 21:21 PM - 21:25 PM - 21:29 PM - 21:33 PM - 21:37 PM - 21:41 PM - 21:45 PM - 21:49 PM - 21:53 PM - 21:57 PM - 22:01 PM - 22:05 PM - 22:09 PM - 22:13 PM - 22:17 PM - 22:21 PM - 22:25 PM - 22:29 PM - 22:33 PM - 22:37 PM - 22:41 PM - 22:45 PM - 22:49 PM - 22:53 PM - 22:57 PM - 23:01 PM - 23:05 PM - 23:09 PM - 23:13 PM - 23:17 PM - 23:21 PM - 23:25 PM - 23:29 PM - 23:33 PM - 23:37 PM - 23:41 PM - 23:45 PM - 23:49 PM - 23:53 PM - 23:57 PM - 24:01 PM - 24:05 PM - 24:09 PM - 24:13 PM - 24:17 PM - 24:21 PM - 24:25 PM - 24:29 PM - 24:33 PM - 24:37 PM - 24:41 PM - 24:45 PM - 24:49 PM - 24:53 PM - 24:57 PM - 25:01 PM - 25:05 PM - 25:09 PM - 25:13 PM - 25:17 PM - 25:21 PM - 25:25 PM - 25:29 PM - 25:33 PM - 25:37 PM - 25:41 PM - 25:45 PM - 25:49 PM - 25:53 PM - 25:57 PM - 26:01 PM - 26:05 PM - 26:09 PM - 26:13 PM - 26:17 PM - 26:21 PM - 26:25 PM - 26:29 PM - 26:33 PM - 26:37 PM - 26:41 PM - 26:45 PM - 26:49 PM - 26:53 PM - 26:57 PM - 27:01 PM - 27:05 PM - 27:09 PM - 27:13 PM - 27:17 PM - 27:21 PM - 27:25 PM - 27:29 PM - 27:33 PM - 27:37 PM - 27:41 PM - 27:45 PM - 27:49 PM - 27:53 PM - 27:57 PM - 28:01 PM - 28:05 PM - 28:09 PM - 28:13 PM - 28:17 PM - 28:21 PM - 28:25 PM - 28:29 PM - 28:33 PM - 28:37 PM - 28:41 PM - 28:45 PM - 28:49 PM - 28:53 PM - 28:57 PM - 29:01 PM - 29:05 PM - 29:09 PM - 29:13 PM - 29:17 PM - 29:21 PM - 29:25 PM - 29:29 PM - 29:33 PM - 29:37 PM - 29:41 PM - 29:45 PM - 29:49 PM - 29:53 PM - 29:57 PM - 30:01 PM - 30:05 PM - 30:09 PM - 30:13 PM - 30:17 PM - 30:21 PM - 30:25 PM - 30:29 PM - 30:33 PM - 30:37 PM - 30:41 PM - 30:45 PM - 30:49 PM - 30:53 PM - 30:57 PM - 31:01 PM - 31:05 PM - 31:09 PM - 31:13 PM - 31:17 PM - 31:21 PM - 31:25 PM - 31:29 PM - 31:33 PM - 31:37 PM - 31:41 PM - 31:45 PM - 31:49 PM - 31:53 PM - 31:57 PM - 32:01 PM - 32:05 PM - 32:09 PM - 32:13 PM - 32:17 PM - 32:21 PM - 32:25 PM - 32:29 PM - 32:33 PM - 32:37 PM - 32:41 PM - 32:45 PM - 32:49 PM - 32:53 PM - 32:57 PM - 33:01 PM - 33:05 PM - 33:09 PM - 33:13 PM - 33:17 PM - 33:21 PM - 33:25 PM - 33:29 PM - 33:33 PM - 33:37 PM - 33:41 PM - 33:45 PM - 33:49 PM - 33:53 PM - 33:57 PM - 34:01 PM - 34:05 PM - 34:09 PM - 34:13 PM - 34:17 PM - 34:21 PM - 34:25 PM - 34:29 PM - 34:33 PM - 34:37 PM - 34:41 PM - 34:45 PM - 34:49 PM - 34:53 PM - 34:57 PM - 35:01 PM - 35:05 PM - 35:09 PM - 35:13 PM - 35:17 PM - 35:21 PM - 35:25 PM - 35:29 PM - 35:33 PM - 35:37 PM - 35:41 PM - 35:45 PM - 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41:53 PM - 41:57 PM - 42:01 PM - 42:05 PM - 42:09 PM - 42:13 PM - 42:17 PM - 42:21 PM - 42:25 PM - 42:29 PM - 42:33 PM - 42:37 PM - 42:41 PM - 42:45 PM - 42:49 PM - 42:53 PM - 42:57 PM - 43:01 PM - 43:05 PM - 43:09 PM - 43:13 PM - 43:17 PM - 43:21 PM - 43:25 PM - 43:29 PM - 43:33 PM - 43:37 PM - 43:41 PM - 43:45 PM - 43:49 PM - 43:53 PM - 43:57 PM - 44:01 PM - 44:05 PM - 44:09 PM - 44:13 PM - 44:17 PM - 44:21 PM - 44:25 PM - 44:29 PM - 44:33 PM - 44:37 PM - 44:41 PM - 44:45 PM - 44:49 PM - 44:53 PM - 44:57 PM - 45:01 PM - 45:05 PM - 45:09 PM - 45:13 PM - 45:17 PM - 45:21 PM - 45:25 PM - 45:29 PM - 45:33 PM - 45:37 PM - 45:41 PM - 45:45 PM - 45:49 PM - 45:53 PM - 45:57 PM - 46:01 PM - 46:05 PM - 46:09 PM - 46:13 PM - 46:17 PM - 46:21 PM - 46:25 PM - 46:29 PM - 46:33 PM - 46:37 PM - 46:41 PM - 46:45 PM - 46:49 PM - 46:53 PM - 46:57 PM - 47:01 PM - 47:05 PM - 47:09 PM - 47:13 PM - 47:17 PM - 47:21 PM - 47:25 PM - 47:29 PM - 47:33 PM - 47:37 PM - 47:41 PM - 47:45 PM - 47:49 PM - 47:53 PM - 47:57 PM - 48:01 PM - 48:05 PM - 48:09 PM - 48:13 PM - 48:17 PM - 48:21 PM - 48:25 PM - 48:29 PM - 48:33 PM - 48:37 PM - 48:41 PM - 48:45 PM - 48:49 PM - 48:53 PM - 48:57 PM - 49:01 PM - 49:05 PM - 49:09 PM - 49:13 PM - 49:17 PM - 49:21 PM - 49:25 PM - 49:29 PM - 49:33 PM - 49:37 PM - 49:41 PM - 49:45 PM - 49:49 PM - 49:53 PM - 49:57 PM - 50:01 PM - 50:05 PM - 50:09 PM - 50:13 PM - 50:17 PM - 50:21 PM - 50:25 PM - 50:29 PM - 50:33 PM - 50:37 PM - 50:41 PM - 50:45 PM - 50:49 PM - 50:53 PM - 50:57 PM - 51:01 PM - 51:05 PM - 51:09 PM - 51:13 PM - 51:17 PM - 51:21 PM - 51:25 PM - 51:29 PM - 51:33 PM - 51:37 PM - 51:41 PM - 51:45 PM - 51:49 PM - 51:53 PM - 51:57 PM - 52:01 PM - 52:05 PM - 52:09 PM - 52:13 PM - 52:17 PM - 52:21 PM - 52:25 PM - 52:29 PM - 52:33 PM - 52:37 PM - 52:41 PM - 52:45 PM - 52:49 PM - 52:53 PM - 52:57 PM - 53:01 PM - 53:05 PM - 53:09 PM - 53:13 PM - 53:17 PM - 53:21 PM - 53:25 PM - 53:29 PM - 53:33 PM - 53:37 PM - 53:41 PM - 53:45 PM - 53:49 PM - 53:53 PM - 53:57 PM - 54:01 PM - 54:05 PM - 54:09 PM - 54:13 PM - 54:17 PM - 54:21 PM - 54:25 PM - 54:29 PM - 54:33 PM - 54:37 PM - 54:41 PM - 54:45 PM - 54:49 PM - 54:53 PM - 54:57 PM - 55:01 PM - 55:05 PM - 55:09 PM - 55:13 PM - 55:17 PM - 55:21 PM - 55:25 PM - 55:29 PM - 55:33 PM - 55:37 PM - 55:41 PM - 55:45 PM - 55:49 PM - 55:53 PM - 55:57 PM - 56:01 PM - 56:05 PM - 56:09 PM - 56:13 PM - 56:17 PM - 56:21 PM - 56:25 PM - 56:29 PM - 56:33 PM - 56:37 PM - 56:41 PM - 56:45 PM - 56:49 PM - 56:53 PM - 56:57 PM - 57:01 PM - 57:05 PM - 57:09 PM - 57:13 PM - 57:17 PM - 57:21 PM - 57:25 PM - 57:29 PM - 57:33 PM - 57:37 PM - 57:41 PM - 57:45 PM - 57:49 PM - 57:53 PM - 57:57 PM - 58:01 PM - 58:05 PM - 58:09 PM - 58:13 PM - 58:17 PM - 58:21 PM - 58:25 PM - 58:29 PM - 58:33 PM - 58:37 PM - 58:41 PM - 58:45 PM - 58:49 PM - 58:53 PM - 58:57 PM - 59:01 PM - 59:05 PM - 59:09 PM - 59:13 PM - 59:17 PM - 59:21 PM - 59:25 PM - 59:29 PM - 59:33 PM - 59:37 PM - 59:41 PM - 59:45 PM - 59:49 PM - 59:53 PM - 59:57 PM - 60:01 PM - 60:05 PM - 60:09 PM - 60:13 PM - 60:17 PM - 60:21 PM - 60:25 PM - 60:29 PM - 60:33 PM - 60:37 PM - 60:41 PM - 60:45 PM - 60:49 PM - 60:53 PM - 60:57 PM - 61:01 PM - 61:05 PM - 61:09 PM - 61:13 PM - 61:17 PM - 61:21 PM - 61:25 PM - 61:29 PM - 61:33 PM - 61:37 PM - 61:41 PM - 61:45 PM - 61:49 PM - 61:53 PM - 61:57 PM - 62:01 PM - 62:05 PM - 62:09 PM - 62:13 PM - 62:17 PM - 62:21 PM - 62:25 PM - 62:29 PM - 62:33 PM - 62:37 PM - 62:41 PM - 62:45 PM - 62:49 PM - 62:53 PM - 62:57 PM - 63:01 PM - 63:05 PM - 63:09 PM - 63:13 PM - 63:17 PM - 63:21 PM - 63:25 PM - 63:29 PM - 63:33 PM - 63:37 PM - 63:41 PM - 63:45 PM - 63:49 PM - 63:53 PM - 63:57 PM - 64:01 PM - 64:05 PM - 64:09 PM - 64:13 PM - 64:17 PM - 64:21 PM - 64:25 PM - 64:29 PM - 64:33 PM - 64:37 PM - 64:41 PM - 64:45 PM - 64:49 PM - 64:53 PM - 64:57 PM - 65:01 PM - 65:05 PM - 65:09 PM - 65:13 PM - 65:17 PM - 65:21 PM - 65:25 PM - 65:29 PM - 65:33 PM - 65:37 PM - 65:41 PM - 65:45 PM - 65:49 PM - 65:53 PM - 65:57 PM - 66:01 PM - 66:05 PM - 66:09 PM - 66:13 PM - 66:17 PM - 66:21 PM - 66:25 PM - 66:29 PM - 66:33 PM - 66:37 PM - 66:41 PM - 66:45 PM - 66:49 PM - 66:53 PM - 66:57 PM - 67:01 PM - 67:05 PM - 67:09 PM - 67:13 PM - 67:17 PM - 67:21 PM - 67:25 PM - 67:29 PM - 67:33 PM - 67:37 PM - 67:41 PM - 67:45 PM - 67:49 PM - 67:53 PM - 67:57 PM - 68:01 PM - 68:05 PM - 68:09 PM - 68:13 PM - 68:17 PM - 68:21 PM - 68:25 PM - 68:29 PM - 68:33 PM - 68:37 PM - 68:41 PM - 68:45 PM - 68:49 PM - 68:53 PM - 68:57 PM - 69:01 PM - 69:05 PM - 69:09 PM - 69:13 PM - 69:17 PM - 69:21 PM - 69:25 PM - 69:29 PM - 69:33 PM - 69:37 PM - 69:41 PM - 69:45 PM - 69:49 PM - 69:53 PM - 69:57 PM - 70:01 PM - 70:05 PM - 70:09 PM - 70:13 PM - 70:17 PM - 70:21 PM - 70:25 PM - 70:29 PM - 70:33 PM - 70:37 PM - 70:41 PM - 70:45 PM - 70:49 PM - 70:53 PM - 70:57 PM - 71:01 PM - 71:05 PM - 71:09 PM - 71:13 PM - 71:17 PM - 71:21 PM - 71:25 PM - 71:29 PM - 71:33 PM - 71:37 PM - 71:41 PM - 71:45 PM - 71:49 PM - 71:53 PM - 71:57 PM - 72:01 PM - 72:05 PM - 72:09 PM - 72:13 PM - 72:17 PM - 72:21 PM - 72:25 PM - 72:29 PM - 72:33 PM - 72:37 PM - 72:41 PM - 72:45 PM - 72:49 PM - 72:53 PM - 72:57 PM - 73:01 PM - 73:05 PM - 73:09 PM - 73:13 PM - 73:17 PM - 73:21 PM - 73:25 PM - 73:29 PM - 73:33 PM - 73:37 PM - 73:41 PM - 73:45 PM - 73:49 PM - 73:53 PM - 73:57 PM - 74:01 PM - 74:05 PM - 74:09 PM - 74:13 PM - 74:17 PM - 74:21 PM - 74:25 PM - 74:29 PM - 74:33 PM - 74:37 PM - 74:41 PM - 74:45 PM - 74:49 PM - 74:53 PM - 74:57 PM - 75:01 PM - 75:05 PM - 75:09 PM - 75:13 PM - 75:17 PM - 75:21 PM - 75:25 PM - 75:29 PM - 75:33 PM - 75:37 PM - 75:41 PM - 75:45 PM - 75:49 PM - 75:53 PM - 75:57 PM - 76:01 PM - 76:05 PM - 76:09 PM - 76:13 PM - 76:17 PM - 76:21 PM - 76:25 PM - 76:29 PM - 76:33 PM - 76:37 PM - 76:41 PM - 76:45 PM - 76:49 PM - 76:53 PM - 76:57 PM - 77:01 PM - 77:05 PM - 77:09 PM - 77:13 PM - 77:17 PM - 77:21 PM - 77:25 PM - 77:29 PM - 77:33 PM - 77:37 PM - 77:41 PM - 77:45 PM - 77:49 PM - 77:53 PM - 77:57 PM - 78:01 PM - 78:05 PM - 78:09 PM - 78:13 PM - 78:17 PM - 78:21 PM - 78:25 PM - 78:29 PM - 78:33 PM - 78:37 PM - 78:41 PM - 78:45 PM - 78:49 PM - 78:53 PM - 78:57 PM - 79:01 PM - 79:05 PM - 79:09 PM - 79:13 PM - 79:17 PM - 79:21 PM - 79:25 PM - 79:29 PM - 79:33 PM - 79:37 PM - 79:41 PM - 79:45 PM - 79:49 PM - 79:53 PM - 79:57 PM - 80:01 PM - 80:05 PM - 80:09 PM - 80:13 PM - 80:17 PM - 80:21 PM - 80:25 PM - 80:29 PM - 80:33 PM - 80:37 PM - 80:41 PM - 80:45 PM - 80:49 PM - 80:53 PM - 80:57 PM - 81:01 PM - 81:05 PM - 81:09 PM - 81:13 PM - 81:17 PM - 81:21 PM - 81:25 PM - 81:29 PM - 81:33 PM - 81:37 PM - 81:41 PM - 81:45 PM - 81:49 PM - 81:53 PM - 81:57 PM - 82:01 PM - 82:05 PM - 82:09 PM - 82:13 PM - 82:17 PM - 82:21 PM - 82:25 PM - 82:29 PM - 82:33 PM - 82:37 PM - 82:41 PM - 82:45 PM - 82:49 PM - 82:53 PM - 82:57 PM - 83:01 PM - 83:05 PM - 83:09 PM - 83:13 PM - 83:17 PM - 83:21 PM - 83:25 PM - 83:29 PM - 83:33 PM - 83:37 PM - 83:41 PM - 83:45 PM - 83:49 PM - 83:53 PM - 83:57 PM - 84:01 PM - 84:05 PM - 84:09 PM - 84:13 PM - 84:17 PM - 84:21 PM - 84:25 PM - 84:29 PM - 84:33 PM - 84:37 PM - 84:41 PM - 84:45 PM - 84:49 PM - 84:53 PM - 84:57 PM - 85:01 PM - 85:05 PM - 85:09 PM - 85:13 PM - 85:17 PM - 85:21 PM - 85:25 PM - 85:29 PM - 85:33 PM - 85:37 PM - 85:41 PM - 85:45 PM - 85:49 PM - 85:53 PM - 85:57 PM - 86:01 PM - 86:05 PM - 86:09 PM - 86:13 PM - 86:17 PM - 86:21 PM - 86:25 PM - 86:29 PM - 86:33 PM - 86:37 PM - 86:41 PM - 86:45 PM - 86:

# GZA GeoEnvironmental of New York

## Modified Traditional Purge Sampling Data Sheet

WELL ID: MW-104-102  
(1003)

CLIENT: Emergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
DATE: 10/1/08  
SAMPLER(S): 10/1/08

WATER COLUMN HEIGHT (ft) Well Diameter: 1 inches

$\frac{1.54}{\text{DTB}} - \frac{3.17}{\text{DTW}} = 34.72$  ft  
Well Column Height

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

**GALLONS OF WATER PER WELL VOLUME:**

Water Column Height 34.72 x 0.3811 = 13.23 gallons  
Multiplier Well Volume

DESIGNED PURGE VOLUME: 1.5 x 1.5 = 2.25 gallons  
Multiplier Designed Purge Volume

TOTAL VOLUME PURGED: 2.25 gal

PURGE METHOD: Waterfall Footvalve

**WATER QUALITY:**

Time	Volume Purged (gal)	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
5:41	0.05	1.10								
5:42	0.05	1.10								
5:43	0.05	1.10								
5:44	0.05	1.10								
5:45	0.05	1.10								
5:46	0.05	1.10								
5:47	0.05	1.10								
5:48	0.05	1.10								
5:49	0.05	1.10								
5:50	0.05	1.10								
5:51	0.05	1.10								
5:52	0.05	1.10								
5:53	0.05	1.10								
5:54	0.05	1.10								
5:55	0.05	1.10								
5:56	0.05	1.10								
5:57	0.05	1.10								
5:58	0.05	1.10								
5:59	0.05	1.10								
6:00	0.05	1.10								
6:01	0.05	1.10								
6:02	0.05	1.10								
6:03	0.05	1.10								
6:04	0.05	1.10								
6:05	0.05	1.10								
6:06	0.05	1.10								
6:07	0.05	1.10								
6:08	0.05	1.10								
6:09	0.05	1.10								
6:10	0.05	1.10								
6:11	0.05	1.10								
6:12	0.05	1.10								
6:13	0.05	1.10								
6:14	0.05	1.10								
6:15	0.05	1.10								
6:16	0.05	1.10								
6:17	0.05	1.10								
6:18	0.05	1.10								
6:19	0.05	1.10								
6:20	0.05	1.10								
6:21	0.05	1.10								
6:22	0.05	1.10								
6:23	0.05	1.10								
6:24	0.05	1.10								
6:25	0.05	1.10								
6:26	0.05	1.10								
6:27	0.05	1.10								
6:28	0.05	1.10								
6:29	0.05	1.10								
6:30	0.05	1.10								
6:31	0.05	1.10								
6:32	0.05	1.10								
6:33	0.05	1.10								
6:34	0.05	1.10								
6:35	0.05	1.10								
6:36	0.05	1.10								
6:37	0.05	1.10								
6:38	0.05	1.10								
6:39	0.05	1.10								
6:40	0.05	1.10								
6:41	0.05	1.10								
6:42	0.05	1.10								
6:43	0.05	1.10								
6:44	0.05	1.10								
6:45	0.05	1.10								
6:46	0.05	1.10								
6:47	0.05	1.10								
6:48	0.05	1.10								
6:49	0.05	1.10								
6:50	0.05	1.10								
6:51	0.05	1.10								
6:52	0.05	1.10								
6:53	0.05	1.10								
6:54	0.05	1.10								
6:55	0.05	1.10								
6:56	0.05	1.10								
6:57	0.05	1.10								
6:58	0.05	1.10								
6:59	0.05	1.10								
7:00	0.05	1.10								
7:01	0.05	1.10								
7:02	0.05	1.10								
7:03	0.05	1.10								
7:04	0.05	1.10								
7:05	0.05	1.10								
7:06	0.05	1.10								
7:07	0.05	1.10								
7:08	0.05	1.10								
7:09	0.05	1.10								
7:10	0.05	1.10								
7:11	0.05	1.10								
7:12	0.05	1.10								
7:13	0.05	1.10								
7:14	0.05	1.10								
7:15	0.05	1.10								
7:16	0.05	1.10								
7:17	0.05	1.10								
7:18	0.05	1.10								
7:19	0.05	1.10								
7:20	0.05	1.10								
7:21	0.05	1.10								
7:22	0.05	1.10								
7:23	0.05	1.10								
7:24	0.05	1.10								
7:25	0.05	1.10								
7:26	0.05	1.10								
7:27	0.05	1.10								
7:28	0.05	1.10								
7:29	0.05	1.10								
7:30	0.05	1.10								
7:31	0.05	1.10								
7:32	0.05	1.10								
7:33	0.05	1.10								
7:34	0.05	1.10								
7:35	0.05	1.10								
7:36	0.05	1.10								
7:37	0.05	1.10								
7:38	0.05	1.10								
7:39	0.05	1.10								
7:40	0.05	1.10								
7:41	0.05	1.10								
7:42	0.05	1.10								
7:43	0.05	1.10								
7:44	0.05	1.10								
7:45	0.05	1.10								
7:46	0.05	1.10								
7:47	0.05	1.10								
7:48	0.05	1.10								
7:49	0.05	1.10								
7:50	0.05	1.10								
7:51	0.05	1.10								
7:52	0.05	1.10								
7:53	0.05	1.10								
7:54	0.05	1.10								
7:55	0.05	1.10								
7:56	0.05	1.10								
7:57	0.05	1.10								
7:58	0.05	1.10								
7:59	0.05	1.10								
8:00	0.05	1.10								

Equipment Used	Equipment Serial Number/ Identification Number
Waterfall Purge	

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

10/1/08  
 10:10  
 10:15  
 10:20  
 10:25  
 10:30  
 10:35  
 10:40  
 10:45  
 10:50  
 10:55  
 11:00  
 11:05  
 11:10  
 11:15  
 11:20  
 11:25  
 11:30  
 11:35  
 11:40  
 11:45  
 11:50  
 11:55  
 12:00

Low-Flow Sampling Data Sheet

MW-45-42 (D11)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 18-014-11  
 DATE: 12-1-18  
 SAMPLER(S): AL-15 (D11)

WATER QUALITY: DTW 23.20 = 17.8mS

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1430	11.5									
1431	11.5									
1432	11.5									
1433	11.5									
1434	11.5									
1435	11.5									
1436	11.5									
1437	11.5									
1438	11.5									
1439	11.5									
1440	11.5									
1441	11.5									
1442	11.5									
1443	11.5									
1444	11.5									
1445	11.5									
1446	11.5									
1447	11.5									
1448	11.5									
1449	11.5									
1450	11.5									
1451	11.5									
1452	11.5	10.53	1242	15.7	1.38	17.0	116			
1453	11.5	10.54	1242	15.7	1.38	17.0	116			
1454	11.5									
1455	11.5									
1456	11.5									
1457	11.5									
1458	11.5									
1459	11.5									
1460	11.5									
1461	11.5									
1462	11.5									
1463	11.5									
1464	11.5									
1465	11.5									
1466	11.5									
1467	11.5									
1468	11.5									
1469	11.5									
1470	11.5									
1471	11.5									
1472	11.5									
1473	11.5									
1474	11.5									
1475	11.5									
1476	11.5									
1477	11.5									
1478	11.5									
1479	11.5									
1480	11.5									
1481	11.5									
1482	11.5									
1483	11.5									
1484	11.5									
1485	11.5									
1486	11.5									
1487	11.5									
1488	11.5									
1489	11.5									
1490	11.5									
1491	11.5									
1492	11.5									
1493	11.5									
1494	11.5									
1495	11.5									
1496	11.5									
1497	11.5									
1498	11.5									
1499	11.5									
1500	11.5									

Equipment Used	Equipment Serial Number/ Identification Number

NOTES AND OBSERVATIONS:  
 All depth to water measurements are taken from top of casing



# Low-Flow Sampling Data Sheet

MU-45.01 (01)

CLIENT: Entergy - IPEC  
 SITE: Buchman, NY

PROJECT NO:  
 DATE: 12/08  
 SAMPLER(S): A A P C

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
12:07	1.5									
12:15	1.5									
12:20	1.5									
12:25	1.5									
12:30	1.5									
12:35	1.5									
12:40	1.5									
<p>The pump pressure was very low. Water level dropped quite low. Not sampled. Will try next day using a different pump.</p>										

Equipment Used	Equipment Serial Number/ Identification Number

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.

Modified Traditional Purge

Sampling Data Sheet

MW, 45-61 (2.1)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
DATE: 1/25/08  
SAMPLER(S): MB AA

WATER COLUMN HEIGHT (ft)

$\frac{612}{DTB} - \frac{2397}{DTW} = \frac{37.03}{\text{Well Column Height}}$  ft

Well Diameter: 1 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height  $\frac{37.03}{\text{Well Column Height}}$  x  $\frac{0.041}{\text{Multiplier}}$  =  $\frac{1.51}{\text{Well Volume}}$  gallons

DESIGNED PURGE VOLUME:  $\frac{1.51}{\text{Well Volume}}$  x 1.5 =  $\frac{2.27}{\text{Designed Purge Volume}}$  gallons

TOTAL VOLUME PURGED:

2.45 gal

PURGE METHOD: Waterra Footvalve

WATER QUALITY:

Time	Volume Purged (gal)	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
11:10	0									PUMP ON
11:12	0.1		7.56	1651	27.8	2.2	15.27	304.8		
11:14	0.2		7.50	1626	27.7	2.0	15.41	304.2		
11:17	0.5		7.47	1706	27.7	1.72	15.37	306.4		
11:20	1.0		7.50	1773	28.6	1.37	15.24	305.1		
11:26	1.5		7.32	1795	28.9	1.48	15.21	304.7		
11:30	2.0		7.34	1732	28.7	1.30	15.38	304.0		
11:34	2.5		7.35	1769	29.1	1.26	15.40	302.8		
11:39	3.0		7.34	1776	28.8	1.5	15.32	302.7		
11:39										PUMP OFF
11:41										START COMP 1
11:55										SAMPLE COMP: 2.116 ; 1 gal IPEC

Equipment Used	Equipment Serial Number/ Identification Number
YSI	3
Prober / cable	
Turbidity meter	200501 54

NOTES AND OBSERVATIONS:

All depth to water measurements are taken from top of casing.



# Low-Flow Sampling Data Sheet

MW-46(011)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
 DATE: 11/22/08  
 SAMPLER(S): Moyer's Bottle

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS.m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
09:57	3.68									
10:00	3.80	7.87	0.426		4.2	3.26	435.1			
10:04	4.30	7.97	0.426	13.99	1.9	13.07	435.1			
10:08	4.15	7.99	0.425	17.22	0.91	12.76	415.8			
10:10	4.09	7.87	0.421	15.16	0.7	12.53	391.1			
10:16	4.17	7.80	0.426	10.27	1.0	12.24	351.6			
10:19	4.22	7.81	0.428	10.07	0.76	11.97	307.8			
10:40	4.30	7.81	0.425	3.94	0.90	9.46	366.6			
10:45	4.30	7.97	0.428	38.63	0.59	9.21	361.2			
10:52	4.31	7.87	0.429	28.53	0.41	8.17	315.0			
10:54	4.31	7.88	0.422	23.26	0.72	8.61	317.8			
10:55		START - OFFLINE								
12:19		SAMPLE COMPLETED				1.10	1.17			

Equipment Used	Equipment Serial Number/ Identification Number
YSI	2
Turbidity meter	200701264

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MW-49-26(011)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
 DATE: 11/25/08  
 SAMPLER(S): Miguel Britos, Angela A. [unclear]

WATER QUALITY: DTW 10 22 = 45.492

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			
1:26	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.20
1:37	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
1:42	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
1:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
2:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
2:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
2:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
2:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
2:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
2:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
3:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
3:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
3:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
3:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
3:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
3:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
4:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
4:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
4:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
4:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
4:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
4:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
5:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
5:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
5:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
5:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
5:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
5:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
6:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
6:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
6:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
6:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
6:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
6:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
7:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
7:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
7:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
7:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
7:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
7:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
8:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
8:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
8:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
8:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
8:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
8:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
9:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
9:10	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
9:20	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
9:30	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
9:40	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
9:50	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25
10:00	4.0	7.2	3.950	0.1	1.63	13.75	114.2			0.25

Equipment Used	Equipment Serial Number/ Identification Number
YSI { not # } Reader	

NOTES AND OBSERVATIONS:  
 All depth to water measurements are taken from top of casing.



# Low-Flow Sampling Data Sheet

MW-49.65(011)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161619 00  
 DATE: 12/28/02  
 SAMPLER(S): Miguel Britos / Anna A. R...

WATER QUALITY: LFW-12 20 = 13 775

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
13:10	13.775		3.165	0	0.22	12.0				
13:20	14.0		3.157	0	0.22	12.0				
13:30	14.25		3.165	0	0.22	12.0				
13:40	14.5		3.15	0	0.22	12.0				
13:50	14.75		3.165	0	0.22	12.0				
14:00	15.0		3.165	0	0.22	12.0				
14:10	15.25		3.165	0	0.22	12.0				
14:20	15.5		3.165	0	0.22	12.0				
14:30	15.75		3.165	0	0.22	12.0				
14:40	16.0		3.165	0	0.22	12.0				
14:50	16.25		3.165	0	0.22	12.0				
15:00	16.5		3.165	0	0.22	12.0				
15:10	16.75		3.165	0	0.22	12.0				
15:20	17.0		3.165	0	0.22	12.0				
15:30	17.25		3.165	0	0.22	12.0				
15:40	17.5		3.165	0	0.22	12.0				
15:50	17.75		3.165	0	0.22	12.0				
16:00	18.0		3.165	0	0.22	12.0				
16:10	18.25		3.165	0	0.22	12.0				
16:20	18.5		3.165	0	0.22	12.0				
16:30	18.75		3.165	0	0.22	12.0				
16:40	19.0		3.165	0	0.22	12.0				
16:50	19.25		3.165	0	0.22	12.0				
17:00	19.5		3.165	0	0.22	12.0				
17:10	19.75		3.165	0	0.22	12.0				
17:20	20.0		3.165	0	0.22	12.0				
17:30	20.25		3.165	0	0.22	12.0				
17:40	20.5		3.165	0	0.22	12.0				
17:50	20.75		3.165	0	0.22	12.0				
18:00	21.0		3.165	0	0.22	12.0				
18:10	21.25		3.165	0	0.22	12.0				
18:20	21.5		3.165	0	0.22	12.0				
18:30	21.75		3.165	0	0.22	12.0				
18:40	22.0		3.165	0	0.22	12.0				
18:50	22.25		3.165	0	0.22	12.0				
19:00	22.5		3.165	0	0.22	12.0				
19:10	22.75		3.165	0	0.22	12.0				
19:20	23.0		3.165	0	0.22	12.0				
19:30	23.25		3.165	0	0.22	12.0				
19:40	23.5		3.165	0	0.22	12.0				
19:50	23.75		3.165	0	0.22	12.0				
20:00	24.0		3.165	0	0.22	12.0				
20:10	24.25		3.165	0	0.22	12.0				
20:20	24.5		3.165	0	0.22	12.0				
20:30	24.75		3.165	0	0.22	12.0				
20:40	25.0		3.165	0	0.22	12.0				
20:50	25.25		3.165	0	0.22	12.0				
21:00	25.5		3.165	0	0.22	12.0				
21:10	25.75		3.165	0	0.22	12.0				
21:20	26.0		3.165	0	0.22	12.0				
21:30	26.25		3.165	0	0.22	12.0				
21:40	26.5		3.165	0	0.22	12.0				
21:50	26.75		3.165	0	0.22	12.0				
22:00	27.0		3.165	0	0.22	12.0				
22:10	27.25		3.165	0	0.22	12.0				
22:20	27.5		3.165	0	0.22	12.0				
22:30	27.75		3.165	0	0.22	12.0				
22:40	28.0		3.165	0	0.22	12.0				
22:50	28.25		3.165	0	0.22	12.0				
23:00	28.5		3.165	0	0.22	12.0				
23:10	28.75		3.165	0	0.22	12.0				
23:20	29.0		3.165	0	0.22	12.0				
23:30	29.25		3.165	0	0.22	12.0				
23:40	29.5		3.165	0	0.22	12.0				
23:50	29.75		3.165	0	0.22	12.0				
00:00	30.0		3.165	0	0.22	12.0				

Equipment Used	Equipment Serial Number/ Identification Number
YSI { out #	
Reader	

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.



### Low-Flow Sampling Data Sheet

NW-50-42 (013)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41061619.00  
 DATE: 2/26/08  
 SAMPLER(S): M. Britos

air, 12.10, 35°F

DJW - 8.07 @ 41.627 elevation

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
10:50	4.64									PUMP ON
11:03	41.664	7.77	1.91	—	2.05	17.73	312.6	1.5		0
11:09	41.633	8.09	1.33	—	1.11	18.22	300.4			0.15
11:16	41.633	8.17	1.091	1.17	0.70	18.59	290.3			0.30
11:21	41.633	8.21	1.096	1.11	0.60	18.93	281.1			0.45
11:29	41.633	8.26	1.023	1.10	0.50	19.40	269.4			0.75
11:34	41.633	8.25	1.081	1.15	0.30	19.50	264.7			0.85
11:39	41.633	8.27	1.023	0.99	0.50	19.56	253.4			0.95
11:40										21.67 SAMPLE
12:19										SAMPLE COMPLETE TO 1 gal IPEE

Equipment Used	Equipment Serial Number/ Identification Number
YSI	3
Recorder	
conductivity meter	200701250

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MW. 50-66 (012)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
 DATE: 1/15/08  
 SAMPLER(S): M.B., A.A.

WATER QUALITY: *11.00 = 88060 200.00/0.01*

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
10:55	88.00									
10:10		KUM?	50							
10:5	88.30	7.2	2.365		3.34	7.57	124			0
10:20	88.29	7.20	2.448		2.7	7.56	135.5			0.05
10:30	88.70	7.3	2.347	0.59	2.07	20.00	125.9			0.25
10:40	88.90	7.3	2.481		2.03	20.24	113			0.30
10:50	88.70	7.30	2.527	0.5	2.02	20.44	114.4			0.50
10:55	88.70	7.30	2.527	0.5	2.02	20.44	114.4			0.50
10:59	88.70	7.30	2.633	0.51	2.05	20.55	117.2			0.60
11:00										
SAMPLE DAMAGED										

Equipment Used	Equipment Serial Number/ Identification Number
YSI } Set #	5
Reader }	
Turbidity meter	10070-354

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MW-50-66 (013)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41,0161619.00  
 DATE: 2/26/08  
 SAMPLER(S): M. Britton

**WATER QUALITY:**

3 mwd, ice, water 52°F  
 27 ft - 110 = 28067 elevation

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
10:50	82.66		PUMP	0.0						
11:03	87.74	7.43	2.525	-	3.40	18.27	334.2			0
11:09	87.52	7.43	2.524	-	3.31	17.83	324.0			0.01
11:15	87.76	7.41	2.528	3.49	3.31	17.42	312.4			
11:21	87.49	7.40	2.507	2.89	3.49	17.34	293.8			
11:28	87.39	7.40	2.500	2.28	3.67	17.62	284.9			0.15
11:33	87.43	7.39	2.514	3.44	3.52	17.86	272.8			0.18
11:38	87.43	7.39	2.511	4.14	3.75	18.00	272.5			0.19
11:43	87.54	7.39	2.517	2.22	3.63	17.83	269.8			0.20
11:47	87.50	7.39	2.519	2.1	3.78	17.85	267.7			0.21
11:51	87.73	7.38	2.520		3.74	17.83	266.0			0.22
11:52			START SAMPLE							
11:46			SAMPLE COMPLETE							

Equipment Used	Equipment Serial Number/ Identification Number
YS Pump	2
Flowmeter	50070254

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.



# Waterloo Sampling Data Sheet

MW-51-40 (005)

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

PROJECT NO: 41.0161619.00  
 DATE: 8/08  
 SAMPLER(S): M6

SAMPLING INTERVAL (depth in ft below top of casing)  
29.7 to 34.2

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 14.5

SAMPLING PORT  
40

TOTAL VOLUME PURGED:  
 \_\_\_\_\_ gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
04:26	0	7.48	121					20.50	2.0
04:33	0.5	7.98	114			17.0	22.2	20.00	2.0
04:40	1.0	7.01	113			17.0	22.4	19.50	2.0
04:47	1.5	7.01	113			17.0	22.4	19.50	2.0
04:54	2.0	7.01	113			17.0	22.4	19.50	2.0
05:01	2.5	7.01	113			17.0	22.4	19.50	2.0
05:08	3.0	7.01	113			17.0	22.4	19.50	2.0
05:15	3.5	7.01	113			17.0	22.4	19.50	2.0
05:22	4.0	7.01	113			17.0	22.4	19.50	2.0
05:29	4.5	7.01	113			17.0	22.4	19.50	2.0
05:36	5.0	7.01	113			17.0	22.4	19.50	2.0
05:43	5.5	7.01	113			17.0	22.4	19.50	2.0
05:50	6.0	7.01	113			17.0	22.4	19.50	2.0
05:57	6.5	7.01	113			17.0	22.4	19.50	2.0
06:04	7.0	7.01	113			17.0	22.4	19.50	2.0
06:11	7.5	7.01	113			17.0	22.4	19.50	2.0
06:18	8.0	7.01	113			17.0	22.4	19.50	2.0
06:25	8.5	7.01	113			17.0	22.4	19.50	2.0
06:32	9.0	7.01	113			17.0	22.4	19.50	2.0
06:39	9.5	7.01	113			17.0	22.4	19.50	2.0
06:46	10.0	7.01	113			17.0	22.4	19.50	2.0
06:53	10.5	7.01	113			17.0	22.4	19.50	2.0
07:00	11.0	7.01	113			17.0	22.4	19.50	2.0
07:07	11.5	7.01	113			17.0	22.4	19.50	2.0
07:14	12.0	7.01	113			17.0	22.4	19.50	2.0
07:21	12.5	7.01	113			17.0	22.4	19.50	2.0
07:28	13.0	7.01	113			17.0	22.4	19.50	2.0
07:35	13.5	7.01	113			17.0	22.4	19.50	2.0
07:42	14.0	7.01	113			17.0	22.4	19.50	2.0
07:49	14.5	7.01	113			17.0	22.4	19.50	2.0
07:56	15.0	7.01	113			17.0	22.4	19.50	2.0
08:03	15.5	7.01	113			17.0	22.4	19.50	2.0
08:10	16.0	7.01	113			17.0	22.4	19.50	2.0
08:17	16.5	7.01	113			17.0	22.4	19.50	2.0
08:24	17.0	7.01	113			17.0	22.4	19.50	2.0
08:31	17.5	7.01	113			17.0	22.4	19.50	2.0
08:38	18.0	7.01	113			17.0	22.4	19.50	2.0
08:45	18.5	7.01	113			17.0	22.4	19.50	2.0
08:52	19.0	7.01	113			17.0	22.4	19.50	2.0
08:59	19.5	7.01	113			17.0	22.4	19.50	2.0
09:06	20.0	7.01	113			17.0	22.4	19.50	2.0
09:13	20.5	7.01	113			17.0	22.4	19.50	2.0
09:20	21.0	7.01	113			17.0	22.4	19.50	2.0
09:27	21.5	7.01	113			17.0	22.4	19.50	2.0
09:34	22.0	7.01	113			17.0	22.4	19.50	2.0
09:41	22.5	7.01	113			17.0	22.4	19.50	2.0
09:48	23.0	7.01	113			17.0	22.4	19.50	2.0
09:55	23.5	7.01	113			17.0	22.4	19.50	2.0
10:02	24.0	7.01	113			17.0	22.4	19.50	2.0
10:09	24.5	7.01	113			17.0	22.4	19.50	2.0
10:16	25.0	7.01	113			17.0	22.4	19.50	2.0
10:23	25.5	7.01	113			17.0	22.4	19.50	2.0
10:30	26.0	7.01	113			17.0	22.4	19.50	2.0
10:37	26.5	7.01	113			17.0	22.4	19.50	2.0
10:44	27.0	7.01	113			17.0	22.4	19.50	2.0
10:51	27.5	7.01	113			17.0	22.4	19.50	2.0
10:58	28.0	7.01	113			17.0	22.4	19.50	2.0
11:05	28.5	7.01	113			17.0	22.4	19.50	2.0
11:12	29.0	7.01	113			17.0	22.4	19.50	2.0
11:19	29.5	7.01	113			17.0	22.4	19.50	2.0
11:26	30.0	7.01	113			17.0	22.4	19.50	2.0
11:33	30.5	7.01	113			17.0	22.4	19.50	2.0
11:40	31.0	7.01	113			17.0	22.4	19.50	2.0
11:47	31.5	7.01	113			17.0	22.4	19.50	2.0
11:54	32.0	7.01	113			17.0	22.4	19.50	2.0
12:01	32.5	7.01	113			17.0	22.4	19.50	2.0
12:08	33.0	7.01	113			17.0	22.4	19.50	2.0
12:15	33.5	7.01	113			17.0	22.4	19.50	2.0
12:22	34.0	7.01	113			17.0	22.4	19.50	2.0
12:29	34.5	7.01	113			17.0	22.4	19.50	2.0
12:36	35.0	7.01	113			17.0	22.4	19.50	2.0
12:43	35.5	7.01	113			17.0	22.4	19.50	2.0
12:50	36.0	7.01	113			17.0	22.4	19.50	2.0
12:57	36.5	7.01	113			17.0	22.4	19.50	2.0
13:04	37.0	7.01	113			17.0	22.4	19.50	2.0
13:11	37.5	7.01	113			17.0	22.4	19.50	2.0
13:18	38.0	7.01	113			17.0	22.4	19.50	2.0
13:25	38.5	7.01	113			17.0	22.4	19.50	2.0
13:32	39.0	7.01	113			17.0	22.4	19.50	2.0
13:39	39.5	7.01	113			17.0	22.4	19.50	2.0
13:46	40.0	7.01	113			17.0	22.4	19.50	2.0

Equipment Used	Equipment Serial Number/ Identification Number

NOTES AND OBSERVATIONS:





# Waterloo Sampling Data Sheet

MW-51-135 (003)

CLIENT: Entergy - IPEC  
SITE: Bushanan, NY  
WEATHER:

PROJECT NO: 410161-19 W  
DATE: 1/3/09  
SAMPLER S: MB

SAMPLING INTERVAL (depth in ft below top of casing):  
30.2 to 43.7

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 13.5

SAMPLING PORT:  
135

TOTAL VOLUME PURGED:  
\_\_\_\_\_ gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
10:30	0								40
10:35	0.35	6.80	2.100	0.0	0.0	20.5			
10:40	0.70	6.80	2.100	0.0	0.0	20.5			
10:45	1.05	6.80	2.100	0.0	0.0	20.5			
10:50	1.40	6.80	2.100	0.0	0.0	20.5			
10:55	1.75	6.80	2.100	0.0	0.0	20.5			
11:00	2.10	6.80	2.100	0.0	0.0	20.5			
11:05	2.45	6.80	2.100	0.0	0.0	20.5			
11:10	2.80	6.80	2.100	0.0	0.0	20.5			
11:15	3.15	6.80	2.100	0.0	0.0	20.5			
11:20	3.50	6.80	2.100	0.0	0.0	20.5			
11:25	3.85	6.80	2.100	0.0	0.0	20.5			
11:30	4.20	6.80	2.100	0.0	0.0	20.5			
11:35	4.55	6.80	2.100	0.0	0.0	20.5			
11:40	4.90	6.80	2.100	0.0	0.0	20.5			
11:45	5.25	6.80	2.100	0.0	0.0	20.5			
11:50	5.60	6.80	2.100	0.0	0.0	20.5			
11:55	5.95	6.80	2.100	0.0	0.0	20.5			
12:00	6.30	6.80	2.100	0.0	0.0	20.5			
12:05	6.65	6.80	2.100	0.0	0.0	20.5			
12:10	7.00	6.80	2.100	0.0	0.0	20.5			
12:15	7.35	6.80	2.100	0.0	0.0	20.5			
12:20	7.70	6.80	2.100	0.0	0.0	20.5			
12:25	8.05	6.80	2.100	0.0	0.0	20.5			
12:30	8.40	6.80	2.100	0.0	0.0	20.5			
12:35	8.75	6.80	2.100	0.0	0.0	20.5			
12:40	9.10	6.80	2.100	0.0	0.0	20.5			
12:45	9.45	6.80	2.100	0.0	0.0	20.5			
12:50	9.80	6.80	2.100	0.0	0.0	20.5			
12:55	10.15	6.80	2.100	0.0	0.0	20.5			
13:00	10.50	6.80	2.100	0.0	0.0	20.5			
13:05	10.85	6.80	2.100	0.0	0.0	20.5			
13:10	11.20	6.80	2.100	0.0	0.0	20.5			
13:15	11.55	6.80	2.100	0.0	0.0	20.5			
13:20	11.90	6.80	2.100	0.0	0.0	20.5			
13:25	12.25	6.80	2.100	0.0	0.0	20.5			
13:30	12.60	6.80	2.100	0.0	0.0	20.5			
13:35	12.95	6.80	2.100	0.0	0.0	20.5			
13:40	13.30	6.80	2.100	0.0	0.0	20.5			
13:45	13.65	6.80	2.100	0.0	0.0	20.5			
13:50	14.00	6.80	2.100	0.0	0.0	20.5			
13:55	14.35	6.80	2.100	0.0	0.0	20.5			
14:00	14.70	6.80	2.100	0.0	0.0	20.5			
14:05	15.05	6.80	2.100	0.0	0.0	20.5			
14:10	15.40	6.80	2.100	0.0	0.0	20.5			
14:15	15.75	6.80	2.100	0.0	0.0	20.5			
14:20	16.10	6.80	2.100	0.0	0.0	20.5			
14:25	16.45	6.80	2.100	0.0	0.0	20.5			
14:30	16.80	6.80	2.100	0.0	0.0	20.5			
14:35	17.15	6.80	2.100	0.0	0.0	20.5			
14:40	17.50	6.80	2.100	0.0	0.0	20.5			
14:45	17.85	6.80	2.100	0.0	0.0	20.5			
14:50	18.20	6.80	2.100	0.0	0.0	20.5			
14:55	18.55	6.80	2.100	0.0	0.0	20.5			
15:00	18.90	6.80	2.100	0.0	0.0	20.5			
15:05	19.25	6.80	2.100	0.0	0.0	20.5			
15:10	19.60	6.80	2.100	0.0	0.0	20.5			
15:15	19.95	6.80	2.100	0.0	0.0	20.5			
15:20	20.30	6.80	2.100	0.0	0.0	20.5			
15:25	20.65	6.80	2.100	0.0	0.0	20.5			
15:30	21.00	6.80	2.100	0.0	0.0	20.5			
15:35	21.35	6.80	2.100	0.0	0.0	20.5			
15:40	21.70	6.80	2.100	0.0	0.0	20.5			
15:45	22.05	6.80	2.100	0.0	0.0	20.5			
15:50	22.40	6.80	2.100	0.0	0.0	20.5			
15:55	22.75	6.80	2.100	0.0	0.0	20.5			
16:00	23.10	6.80	2.100	0.0	0.0	20.5			
16:05	23.45	6.80	2.100	0.0	0.0	20.5			
16:10	23.80	6.80	2.100	0.0	0.0	20.5			
16:15	24.15	6.80	2.100	0.0	0.0	20.5			
16:20	24.50	6.80	2.100	0.0	0.0	20.5			
16:25	24.85	6.80	2.100	0.0	0.0	20.5			
16:30	25.20	6.80	2.100	0.0	0.0	20.5			
16:35	25.55	6.80	2.100	0.0	0.0	20.5			
16:40	25.90	6.80	2.100	0.0	0.0	20.5			
16:45	26.25	6.80	2.100	0.0	0.0	20.5			
16:50	26.60	6.80	2.100	0.0	0.0	20.5			
16:55	26.95	6.80	2.100	0.0	0.0	20.5			
17:00	27.30	6.80	2.100	0.0	0.0	20.5			
17:05	27.65	6.80	2.100	0.0	0.0	20.5			
17:10	28.00	6.80	2.100	0.0	0.0	20.5			
17:15	28.35	6.80	2.100	0.0	0.0	20.5			
17:20	28.70	6.80	2.100	0.0	0.0	20.5			
17:25	29.05	6.80	2.100	0.0	0.0	20.5			
17:30	29.40	6.80	2.100	0.0	0.0	20.5			
17:35	29.75	6.80	2.100	0.0	0.0	20.5			
17:40	30.10	6.80	2.100	0.0	0.0	20.5			
17:45	30.45	6.80	2.100	0.0	0.0	20.5			
17:50	30.80	6.80	2.100	0.0	0.0	20.5			
17:55	31.15	6.80	2.100	0.0	0.0	20.5			
18:00	31.50	6.80	2.100	0.0	0.0	20.5			
18:05	31.85	6.80	2.100	0.0	0.0	20.5			
18:10	32.20	6.80	2.100	0.0	0.0	20.5			
18:15	32.55	6.80	2.100	0.0	0.0	20.5			
18:20	32.90	6.80	2.100	0.0	0.0	20.5			
18:25	33.25	6.80	2.100	0.0	0.0	20.5			
18:30	33.60	6.80	2.100	0.0	0.0	20.5			
18:35	33.95	6.80	2.100	0.0	0.0	20.5			
18:40	34.30	6.80	2.100	0.0	0.0	20.5			
18:45	34.65	6.80	2.100	0.0	0.0	20.5			
18:50	35.00	6.80	2.100	0.0	0.0	20.5			
18:55	35.35	6.80	2.100	0.0	0.0	20.5			
19:00	35.70	6.80	2.100	0.0	0.0	20.5			
19:05	36.05	6.80	2.100	0.0	0.0	20.5			
19:10	36.40	6.80	2.100	0.0	0.0	20.5			
19:15	36.75	6.80	2.100	0.0	0.0	20.5			
19:20	37.10	6.80	2.100	0.0	0.0	20.5			
19:25	37.45	6.80	2.100	0.0	0.0	20.5			
19:30	37.80	6.80	2.100	0.0	0.0	20.5			
19:35	38.15	6.80	2.100	0.0	0.0	20.5			
19:40	38.50	6.80	2.100	0.0	0.0	20.5			
19:45	38.85	6.80	2.100	0.0	0.0	20.5			
19:50	39.20	6.80	2.100	0.0	0.0	20.5			
19:55	39.55	6.80	2.100	0.0	0.0	20.5			
20:00	39.90	6.80	2.100	0.0	0.0	20.5			
20:05	40.25	6.80	2.100	0.0	0.0	20.5			
20:10	40.60	6.80	2.100	0.0	0.0	20.5			
20:15	40.95	6.80	2.100	0.0	0.0	20.5			
20:20	41.30	6.80	2.100	0.0	0.0	20.5			
20:25	41.65	6.80	2.100	0.0	0.0	20.5			
20:30	42.00	6.80	2.100	0.0	0.0	20.5			
20:35	42.35	6.80	2.100	0.0	0.0	20.5			
20:40	42.70	6.80	2.100	0.0	0.0	20.5			
20:45	43.05	6.80	2.100	0.0	0.0	20.5			
20:50	43.40	6.80	2.100	0.0	0.0	20.5			
20:55	43.75	6.80	2.100	0.0	0.0	20.5			

Equipment Used	Equipment Serial Number / Identification Number
20	4

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-31-63(005)

CLIENT: Entergy - IPEC  
SIT: Buchanan, NY

PROJECT NO: 41167819 W  
DATE: 1/8/08  
SAMPLER(S): MB

SAMPLING INTERVAL (depth in ft below top of casing):  
154.7 to 166.2

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 11.5

SAMPLING PORT:  
163

TOTAL VOLUME PURGED:  
\_\_\_\_\_ gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
1:35	0							7:27	46
1:37	0.05	7.90	270m		0.0	27.0	-300		
1:38	0.10	7.76	270m	0.07	0.0	27.0	-300		
1:39	0.15	7.62	270m	0.14	0.0	27.0	-300		
1:40	0.20	7.48	270m	0.21	0.0	27.0	-300		
1:41	0.25	7.34	270m	0.28	0.0	27.0	-300		
1:42	0.30	7.20	270m	0.35	0.0	27.0	-300		
1:43	0.35	7.06	270m	0.42	0.0	27.0	-300		
1:44	0.40	6.92	270m	0.49	0.0	27.0	-300		
1:45	0.45	6.78	270m	0.56	0.0	27.0	-300		
1:46	0.50	6.64	270m	0.63	0.0	27.0	-300		
1:47	0.55	6.50	270m	0.70	0.0	27.0	-300		
1:48	0.60	6.36	270m	0.77	0.0	27.0	-300		
1:49	0.65	6.22	270m	0.84	0.0	27.0	-300		
1:50	0.70	6.08	270m	0.91	0.0	27.0	-300		
1:51	0.75	5.94	270m	0.98	0.0	27.0	-300		
1:52	0.80	5.80	270m	1.05	0.0	27.0	-300		
1:53	0.85	5.66	270m	1.12	0.0	27.0	-300		
1:54	0.90	5.52	270m	1.19	0.0	27.0	-300		
1:55	0.95	5.38	270m	1.26	0.0	27.0	-300		
1:56	1.00	5.24	270m	1.33	0.0	27.0	-300		
1:57	1.05	5.10	270m	1.40	0.0	27.0	-300		
1:58	1.10	4.96	270m	1.47	0.0	27.0	-300		
1:59	1.15	4.82	270m	1.54	0.0	27.0	-300		
2:00	1.20	4.68	270m	1.61	0.0	27.0	-300		
2:01	1.25	4.54	270m	1.68	0.0	27.0	-300		
2:02	1.30	4.40	270m	1.75	0.0	27.0	-300		
2:03	1.35	4.26	270m	1.82	0.0	27.0	-300		
2:04	1.40	4.12	270m	1.89	0.0	27.0	-300		
2:05	1.45	3.98	270m	1.96	0.0	27.0	-300		
2:06	1.50	3.84	270m	2.03	0.0	27.0	-300		
2:07	1.55	3.70	270m	2.10	0.0	27.0	-300		
2:08	1.60	3.56	270m	2.17	0.0	27.0	-300		
2:09	1.65	3.42	270m	2.24	0.0	27.0	-300		
2:10	1.70	3.28	270m	2.31	0.0	27.0	-300		
2:11	1.75	3.14	270m	2.38	0.0	27.0	-300		
2:12	1.80	3.00	270m	2.45	0.0	27.0	-300		
2:13	1.85	2.86	270m	2.52	0.0	27.0	-300		
2:14	1.90	2.72	270m	2.59	0.0	27.0	-300		
2:15	1.95	2.58	270m	2.66	0.0	27.0	-300		
2:16	2.00	2.44	270m	2.73	0.0	27.0	-300		
2:17	2.05	2.30	270m	2.80	0.0	27.0	-300		
2:18	2.10	2.16	270m	2.87	0.0	27.0	-300		
2:19	2.15	2.02	270m	2.94	0.0	27.0	-300		
2:20	2.20	1.88	270m	3.01	0.0	27.0	-300		
2:21	2.25	1.74	270m	3.08	0.0	27.0	-300		
2:22	2.30	1.60	270m	3.15	0.0	27.0	-300		
2:23	2.35	1.46	270m	3.22	0.0	27.0	-300		
2:24	2.40	1.32	270m	3.29	0.0	27.0	-300		
2:25	2.45	1.18	270m	3.36	0.0	27.0	-300		
2:26	2.50	1.04	270m	3.43	0.0	27.0	-300		
2:27	2.55	0.90	270m	3.50	0.0	27.0	-300		
2:28	2.60	0.76	270m	3.57	0.0	27.0	-300		
2:29	2.65	0.62	270m	3.64	0.0	27.0	-300		
2:30	2.70	0.48	270m	3.71	0.0	27.0	-300		
2:31	2.75	0.34	270m	3.78	0.0	27.0	-300		
2:32	2.80	0.20	270m	3.85	0.0	27.0	-300		
2:33	2.85	0.06	270m	3.92	0.0	27.0	-300		
2:34	2.90		270m	3.99	0.0	27.0	-300		
2:35	2.95		270m	4.06	0.0	27.0	-300		
2:36	3.00		270m	4.13	0.0	27.0	-300		
2:37	3.05		270m	4.20	0.0	27.0	-300		
2:38	3.10		270m	4.27	0.0	27.0	-300		
2:39	3.15		270m	4.34	0.0	27.0	-300		
2:40	3.20		270m	4.41	0.0	27.0	-300		
2:41	3.25		270m	4.48	0.0	27.0	-300		
2:42	3.30		270m	4.55	0.0	27.0	-300		
2:43	3.35		270m	4.62	0.0	27.0	-300		
2:44	3.40		270m	4.69	0.0	27.0	-300		
2:45	3.45		270m	4.76	0.0	27.0	-300		
2:46	3.50		270m	4.83	0.0	27.0	-300		
2:47	3.55		270m	4.90	0.0	27.0	-300		
2:48	3.60		270m	4.97	0.0	27.0	-300		
2:49	3.65		270m	5.04	0.0	27.0	-300		
2:50	3.70		270m	5.11	0.0	27.0	-300		
2:51	3.75		270m	5.18	0.0	27.0	-300		
2:52	3.80		270m	5.25	0.0	27.0	-300		
2:53	3.85		270m	5.32	0.0	27.0	-300		
2:54	3.90		270m	5.39	0.0	27.0	-300		
2:55	3.95		270m	5.46	0.0	27.0	-300		
2:56	4.00		270m	5.53	0.0	27.0	-300		
2:57	4.05		270m	5.60	0.0	27.0	-300		
2:58	4.10		270m	5.67	0.0	27.0	-300		
2:59	4.15		270m	5.74	0.0	27.0	-300		
3:00	4.20		270m	5.81	0.0	27.0	-300		

Equipment Used	Equipment Serial Number Identification Number
YSI 6000	1000
YSI 6000	1000
YSI 6000	1000
YSI 6000	1000

NOTES AND OBSERVATIONS:



# Low-Flow Sampling Data Sheet MW-53-82 (006)

CLIENT: Energy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 4:0161619.00  
 DATE: 1/21/08  
 SAMPLER(S): Miguel Britos

Cold 17°F

WATER QUALITY: 59.84 = 22.23

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1000	59.84									
1110	21.77	7.15	2.387	202.4	6.85	14.9	72.8			0.05
1118	21.63	7.33	2.335	216.1	6.29	13.49	84.0			0.51
1123	21.70	7.62	2.405	195.8	6.06	13.92	71.2			0.75
1127	21.91	7.60	2.427	174.2	6.96	14.47	63.2			0.85
1137	21.63	7.62	2.393	150.9	7.01	14.85	11.9			1.0
1142	21.15	7.64	2.424	127.7	7.19	13.92	106.2			1.3
1147	21.27	7.66	2.429	115.2	6.28	12.80	104.4			1.5
1150	21.20	7.69	2.417	120.4	7.25	12.00	100.8			1.7
1153	21.87	7.67	2.416	94.0	7.20	12.07	95.1			1.9
1158	21.87	7.68	2.419	82.6	7.18	11.95	92.5			2.1
1202	21.88	7.69	2.420	70.2	7.21	11.85	96.9	✓		2.2
1205	STOP - NO/NOPE									
1252	SAMPLE COMPLETED									
1252	SPLIT SAMPLE - 1-10 IPEC									
	1-10 IPEC									
	1-10 IPEC									
	1-10 IPEC									

Equipment Used	Equipment Serial Number/ Identification Number
YSI { Set #	3
Reader	
Turbidity meter	200224243

NOTES AND OBSERVATIONS:  
 All depth to water measurements are taken from top of casing.

Modified Traditional Purge  
Sampling Data Sheet

MW-53-120 (006)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
DATE: 12-10-08  
SAMPLER(S): MB

Cond 17°F

WATER COLUMN HEIGHT (ft)

$$\frac{120.0}{DTB} - \frac{60.00}{DTW} = \frac{60.0}{\text{Well Column Height}}$$

Well Diameter: 1 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

$$\text{Water Column Height } \frac{60}{\text{Multiplier}} = \frac{2.46}{\text{Well Volume}} \text{ gallons}$$

$$\text{DESIGNED PURGE VOLUME: } \frac{2.46}{\text{Multiplier}} \times 1.5 = \frac{3.69}{\text{Designed Purge Volume}} \text{ gallons}$$

TOTAL VOLUME PURGED: 3.69 gal

PURGE METHOD: Waterra/ Footvalve

WATER QUALITY:

Time	Volume Purged (gal)	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
0905	0	PUMP ON								
0910	0.5		7.00	293.0	399.0	2.02	7.20	269.7		
0920	1.0		7.00	295	408.0	1.0	7.20	234.5		
0925	1.5		7.11	290.0	408.0	1.0	7.20	214.8		
0930	2.0		7.2	272.0	461.0	1.0	10.74	203.1		
0936	2.1		7.3	151.1	689.7	1.0	11.45	184.0		
0937	2.1		7.15	154.7	857.0	1.0	12.70	157.4		
0943	2.1		7.6	159.0	1100.0	1.0	12.22	102.5		
0944	2.1		7.15	162.0	1100.0	1.0	13.53	96.2		
0952	3.5		7.16	162.6	1100.0	1.0	13.57	95.4		
0953		PUMP OFF								
1000		START GWT SAMPLE								
1045		START CONDUCTIVITY								

Equipment Used	Equipment Serial Number/ Identification Number
YSI Conductivity meter	4
Turbidity meter	200724243

NOTES AND OBSERVATIONS:

All depth to water measurements are taken from top of casing.



# Waterloo Sampling Data Sheet

MW-54-37 (004)

CLIENT: Emery, IFF  
SITE: Buffalo, NY  
WEATHER: Cloudy

PROJECT NO: 40000000  
DATE: 1/15/08  
SAMPLER S: M.B., A.A.

SAMPLING INTERVAL (depth in ft below top of casing):  
24.0 to 42.0  
SAMPLING PORT: 37

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length: 13

TOTAL VOLUME PURGED:  
3.3 gal

PURGE RATE: variable gal/min

6

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:03	0.00	7.3	1.046	0	1.228	11.29	21.9	24.2	20
11:07	0.76	7.18	1.051	0	1.207	11.26	21.7	24.3	20
11:11	1.52	7.28	1.059	0	1.207	11.27	21.9	24.3	20
11:15	2.28	7.20	1.055	0	1.207	11.28	21.7	24.3	20
11:19	3.04	7.25	1.052	0	1.203	11.23	21.21	24.3	20
11:23	3.80	7.24	1.052	0	1.19	11.23	21.4	24.3	20
11:27	4.56	7.25	1.052	0	1.185	11.21	21.4	24.3	20
11:31	5.32	7.25	1.052	0	1.185	11.21	21.4	24.3	20
11:35	6.08	7.24	1.052	0	1.185	11.21	21.4	24.3	20
11:39	6.84	7.24	1.052	0	1.185	11.21	21.4	24.3	20
11:43	7.60	7.24	1.052	0	1.185	11.21	21.4	24.3	20
11:47	8.36	7.24	1.052	0	1.185	11.21	21.4	24.3	20
11:51	9.12	7.24	1.052	0	1.185	11.21	21.4	24.3	20
11:55	9.88	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:00	10.64	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:05	11.40	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:10	12.16	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:15	12.92	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:20	13.68	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:25	14.44	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:30	15.20	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:35	15.96	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:40	16.72	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:45	17.48	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:50	18.24	7.24	1.052	0	1.185	11.21	21.4	24.3	20
12:55	19.00	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:00	19.76	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:05	20.52	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:10	21.28	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:15	22.04	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:20	22.80	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:25	23.56	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:30	24.32	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:35	25.08	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:40	25.84	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:45	26.60	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:50	27.36	7.24	1.052	0	1.185	11.21	21.4	24.3	20
13:55	28.12	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:00	28.88	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:05	29.64	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:10	30.40	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:15	31.16	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:20	31.92	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:25	32.68	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:30	33.44	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:35	34.20	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:40	34.96	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:45	35.72	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:50	36.48	7.24	1.052	0	1.185	11.21	21.4	24.3	20
14:55	37.24	7.24	1.052	0	1.185	11.21	21.4	24.3	20
15:00	38.00	7.24	1.052	0	1.185	11.21	21.4	24.3	20
15:05	38.76	7.24	1.052	0	1.185	11.21	21.4	24.3	20
15:10	39.52	7.24	1.052	0	1.185	11.21	21.4	24.3	20
15:15	40.28	7.24	1.052	0	1.185	11.21	21.4	24.3	20
15:20	41.04	7.24	1.052	0	1.185	11.21	21.4	24.3	20
15:25	41.80	7.24	1.052	0	1.185	11.21	21.4	24.3	20
15:30	42.56	7.24	1.052	0	1.185	11.21	21.4	24.3	20

Equipment Used	Equipment Serial Number Identification Number
YSI Reader & Set #	4
Turbidity meter	40000000

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-54-58 (004)

CLIENT: Energy IPE  
SITE: Buchanan, NY  
WEATHER:

PROJECT No: \_\_\_\_\_  
DATE: 1/15/08  
SAMPLER S: M.B., A A

SAMPLING INTERVAL (depth in ft below top of casing):  
51.5 to 64.0  
SAMPLING PORT: 58

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 12.5

TOTAL VOLUME PURGED: \_\_\_\_\_ gal

PURGE RATE: variable gal/min

5

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:33		7.2	1591	0	2.46	20.60	172.1	17.2	28
11:34	0.30	7.2	1591	0	2.46	20.60	172.1	17.2	28
11:35	0.30	7.2	1576	0	2.47	20.60	172.1	17.2	28
11:36	0.30	7.2	1575	0	2.21	20.93	175.8	17.5	28
11:37	0.30	7.2	1577	0	2.27	20.96	176.4	17.6	28
11:38	0.30	7.2	1576	0	2.2 =	20.87	176.2	17.6	28
11:39	0.30	7.2	1577	0	2.24	20.82	176.2	17.6	28
11:40	0.30	7.2	1577	0	2.15	20.82	176.2	17.6	28
11:41	0.30	7.2	1578	0	2.14	20.82	176.4	17.6	28
11:42	0.30	7.2	1575	0	2.16	20.82	176.4	17.6	28
11:43	0.30	7.2	1577	0	2.14	20.82	176.4	17.6	28
11:44	0.30	7.2	1577	0	2.13	20.82	176.4	17.6	28
11:45	0.30	7.2	1576	0	2.12	20.82	176.4	17.6	28
11:46	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:47	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:48	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:49	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:50	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:51	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:52	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:53	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:54	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:55	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:56	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:57	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:58	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
11:59	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28
12:00	0.30	7.2	1572	0	2.12	20.82	176.4	17.6	28

Equipment Used	Equipment Serial Number Identification Number
YSI Reader & Set #	3
Turbidity meter	1030

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

NW-54-123 (004)

CLIENT: Entergy - IPE  
 SITE: Buchanan, NY  
 WEATHER:                     

PROJECT NO:                       
 DATE: 1/15/08  
 SAMPLER S: M.B., A.A.

SAMPLING INTERVAL (depth in ft below top of casing):  
116.0 to 126.0  
 SAMPLING PORT: 123

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length: 10

TOTAL VOLUME PURGED:  
3 gal

PURGE RATE: variable gal/min 4 PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
7:42	0.3	7.11	1652	0	0.74	20.57	-162.8		
7:43	0.60	7.11	1654	0	0.70	20.15	-162.8		
7:54	1.0	7.04	1648	0	0.70	21.26	-165.0		
7:55	1.25	7.12	1650	0	0.72	21.24	-161.7		
7:56	1.60	7.17	1653	0	0.72	21.73	-159.1		
7:57	2.0	7.23	1655	0	0.72	21.75	-159.1		
7:58	2.35	7.24	1658	0	0.72	21.75	-159.1		
7:59	2.75	7.24	1652	0	0.72	21.75	-159.1		
7:59	3.0	7.25	1656	0	0.70	21.70	-159.1		
7:59	3.40	7.25	1656	0	0.70	21.70	-159.1		
7:59	3.80	7.25	1656	0	0.70	21.70	-159.1		
7:59	4.20	7.25	1656	0	0.70	21.70	-159.1		
7:59	4.60	7.25	1656	0	0.70	21.70	-159.1		
7:59	5.00	7.25	1656	0	0.70	21.70	-159.1		
7:59	5.40	7.25	1656	0	0.70	21.70	-159.1		
7:59	5.80	7.25	1656	0	0.70	21.70	-159.1		
7:59	6.20	7.25	1656	0	0.70	21.70	-159.1		
7:59	6.60	7.25	1656	0	0.70	21.70	-159.1		
7:59	7.00	7.25	1656	0	0.70	21.70	-159.1		
7:59	7.40	7.25	1656	0	0.70	21.70	-159.1		
7:59	7.80	7.25	1656	0	0.70	21.70	-159.1		
7:59	8.20	7.25	1656	0	0.70	21.70	-159.1		
7:59	8.60	7.25	1656	0	0.70	21.70	-159.1		
7:59	9.00	7.25	1656	0	0.70	21.70	-159.1		
7:59	9.40	7.25	1656	0	0.70	21.70	-159.1		
7:59	9.80	7.25	1656	0	0.70	21.70	-159.1		
7:59	10.20	7.25	1656	0	0.70	21.70	-159.1		
7:59	10.60	7.25	1656	0	0.70	21.70	-159.1		
7:59	11.00	7.25	1656	0	0.70	21.70	-159.1		
7:59	11.40	7.25	1656	0	0.70	21.70	-159.1		
7:59	11.80	7.25	1656	0	0.70	21.70	-159.1		
7:59	12.20	7.25	1656	0	0.70	21.70	-159.1		
7:59	12.60	7.25	1656	0	0.70	21.70	-159.1		

Equipment Used	Equipment Serial Number Identification Number
YSI 4 Set #	
Reader	
Turbidity meter	

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-54-144 (064)

CLIENT: Entergy - IPE  
SITE: Burlington, NY  
WEATHER: Partly Cloudy

PROJECT No: 41006419  
DATE: 1/15/08  
SAMPLER S: M.D., A.A.

SAMPLING INTERVAL (depth in ft below top of casing):  
135.0 to 155.5

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 20.5

SAMPLING PORT:  
144

TOTAL VOLUME PURGED:  
2.4 gal

PURGE RATE: variable gal/min.      3      PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
7:00	0.00	7.00	1600	0	0.00	20.00	100		60
7:01	0.05	7.00	1600	0	0.00	20.00	100		
7:02	0.10	7.00	1600	0	0.00	20.00	100		
7:03	0.15	7.00	1600	0	0.00	20.00	100		
7:04	0.20	7.00	1600	0	0.00	20.00	100		
7:05	0.25	7.00	1600	0	0.00	20.00	100		
7:06	0.30	7.00	1600	0	0.00	20.00	100		
7:07	0.35	7.00	1600	0	0.00	20.00	100		
7:08	0.40	7.00	1600	0	0.00	20.00	100		
7:09	0.45	7.00	1600	0	0.00	20.00	100		
7:10	0.50	7.00	1600	0	0.00	20.00	100		
7:11	0.55	7.00	1600	0	0.00	20.00	100		
7:12	0.60	7.00	1600	0	0.00	20.00	100		
7:13	0.65	7.00	1600	0	0.00	20.00	100		
7:14	0.70	7.00	1600	0	0.00	20.00	100		
7:15	0.75	7.00	1600	0	0.00	20.00	100		
7:16	0.80	7.00	1600	0	0.00	20.00	100		
7:17	0.85	7.00	1600	0	0.00	20.00	100		
7:18	0.90	7.00	1600	0	0.00	20.00	100		
7:19	0.95	7.00	1600	0	0.00	20.00	100		
7:20	1.00	7.00	1600	0	0.00	20.00	100		
7:21	1.05	7.00	1600	0	0.00	20.00	100		
7:22	1.10	7.00	1600	0	0.00	20.00	100		
7:23	1.15	7.00	1600	0	0.00	20.00	100		
7:24	1.20	7.00	1600	0	0.00	20.00	100		
7:25	1.25	7.00	1600	0	0.00	20.00	100		
7:26	1.30	7.00	1600	0	0.00	20.00	100		
7:27	1.35	7.00	1600	0	0.00	20.00	100		
7:28	1.40	7.00	1600	0	0.00	20.00	100		
7:29	1.45	7.00	1600	0	0.00	20.00	100		
7:30	1.50	7.00	1600	0	0.00	20.00	100		
7:31	1.55	7.00	1600	0	0.00	20.00	100		
7:32	1.60	7.00	1600	0	0.00	20.00	100		
7:33	1.65	7.00	1600	0	0.00	20.00	100		
7:34	1.70	7.00	1600	0	0.00	20.00	100		
7:35	1.75	7.00	1600	0	0.00	20.00	100		
7:36	1.80	7.00	1600	0	0.00	20.00	100		
7:37	1.85	7.00	1600	0	0.00	20.00	100		
7:38	1.90	7.00	1600	0	0.00	20.00	100		
7:39	1.95	7.00	1600	0	0.00	20.00	100		
7:40	2.00	7.00	1600	0	0.00	20.00	100		

Equipment Used	Equipment Serial Number Identification Number
YSI 4 Set #	21
Reader	
Turbidity meter	

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

NW-54-173 (004)

CLIENT: Energy - IPE  
 SITE: Iron Mountain, NY  
 WEATHER: cloudy, 27°

PROJECT NO:                       
 DATE: 1/15/08  
 SAMPLER S: M.D., A.A.

SAMPLING INTERVAL (depth in ft below top of casing):  
170.5 "      "      182.0  
 SAMPLING PORT: 173

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length: 11.5

TOTAL VOLUME PURGED:  
225 gal

PURGE RATE: variable gal/min.      2      PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
6:30	0.25	7.6	152	0	0.19	21.02	-209.9		
6:31	0.5	7.6	154	0	0.19	21.02	-209.9		
6:32	0.75	7.6	154	0	0.19	21.02	-209.9		
6:33	1.0	7.6	154	0	0.19	21.02	-209.9		
6:34	1.25	7.6	154	0	0.19	21.02	-209.9		
6:35	1.5	7.6	154	0	0.19	21.02	-209.9		
6:36	1.75	7.6	154	0	0.19	21.02	-209.9		
6:37	2.0	7.6	154	0	0.19	21.02	-209.9		
6:38	2.25	7.6	154	0	0.19	21.02	-209.9		
6:39	2.5	7.6	154	0	0.19	21.02	-209.9		
6:40	2.75	7.6	154	0	0.19	21.02	-209.9		
6:41	3.0	7.6	154	0	0.19	21.02	-209.9		
6:42	3.25	7.6	154	0	0.19	21.02	-209.9		
6:43	3.5	7.6	154	0	0.19	21.02	-209.9		
6:44	3.75	7.6	154	0	0.19	21.02	-209.9		
6:45	4.0	7.6	154	0	0.19	21.02	-209.9		
6:46	4.25	7.6	154	0	0.19	21.02	-209.9		
6:47	4.5	7.6	154	0	0.19	21.02	-209.9		
6:48	4.75	7.6	154	0	0.19	21.02	-209.9		
6:49	5.0	7.6	154	0	0.19	21.02	-209.9		
6:50	5.25	7.6	154	0	0.19	21.02	-209.9		
6:51	5.5	7.6	154	0	0.19	21.02	-209.9		
6:52	5.75	7.6	154	0	0.19	21.02	-209.9		
6:53	6.0	7.6	154	0	0.19	21.02	-209.9		
6:54	6.25	7.6	154	0	0.19	21.02	-209.9		
6:55	6.5	7.6	154	0	0.19	21.02	-209.9		
6:56	6.75	7.6	154	0	0.19	21.02	-209.9		
6:57	7.0	7.6	154	0	0.19	21.02	-209.9		
6:58	7.25	7.6	154	0	0.19	21.02	-209.9		
6:59	7.5	7.6	154	0	0.19	21.02	-209.9		
7:00	7.75	7.6	154	0	0.19	21.02	-209.9		
7:01	8.0	7.6	154	0	0.19	21.02	-209.9		
7:02	8.25	7.6	154	0	0.19	21.02	-209.9		
7:03	8.5	7.6	154	0	0.19	21.02	-209.9		
7:04	8.75	7.6	154	0	0.19	21.02	-209.9		
7:05	9.0	7.6	154	0	0.19	21.02	-209.9		
7:06	9.25	7.6	154	0	0.19	21.02	-209.9		
7:07	9.5	7.6	154	0	0.19	21.02	-209.9		
7:08	9.75	7.6	154	0	0.19	21.02	-209.9		
7:09	10.0	7.6	154	0	0.19	21.02	-209.9		
7:10	10.25	7.6	154	0	0.19	21.02	-209.9		
7:11	10.5	7.6	154	0	0.19	21.02	-209.9		
7:12	10.75	7.6	154	0	0.19	21.02	-209.9		
7:13	11.0	7.6	154	0	0.19	21.02	-209.9		
7:14	11.25	7.6	154	0	0.19	21.02	-209.9		
7:15	11.5	7.6	154	0	0.19	21.02	-209.9		

Equipment Used	Equipment Serial Number Identification Number
YSI 4 Set #	
Reader	
Turbidity meter	

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

NIW-54-190 (004)

CLIENT: Entergy - IPI  
 SITE: Buchanan, NY  
 WEATHER: Cloudy with rain

PROJECT No: 4-10000000  
 DATE: 1/15/08  
 SAMPLERS: M.B., A.A.

SAMPLING INTERVAL (depth in ft below top of casing):  
185.0 to 203.6  
 SAMPLING PORT: 190

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length: 18.6

TOTAL VOLUME PURGED:  
3.48 gal

PURGE RATE: variable gal/min

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
9:30	1.10	6.31	1.708	0	6.19	21.06	25.8	27.7	30
9:35	2.25	6.31	1.708	0	6.19	21.06	25.8		
9:40	3.40	6.31	1.708	0	6.19	21.06	25.8		
9:45	4.55	6.31	1.708	0	6.19	21.06	25.8		
9:50	5.70	6.31	1.708	0	6.19	21.06	25.8		
9:55	6.85	6.31	1.708	0	6.19	21.06	25.8		
10:00	8.00	6.31	1.708	0	6.19	21.06	25.8		
10:05	9.15	6.31	1.708	0	6.19	21.06	25.8		
10:10	10.30	6.31	1.708	0	6.19	21.06	25.8		
10:15	11.45	6.31	1.708	0	6.19	21.06	25.8		
10:20	12.60	6.31	1.708	0	6.19	21.06	25.8		
10:25	13.75	6.31	1.708	0	6.19	21.06	25.8		
10:30	14.90	6.31	1.708	0	6.19	21.06	25.8		
10:35	16.05	6.31	1.708	0	6.19	21.06	25.8		
10:40	17.20	6.31	1.708	0	6.19	21.06	25.8		
10:45	18.35	6.31	1.708	0	6.19	21.06	25.8		
10:50	19.50	6.31	1.708	0	6.19	21.06	25.8		
10:55	20.65	6.31	1.708	0	6.19	21.06	25.8		
11:00	21.80	6.31	1.708	0	6.19	21.06	25.8		
11:05	22.95	6.31	1.708	0	6.19	21.06	25.8		
11:10	24.10	6.31	1.708	0	6.19	21.06	25.8		
11:15	25.25	6.31	1.708	0	6.19	21.06	25.8		
11:20	26.40	6.31	1.708	0	6.19	21.06	25.8		
11:25	27.55	6.31	1.708	0	6.19	21.06	25.8		
11:30	28.70	6.31	1.708	0	6.19	21.06	25.8		
11:35	29.85	6.31	1.708	0	6.19	21.06	25.8		
11:40	31.00	6.31	1.708	0	6.19	21.06	25.8		
11:45	32.15	6.31	1.708	0	6.19	21.06	25.8		
11:50	33.30	6.31	1.708	0	6.19	21.06	25.8		
11:55	34.45	6.31	1.708	0	6.19	21.06	25.8		
12:00	35.60	6.31	1.708	0	6.19	21.06	25.8		
12:05	36.75	6.31	1.708	0	6.19	21.06	25.8		
12:10	37.90	6.31	1.708	0	6.19	21.06	25.8		
12:15	39.05	6.31	1.708	0	6.19	21.06	25.8		
12:20	40.20	6.31	1.708	0	6.19	21.06	25.8		
12:25	41.35	6.31	1.708	0	6.19	21.06	25.8		
12:30	42.50	6.31	1.708	0	6.19	21.06	25.8		
12:35	43.65	6.31	1.708	0	6.19	21.06	25.8		
12:40	44.80	6.31	1.708	0	6.19	21.06	25.8		
12:45	45.95	6.31	1.708	0	6.19	21.06	25.8		
12:50	47.10	6.31	1.708	0	6.19	21.06	25.8		
12:55	48.25	6.31	1.708	0	6.19	21.06	25.8		
13:00	49.40	6.31	1.708	0	6.19	21.06	25.8		
13:05	50.55	6.31	1.708	0	6.19	21.06	25.8		
13:10	51.70	6.31	1.708	0	6.19	21.06	25.8		
13:15	52.85	6.31	1.708	0	6.19	21.06	25.8		
13:20	54.00	6.31	1.708	0	6.19	21.06	25.8		
13:25	55.15	6.31	1.708	0	6.19	21.06	25.8		
13:30	56.30	6.31	1.708	0	6.19	21.06	25.8		
13:35	57.45	6.31	1.708	0	6.19	21.06	25.8		
13:40	58.60	6.31	1.708	0	6.19	21.06	25.8		
13:45	59.75	6.31	1.708	0	6.19	21.06	25.8		
13:50	60.90	6.31	1.708	0	6.19	21.06	25.8		
13:55	62.05	6.31	1.708	0	6.19	21.06	25.8		
14:00	63.20	6.31	1.708	0	6.19	21.06	25.8		
14:05	64.35	6.31	1.708	0	6.19	21.06	25.8		
14:10	65.50	6.31	1.708	0	6.19	21.06	25.8		
14:15	66.65	6.31	1.708	0	6.19	21.06	25.8		
14:20	67.80	6.31	1.708	0	6.19	21.06	25.8		
14:25	68.95	6.31	1.708	0	6.19	21.06	25.8		
14:30	70.10	6.31	1.708	0	6.19	21.06	25.8		
14:35	71.25	6.31	1.708	0	6.19	21.06	25.8		
14:40	72.40	6.31	1.708	0	6.19	21.06	25.8		
14:45	73.55	6.31	1.708	0	6.19	21.06	25.8		
14:50	74.70	6.31	1.708	0	6.19	21.06	25.8		
14:55	75.85	6.31	1.708	0	6.19	21.06	25.8		
15:00	77.00	6.31	1.708	0	6.19	21.06	25.8		
15:05	78.15	6.31	1.708	0	6.19	21.06	25.8		
15:10	79.30	6.31	1.708	0	6.19	21.06	25.8		
15:15	80.45	6.31	1.708	0	6.19	21.06	25.8		
15:20	81.60	6.31	1.708	0	6.19	21.06	25.8		
15:25	82.75	6.31	1.708	0	6.19	21.06	25.8		
15:30	83.90	6.31	1.708	0	6.19	21.06	25.8		
15:35	85.05	6.31	1.708	0	6.19	21.06	25.8		
15:40	86.20	6.31	1.708	0	6.19	21.06	25.8		
15:45	87.35	6.31	1.708	0	6.19	21.06	25.8		
15:50	88.50	6.31	1.708	0	6.19	21.06	25.8		
15:55	89.65	6.31	1.708	0	6.19	21.06	25.8		
16:00	90.80	6.31	1.708	0	6.19	21.06	25.8		
16:05	91.95	6.31	1.708	0	6.19	21.06	25.8		
16:10	93.10	6.31	1.708	0	6.19	21.06	25.8		
16:15	94.25	6.31	1.708	0	6.19	21.06	25.8		
16:20	95.40	6.31	1.708	0	6.19	21.06	25.8		
16:25	96.55	6.31	1.708	0	6.19	21.06	25.8		
16:30	97.70	6.31	1.708	0	6.19	21.06	25.8		
16:35	98.85	6.31	1.708	0	6.19	21.06	25.8		
16:40	100.00	6.31	1.708	0	6.19	21.06	25.8		
16:45	101.15	6.31	1.708	0	6.19	21.06	25.8		
16:50	102.30	6.31	1.708	0	6.19	21.06	25.8		
16:55	103.45	6.31	1.708	0	6.19	21.06	25.8		
17:00	104.60	6.31	1.708	0	6.19	21.06	25.8		
17:05	105.75	6.31	1.708	0	6.19	21.06	25.8		
17:10	106.90	6.31	1.708	0	6.19	21.06	25.8		
17:15	108.05	6.31	1.708	0	6.19	21.06	25.8		
17:20	109.20	6.31	1.708	0	6.19	21.06	25.8		
17:25	110.35	6.31	1.708	0	6.19	21.06	25.8		
17:30	111.50	6.31	1.708	0	6.19	21.06	25.8		
17:35	112.65	6.31	1.708	0	6.19	21.06	25.8		
17:40	113.80	6.31	1.708	0	6.19	21.06	25.8		
17:45	114.95	6.31	1.708	0	6.19	21.06	25.8		
17:50	116.10	6.31	1.708	0	6.19	21.06	25.8		
17:55	117.25	6.31	1.708	0	6.19	21.06	25.8		
18:00	118.40	6.31	1.708	0	6.19	21.06	25.8		
18:05	119.55	6.31	1.708	0	6.19	21.06	25.8		
18:10	120.70	6.31	1.708	0	6.19	21.06	25.8		
18:15	121.85	6.31	1.708	0	6.19	21.06	25.8		
18:20	123.00	6.31	1.708	0	6.19	21.06	25.8		
18:25	124.15	6.31	1.708	0	6.19	21.06	25.8		
18:30	125.30	6.31	1.708	0	6.19	21.06	25.8		
18:35	126.45	6.31	1.708	0	6.19	21.06	25.8		
18:40	127.60	6.31	1.708	0	6.19	21.06	25.8		
18:45	128.75	6.31	1.708	0	6.19	21.06	25.8		
18:50	129.90	6.31	1.708	0	6.19	21.06	25.8		
18:55	131.05	6.31	1.708	0	6.19	21.06	25.8		
19:00	132.20	6.31	1.708	0	6.19	21.06	25.8		
19:05	133.35	6.31	1.708	0	6.19	21.06	25.8		
19:10	134.50	6.31	1.708	0	6.19	21.06	25.8		
19:15	135.65	6.31	1.708	0	6.19	21.06	25.8		
19:20	136.80	6.31	1.708	0	6.19	21.06	25.8		
19:25	137.95	6.31	1.708	0	6.19	21.06	25.8		
19:30	139.10	6.31	1.708	0	6.19	21.06	25.8		
19:35	140.25	6.31	1.708	0	6.19	21.06	25.8		
19:40	141.40	6.31	1.708	0	6.19	21.06	25.8		
19:45	142.55	6.31	1.708	0	6.19	21.06	25.8		
19:50	143.70	6.31	1.708	0	6.19	21.06	25.8		
19:55	144.85	6.31	1.708	0	6.19	21.06	25.8		
20:00	146.00	6.31	1.708	0	6.19	21.06	25.8		
20:05	147.15	6.31	1.708	0	6.19	21.06	25.8		
20:10	148.30	6.31	1.708	0	6.19	21.06	25.8		
20:15	149.45	6.31	1.708	0	6.19	21.06	25.8		
20:20	150.60	6.31	1.708	0	6.19	21.06	25.8		
20:25	151.75	6.31	1.708	0	6.19	21.06	25.8		
20:30	152.90	6.31	1.708	0	6.19	21.06	25.8		
20:35	154.05	6.31	1.708	0	6.19	21.06	25.8		
20:40	155.20	6.31	1.708	0	6.19	21.06			



# Low-Flow Sampling Data Sheet

MW-55-35(005)

CLIENT: Energy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41,0161818 00  
 DATE: 1/29/08  
 SAMPLER(S): L.A. 18

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
7:40	1.074									
7:43	1.074									
7:47	2.073	7.0	5.765	2.25	0.20	12.24	213.8			0.5
7:48	2.073	7.58	5.765	2.25	0.21	12.24	213.8			0.5
7:53	2.074	7.65	5.765	2.24	0.24	12.24	217.2			0.5
7:57	2.074	7.65	5.765	2.24	0.24	12.24	217.2			0.5
7:58	2.074	7.71	5.765	2.24	0.27	12.24	217.6			0.5
7:59	2.074	7.71	5.765	2.24	0.27	12.24	217.6			0.5
8:05	2.074	7.75	5.765	2.24	0.27	12.24	217.6			0.5
8:07	2.074	7.75	5.765	2.24	0.27	12.24	217.6			0.5
8:11	2.074	7.75	5.765	2.24	0.27	12.24	217.6			0.5
8:14	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:17	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:20	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:23	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:26	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:29	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:32	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:35	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:38	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:41	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:44	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:47	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:50	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:53	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:56	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
8:59	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:02	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:05	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:08	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:11	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:14	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:17	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:20	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:23	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:26	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:29	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:32	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:35	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:38	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:41	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:44	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:47	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:50	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:53	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:56	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
9:59	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:02	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:05	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:08	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:11	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:14	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:17	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:20	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:23	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:26	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:29	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:32	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:35	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:38	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:41	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:44	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:47	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:50	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:53	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:56	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
10:59	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:02	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:05	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:08	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:11	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:14	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:17	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:20	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:23	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:26	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:29	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:32	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:35	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:38	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:41	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:44	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:47	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:50	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:53	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:56	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5
11:59	2.074	7.77	5.765	2.24	0.27	12.24	217.6			0.5

Equipment Used	Equipment Serial Number/ Identification Number

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.





### Low-Flow Sampling Data Sheet

M.W. 36-33 (004)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161819 00  
 DATE: 1/31/08  
 SAMPLER(S): M. g. and B. g. and C. g.

WATER QUALITY: 47.40 23.218 etc. surface

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
11:10	23.997		1.1208	2.02						
11:15	23.048	7.31	2.720	72.36	2.20	11.84	232.7	5.9		0.2
11:21	23.048	7.32	2.867	21.40	2.22	12.14	232.6			0.3
11:25	23.048	7.31	3.269	59.38	2.02	12.89	234.2			0.5
11:32	23.048	7.32	3.131	67.4	2.75	12.72	232.4			0.7
11:40	23.048	7.34	3.201	75.62	2.75	12.49	232			0.85
11:45	23.042	7.35	3.235	50.02	2.63	13.02	270			1.0
11:50	23.042	7.35	3.269	59.28	2.64	13.18	215.5			1.1
11:53	23.044	7.35	3.271	57.01	2.66	13.14	249			1.2
11:55										
12:30			SAMPLE COMPLETE							
										1.1 and IPEC
										1.200 mil B. g. and C. g.

Equipment Used	Equipment Serial Number/ Identification Number
YSI 1 set #	2
Prober	
cont. depth min.	200734273

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.

Modified Traditional Purge  
Sampling Data Sheet

MW-56-53(006)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
DATE: 1/3/08  
SAMPLER(S): 1 B

Sunny 25°F

WATER COLUMN HEIGHT (ft)

$$\frac{830}{\text{DTB}} - \frac{47.22}{\text{DTW}} =$$

$$\frac{35.78}{\text{Well Column Height}}$$

Well Diameter: \_\_\_\_\_ inches  
ft

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

$$\text{Water Column Height } \frac{35.78}{\text{ft}} \times \frac{0.041}{\text{Multiplier}} = \frac{46}{\text{Well Volume}} \text{ gallons}$$

DESIGNED PURGE VOLUME:

$$\frac{1.46}{\text{Well Volume}} \times 1.5 = \frac{2.25}{\text{Designed Purge Volume}} \text{ gallons}$$

TOTAL VOLUME PURGED:

2.25 gal

PURGE METHOD: Waterloo Footvalve

WATER QUALITY:

Time	Volume Purged (gal)	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
0900	0	START		PUMP						
0906	0		6.21	5.77		3.20	12.50	300		
0910	0.5		6.27	1.446	52.24	1.52	10.77	300		
0913	1.0		6.24	2.047	27.24	2.35	15.36	330		
0916	1.5		6.47	2.053	46.55	2.45	5.05	327.5		
0920										PUMP OFF
0921										START
0930										SWITCH TO WATER VALVE. 1.5 gal. 11°C

Equipment Used	Equipment Serial Number/ Identification Number
7.5' ...	5
Water ...	
Turbidity ...	205.15.00113

NOTES AND OBSERVATIONS:

All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MW-58-26 (003)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41 016164 00  
 DATE: 1/22/08  
 SAMPLER(S):

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
7:51	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
8:03	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
8:19	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
8:31	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
8:41	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
8:56	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
9:02	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
9:16	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
9:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
9:39	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
9:53	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
10:05	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
10:20	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
10:30	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
10:47	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
11:06	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
11:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
11:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
11:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
12:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
12:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
12:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
12:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
13:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
13:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
13:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
13:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
14:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
14:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
14:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
14:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
15:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
15:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
15:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
15:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
16:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
16:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
16:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
16:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
17:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
17:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
17:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
17:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
18:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
18:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
18:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
18:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
19:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
19:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
19:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
19:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
20:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
20:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
20:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
20:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
21:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
21:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
21:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
21:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
22:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
22:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
22:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
22:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
23:07	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
23:22	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
23:37	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		
23:52	10.85	7.31	4.978	1.58	2.91	1.50	191.8	2.5		

Equipment Used	Equipment Serial Number/ Identification Number
1-gal IPEC	
0.5cc ml pellicensing	

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

1-gal IPEC  
 0.5cc ml pellicensing













# Waterloo Sampling Data Sheet

MW-60-154(004)

CLIENT: Entergy - IPE  
 SITE: Buchanan, NY  
 WEATHER: Cloudy 40°F

PROJECT No. 40100010  
 DATE: 1/14/08  
 SAMPLER: M.B.

SAMPLING INTERVAL (depth in ft below top of casing):  
147.4      "      164.9  
 SAMPLING PORT: 154

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length: 17.5

TOTAL VOLUME PURGED:  
3.15 gal

PURGE RATE: variable gal/min

2

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:00	0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:05	0.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:10	0.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:15	0.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:20	0.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:25	0.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:30	0.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:35	0.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:40	0.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:45	0.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:50	1.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
11:55	1.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:00	1.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:05	1.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:10	1.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:15	1.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:20	1.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:25	1.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:30	1.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:35	1.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:40	2.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:45	2.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:50	2.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
12:55	2.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:00	2.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:05	2.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:10	2.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:15	2.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:20	2.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:25	2.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:30	3.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:35	3.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:40	3.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:45	3.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:50	3.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
1:55	3.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:00	3.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:05	3.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:10	3.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:15	3.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:20	4.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:25	4.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:30	4.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:35	4.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:40	4.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:45	4.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:50	4.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
2:55	4.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:00	4.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:05	4.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:10	5.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:15	5.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:20	5.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:25	5.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:30	5.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:35	5.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:40	5.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:45	5.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:50	5.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
3:55	5.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:00	6.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:05	6.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:10	6.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:15	6.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:20	6.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:25	6.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:30	6.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:35	6.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:40	6.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:45	6.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:50	7.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
4:55	7.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:00	7.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:05	7.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:10	7.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:15	7.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:20	7.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:25	7.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:30	7.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:35	7.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:40	8.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:45	8.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:50	8.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
5:55	8.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:00	8.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:05	8.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:10	8.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:15	8.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:20	8.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:25	8.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:30	9.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:35	9.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:40	9.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:45	9.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:50	9.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
6:55	9.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:00	9.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:05	9.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:10	9.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:15	9.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:20	10.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:25	10.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:30	10.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:35	10.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:40	10.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:45	10.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:50	10.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
7:55	10.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:00	10.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:05	10.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:10	11.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:15	11.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:20	11.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:25	11.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:30	11.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:35	11.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:40	11.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:45	11.7	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:50	11.8	7.8	147.4	0.79	2.31	10.21	100	1	7.4
8:55	11.9	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:00	12.0	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:05	12.1	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:10	12.2	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:15	12.3	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:20	12.4	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:25	12.5	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:30	12.6	7.8	147.4	0.79	2.31	10.21	100	1	7.4
9:35	12.7	7.8	147.4	0.79	2.31	10.21	100	1	



Low-Flow Sampling Data Sheet

MW-62-18(004)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.016161900  
 DATE: 1/10/08  
 SAMPLER(S): M.B.

WATER QUALITY:

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
10:10	4.96									
10:15	5.01	7.43	4.272		1.12	11.26	179.2			0.01
10:17	5.22	7.56	4.357		1.63	11.43	110.7			0.20
10:19	5.45	7.50	3.951	0.0	1.29	11.66	145.2			0.6
10:21	5.15	7.64	3.512	0.0	1.33	12.32	208			1.0
10:23	5.45	7.69	3.302	0.0	1.79	11.5	152.8			1.1
10:25	5.35	7.74	3.512	0.0	1.88	12.02	216			1.5
10:26	5.58	7.84	3.715	0.0	2.22	12.18	137.5			1.8
10:28	5.60	7.8	3.715	0.0	2.21	12.18	136			2.0
10:30	5.60	7.85	3.715	0.0	2.24	12.40	127.4			2.1
10:32		STALL								
10:45		STOP PUMP								
10:15		Not enough water to get a sample with DDC + IPEC								
10:15		Sample only 1-500 ml for lab. only								

Equipment Used	Equipment Serial Number/ Identification Number
YSI	
Flowmeter	
Flowmeter	200704293

NOTES AND OBSERVATIONS:

All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

MW-62-18 (004)

CLIENT: Energy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 11.0161619.00  
 DATE: 11/3/07  
 SAMPLER(S): Miguel Britos

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1400	1350	7.17	1865	0.10	0.57	10.52	759			
1407	350	6.70	1865	0.10	0.57	10.52	759			
1410	350	6.94	1858	0.10	0.61	11.10	75			
1415	350	7.02	1821	0.10	0.72	11.61	78			0.25
1420	350	7.17	1762	0.10	0.72	12.07	404			0.50
1425	350	7.28	1710	0.10	0.73	12.14	410			0.75
1432	350	7.29	1661	0.10	0.80	12.33	412			1.0
1435	350	7.36	1611	0.10	0.87	12.38	412			1.25
1440	350	7.43	1561	0.10	0.93	12.42	412			1.50
1445	350	7.48	1511	0.10	0.97	12.44	412			1.75
1450										

Equipment Used	Equipment Serial Number/ Identification Number
YSI 1 Set #	4
Reader	
Turbidity meter	202704223

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.

Low-Flow Sampling Data Sheet

MW-62-37 (004)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
 DATE: 1/10/08  
 SAMPLER(S): M B.

WATER QUALITY:

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
10:17	11.38									
10:56	11.38	7.44	282		.90	11.40	500	1		7.0
11:15	11.42	7.34	280		0.76	12.33	17			7.5
11:58	11.40	7.32	280		0.3	17.04	29.8	1		7.5
12:1	11.4	7.3	280		0.4	17.0	120	1		7.0
12:24	11.4	7.29	277		0.33	18.1	233	1		7.0
11:52		7.31	280		0.4	17.0	120			
13:55		7.31	280		0.4	17.0	120			

Equipment Used	Equipment Serial Number/ Identification Number
YSI } set	
Reader }	
Turbidity meter	200704293

NOTES AND OBSERVATIONS:  
 All depth to water measurements are taken from top of casing.

# Waterloo Sampling Data Sheet

MW-62-53 (003)

CLIENT: Entergy Inc  
SITE: Buchanan  
WEATHER: Partly Cloudy

PROJECT: 10/08  
DATE: 10/10/08  
SAMPLERS: M.B.

SAMPLING INTERVAL (depth in ft below top of casing): 49.6 to 54.1

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length: 4.5

SAMPLING PORT: 53

TOTAL VOLUME PURGED: \_\_\_\_\_ gal

PURGE RATE: variable gal/min

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
12:30	0	7.4	202	0.0	7.6	11.7	200	7	24
12:35	0.01	7.4	202	0.0	7.6	11.7	200	7	24
12:40	0.02	7.4	202	0.0	7.6	11.7	200	7	24
12:45	0.03	7.4	202	0.0	7.6	11.7	200	7	24
12:50	0.04	7.4	202	0.0	7.6	11.7	200	7	24
12:55	0.05	7.4	202	0.0	7.6	11.7	200	7	24
1:00	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:05	0.05	7.38	202	0.0	7.6	11.7	200	7	24
1:10	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:15	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:20	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:25	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:30	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:35	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:40	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:45	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:50	0.05	7.39	202	0.0	7.6	11.7	200	7	24
1:55	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:00	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:05	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:10	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:15	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:20	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:25	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:30	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:35	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:40	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:45	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:50	0.05	7.39	202	0.0	7.6	11.7	200	7	24
2:55	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:00	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:05	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:10	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:15	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:20	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:25	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:30	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:35	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:40	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:45	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:50	0.05	7.39	202	0.0	7.6	11.7	200	7	24
3:55	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:00	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:05	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:10	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:15	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:20	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:25	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:30	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:35	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:40	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:45	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:50	0.05	7.39	202	0.0	7.6	11.7	200	7	24
4:55	0.05	7.39	202	0.0	7.6	11.7	200	7	24
5:00	0.05	7.39	202	0.0	7.6	11.7	200	7	24

Equipment Used	Equipment Serial Number Identification Number
YSI Reader	
Turbidity meter	200704293

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-62-71 (004)

CLIENT: Entergy, IPE  
SITE: Buchanan, NY  
WEATHER: Windy

PROJECT: 10/08  
DATE: 10/08  
SAMPLER: MB

SAMPLING INTERVAL (depth in ft below top of casing): 21.5 to 82.6

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 21.5

SAMPLING PORT: 71

TOTAL VOLUME PLURGED: 2.55 gal

PLURGE RATE: variable gal/min

PLURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:55	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:00	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:05	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:10	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:15	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:20	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:25	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:30	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:35	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:40	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:45	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:50	0.5	7.42	152	0.2	6.2	16.3	235	10	25
12:55	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:00	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:05	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:10	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:15	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:20	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:25	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:30	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:35	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:40	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:45	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:50	0.5	7.42	152	0.2	6.2	16.3	235	10	25
13:55	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:00	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:05	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:10	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:15	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:20	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:25	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:30	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:35	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:40	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:45	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:50	0.5	7.42	152	0.2	6.2	16.3	235	10	25
14:55	0.5	7.42	152	0.2	6.2	16.3	235	10	25
15:00	0.5	7.42	152	0.2	6.2	16.3	235	10	25

Equipment Used	Equipment Serial Number Identification Number
YSI Reader / Set	7
Turbidity meter	200704293

NOTES AND OBSERVATIONS:



# Waterloo Sampling Data Sheet

MW-62-92 (004)

CLIENT: Interp. IPE  
SITE: Burlington, NY  
WEATHER: Sunny

PROJECT No. \_\_\_\_\_  
DATE: 1/10/08  
SAMPLERS: M B

SAMPLING INTERVAL (depth in ft below top of casing)  
From 88.6 to 99.1

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 10.5

SAMPLING PORT  
92

TOTAL VOLUME PURGED:  
2.75 gal

PURGE RATE: variable gal/min

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
0835	0								
0900	0.35	7.31	1.20	0.2	2.07	2.20	134.0		
0910	1.0	7.32	1.20	0.2	2.07	2.20	134.0		
0920	1.7	7.32	1.20	0.2	2.07	2.20	134.0		
0930	2.4	7.32	1.20	0.2	2.07	2.20	134.0		
0940	3.1	7.32	1.20	0.2	2.07	2.20	134.0		
0950	3.8	7.32	1.20	0.2	2.07	2.20	134.0		
1000	4.5	7.32	1.20	0.2	2.07	2.20	134.0		
1010	5.2	7.32	1.20	0.2	2.07	2.20	134.0		
1020	5.9	7.32	1.20	0.2	2.07	2.20	134.0		
1030	6.6	7.32	1.20	0.2	2.07	2.20	134.0		
1040	7.3	7.32	1.20	0.2	2.07	2.20	134.0		
1050	8.0	7.32	1.20	0.2	2.07	2.20	134.0		
1100	8.7	7.32	1.20	0.2	2.07	2.20	134.0		
1110	9.4	7.32	1.20	0.2	2.07	2.20	134.0		
1120	10.1	7.32	1.20	0.2	2.07	2.20	134.0		
1130	10.8	7.32	1.20	0.2	2.07	2.20	134.0		
1140	11.5	7.32	1.20	0.2	2.07	2.20	134.0		
1150	12.2	7.32	1.20	0.2	2.07	2.20	134.0		
1200	12.9	7.32	1.20	0.2	2.07	2.20	134.0		
1210	13.6	7.32	1.20	0.2	2.07	2.20	134.0		
1220	14.3	7.32	1.20	0.2	2.07	2.20	134.0		
1230	15.0	7.32	1.20	0.2	2.07	2.20	134.0		
1240	15.7	7.32	1.20	0.2	2.07	2.20	134.0		
1250	16.4	7.32	1.20	0.2	2.07	2.20	134.0		
1300	17.1	7.32	1.20	0.2	2.07	2.20	134.0		
1310	17.8	7.32	1.20	0.2	2.07	2.20	134.0		
1320	18.5	7.32	1.20	0.2	2.07	2.20	134.0		
1330	19.2	7.32	1.20	0.2	2.07	2.20	134.0		
1340	19.9	7.32	1.20	0.2	2.07	2.20	134.0		
1350	20.6	7.32	1.20	0.2	2.07	2.20	134.0		
1400	21.3	7.32	1.20	0.2	2.07	2.20	134.0		
1410	22.0	7.32	1.20	0.2	2.07	2.20	134.0		
1420	22.7	7.32	1.20	0.2	2.07	2.20	134.0		
1430	23.4	7.32	1.20	0.2	2.07	2.20	134.0		
1440	24.1	7.32	1.20	0.2	2.07	2.20	134.0		
1450	24.8	7.32	1.20	0.2	2.07	2.20	134.0		
1500	25.5	7.32	1.20	0.2	2.07	2.20	134.0		
1510	26.2	7.32	1.20	0.2	2.07	2.20	134.0		
1520	26.9	7.32	1.20	0.2	2.07	2.20	134.0		
1530	27.6	7.32	1.20	0.2	2.07	2.20	134.0		
1540	28.3	7.32	1.20	0.2	2.07	2.20	134.0		
1550	29.0	7.32	1.20	0.2	2.07	2.20	134.0		
1600	29.7	7.32	1.20	0.2	2.07	2.20	134.0		
1610	30.4	7.32	1.20	0.2	2.07	2.20	134.0		
1620	31.1	7.32	1.20	0.2	2.07	2.20	134.0		
1630	31.8	7.32	1.20	0.2	2.07	2.20	134.0		
1640	32.5	7.32	1.20	0.2	2.07	2.20	134.0		
1650	33.2	7.32	1.20	0.2	2.07	2.20	134.0		
1700	33.9	7.32	1.20	0.2	2.07	2.20	134.0		
1710	34.6	7.32	1.20	0.2	2.07	2.20	134.0		
1720	35.3	7.32	1.20	0.2	2.07	2.20	134.0		
1730	36.0	7.32	1.20	0.2	2.07	2.20	134.0		
1740	36.7	7.32	1.20	0.2	2.07	2.20	134.0		
1750	37.4	7.32	1.20	0.2	2.07	2.20	134.0		
1800	38.1	7.32	1.20	0.2	2.07	2.20	134.0		
1810	38.8	7.32	1.20	0.2	2.07	2.20	134.0		
1820	39.5	7.32	1.20	0.2	2.07	2.20	134.0		
1830	40.2	7.32	1.20	0.2	2.07	2.20	134.0		
1840	40.9	7.32	1.20	0.2	2.07	2.20	134.0		
1850	41.6	7.32	1.20	0.2	2.07	2.20	134.0		
1900	42.3	7.32	1.20	0.2	2.07	2.20	134.0		
1910	43.0	7.32	1.20	0.2	2.07	2.20	134.0		
1920	43.7	7.32	1.20	0.2	2.07	2.20	134.0		
1930	44.4	7.32	1.20	0.2	2.07	2.20	134.0		
1940	45.1	7.32	1.20	0.2	2.07	2.20	134.0		
1950	45.8	7.32	1.20	0.2	2.07	2.20	134.0		
2000	46.5	7.32	1.20	0.2	2.07	2.20	134.0		
2010	47.2	7.32	1.20	0.2	2.07	2.20	134.0		
2020	47.9	7.32	1.20	0.2	2.07	2.20	134.0		
2030	48.6	7.32	1.20	0.2	2.07	2.20	134.0		
2040	49.3	7.32	1.20	0.2	2.07	2.20	134.0		
2050	50.0	7.32	1.20	0.2	2.07	2.20	134.0		
2100	50.7	7.32	1.20	0.2	2.07	2.20	134.0		
2110	51.4	7.32	1.20	0.2	2.07	2.20	134.0		
2120	52.1	7.32	1.20	0.2	2.07	2.20	134.0		
2130	52.8	7.32	1.20	0.2	2.07	2.20	134.0		
2140	53.5	7.32	1.20	0.2	2.07	2.20	134.0		
2150	54.2	7.32	1.20	0.2	2.07	2.20	134.0		
2200	54.9	7.32	1.20	0.2	2.07	2.20	134.0		
2210	55.6	7.32	1.20	0.2	2.07	2.20	134.0		
2220	56.3	7.32	1.20	0.2	2.07	2.20	134.0		
2230	57.0	7.32	1.20	0.2	2.07	2.20	134.0		
2240	57.7	7.32	1.20	0.2	2.07	2.20	134.0		
2250	58.4	7.32	1.20	0.2	2.07	2.20	134.0		
2300	59.1	7.32	1.20	0.2	2.07	2.20	134.0		
2310	59.8	7.32	1.20	0.2	2.07	2.20	134.0		
2320	60.5	7.32	1.20	0.2	2.07	2.20	134.0		
2330	61.2	7.32	1.20	0.2	2.07	2.20	134.0		
2340	61.9	7.32	1.20	0.2	2.07	2.20	134.0		
2350	62.6	7.32	1.20	0.2	2.07	2.20	134.0		
2400	63.3	7.32	1.20	0.2	2.07	2.20	134.0		
2410	64.0	7.32	1.20	0.2	2.07	2.20	134.0		
2420	64.7	7.32	1.20	0.2	2.07	2.20	134.0		
2430	65.4	7.32	1.20	0.2	2.07	2.20	134.0		
2440	66.1	7.32	1.20	0.2	2.07	2.20	134.0		
2450	66.8	7.32	1.20	0.2	2.07	2.20	134.0		
2500	67.5	7.32	1.20	0.2	2.07	2.20	134.0		
2510	68.2	7.32	1.20	0.2	2.07	2.20	134.0		
2520	68.9	7.32	1.20	0.2	2.07	2.20	134.0		
2530	69.6	7.32	1.20	0.2	2.07	2.20	134.0		
2540	70.3	7.32	1.20	0.2	2.07	2.20	134.0		
2550	71.0	7.32	1.20	0.2	2.07	2.20	134.0		
2600	71.7	7.32	1.20	0.2	2.07	2.20	134.0		
2610	72.4	7.32	1.20	0.2	2.07	2.20	134.0		
2620	73.1	7.32	1.20	0.2	2.07	2.20	134.0		
2630	73.8	7.32	1.20	0.2	2.07	2.20	134.0		
2640	74.5	7.32	1.20	0.2	2.07	2.20	134.0		
2650	75.2	7.32	1.20	0.2	2.07	2.20	134.0		
2700	75.9	7.32	1.20	0.2	2.07	2.20	134.0		
2710	76.6	7.32	1.20	0.2	2.07	2.20	134.0		
2720	77.3	7.32	1.20	0.2	2.07	2.20	134.0		
2730	78.0	7.32	1.20	0.2	2.07	2.20	134.0		
2740	78.7	7.32	1.20	0.2	2.07	2.20	134.0		
2750	79.4	7.32	1.20	0.2	2.07	2.20	134.0		
2800	80.1	7.32	1.20	0.2	2.07	2.20	134.0		
2810	80.8	7.32	1.20	0.2	2.07	2.20	134.0		
2820	81.5	7.32	1.20	0.2	2.07	2.20	134.0		
2830	82.2	7.32	1.20	0.2	2.07	2.20	134.0		
2840	82.9	7.32	1.20	0.2	2.07	2.20	134.0		
2850	83.6	7.32	1.20	0.2	2.07	2.20	134.0		
2900	84.3	7.32	1.20	0.2	2.07	2.20	134.0		
2910	85.0	7.32	1.20	0.2	2.07	2.20	134.0		
2920	85.7	7.32	1.20	0.2	2.07	2.20	134.0		
2930	86.4	7.32	1.20	0.2	2.07	2.20	134.0		
2940	87.1	7.32	1.20	0.2	2.07	2.20	134.0		
2950	87.8	7.32	1.20	0.2	2.07	2.20	134.0		
3000	88.5	7.32	1.20	0.2	2.07	2.20	134.0		
3010	89.2	7.32	1.20	0.2	2.07	2.20	134.0		
3020	89.9	7.32	1.20	0.2	2.07	2.20	134.0		
3030	90.6	7.32	1.20	0.2	2.07	2.20	134.0		
3040	91.3	7.32	1.20	0.2	2.07	2.20	134.0		
3050	92.0	7.32	1.20	0.2	2.07	2.20	134.0		

Equipment Used	Equipment Serial Number Identification Number
YSI Reader / Set	
Turbidity meter	200704293

NOTES AND OBSERVATIONS:



# Waterloo Sampling Data Sheet

MW-62-182(004)

CLIENT: Entegris, IPE  
SITE: Fox Island, NY  
WEATHER: 10/10/08

PROJECT: 411000000  
DATE: 10/10/08  
SAMPLER: M6

SAMPLING INTERVAL (depth in ft below top of casing):  
177.6 to 198.7

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 20.9

SAMPLING PORT: 182

TOTAL VOLUME PURGED:  
2.13 gal

PURGE RATE: variable gal/min

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
10:00	0								
10:01	0.35	7.89	1224	0.2	0.75	17.54	271	↓	50
10:02	0.65	7.88	1225	0.2	0.75	17.54	271	↓	50
10:03	1.0	7.88	1225	0.2	0.75	17.54	271	↓	50
10:04	1.3	7.87	1225	0.2	0.75	17.54	271	↓	50
10:05	1.6	7.87	1225	0.2	0.75	17.54	271	↓	50
10:06	1.9	7.87	1225	0.2	0.75	17.54	271	↓	50
10:07	2.2	7.87	1225	0.2	0.75	17.54	271	↓	50
10:08	2.5	7.87	1225	0.2	0.75	17.54	271	↓	50
10:09	2.8	7.87	1225	0.2	0.75	17.54	271	↓	50
10:10	3.1	7.87	1225	0.2	0.75	17.54	271	↓	50
10:11	3.4	7.87	1225	0.2	0.75	17.54	271	↓	50
10:12	3.7	7.87	1225	0.2	0.75	17.54	271	↓	50
10:13	4.0	7.87	1225	0.2	0.75	17.54	271	↓	50
10:14	4.3	7.87	1225	0.2	0.75	17.54	271	↓	50
10:15	4.6	7.87	1225	0.2	0.75	17.54	271	↓	50
10:16	4.9	7.87	1225	0.2	0.75	17.54	271	↓	50
10:17	5.2	7.87	1225	0.2	0.75	17.54	271	↓	50
10:18	5.5	7.87	1225	0.2	0.75	17.54	271	↓	50
10:19	5.8	7.87	1225	0.2	0.75	17.54	271	↓	50
10:20	6.1	7.87	1225	0.2	0.75	17.54	271	↓	50
10:21	6.4	7.87	1225	0.2	0.75	17.54	271	↓	50
10:22	6.7	7.87	1225	0.2	0.75	17.54	271	↓	50
10:23	7.0	7.87	1225	0.2	0.75	17.54	271	↓	50
10:24	7.3	7.87	1225	0.2	0.75	17.54	271	↓	50
10:25	7.6	7.87	1225	0.2	0.75	17.54	271	↓	50
10:26	7.9	7.87	1225	0.2	0.75	17.54	271	↓	50
10:27	8.2	7.87	1225	0.2	0.75	17.54	271	↓	50
10:28	8.5	7.87	1225	0.2	0.75	17.54	271	↓	50
10:29	8.8	7.87	1225	0.2	0.75	17.54	271	↓	50
10:30	9.1	7.87	1225	0.2	0.75	17.54	271	↓	50
10:31	9.4	7.87	1225	0.2	0.75	17.54	271	↓	50
10:32	9.7	7.87	1225	0.2	0.75	17.54	271	↓	50
10:33	10.0	7.87	1225	0.2	0.75	17.54	271	↓	50
10:34	10.3	7.87	1225	0.2	0.75	17.54	271	↓	50
10:35	10.6	7.87	1225	0.2	0.75	17.54	271	↓	50
10:36	10.9	7.87	1225	0.2	0.75	17.54	271	↓	50
10:37	11.2	7.87	1225	0.2	0.75	17.54	271	↓	50
10:38	11.5	7.87	1225	0.2	0.75	17.54	271	↓	50
10:39	11.8	7.87	1225	0.2	0.75	17.54	271	↓	50
10:40	12.1	7.87	1225	0.2	0.75	17.54	271	↓	50
10:41	12.4	7.87	1225	0.2	0.75	17.54	271	↓	50
10:42	12.7	7.87	1225	0.2	0.75	17.54	271	↓	50
10:43	13.0	7.87	1225	0.2	0.75	17.54	271	↓	50
10:44	13.3	7.87	1225	0.2	0.75	17.54	271	↓	50
10:45	13.6	7.87	1225	0.2	0.75	17.54	271	↓	50
10:46	13.9	7.87	1225	0.2	0.75	17.54	271	↓	50
10:47	14.2	7.87	1225	0.2	0.75	17.54	271	↓	50
10:48	14.5	7.87	1225	0.2	0.75	17.54	271	↓	50
10:49	14.8	7.87	1225	0.2	0.75	17.54	271	↓	50
10:50	15.1	7.87	1225	0.2	0.75	17.54	271	↓	50
10:51	15.4	7.87	1225	0.2	0.75	17.54	271	↓	50
10:52	15.7	7.87	1225	0.2	0.75	17.54	271	↓	50
10:53	16.0	7.87	1225	0.2	0.75	17.54	271	↓	50
10:54	16.3	7.87	1225	0.2	0.75	17.54	271	↓	50
10:55	16.6	7.87	1225	0.2	0.75	17.54	271	↓	50
10:56	16.9	7.87	1225	0.2	0.75	17.54	271	↓	50
10:57	17.2	7.87	1225	0.2	0.75	17.54	271	↓	50
10:58	17.5	7.87	1225	0.2	0.75	17.54	271	↓	50
10:59	17.8	7.87	1225	0.2	0.75	17.54	271	↓	50
11:00	18.1	7.87	1225	0.2	0.75	17.54	271	↓	50
11:01	18.4	7.87	1225	0.2	0.75	17.54	271	↓	50
11:02	18.7	7.87	1225	0.2	0.75	17.54	271	↓	50
11:03	19.0	7.87	1225	0.2	0.75	17.54	271	↓	50
11:04	19.3	7.87	1225	0.2	0.75	17.54	271	↓	50
11:05	19.6	7.87	1225	0.2	0.75	17.54	271	↓	50
11:06	19.9	7.87	1225	0.2	0.75	17.54	271	↓	50
11:07	20.2	7.87	1225	0.2	0.75	17.54	271	↓	50
11:08	20.5	7.87	1225	0.2	0.75	17.54	271	↓	50
11:09	20.8	7.87	1225	0.2	0.75	17.54	271	↓	50
11:10	21.1	7.87	1225	0.2	0.75	17.54	271	↓	50
11:11	21.4	7.87	1225	0.2	0.75	17.54	271	↓	50
11:12	21.7	7.87	1225	0.2	0.75	17.54	271	↓	50
11:13	22.0	7.87	1225	0.2	0.75	17.54	271	↓	50
11:14	22.3	7.87	1225	0.2	0.75	17.54	271	↓	50
11:15	22.6	7.87	1225	0.2	0.75	17.54	271	↓	50
11:16	22.9	7.87	1225	0.2	0.75	17.54	271	↓	50
11:17	23.2	7.87	1225	0.2	0.75	17.54	271	↓	50
11:18	23.5	7.87	1225	0.2	0.75	17.54	271	↓	50
11:19	23.8	7.87	1225	0.2	0.75	17.54	271	↓	50
11:20	24.1	7.87	1225	0.2	0.75	17.54	271	↓	50
11:21	24.4	7.87	1225	0.2	0.75	17.54	271	↓	50
11:22	24.7	7.87	1225	0.2	0.75	17.54	271	↓	50
11:23	25.0	7.87	1225	0.2	0.75	17.54	271	↓	50
11:24	25.3	7.87	1225	0.2	0.75	17.54	271	↓	50
11:25	25.6	7.87	1225	0.2	0.75	17.54	271	↓	50
11:26	25.9	7.87	1225	0.2	0.75	17.54	271	↓	50
11:27	26.2	7.87	1225	0.2	0.75	17.54	271	↓	50
11:28	26.5	7.87	1225	0.2	0.75	17.54	271	↓	50
11:29	26.8	7.87	1225	0.2	0.75	17.54	271	↓	50
11:30	27.1	7.87	1225	0.2	0.75	17.54	271	↓	50
11:31	27.4	7.87	1225	0.2	0.75	17.54	271	↓	50
11:32	27.7	7.87	1225	0.2	0.75	17.54	271	↓	50
11:33	28.0	7.87	1225	0.2	0.75	17.54	271	↓	50
11:34	28.3	7.87	1225	0.2	0.75	17.54	271	↓	50
11:35	28.6	7.87	1225	0.2	0.75	17.54	271	↓	50
11:36	28.9	7.87	1225	0.2	0.75	17.54	271	↓	50
11:37	29.2	7.87	1225	0.2	0.75	17.54	271	↓	50
11:38	29.5	7.87	1225	0.2	0.75	17.54	271	↓	50
11:39	29.8	7.87	1225	0.2	0.75	17.54	271	↓	50
11:40	30.1	7.87	1225	0.2	0.75	17.54	271	↓	50
11:41	30.4	7.87	1225	0.2	0.75	17.54	271	↓	50
11:42	30.7	7.87	1225	0.2	0.75	17.54	271	↓	50
11:43	31.0	7.87	1225	0.2	0.75	17.54	271	↓	50
11:44	31.3	7.87	1225	0.2	0.75	17.54	271	↓	50
11:45	31.6	7.87	1225	0.2	0.75	17.54	271	↓	50
11:46	31.9	7.87	1225	0.2	0.75	17.54	271	↓	50
11:47	32.2	7.87	1225	0.2	0.75	17.54	271	↓	50
11:48	32.5	7.87	1225	0.2	0.75	17.54	271	↓	50
11:49	32.8	7.87	1225	0.2	0.75	17.54	271	↓	50
11:50	33.1	7.87	1225	0.2	0.75	17.54	271	↓	50
11:51	33.4	7.87	1225	0.2	0.75	17.54	271	↓	50
11:52	33.7	7.87	1225	0.2	0.75	17.54	271	↓	50
11:53	34.0	7.87	1225	0.2	0.75	17.54	271	↓	50
11:54	34.3	7.87	1225	0.2	0.75	17.54	271	↓	50
11:55	34.6	7.87	1225	0.2	0.75	17.54	271	↓	50
11:56	34.9	7.87	1225	0.2	0.75	17.54	271	↓	50
11:57	35.2	7.87	1225	0.2	0.75	17.54	271	↓	50
11:58	35.5	7.87	1225	0.2	0.75	17.54	271	↓	50
11:59	35.8	7.87	1225	0.2	0.75	17.54	271	↓	50
12:00	36.1	7.87	1225	0.2	0.75	17.54	271	↓	50

Equipment Used	Equipment Serial Number Identification Number
YSI Reader / Set	
Turbidity meter	200704293

NOTES AND OBSERVATIONS:





# Waterloo Sampling Data Sheet

4W-63-50(204)

CLIENT: Energy - IPEC  
 SITE: Buchanan, NY  
 WEATHER:

PROJECT NO: 4136181910  
 DATE: 19/08  
 SAMPLER(S): MB

SAMPLING INTERVAL (depth in ft below top of casing)  
41.5 to 83.0  
 SAMPLING PORT: 50

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 13.5

TOTAL VOLUME PURGED:  
0.75 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:58	0.0	7.2	130	0.0	1.7	16.5	220		
12:00	0.0	7.2	130	0.0	1.7	16.5	220		
12:02	0.0	7.2	130	0.0	1.7	16.5	220		
12:04	0.0	7.2	130	0.0	1.7	16.5	220		
12:06	0.0	7.2	130	0.0	1.7	16.5	220		
12:08	0.0	7.2	130	0.0	1.7	16.5	220		
12:10	0.0	7.2	130	0.0	1.7	16.5	220		
12:12	0.0	7.2	130	0.0	1.7	16.5	220		
12:14	0.0	7.2	130	0.0	1.7	16.5	220		
12:16	0.0	7.2	130	0.0	1.7	16.5	220		
12:18	0.0	7.2	130	0.0	1.7	16.5	220		
12:20	0.0	7.2	130	0.0	1.7	16.5	220		
12:22	0.0	7.2	130	0.0	1.7	16.5	220		
12:24	0.0	7.2	130	0.0	1.7	16.5	220		
12:26	0.0	7.2	130	0.0	1.7	16.5	220		
12:28	0.0	7.2	130	0.0	1.7	16.5	220		
12:30	0.0	7.2	130	0.0	1.7	16.5	220		
12:32	0.0	7.2	130	0.0	1.7	16.5	220		
12:34	0.0	7.2	130	0.0	1.7	16.5	220		
12:36	0.0	7.2	130	0.0	1.7	16.5	220		
12:38	0.0	7.2	130	0.0	1.7	16.5	220		
12:40	0.0	7.2	130	0.0	1.7	16.5	220		
12:42	0.0	7.2	130	0.0	1.7	16.5	220		
12:44	0.0	7.2	130	0.0	1.7	16.5	220		
12:46	0.0	7.2	130	0.0	1.7	16.5	220		
12:48	0.0	7.2	130	0.0	1.7	16.5	220		
12:50	0.0	7.2	130	0.0	1.7	16.5	220		
12:52	0.0	7.2	130	0.0	1.7	16.5	220		
12:54	0.0	7.2	130	0.0	1.7	16.5	220		
12:56	0.0	7.2	130	0.0	1.7	16.5	220		
12:58	0.0	7.2	130	0.0	1.7	16.5	220		

Equipment Used	Equipment Serial Number / Identification Number
YSI	
Leadline	
Flowmeter	

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

MW-63-93 (004)

CLIENT: Energy RPT  
SITE: Buchanan NY  
WEATHER:

PROJECT NO: 4  
DATE: 10/10/08  
SAMPLER S: M.B.

SAMPLING INTERVAL (depth in ft below top of casing):  
8.5 to 100.5  
SAMPLING PORT: 0.3

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length: 14.0

TOTAL VOLUME PURGED:  
2.5 gal

PURGE RATE: variable (gal/min): PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
11:20	0.8	7.2	0.24	0.0	0.0	15.0	100	10	10
11:25	1.0	7.2	0.22	0.0	0.0	15.0	100	10	10
11:30	1.3	7.3	0.24	0.0	0.0	15.0	100	10	10
11:40	1.2	7.2	0.24	0.0	0.0	15.0	100	10	10
11:50		PUMP OFF							
12:00		PUMP ON							
12:03	1.0	7.3	0.24	0.0	0.0	15.0	100	10	10
12:10	1.3	7.3	0.24	0.0	0.0	15.0	100	10	10
12:13		PUMP OFF							
12:14		PUMP ON							
12:17		PUMP OFF							
12:46		SAMPLE COMPLETED							

Equipment Used	Equipment Serial Number Identification Number
VEL 1 set	
Probes set	
Flowmeter	

NOTES AND OBSERVATIONS:

# Waterloo Sampling Data Sheet

Mul-63-112 (004)

CLIENT: Entergy - IEP  
 SITE: Buchanan, NY  
 WEATHER:

PROJECT No: 4110612001  
 DATE: 1/9/08  
 SAMPLER: 48

SAMPLING INTERVAL (depth in ft below top of casing) 106.5 to 112.0

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 5.5

SAMPLING PORT 112

TOTAL VOLUME PURGED: 125 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive Vent Cycle (seconds)	Drive Pressure (psi)
07:00	0								
07:05	10								
07:10	20								
07:15	30								
07:20	40								
07:25	50								
07:30	60								
07:35	70								
07:40	80								
07:45	90								
07:50	100								
07:55	110								
08:00	120								
08:05	130								
08:10	140								
08:15	150								
08:20	160								
08:25	170								
08:30	180								
08:35	190								
08:40	200								
08:45	210								
08:50	220								
08:55	230								
09:00	240								
09:05	250								
09:10	260								
09:15	270								
09:20	280								
09:25	290								
09:30	300								
09:35	310								
09:40	320								
09:45	330								
09:50	340								
09:55	350								
10:00	360								
10:05	370								
10:10	380								
10:15	390								
10:20	400								
10:25	410								
10:30	420								
10:35	430								
10:40	440								
10:45	450								
10:50	460								
10:55	470								
11:00	480								
11:05	490								
11:10	500								
11:15	510								
11:20	520								
11:25	530								
11:30	540								
11:35	550								
11:40	560								
11:45	570								
11:50	580								
11:55	590								
12:00	600								

Equipment Used	Equipment Serial Number Identification Number
481	
482	
483	
484	
485	

NOTES AND OBSERVATIONS:









Low-Flow Sampling Data Sheet

MW-66-21 (003)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
DATE: 1/14/08  
SAMPLER(S): M.B. 1 A-A

WATER QUALITY

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
8:47	8.455									11.96' DFW
8:58	8.455									
9:02	8.378	6.96	1.175	3.77	1.78	11.49	156.6			
9:07	8.360	6.95	1.791	3.02	5.51	10.24	160.0			
9:13	8.339	7.05	1.804	4.62	3.52	10.97	161.3			
9:19	8.242	7.07	1.819	3.35	2.52	11.52	162.6			
9:24	8.258	7.12	1.822	4.24	2.44	12.03	169.5			
9:29	8.268	7.15	1.832	3.52	1.75	12.07	173.4			
9:31	8.215	7.17	1.835	4.53	1.79	12.15	174.2			
9:34	8.217	7.18	1.832	3.23	1.75	12.15	174.7			1 gal
9:44	8.153	7.18	1.855	3.38	1.13	12.05	179.3			
9:49	8.152	7.19	1.862	3.14	1.00	11.91	181.2			
9:54	8.107	7.19	1.862	2.57	0.94	11.97	181.5			
10:00	8.126	7.21	1.869	2.15	0.85	12.02	179.5			
10:05	8.098	7.21	1.870	2.31	0.95	12.02	179.5			
10:12										1 gal
11:28										

Equipment Used	Equipment Serial Number/ Identification Number
YSI	
Reading	Set #
Turbidity meter	200704293

NOTES AND OBSERVATIONS:

All depth to water measurements are taken from top of casing.

1 liter water added to the line

2

**GZA GeoEnvironmental of New York**  
**Low-Flow Sampling Data Sheet**

WELL ID: MW- -

MW-66-36(003)

CLIENT: Eneryg - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.016161900  
 DATE: 1/14/08  
 SAMPLER(S): M B. / A A.

**WATER QUALITY:** *transducer*

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
853	14.612									11.78' DFL
856	14.612									
902	14.542	6.86	3.279	1.223	5.73	8.50	349.5			
907	14.542	7.92	3.199	1.276	2.57	11.06	1074.6			
913	14.542	7.14	3.523	1.53	1.54	10.15	-66.7			
916	14.542	7.21	3.910	1.84	1.07	11.26	-155.3			
924	14.542	7.24	3.965	1.57	1.44	11.17	-155.3			
929	14.542	7.2	3.949	2.06	1.00	11.04	100.4			
934	14.542	7.27	3.980	2.36	0.82	11.03	-103.6			
939	14.542	7.28	3.962	1.90	0.77	10.95	-104.9			
944	14.542	7.28	3.979	1.46	0.74	10.83	-106.3			1.05
949	14.567	7.28	4.300	1.59	0.73	10.54	-107.3			
954	14.369	7.28	3.998	1.99	0.70	10.55	-108.1			
1000	14.389	7.24	4.02	1.85	0.85	10.74	-109.9			
1002	14.389	7.29	4.035	1.72	0.85	10.65	-111.4			
1013	14.389									stop pump

Equipment Used	Equipment Serial Number/ Identification Number
YSI	3
Reader	5
Turbidity meter	200704293

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.













# Waterloo Sampling Data Sheet

5  
MUJ-67-173 (0004)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY  
WEATHER: Sunny 43°F

PROJECT NO: 41.0161619.00  
DATE: 2/25/08  
SAMPLER(S): M Britos

SAMPLING INTERVAL (depth in ft below top of casing)  
164.5 to 188.0

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 23.5

SAMPLING PORT  
173

TOTAL VOLUME PURGED:  
3.25 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
1246	0								
1246	0.2	6.42	1382		0.89	15.42	-322.2	5/8	45
1251	0.75	6.52	1403	2.70	0.85	15.91	-316.7	5/8	40
1257	1.0	6.54	1415	2.23	0.90	15.05	-355.2	5/8	40
1303	1.30	6.53	1420	2.45	0.78	15.97	-357.1	5/8	40
1310	1.80	6.56	1421	2.51	0.85	15.98	-361.7	5/8	40
1315	2.10	6.56	1421	2.72	0.85	15.79	-344.5	5/8	40
1320	2.50	6.57	1409	2.63	0.84	16.45	-357.2	5/8	40
1324	2.95	6.57	1407	2.61	0.81	16.01	-362.7	5/8	40
1334	3.0	6.52	1401	2.52	0.81	16.01	-357.0	5/8	40
1335		PUMP	0.0						
1337		PUMP	0.0						
1344		PUMP	0.0						
1402		PUMP	0.0						

Equipment Used	Equipment Serial Number/ Identification Number
YSI } set #	2
Readers } set #	
Turbidity meter	200701254

NOTES AND OBSERVATIONS:



# Waterloo Sampling Data Sheet

5  
MW-67-219 (00\*)

CLIENT: Energy - IPEC  
SITE: Buchanan, NY  
WEATHER: Sunny 45°F

PROJECT NO: 41.01619.00  
DATE: 2/25/08  
SAMPLER(S): M Brito

SAMPLING INTERVAL (depth in ft below top of casing)  
209 to 229.5  
SAMPLING PORT 219

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 20.5

TOTAL VOLUME PURGED:  
3.42 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
1002	0	6.92	0.1					6.5	6.0
1003	0.35	7.08	0.46		0.5	12.7	250.0	2.2	6.0
1023	1.0	7.15	0.44	21	0.53	14.02	271.1		
1032	1.5	7.17	0.43	2.48	0.42	14.04	273.4		
1041	2.0	7.25	0.44	0.80	0.37	12.04	270.2		
1053	2.8	7.14	0.44	0.71	0.33	12.5	243		
1062	3.2	7.14	0.43	0.72	0.32	14.12	218.1	↓	↓
1103	PUMP OFF								
1126	PUMP OFF								
1129	STOP								
1143	SAMPLE COMPLETE								

Equipment Used	Equipment Serial Number/ Identification Number
YSI 1 set #	
Reader	
Turbidity meter	

NOTES AND OBSERVATIONS:



# Waterloo Sampling Data Sheet

5  
MW-67-276 (004)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY  
WEATHER: Sunny 43°F

PROJECT NO. 41 0161619.00  
DATE: 2/25/08  
SAMPLER(S): M Britos

SAMPLING INTERVAL (depth in ft below top of casing)  
250.8 to 291.3  
SAMPLING PORT 276

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 30.5

TOTAL VOLUME PURGED:  
3.95 gal

PURGE RATE: variable (gal min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
1002	0	6.41	0.1					5.5	6.9
1003	0.2	6.57	0.150		2.70	12.52	247	5.5	6.9
1023	0	6.73	0.150	1.91	1.23	12.37	264.5		
1031	0.2	6.83	0.138	1.15	0.47	12.22	270.0		
1041	0.8	6.86	0.138	0.67	0.88	12.50	271.0		
1050	2.1	6.86	0.137	0.61	0.88	12.50	272.3		
1102	2.3	6.86	0.134	0.58	0.87	12.70	278.7		
1110	2.8	6.87	0.130	0.54	0.8	12.43	260.8		
1124	PUMP OFF								
1124	PUMP ON								
1124	START SAMPLE								
1148	SAMPLE COMPLETE								

Equipment Used	Equipment Serial Number/ Identification Number
YSI	
Reader / set #	
Turbidity meter	20070 211

NOTES AND OBSERVATIONS:





# Waterloo Sampling Data Sheet

5  
MJ-67-323 (004)

CLIENT: Entergy - IPEC  
SITE: Buchanan, NY  
WEATHER: Sunny 45°F

PROJECT NO. 410161619.00  
DATE: 2/25/08  
SAMPLER(S): M. Brito

SAMPLING INTERVAL (depth in ft below top of casing)  
317 to 333  
SAMPLING PORT 323

GALLONS OF WATER PER WELL VOLUME:  
Sampling Interval Length 10.5

TOTAL VOLUME PURGED:  
2.0 gal

PURGE RATE: variable (gal min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
1002	0	PUMP ON	0.243		0.25	12.21	333.4	5/5	5/1
1008	0.05	7.46	0.244	1.07	0.26	12.21	333.4		
1012	0.1	7.03	0.237	1.07	0.25	12.21	333.4		
1018	0.2	7.03	0.237	1.50	0.23	12.20	333.4		
1024	0.35	7.1	0.240	1.49	0.23	12.20	333.4		
1030	0.5	7.1	0.240	1.49	0.23	12.20	333.4		
1036		PUMP OFF							
1038		PUMP ON							
1038		7.46	SAMPLE						
1044		PUMP ON	0.24	1.12	0.25	12.20	333.4		

Equipment Used	Equipment Serial Number/ Identification Number
YSI Reader } set #	2
turbidity meter	200751524

NOTES AND OBSERVATIONS:



# Waterloo Sampling Data Sheet

MW-67-340 (004) <sup>5</sup>

CLIENT: Energy - IPEC  
 SITE: Buchanan, NY  
 WFATHER Sunny 45°F

PROJECT NO: 41 0161619.00  
 DATE: 2/25/08  
 SAMPLER(S): M Britos

SAMPLING INTERVAL (depth in ft below top of casing)  
335.2 to 347.9  
 SAMPLING PORT 340

GALLONS OF WATER PER WELL VOLUME:  
 Sampling Interval Length 12.6

TOTAL VOLUME PURGED:  
2.0 gal

PURGE RATE: variable (gal/min)

PURGE METHOD: Double Valve Pump

**WATER QUALITY:**

Time	Purged Volume (gal)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
10:07	0	7.41	0.170					5.5	64
10:08	0.2	7.47	0.170		2.35	12.6	-112	6.1	64
10:22	0.2	7.47	0.170	1.1	2.57	12.45	-133		
10:30	1.0	7.24	0.170	1.02	2.57	12.3	-122		
10:40	1.2	7.34	0.170	1.40	2.50	12.44	-100		
10:50	1.2	7.35	0.170	1.25	2.40	12.7	-112		
10:51	1.2	7.37	0.170	1.35	2.40	12.7	-112		
10:52		PUMP OFF							
10:53		PUMP ON							
10:54		SYSTEM SAMPLE							
10:55		SAMPLE COMPLETE							

Equipment Used	Equipment Serial Number/ Identification Number
YSI Reader set #	
Turbidity meter	20075306

NOTES AND OBSERVATIONS:



# Low-Flow Sampling Data Sheet

21-CSS

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161619.00  
 DATE: 1/15/08  
 SAMPLER(S): M.B., A.A.

cloudy 35°F

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissoived Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
1245	3.55									
1250	4.15	7.01	2.320	7.34	3.60	18.13	24.2			
1255	4.36	7.03	2.320	7.34	3.60	18.76	22.5			
1300	4.12	7.10	2.347	7.93	3.17	18.75	24.8			0.3
1305	4.04	7.14	2.359	8.74	3.21	18.76	24.7			
1315	3.97	7.32	2.268	8.61	3.26	18.79	27.0			0.2
1320	3.97	7.27	2.377	8.14	3.27	18.76	52.8			0.2
1325	3.12	7.41	2.378	8.29	3.32	18.76	52.8			0.2
1330	3.11	7.21	2.329	8.51	3.25	18.76	60.7			0.2
1335	4.33	7.76	2.461	8.11	3.76	18.76	65.9			0.2
1340	4.33	7.76	2.461	8.11	3.76	18.76	65.9			0.2
1345	4.33	7.76	2.461	8.11	3.76	18.76	65.9			0.2
1050										

Equipment Used	Equipment Serial Number/ Identification Number
YSI } Sed #	3
Resden }	
Turbidity meter	2115 1005 24

**NOTES AND OBSERVATIONS:**

All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

03-10-08

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY  
 30" line / rain

PROJECT NO: 2:0161619.00  
 DATE: 2/10/08  
 SAMPLER(S): Miguel Britos

WATER QUALITY: BTW 10.85 - 49 492 level surface

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
0925										
0930	49.47	10.85	3833	0.0	2.53	23.11	77.8			0
0935	42.92	10.80	3874	0.0	2.53	23.00	78.2			0.1
0940	42.25	10.75	3840	0.0	2.80	21.42	76.7			0.25
0945	41.70	10.82	3870	0.0	2.80	21.25	77.7			0.55
0950	41.15	10.78	3870	0.0	2.80	21.25	77.7			0.55
0955	40.60	10.75	3870	0.0	2.80	21.25	77.7			0.55
1000	40.05	10.72	3870	0.0	2.80	21.25	77.7			0.55
1005	39.50	10.72	3870	0.0	2.80	21.25	77.7			0.55
1010	38.95	10.72	3870	0.0	2.80	21.25	77.7			0.55
1015	38.40	10.74	3997	0.0	3.22	19.12	78.0			0.58
1020	37.85	10.82	3994	0.0	3.23	19.91	78.2			0.54
1025	37.30	10.82	3994	0.0	3.23	19.91	78.2			0.54
1030	36.75	10.82	3994	0.0	3.23	19.91	78.2			0.54
1035	36.20	10.82	3994	0.0	3.23	19.91	78.2			0.54
1040	35.65	10.82	3994	0.0	3.23	19.91	78.2			0.54
1045	35.10	10.82	3994	0.0	3.23	19.91	78.2			0.54
1050	34.55	10.82	3994	0.0	3.23	19.91	78.2			0.54
1055	34.00	10.82	3994	0.0	3.23	19.91	78.2			0.54
1100	33.45	10.82	3994	0.0	3.23	19.91	78.2			0.54
1105	32.90	10.82	3994	0.0	3.23	19.91	78.2			0.54
1110	32.35	10.82	3994	0.0	3.23	19.91	78.2			0.54
1115	31.80	10.82	3994	0.0	3.23	19.91	78.2			0.54
1120	31.25	10.82	3994	0.0	3.23	19.91	78.2			0.54
1125	30.70	10.82	3994	0.0	3.23	19.91	78.2			0.54
1130	30.15	10.82	3994	0.0	3.23	19.91	78.2			0.54
1135	29.60	10.82	3994	0.0	3.23	19.91	78.2			0.54
1140	29.05	10.82	3994	0.0	3.23	19.91	78.2			0.54
1145	28.50	10.82	3994	0.0	3.23	19.91	78.2			0.54
1150	27.95	10.82	3994	0.0	3.23	19.91	78.2			0.54
1155	27.40	10.82	3994	0.0	3.23	19.91	78.2			0.54
1200	26.85	10.82	3994	0.0	3.23	19.91	78.2			0.54
1205	26.30	10.82	3994	0.0	3.23	19.91	78.2			0.54
1210	25.75	10.82	3994	0.0	3.23	19.91	78.2			0.54
1215	25.20	10.82	3994	0.0	3.23	19.91	78.2			0.54
1220	24.65	10.82	3994	0.0	3.23	19.91	78.2			0.54
1225	24.10	10.82	3994	0.0	3.23	19.91	78.2			0.54
1230	23.55	10.82	3994	0.0	3.23	19.91	78.2			0.54
1235	23.00	10.82	3994	0.0	3.23	19.91	78.2			0.54
1240	22.45	10.82	3994	0.0	3.23	19.91	78.2			0.54
1245	21.90	10.82	3994	0.0	3.23	19.91	78.2			0.54
1250	21.35	10.82	3994	0.0	3.23	19.91	78.2			0.54
1255	20.80	10.82	3994	0.0	3.23	19.91	78.2			0.54
1300	20.25	10.82	3994	0.0	3.23	19.91	78.2			0.54
1305	19.70	10.82	3994	0.0	3.23	19.91	78.2			0.54
1310	19.15	10.82	3994	0.0	3.23	19.91	78.2			0.54
1315	18.60	10.82	3994	0.0	3.23	19.91	78.2			0.54
1320	18.05	10.82	3994	0.0	3.23	19.91	78.2			0.54
1325	17.50	10.82	3994	0.0	3.23	19.91	78.2			0.54
1330	16.95	10.82	3994	0.0	3.23	19.91	78.2			0.54
1335	16.40	10.82	3994	0.0	3.23	19.91	78.2			0.54
1340	15.85	10.82	3994	0.0	3.23	19.91	78.2			0.54
1345	15.30	10.82	3994	0.0	3.23	19.91	78.2			0.54
1350	14.75	10.82	3994	0.0	3.23	19.91	78.2			0.54
1355	14.20	10.82	3994	0.0	3.23	19.91	78.2			0.54
1400	13.65	10.82	3994	0.0	3.23	19.91	78.2			0.54
1405	13.10	10.82	3994	0.0	3.23	19.91	78.2			0.54
1410	12.55	10.82	3994	0.0	3.23	19.91	78.2			0.54
1415	12.00	10.82	3994	0.0	3.23	19.91	78.2			0.54
1420	11.45	10.82	3994	0.0	3.23	19.91	78.2			0.54
1425	10.90	10.82	3994	0.0	3.23	19.91	78.2			0.54
1430	10.35	10.82	3994	0.0	3.23	19.91	78.2			0.54
1435	9.80	10.82	3994	0.0	3.23	19.91	78.2			0.54
1440	9.25	10.82	3994	0.0	3.23	19.91	78.2			0.54
1445	8.70	10.82	3994	0.0	3.23	19.91	78.2			0.54
1450	8.15	10.82	3994	0.0	3.23	19.91	78.2			0.54
1455	7.60	10.82	3994	0.0	3.23	19.91	78.2			0.54
1500	7.05	10.82	3994	0.0	3.23	19.91	78.2			0.54
1505	6.50	10.82	3994	0.0	3.23	19.91	78.2			0.54
1510	5.95	10.82	3994	0.0	3.23	19.91	78.2			0.54
1515	5.40	10.82	3994	0.0	3.23	19.91	78.2			0.54
1520	4.85	10.82	3994	0.0	3.23	19.91	78.2			0.54
1525	4.30	10.82	3994	0.0	3.23	19.91	78.2			0.54
1530	3.75	10.82	3994	0.0	3.23	19.91	78.2			0.54
1535	3.20	10.82	3994	0.0	3.23	19.91	78.2			0.54
1540	2.65	10.82	3994	0.0	3.23	19.91	78.2			0.54
1545	2.10	10.82	3994	0.0	3.23	19.91	78.2			0.54
1550	1.55	10.82	3994	0.0	3.23	19.91	78.2			0.54
1555	1.00	10.82	3994	0.0	3.23	19.91	78.2			0.54
1600	0.45	10.82	3994	0.0	3.23	19.91	78.2			0.54

Equipment Used	Equipment Serial Number/ Identification Number
YSI { Set #	
Reader	
Turbidity meter	

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

03-T-1019

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.0161619 00  
 DATE: 1/22/08  
 SAMPLER(S): 1/1

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	Notes
11:30	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:31	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:32	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:33	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:34	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:35	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:36	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:37	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:38	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:39	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:40	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:41	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:42	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:43	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:44	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:45	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:46	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:47	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:48	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:49	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:50	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:51	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:52	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:53	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:54	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:55	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:56	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:57	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:58	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
11:59	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:00	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:01	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:02	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:03	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:04	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:05	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:06	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:07	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:08	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:09	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:10	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:11	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:12	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:13	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:14	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:15	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:16	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:17	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:18	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:19	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:20	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:21	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:22	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:23	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:24	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:25	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:26	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:27	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:28	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:29	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	
12:30	15.4	7.5	140	0.4	0.4	11.5	11.5	1.5	1.5	

1 - 1 gal IPEC  
 1 - 500 ml Volucensing  
 2 - 1 gal weighted bottles samples

Equipment Used	Equipment Serial Number/ Identification Number
Flowmeter	1
Turbidity meter	101110000

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.

# Low-Flow Sampling Data Sheet

J3-T2 (074)

CLIENT: Entergy - IPEC  
 SITE: Buchanan, NY

PROJECT NO: 41.016169 00  
 DATE: 1/21/08  
 SAMPLER(S): M. J. ...

**WATER QUALITY:**

Time	Depth to Water (ft)	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Pump Depth (ft)	purged flow Notes
1445	2.423	7.33	0.990	0.00	0.41	24.32	-178	2		
1455	2.423			0.00						
1500	2.337	7.70	0.990		0.41	24.32	-178	2		
1505	2.302	7.70	0.931	2.17	0.3	24.33	-180.7			0.75
1510	2.375	7.68	0.85	1.46	0.37	24.38	-180.4			0.35
1513	2.377	7.68	0.87	1.00	0.52	24.37	-181.9			0.50
1516	2.372	7.67	1.38	0.68	0.47	24.34	-183.3			0.70
1519	2.273	7.69	1.21	1.22	0.49	24.31	-182.3			0.75
1522	2.312	7.67	1.30	0.68	0.42	24.40	-200.2			0.90
1525	2.370	7.67	1.47	0.72	0.45	24.38	-200.4			0.75
1528	2.372	7.67	2.00	0.77	0.44	24.54	-190.0			1.0
1534		START SAMPLE								
16.2		Stop Sampling								
		1 - Low IPEC								
		1 - 500 ml of ...								

Equipment Used	Equipment Serial Number/ Identification Number
YSI ...	5
Turbidity meter	20070 75/1

**NOTES AND OBSERVATIONS:**  
 All depth to water measurements are taken from top of casing.





## APPENDIX E: DOSE CALCULATIONS



Facility Groundwater Flux Calculation

Site Indian Point  
Job No. 161619.00

Prepared By: MJG  
Reviewed By: mib

Parameter Values:

		Totals									
		Total Improved Zone (ft <sup>2</sup> )	Recharge (ft/yr)	Precipitation (ft/yr)							
		3,969,765	0.87	3.02							
		1,355,080									
Surface Area											
Northern Clean Zone Improved (ft <sup>2</sup> )	0	Unit 2 North Improved Zone (ft <sup>2</sup> )	136,704	Unit 3 North Improved Zone (ft <sup>2</sup> )	309,497	Unit 3 South Improved Zone (ft <sup>2</sup> )	321,290	Southern Clean Improved Zone (ft <sup>2</sup> )	213,354		
Northern Clean Unimproved Zone (ft <sup>2</sup> )	111,863	Unit 2 North Unimproved Zone (ft <sup>2</sup> )	217,667	Unit 3 North Unimproved Zone (ft <sup>2</sup> )	438,221	Unit 3 South Unimproved Zone (ft <sup>2</sup> )	268,862	Southern Clean Zone Unimproved (ft <sup>2</sup> )	585,600		
Discounted Area Within Zone	44,831	Discounted Area Within Zone	0	Discounted Area Within Zone	137,938	Discounted Area Within Zone	17,730	Discounted Area Within Zone	144,347		
Northern Clean Zone Catchment (ft <sup>2</sup> )	156,694	Unit 2 North Catchment Zone (ft <sup>2</sup> )	354,371	Unit 3 North Catchment Zone (ft <sup>2</sup> )	770,550	Unit 3 South Catchment Zone (ft <sup>2</sup> )	607,882	Southern Clean Zone (ft <sup>2</sup> )	943,302		
Activity (pCi/L)											
Groundwater											
Northern Clean Zone Catchment	150	Unit 2 North	0	Unit 1/2	3,440	Unit 3 North	453	Unit 3 South Zone	932	Southern Clean Zone	140
Upper Zone Before Canal	150	Unit 2 North	247	Unit 1/2	3,201	Unit 3 North	1,418	Unit 3 South Zone	391	Southern Clean Zone	183
Lower Zone Before Canal											



**Facility Groundwater Flux Calculation**

Site Indian Point  
 Job No. 161619.00

Prepared By: MJG  
 Reviewed By: mib

	Northern Clean Zone	Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South Zone	Southern Clean Zone
Upper Zone After Canal	150	473	4,383	317	932	140
Lower Zone After Canal	150	564	1,084	484	391	183
<b>Stormwater Discharging to Canal (pCi/L)</b>						
Storm Water for Northern Clean Zone		Storm Water for Unit 2 North	Storm Water for Unit 1/2	Storm Water for Unit 3 North	Storm Water for Unit 3 South	Storm Water for Southern Clean Zone
NA	1,260 Avg. MH-4a	NA	0 Avg. CB-14 and CB-34	0 Avg. U3-CB-B8	0 Avg. D1, CB3, E6, & E10	0
<b>Stormwater Discharging to River (pCi/L)</b>						
Storm Water for Northern Clean Zone		Storm Water for Unit 2 North	Storm Water for Unit 1/2	Storm Water for Unit 3 North	Storm Water for Unit 3 South	Storm Water for Southern Clean Zone
NA	0 Avg. MH-1 and MH-12	1,241 Avg. MH-14	3,940 Avg. CB-15	NA	1,060 Avg. E13, CB-C2	



**Facility Groundwater Flux Calculation**

Site Indian Point  
 Job No. 161619.00

Prepared By: MJG  
 Reviewed By: mib

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 <sup>3</sup> /yr
0	1,131	3,096	2,561	2,658	1,765	ft <sup>3</sup> /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 <sup>3</sup> /yr
268	521	1,048	773	643	1,401	ft <sup>3</sup> /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. 161619.00

Prepared By: MJG  
 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 <sup>3</sup> /yr
	268	124	534	610	670	1,419	ft <sup>3</sup> /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 x 73.9%	Southern Clean Zone Area x 0%	Units
	0	15,630	44,010	125,273	180,662	0	ft <sup>3</sup> /yr
	0	43	121	343	495	0	ft <sup>3</sup> /day
	0.00	0.22	0.63	1.78	2.57	0.00	GPM
	0	442,591	1,246,220	3,547,339	5,115,782	0	L/Yr



Facility Groundwater Flux Calculation

Site Indian Point  
Job No. 161619.00

Prepared By: MJG  
Reviewed By: mlb

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	6,411	54,110	27,907	21,949	268,209	ft <sup>3</sup> /yr
	90	18	148	76	60	735	ft <sup>3</sup> /day
	0.47	0.09	0.77	0.40	0.31	3.82	GPM
	926,576	181,536	1,532,223	790,237	621,536	7,594,833	L/Yr
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	23,132	96,614	69,330	41,857	249,569	ft <sup>3</sup> /yr
	178	63	265	190	115	684	ft <sup>3</sup> /day
	0.92	0.33	1.38	0.99	0.60	3.55	GPM
	1,839,323	655,037	2,735,807	1,963,203	1,185,255	7,067,007	L/Yr

Water Remaining in Storm Drains and Discharged to Canal

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

Northern Clean Area Catchment (0% Storm Drain Water)	Unit 2 North (45% Unit 2 North and 30% of Unit 1/2 Storm Drain Water)	Unit 1/2 Area 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	524,837	0	37,387	493,426	1,699,863	ft <sup>3</sup> /yr
0	1,438	0	102	1,352	4,657	ft <sup>3</sup> /day
0	7.47	0.00	0.53	7.02	24.19	GPM
0	14,861,733	0	1,058,689	13,972,258	48,134,772	L/Yr



**Facility Groundwater Flux Calculation**

Site Indian Point  
Job No. 161619.00

Prepared By: MJG  
Reviewed By: mlb

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 <sup>3</sup> /yr
0	57	310	256	133	88	ft <sup>3</sup> /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
<b>GW</b>	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
<b>SW</b>	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)**

	Northern Clean Area	Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South	Southern Clean Zone	Total
<b>GW to River-Upper Zone</b>	1.39E+08	8.58E+07	6.72E+09	2.51E+08	5.79E+08	1.07E+09	<b>8.84E+09</b>
<b>GW to River-Lower Zone</b>	2.76E+08	3.70E+08	2.98E+09	9.51E+08	4.64E+08	1.30E+09	<b>6.32E+09</b>
<b>GW to Canal</b>	0.00E+00	0.00E+00	4.29E+09	1.61E+09	4.77E+09	0.00E+00	<b>1.07E+10</b>
<b>SW to Canal</b>	NA	1.38E+10	0.00E+00	0.00E+00	1.43E+02	0.00E+00	<b>1.38E+10</b>
<b>SW to River</b>	NA	0.00E+00	3.97E+09	1.04E+10	0.00E+00	9.67E+08	<b>1.54E+10</b>

**Curies/Yr ==> 0.05**



## Facility Groundwater Flux Calculation

Site Indian Point  
Job No. 161619.00

Prepared By: MJG  
Reviewed By: mib

### Notes:

The recharge rate used herein, 0.66 ft/yr (10 inches/year) is within the range of values discussed in the USGS modeling report<sup>1</sup>. 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 3.02ft/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