

GZA GeoEnvironmental, Inc.

**FINAL
IPEC QUARTERLY LONG-TERM
GROUNDWATER MONITORING REPORT
QUARTER FOUR 2008
(REPORT NO. 4)
INDIAN POINT ENERGY CENTER
BUCHANAN, NEW YORK**

PREPARED FOR:

ENTERGY NUCLEAR NORTHEAST, INC.

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*Engineers and
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September 1, 2009
File No. 01.0017869.91



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Quarter Four 2008 (Report No. 4)
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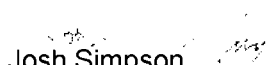
Dear Mr. Evers:

GZA GeoEnvironmental of New York (GZA) is pleased to provide this Quarterly Groundwater Monitoring Report for our mutual client, Entergy 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


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1.0 EXECUTIVE SUMMARY

On behalf of Entergy Nuclear Northeast, Inc., GZA GeoEnvironmental of New York (GZA) has completed the Q4 2008 quarterly groundwater monitoring for the Indian Point Energy Center (IPEC). The radionuclide concentrations measured during Q4 2008 were combined with previous quarterly data¹ to compute rolling average concentrations reflective of groundwater contaminant levels over the past twelve months. 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: 1) the ongoing verification of the Precipitation Mass Balance Model calibration, as based on groundwater elevation data collected in 2007 and 2008²; and 2) the behavior of both the Unit 1 Strontium plume and the Unit 2 Tritium plume.

Based on the quarterly groundwater sampling data for Q4 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 Q4 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, with one exception. This exception involves the temporary, increased leakage from the Unit 1 Spent Fuel Pool Complex (SFPs), as anticipated during the final removal of the residual fuel rods for ISFSI storage. This additional leakage was verified by the Long Term Monitoring Program, with measurement of a pronounced increase in radionuclide levels in the groundwater immediately downgradient of the Unit 1 SFPs. As such, these data support the validity of the current CSM for use as a basis for Long Term Monitoring Program design.

In addition to the detection of an actual "new" SSC leak, as described above, the Long Term Monitoring Program also again yielded at least one false positive this quarter; i.e., where the currently established Investigation Levels (I.L.s) were met without new leakage. These cases are analyzed individually herein and none were found to indicate a new leak in the SSCs. Based on the Q4 2008 data, as well as that collected during Q1, Q2 and Q3 2008, it currently appears that the I.L.s originally established are somewhat too sensitive relative to natural seasonal/precipitation-driven transient variations in radionuclide activities, as well as the variability inherent in the laboratory analyses. As such, these existing I.L.s will need to be re-evaluated over the next quarter.

The data further indicate that the Unit 1 and Unit 2 plumes have remained relatively stable over this monitoring period, and thus are exhibiting an overall slowly decreasing trend in radionuclide levels, when the plumes are viewed in their entirety and past release events and expected seasonal variability in the sampling data are accounted for. Furthermore, the overall, continued

1 In cases where samples were taken in addition to the quarterly samples (e.g., mid-quarter samples associated with refueling events), the additional sample data were not included in the yearly averages so as not to bias the averages to a specific season (i.e., the season when additional samples were obtained).

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

Section 1.0 Executive Summary

reduction in Tritium levels in the Unit 2 plume is consistent with a conclusion that the Unit 2 SFP had ceased leaking after the transfer canal "pin hole leak" was repaired in late 2007. However, given the Tritium stored in the subsurface via natural and anthropogenic retention mechanisms³, ultimate confirmation of this conclusion will require monitoring over a number of years to demonstrate continued depletion of Tritium from the retention mechanisms and allow ranges in seasonal variation to be adequately reflected in the monitoring data. Overall, GZA believes that continued monitoring will further demonstrate decreasing long term trends in groundwater contaminant activities over time, for both the Unit 1 and Unit 2 plumes, given the source interdictions completed by Entergy.

³ These retention mechanisms are discussed along with the CSM in the previously cited Hydrogeologic Site Investigation Report.



2.0 SCOPE OF WORK

During Q4 2008, GZA performed groundwater monitoring activities at IPEC in Buchanan, New York (Site) as part of IPEC's overall Long Term Groundwater Monitoring Program (LTMP) at the Site⁴. The overall foundation for the development and execution of this LTMP is based on the CSM, a description of which is contained within GZA's Hydrogeologic Site Investigation Report⁵. 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 Groundwater Elevation Measurement

GZA currently maintains transducers and dataloggers as part of the monitoring instrumentation located across the Site⁶. 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 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 November 11, 2008 low river tide.

The groundwater contour map is 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 has been collected through the end of 2008 to verify the suitability of the model for dose computation. As such, it is currently our intent to substantially reduce the scope of groundwater elevation data collection during the first half of 2009.

2.2 Groundwater Sampling

During Q4 2008, GZA collected groundwater samples for radionuclide analysis from scheduled sampling intervals within select monitoring installations ("wells") as shown in **Table 3**. In addition, GZA split groundwater samples from select locations between Entergy, the Nuclear Regulatory Commission (NRC), and the New York State Department of Environmental Conservation (NYSDEC). Chains of Custody for samples collected by GZA are presented in **Appendix C**.

GZA used different types of pumping equipment depending upon the sampling method and the characteristics of the individual monitoring installation⁷. **Table 1** lists the monitoring installations

4 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.

5 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.

6 It is noted that following the 2008 fourth quarter, only a select set of locations will continue to be routinely monitored with groundwater level transducers.

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

Section 2.0 Scope of Work

sampled, the sampling depths and elevations within sampling installations, and the sampling method and equipment used.

In general, GZA implemented two basic 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 wastewater⁸. As agreed by Entergy Nuclear Northeast, the NRC, NYSDEC, and GZA, the modified traditional purge method⁹ 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 practical¹⁰. Sampling Data Sheets summarizing water quality data and sampling information are presented in **Appendix D**.

With all of the above sampling methods, GZA used dedicated sampling equipment, including polyethylene and/or nylon tubing and submersible electric pumps to the extent practical. 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.

2.3 Vapor Containment Building Foundation Drain Sampling

GZA attempted to collect 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 around the sumps near the middle of the structures). These drains are being used as an integral part of the early leak detection monitoring network. However, due to plant security precautions, GZA was unable to access these sampling points. The manholes at these catch basins are currently welded shut, as they were during the previous quarter (Q3 08). A plan to gain access to these sampling locations without compromising plant security is underway. GZA anticipates that collection of samples from at least two of the three manholes will be possible in 2009.

Prior to Q3 08, GZA was able to sample the east drain line in manhole MH-5 to capture drainage from the Unit 2 Vapor Containment Foundation Drains. GZA also previously sampled the east drain line in manhole B-1 to capture drainage from the Unit 3 Vapor Containment South Curtain Drain. In addition, GZA sampled the manhole B-6 during earlier sampling quarters to capture drainage from the Unit 3 Vapor Containment North Curtain Drain and Reactor Sump Foundation Drain¹¹.

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

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

10 When external factors (such as well-surface-flooding from stormwater runoff or overland flow of plant component leaks) might have infiltrated the top of the well and impacted ambient groundwater conditions at a specific sampling location, GZA typically purged three to five volumes of water (using the modified traditional purge method) prior to collection of a sample to attempt to obtain a representative groundwater sample.

11 During early attempts to collect a discrete sample specifically representative of the east drain line in B-6, this catch basin was used as a clean water discharge point for some unidentified plant work. As a result, the height of the water within the manhole was above the drain lines, which only permitted collection of a composite sample. By mid-year 2008, these discharge operations had ceased, and during the Q2 2008 attempt to collect a sample from this location, GZA observed no flow of water through this drain. It is possible that flow within this drain is being restricted by sediment further upgradient in the drain. Thus, a definitive sampling solution for storm drain manhole B-6 is currently not available.

Section 2.0 Scope of Work

2.4 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.

2.5 Mid-Quarter Sample Collection

During the spring of 2008, Indian Point Energy Center began moving spent fuel in Unit 1 and refueling Unit 2. Therefore, samples in addition to those collected for the routine quarterly sampling round were obtained from selected wells associated with Units 1 and 2 to increase the monitoring frequency proximate to these events. Following the Q4 08 sampling event, additional groundwater samples were collected from MW-31-49, MW-31-63, and MW-31-85 (for Unit 2 monitoring), and MW-42-49, MW-50-66, MW-53-120, and U1-CSS (for Unit 1 monitoring) during the approximate halfway point between sampling quarters. The results of the mid-quarter samples collected after Q4 2008 are presented in **Section 3.4** along with the quarterly data. Sampling Data Sheets summarizing water quality data and sampling information are presented in **Appendix E**.



3.0 DATA EVALUATION

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

- 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;
- 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;
- 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
- 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)¹², 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 continuing verification of the calibration of this model based on the most current 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 off-Site 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 using the Q2 2007 (reference) data set. 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 Law Model with gradients also derived from Q2 2007

¹² The selection of MNA as the remediation for the Site is discussed further in the Hydrogeologic Site Investigation Report.

Section 3.0 Data Evaluation

(June 1, 2007) groundwater elevation contours¹³. 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 per year. Based on a USGS infiltration study¹⁴ 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 discharge¹⁵ 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 F**.

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 independently¹⁶ 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 Program¹⁷, 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 tides¹⁸ have been used to construct groundwater elevation contours for the upper groundwater flow zone (water table contours) and the lower

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

14 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.

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

16 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.

17 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. The scope of groundwater elevation data collection will be reduced at that point.

18 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 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).

Section 3.0 Data Evaluation

flow (potentiometric head contours), as shown in **Figure 5** for Q4 2008. As summarized on the table included below, similar calibration analyses were performed for previous quarterly monitoring (2nd, 3rd, and 4th quarters of 2007, and 1st, 2nd, and 3rd quarters of 2008)^{19, 20}.

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 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	Q3 2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008
Totals	18.8	18.8	18.4	18.2	20.6	25.7	23.7	23.5
Northern Clean Zone	1.4	0.7	0.7	0.5	0.9	0.4	0.4	0.4
Unit 2 North Zone	0.6	0.8	0.9	0.8	1.3	0.5	0.6	0.6
Unit 1 / 2 Zone	2.8	2.3	1.7	2.1	3.2	2.5	1.9	3.2
Unit 3 North Zone	3.2	4.5	4.4	4.1	5.5	6.6	5.1	4.6
Unit 3 South Zone	3.5	2.6	2.8	2.7	2.2	5.4	5.8	4.5
Southern Clean Zone	7.4	7.9	7.9	8.1	7.6	10.3	9.9	10.2

The new data for Q4 2008 continues to show that the overall groundwater flow through the Site during 2008 is greater than previously computed for 2007 by approximately thirty percent. This is as would be expected given the general overall increase in precipitation for this period²¹; groundwater levels, and thus flow, typically increase during periods of greater precipitation and infiltration. As shown in the table, the increased flow is manifested in a zone-specific manner, with the more southerly zones primarily showing the greatest increases. This is also as would be expected given that the Unit 1 and Unit 2 foundation drains capture a large portion of the more northerly flow prior to it reaching the river.

While the increased flow in 2008 (as compared to the reference flow of Q2 07) may seem substantial, if used for the dose computation, it would have²² only limited impact on the dose

19 See Quarterly Reports prepared by GZA including: Final 2007 Quarterly Report dated May 1, 2008; Quarter 1 2008 Quarterly Report dated May 15, 2008; and Quarter 2 and 3 2008 Quarterly Report dated February 6, 2009.

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

21 The Q4 2008 groundwater contours were developed from data collected on November 11, 2008; the on-site meteorological station reported that the previous month saw 5.15 inches of precipitation which is approximately 1 inch more than average. The Q3 2008 data was collected (July 10, 2008) during a period of relatively heavy rainfall (i.e. July 2008 saw 5.50 inches of precipitation which is 2.38 inches above normal). The Q2 2008 groundwater contours were developed from data collected on April 4, 2008; the on-site meteorological station reported that the previous month saw 3.77 inches of precipitation while the normal is approximately 2.78 inches. In addition, the winter snow (and subsurface frost layer) melt were likely to be reflected in the Q2 2008 groundwater flow rate.

22 The dose computations are currently all performed with the flows computed for the Q2 2007 data set. It is noted that the increase in the Q4 groundwater flow in the Unit 1/2 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 would still only a small fraction of the permitted value. Therefore, the current dose computations have again been based on the

Section 3.0 Data Evaluation

computations for two primary reasons: 1) the dose computations are performed on a yearly average basis, so a higher set of flows for a particular quarter would be averaged with the lower preceding values; and 2) the highest activities are found in the Zone 1 / 2 area where the flows have not shown as great an increase as in the more southerly, cleaner areas. Given the small variability of flow over the seasons monitored to date, as well as the overall recognition that the computed doses to the river are a small fraction of the permitted amounts, 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 time²³.

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 Q4 2008 were analyzed for radionuclides including Tritium, Sr-90, Cs-137, Co-60, and Ni-63 at GEL Laboratories²⁴. **Table 3** presents the Q4 2008 analytical results specific to Tritium, Sr-90, Cs-137, Co-60, and Ni-63. The rolling yearly averages, which were generally calculated from Q1, Q2, Q3, and Q4 2008, are also presented in **Table 3**²⁵. **Table 4** presents minimum detection concentrations (MDC), standard deviation, and I.L.s assigned to each well for the Q4-2008 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 met for Q4 08, and the analytical results should be useable. This conclusion is further supported by a review of the Q4 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-derived 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

Q2 07 data. Once the final full round of quarterly transducer data has been collected, the "reference set of flows" (currently Q2 2007) will be re-established, and the Precipitation Mass Balance Model recalibrated, so as to be as conservative as supported by all the available data at that time.

²³ 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.

²⁴ 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.

²⁵ An overall evaluation of the Q2 2008 sample analytical procedures employed by the laboratory for this round of samples indicated that the quality assurance quality control protocols had not been met for some samples and therefore a portion of the analytical results for Q2 2008 are not useable for calculation of the rolling averages. Therefore, only the useable data from Q2-2008 are included in the calculations for the rolling averages.

Section 3.0 Data Evaluation

multiplied by radionuclide concentrations measured in the storm drains to compute the associated storm drain radionuclide release rates to the Discharge Canal and Hudson River²⁶. 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 Q4 2008 are shown in the table below.

	GROUNDWATER AND SURFACE WATER TO RIVER (CI/YR)	GROUNDWATER AND SURFACE WATER TO CANAL (CI/YR)
Northern Clean Zone*	4.15E-04	0.00E+0**
Unit 2 North Zone	4.11E-04	2.75E-02
Unit ½ Zone	8.53E-03	3.72E-03
Unit 3 North Zone	3.06E-03	9.99E-04
Unit 3 South Zone	1.05E-03	4.40E-03
Southern Clean Zone*	3.95E-03	0.00E+0***

* 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.

** The radionuclide release rate to the Discharge Canal from the Northern Clean Zone is zero because the Discharge canal does not extend far enough to the north to be downgradient of the Northern Clean Zone.

*** The radionuclide release rate to the Discharge Canal from the Southern Clean Zone has been computed to be zero because groundwater in this zone appears to flow under the Discharge Canal and directly to the river. This conclusion has been reached given that the surface water level in the Discharge Canal is, on average tidally, equal to the proximate groundwater elevation, both of which are above the water level elevation in the Hudson River. This approximation results in a conservatively high dose estimation.

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 also provide rapid detection of potential leaks from 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 above cited Memorandum. These monitoring protocols are consistent with the NEI Groundwater Protection Initiative.

As discussed with the NRC during our Groundwater Protection Initiative meeting on August 12 and 13, 2008, Entergy has initiated a program of increased sampling frequency (in addition to

²⁶ The storm drains also include groundwater discharges from the foundation drains for Unit 2 and Unit 3 VC Buildings.

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the quarterly samples) at select wells during/following activities that could potentially result in the increased likelihood of an undetected release to the subsurface. During the Q4 2008 monitoring period, there were no activities that required increased sampling. However, mid-quarter samples were still collected to better define the residual impacts of the Unit 1 fuel removal procedure²⁷ and provide further data pursuant to the ongoing Unit 2 SFP integrity analyses²⁸.

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 I.L.s shown in the table below. I.L.s are currently computed each year based on 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. A new method of calculation is presently being evaluated and is likely to be employed in 2009.

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*	any detection*	any detection*
On-Site Boundary Wells (MW-40, MW-51, MW-52, and MW-107)	1,000**	2**	any detection*
Riverfront Boundary Wells (MW-60, MW-62, MW-63)	2,000**	2**	any detection*
All Other Wells	>2x average***	>2x average***	>2x average***

* A radionuclide is positively detected when the result is greater than or equal to the MDC and 3 times the 1 sigma uncertainty.

** 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.

*** 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.

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.;

27 As part of the process for final fuel removal from Unit 1, IPEC began increasing the water level in the pools to Elevation 55' starting on April 23, 2008, with completion on the 25th. As anticipated based on previous work, increased leakage at high water was observed, particularly from the transfer canal. IPEC believes that the leakage is through the concrete into the Chemical Systems Bldg 33' area given increased Sphere Valve Gallery sump pump activation on the 14' level. During fuel removal, IPEC continued to add water to maintain the pool level at 55' until October when all the fuel was removed and the pools were drained. Given the anticipated increased leakage, GZA collected Unit 1 "Mid-Quarter" groundwater samples from monitoring wells U1-CSS, MW-42-49, MW-50-66, and MW-53-120 on May 12 & 13, 2008 and September 5 & 8, 2008 to evaluate the associated subsurface impact of fuel removal activities. These wells were again sampled as part of the Q4 sampling round, with additional Mid-Quarter samples subsequently taken between November 17th and 19th.

28 To provide additional data pursuant to ongoing analyses relative to the potential for a remaining leak in the Unit 2 SFP, GZA collected additional samples (subsequent to the Q4 samples) from monitoring wells MW-31-49, MW-31-63, MW-31-85, and MW-67-39.

Section 3.0 Data Evaluation

- Re-analyze aliquots of the original sample;
- 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); and
- Initiation of source/ground water remediation techniques commensurate with the potential dose impact analyses and good environmental stewardship.

3.4.1 Boundary Investigation Levels

A comparison of the Q4 2008 analytical results for the On and Off-Site Boundary Wells to their respective I.L. values shows that the I.L.s were not met for any of the monitoring locations. Therefore, there was no cause to further investigate radionuclide activity in these wells.

3.4.2 SSC Investigation Levels

For the SSC monitoring wells, a comparison of the Q4 2008 and Post-Q4 Mid-Quarter analytical results to their respective I.L. values shows that the I.L.s were initially met in four samples. One of these samples (MW-67-39) was reanalyzed, and the results were found to no longer meet I.L.s²⁹. The remaining three samples in which the I.L.s were met are discussed individually in the sections below. The following table summarizes the cases where the I.L.s were met and also presents the reanalyzed results.

WELL ID	RADIONUCLIDE	RESULT (PCI/L)	REANALYZED RESULT (PCI/L)	INVESTIGATION LEVEL (PCI/L)
MW-36-52	Sr-90	8.27	NA*	4.88
MW-42-49	Sr-90	102	NA*	97.1
MW-54-58	Sr-90	9.02	NA*	3.98
MW-67-39	Co-60	15.9	ND**	any detection***

* NA indicates that the sample was not reanalyzed.

** ND indicates that the radionuclide was not detected greater than or equal to the MDC and 3 times the 1 sigma uncertainty.

*** A radionuclide is positively detected when the result is greater than or equal to the MDC and 3 times the 1 sigma uncertainty.

MW-36-52. The Q4 results at this location indicate the continuance of a recently developing trend of increasing Strontium levels. While the exact cause of this trend is currently unclear, it is likely related to either: 1) a delayed response to the 2005 filling of the Unit 1 SFPs for fuel inspection, similar to that described in **Section 3.6** below for MW-37, 49 and 50; or 2) the current (2008) filling of the Unit 1 SFPs for final fuel removal, as is consistent with that further described below for MW-54-58. In any case, plausible potential causes are related to Unit 1, which has had all remaining fuel and SFPs water removed. As such, the source term has been terminated and it is therefore anticipated that Strontium levels at this monitoring location will

²⁹ The initial positive Cobalt-60 result for sample MW-67-39 was unexpected recognizing that the previous results for this location yielded non-detectable levels. As shown in the table, the re-analysis of this sample yielded below detection limit concentrations of Cobalt-60. This is consistent with historically reported concentrations as well as that expected based on the CSM.

Section 3.0 Data Evaluation

return to a downward trend with time. This location will be subject to added scrutiny during the upcoming quarterly monitoring round.

MW-42-49. As discussed previously, water levels in the Unit 1 SFPs were increased during late April 2008 as part of the process for final fuel removal for ISFSI storage. As anticipated based on previous work, increased leakage at high water was observed, particularly from the transfer canal. As such, it was expected that radionuclide levels would increase downgradient of Unit 1. Therefore, Mid Quarter samples were taken during the approximate halfway point following the Q2, Q3, Q4 2008 and Q1 09 sampling quarters. It was anticipated that increased radionuclide levels³⁰ would be observed shortly after raising of pool levels (i.e., in the post-Q2 Mid Quarter samples). However, the expected increase was not observed until the post-Q3 Mid Quarter samples. These samples yielded an abrupt Strontium level increase to three times the I.L. for MW-42-49³¹. The Q4 sample results indicated a similarly abrupt decrease in Strontium levels to just below the I.L. at this location, but the post-Q4 sample yielded a small increase in Strontium levels that resulted in an approximately five percent exceedence of the I.L. However, it is anticipated that this slight increase is the result of natural transient variability in the groundwater system, and that the Strontium levels at this location will continue to decline from the previous abrupt increase observed after the water level increase in the Unit 1 SFPs (the remaining fuel has all been removed and the water drained from the Unit 1 SFPs). Overall, the observed behavior of this monitoring location to the increased leakage, and then cessation of all leakage from the Unit 1 SFPs is consistent with, and further verifies the validity of the CSM.

MW-54-58. The Strontium result at MW-54-58 more than doubled its I.L., the first instance in which the I.L. was exceeded at this sampling location. This abrupt increase is anticipated to be the result of the increase in water levels in the Unit 1 SFPs, showing a predicted delayed response following that seen in the upgradient well MW-42-49. Previously, Strontium levels at MW-54-58 have exhibited a relatively stable trend. This pattern is consistent with the expected delayed response of MW-54-58 following increased activity at MW-42-49. Moreover, all of the other sampling depths within this monitoring installation also showed a similar, but lower magnitude, response in Strontium levels. In addition, MW-53-120, the upper two sampling intervals in MW-57 and potentially MW-36-52, located within the identified Strontium plume upgradient of MW-54 and downgradient of MW-42, also all showed a marked increase in Strontium levels over the same general time interval. All of these monitoring network responses are consistent with, and further verify the validity of the CSM.

Three critical conclusions can be drawn from these data: 1) the current CSM for the IPEC site provides a good basis for the design of the Long Term Monitoring Program; 2) the procedures and rationale used for selecting monitoring well locations for leak detection have been validated given the clear detection of the confirmed Unit 1 SFPs increased leakage during fuel removal ; and 3) increases in radionuclide levels following a documented leak take longer to materialize in the groundwater than might otherwise be expected.

³⁰ It was anticipated that Tritium levels would increase, but it was unclear if increased Strontium levels should be expected given Entergy's demineralization of the pools prior to raising the water levels. In fact, the previously enhanced demineralization, begun in April 2006, was resulting in a consistent decrease in Strontium levels in MW-42-49.

³¹ As indicated, Strontium levels increased even though the SFPs were being aggressively demineralized. This result is not unexpected given that the increase in leakage rate, even at reduced Strontium levels, could result in increased groundwater Strontium levels due to additional partitioning from the solid subsurface materials back into the groundwater as well as the additional leakage rate as compared to the groundwater flow rate.

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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 were below I.L. levels, this overall data set demonstrates that radionuclides continue to migrate toward the Hudson River to the West, and are not migrating off of the property to the North, East or South, as expected given groundwater flow directions towards the power block area.

Given the analyses discussed above, there is also no compelling reason to believe that any new leaks have developed in the SSCs monitored relative to Unit 2 or 3, as no Tritium levels met their I.L.s. Moreover, the overall, continued reduction in Tritium levels in the Unit 2 plume³² is consistent with a conclusion that the Unit 2 SFP had ceased leaking after the transfer canal "pin hole leak" was repaired in late 2007. However, given the Tritium stored in the subsurface via natural and anthropogenic retention mechanisms³³, ultimate confirmation of this conclusion will require monitoring over a number of years to demonstrate continued depletion of Tritium from the retention mechanisms and allow ranges in seasonal variation to be adequately reflected in the monitoring data. As a case in point, MW-31 has exhibited a number of peaks in Tritium levels which appear to be seasonal and do not correlate with refueling outages (as would *otherwise* potentially be more indicative of an ongoing Unit 2 SFP leak). Finally, while not a groundwater monitoring issue, a crack leak collection device³⁴ is also routinely monitored as part of the overall ongoing Unit 2 SFP integrity analysis. The data indicate that very small amounts of water (on average < 2/100ths of a gpd) still drain from the shrinkage crack in the concrete. The volume of drainage is episodic with apparent yearly peaks in the flow. A full explanation of the underpinning mechanism(s) has not yet been discerned, but it is clear that the peaks do not correlate with refueling outages. While work is still ongoing relative to this outstanding issue, water which exits the crack is fully contained and does not enter the subsurface.

Relative to the Unit 1 data, increased leakage was anticipated during final fuel removal from Unit 1 SFPs. This leakage was readily detected by the Long Term Monitoring Program. Overall, GZA believes that continued monitoring will further demonstrate decreasing long term trends in groundwater contaminant activities over time for both the Unit 1 and Unit 2 plumes given the source interdictions completed by Entergy.

Since inception of the Long Term Monitoring Program, it has been observed that I.L.s have been routinely exceeded in a number of cases where subsequent data have demonstrated that no new leaks have occurred. The majority of these cases occur where the radionuclide levels are generally low and/or near their detection limits. It appears that data variability, likely due to seasonal precipitation influences, is the primary cause of these false positives. Analysis of the false positives indicate that, for these cases, I.L.s equal to twice the previous yearly average are clearly too low. Uncorrected, this condition is likely to prove detrimental over time relative to the overall intent of establishing the I.L.s for leak detection. While simply increasing the I.L.s to a greater multiple of the yearly average would likely be appropriate for these cases, it would result in I.L.s that are too high for locations with higher levels of residual contamination. Therefore, the basis upon which the I.L.s are computed needs to be re-evaluated in light of the natural

32 It is noted that there is no Tritium plume associated with Unit 3.

33 These retentions mechanisms are discussed along with the CSM in the previously cited Hydrogeologic Site Investigation Report.

34 Further discussion of the 2005 shrinkage crack leak in the SFP concrete wall that initiated the overall groundwater investigation, and the associated crack leak collection device installed to contain any residual leakage, can be found in the Hydrogeologic Site Investigation Report.

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transient variability of the groundwater system in response to precipitation events. This work is ongoing.

3.5 Plume Natural Attenuation Monitoring

The fourth 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 MNA³⁵, 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 (beginning in April 2006 with a reduction in Strontium levels of over 95 percent³⁶), one might expect that the plumes should have started to markedly attenuate with time. While both plumes have generally shown significant levels of attenuation as compared to the highest levels measured during the two-year hydrogeologic investigation period³⁷, it was expected that the plumes would *not* show rapid additional attenuation during the shorter time frames subsequent to the source interdictions implemented by Entergy³⁸. As predicted, Q4 2008 quarterly data continue to indicate that the Unit 2 Tritium and Unit 1 Strontium plumes have remained relatively stable, and thus are exhibiting an overall slowly decreasing trend in radionuclide levels over the period of long term monitoring to date, when the plumes are viewed in their entirety and past release events and expected seasonal variability in the sampling data are accounted for.

On a smaller scale however, it was previously observed in 2007 and Q1 08 that some vertical intervals in monitoring installations MW-37, MW-49 and MW-50, as well as those downgradient along the plume migration pathway (MW-66 and MW-67), were apparently showing an increasing trend in Strontium levels, with a number of intervals yielding the highest levels ever recorded during Q4 07 or Q1 08. This observed behavior was attributed to either 1) 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; and/or precipitation induced natural variability. Subsequent samples from these wells, however, have generally exhibited decreased or stable Sr-90 activity, thus showing a reversal or stabilization of the previous trend. More recently MW-36-52 has also exhibited a similar increasing trend in Strontium levels, which may also be attributable to the same mechanisms summarized above. 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

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

36 As of late 2008, all the fuel rods have been removed from the Unit 1 SFPs and the pool water has been drained. As such, the Unit 1 SFPs is no longer an active source of radionuclides to the subsurface.

37 See data and discussion presented in the Hydrogeologic Site Investigation Report. It is also important to note that while the Unit 1 plume has generally shown an overall reduction in Strontium levels, a number of wells, starting upgradient with MW-42 and sequentially progressing downgradient, have recently peaked at Strontium and Tritium levels above those previously observed. The most upgradient wells have now begun to show reduced activity levels. This is as was expected given the increased leak rate during final fuel removal. It is anticipated that plume levels will generally increase with time due to this perturbation before resuming their overall downward trend.

38 In the case of the Unit 2 Tritium plume, it has been demonstrated that vadose zone retention mechanisms result in protracted release of Tritium to the groundwater after the physical leaks have been repaired. This conclusion is further supported by the recent tracer data collected as part of Q3 monitoring (see previous quarterly report). 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.

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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, as well as the previously discussed subsurface radionuclide retention mechanisms, 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 Q4 2008 has shown the following:

- While I.L.s have been met at a number of locations, there is no evidence of new leaks from the systems, structures, or components monitored, with the exception of the anticipated additional leakage from the Unit 1 SFPs. Based on past work, additional leakage was expected during the raising of water levels in these pools for final fuel removal to ISFSI storage. This leakage was, in fact, initially detected as pronounced increases in Tritium and Strontium in the monitoring location closest to Unit 1. Subsequently, this monitoring location has shown a decrease in radionuclide levels with similar increases exhibited by monitoring locations further downgradient. As such, these data support the validity of the current CSM for use as a basis for Long Term Monitoring Program design;
- The most current groundwater flux computations (Q2, Q3, and Q4 08) show an overall increase in the total groundwater flow through the Site. This is as would be expected given the increased precipitation values and snow/frost melt over this time period. The continuing calibration of the Precipitation Mass Balance Model indicated that the groundwater flux values calculated have routinely been generally consistent with that predicted using the Darcy Law Model, given anticipated seasonal precipitation variability;
- The overall H3 and Sr-90 activity within the Unit 2 and Unit 1 plumes is generally stable or decreasing, with the anticipated exception of the increases downgradient of the Unit 1 SFPs due to final fuel removal. Given that all the remaining fuel rods and pool water has now removed from these SFPs, it is anticipated that increased radionuclide levels will continue to move downgradient through the plume, with a return over time to the previous overall decreasing trend; and
- Based on the results and evaluation of the Q4 2008 groundwater monitoring within the context of the long term monitoring program, IPEC plans to continue routine groundwater sampling and related maintenance during Q1 2009. In addition, GZA recommends that the basis for establishing I.L.s 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 2008 4th Quarter Low Tide Groundwater Elevations

Table 3 2008 4th Groundwater Analytical Results and Averages

Table 4 2008 4th 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 ¹	Sampling Method	Sampling Equipment Used	Projected 2009 Sampling Frequency ²	SAMPLING INTERVAL ³				SAMPLING DEPTH ⁴	
				FT Below Top of Casing		Elevation in Feet msl		Feet Below TOC	Elevation in Feet msl
				Top	Bottom	Top	Bottom		
MW-30-59	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	67.3	71.3	8.4	1.4	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-31-53	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	125.8	138.3	-48.7	-61.2	130.3	-53.7
MW-32-149	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	125.8	136.8	-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-36-2 ⁸	Low Flow	Peristaltic Pump	Quarterly	11.0	24.0	0.8	-12.2	17.0	-5.2
MW-36-41	Low Flow	Peristaltic Pump	Inactive	36.0	41.0	-24.2	-29.2	37.0	-25.2
MW-36-52	Low Flow	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	Low Flow	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-39-57	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	64.7	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	158.7	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	Watera Pump	Bi-Annually	59.0	64.0	-4.1	-9.1	61.0	-6.1
MW-42-49	Modified Well Vol. Purge	Submersible Pump	Quarterly	31.0	51.0	38.7	18.7	41.0	28.7
MW-42-78	Modified Well Vol. Purge	Watera Pump	Quarterly	69.0	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	Watera Pump	Quarterly	79.0	104.0	14.5	-10.5	80.0	13.5
MW-45-42	Modified Well Vol. Purge	Peristaltic Pump	Quarterly	27.5	42.5	26.2	11.2	37.0	16.6
MW-45-61	Modified Well Vol. Purge	Peristaltic Pump	Quarterly	51.5	61.5	2.2	-7.8	58.0	-4.4
MW-46	Low Flow	Submersible 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	Watera Pump	Inactive	70.0	80.0	0.3	-9.7	72.0	-1.7

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Methods, Frequency, Depths

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

Well ID ¹	Sampling Method	Sampling Equipment Used	Projected 2009 Sampling Frequency ²	SAMPLING INTERVAL ³ Elevation in Feet msl				SAMPLING DEPTH ⁴	
				FT Below Top of Casing		Bottom		Foot Below TOC	Elevation in Feet msl
				Top	Bottom	Top	Bottom		
MW-48-23	Low Flow	Peristaltic Pump	Inactive	8.0	23.0	7.4	-7.6	15.8	-0.4
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	-4.3	-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	-45.4	-50.4	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	4.5	-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	154.7	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	1.8	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	36.0	-33.1	-41.1	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	154.5	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	Waterloo Pump	Quarterly	20.0	120.0	-29.7	-49.7	105.0	-34.7
MW-54-37	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	109.0	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	Modified Well Vol. Purge	Submersible Pump	Bi-Annually	49.2	54.2	21.0	16.0	52.0	18.3
MW-56-83	Modified Well Vol. Purge	Waterloo Pump	Bi-Annually	69.9	84.9	0.4	-14.6	74.0	-3.7
MW-57-11	Modified Well Vol. Purge	Peristaltic Pump	Bi-Annually	6.0	11.0	9.0	4.0	10.0	5.0
MW-57-20	Modified Well Vol. Purge	Peristaltic Pump	Bi-Annually	15.5	20.5	-0.5	-5.5	19.0	-4.0
MW-57-45	Modified Well Vol. Purge	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	-38.0	-53.0	58.0	-43.0
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	45.1	59.1	-32.9	-46.9	53.1	-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	-134.9	-152.4	154.4	-141.9
MW-60-176	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	170.9	200.4	-158.4	-187.8	175.9	-163.4

E:\17_000\18_999\17860\17860-91 M(02)008 Quarter 4 Tables including Q2\Tables1
Table 1 - Q1-08 Methods, Frequency, Depths.xls
Methods, Frequency, Depths

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

Well ID ¹	Sampling Method	Sampling Equipment Used	Projected 2009 Sampling Frequency ²	SAMPLING INTERVAL ³				SAMPLING DEPTH ⁴	
				FT Below Top of Casing		Elevation in Feet msl		Foot Below TOC	Elevation in Feet msl
				Top	Bottom	Top	Bottom		
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	-19.8
MW-62-53	Waterloo Low Flow	Waterloo Multilevel System	Quarterly	49.6	54.1	-36.8	-41.3	53.1	-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-62-182	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	Modified Well Vol. Purge	Peristaltic Pump	Quarterly	7.0	27.0	6.0	-7.0	14.1	0
MW-66-36	Modified Well Vol. Purge	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	34.3	-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	Modified Well Vol. Purge	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
LAE-002	Low Flow	NA	NA	NA	NA	NA	NA	NA	-22.3
MH-5 ⁶	Grab	NA	Inactive	NA	NA	NA	NA	NA	NA
B-1 ⁶	Grab	NA	Inactive	NA	NA	NA	NA	NA	NA
B-6 ⁶	Grab	NA	Inactive	NA	NA	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.
- Projected sampling frequencies presented for 2009 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
 QUARTERLY LOW TIDE GROUNDWATER ELEVATIONS
 INDIAN POINT ENERGY CENTER
 BUCHANAN, NY**

Well ID	LOW RIVER TIDE GROUNDWATER ELEVATIONS (Feet msl)			
	Quarter 1 ¹ , 2008	Quarter 2 ² , 2008	Quarter 3 ³ , 2008	Quarter 4 ⁴ , 2008
HRI	-2.15	-1.13	-1.05	-1.69
I2	53.73	52.11	52.90	50.75
MW-30-69	NA	12.28	11.77	11.71
MW-30-84	NA	13.06	12.68	12.36
MW-31-49	47.50	46.14	45.39	44.13
MW-31-63	45.52	43.96	42.17	41.21
MW-31-85	43.19	41.89	40.58	39.64
MW-32-48	48.81	47.77	46.98	45.79
MW-32-59	47.99	46.75	45.72	44.48
MW-32-85	13.30	13.17	12.30	12.16
MW-32-131	25.01	15.67	11.34	11.53
MW-32-149	10.20	10.04	9.71	9.77
MW-32-173	9.92	9.70	9.45	9.45
MW-32-190	7.88	7.52	7.16	7.05
MW-33	11.49	11.66	10.55	10.60
MW-34	11.63	12.03	10.54	10.54
MW-35	11.65	12.06	10.68	10.68
MW-36-24	6.85	6.86	7.58	9.05
MW-36-52	6.42	6.29	6.99	7.45
MW-37-22	4.66	4.18	5.36	5.55
MW-37-32	4.63	4.05	5.36	5.64
MW-37-40	6.17	5.95	6.18	6.04
MW-37-57	6.28	6.07	6.64	7.20
MW-38	2.22	1.53	2.12	1.22
MW-39-67	32.20	31.69	25.96	25.21
MW-39-84	31.94	31.48	25.78	25.12
MW-39-100	30.99	31.34	25.52	24.79
MW-39-102	31.56	NA	NA	NA
MW-39-124	28.37	30.67	25.07	24.43
MW-39-183	29.74	29.83	22.33	23.79
MW-39-195	28.80	28.89	23.35	22.70
MW-40-27	60.39	59.99	54.70	54.22
MW-40-46	59.35	59.09	52.57	52.35
MW-40-81	56.06	55.78	47.28	46.83
MW-40-100	54.10	53.75	44.83	44.32
MW-40-127	53.61	53.39	44.33	43.87
MW-40-162	50.49	50.26	41.32	40.66
MW-41-40	36.57	33.81	31.28	30.71
MW-41-63	33.31	32.76	27.53	26.96
MW-42-49	34.96	34.81	34.52	34.43
MW-42-78	36.63	36.28	35.38	35.07
MW-43-28	33.47	33.95	32.51	32.15
MW-43-62	NA	32.16	30.48	31.76
MW-44-66	37.99	35.47	35.29	34.00
MW-44-102	NA	30.88	25.85	25.16
MW-45-42	34.19	37.16	28.63	25.15
MW-45-61	32.91	32.46	27.16	26.68
MW-46	15.05	14.97	12.62	12.81
MW-47-57	27.76	31.53	22.84	22.37
MW-47-80	26.53	28.35	21.52	21.08
MW-48-23	-1.14	-0.23	-0.18	-0.48
MW-48-38	-0.18	0.32	0.06	-0.15
MW-49-26	-0.62	0.51	0.37	0.49
MW-49-42	-0.44	0.92	1.02	0.68
MW-49-65	0.07	0.70	0.68	0.47
MW-50-42	NA	5.24	6.40	7.06
MW-50-66	1.97	2.24	2.83	2.34
MW-51-40	51.95	52.35	49.44	49.24
MW-51-79	42.91	44.17	40.71	40.36
MW-51-102	38.46	39.04	36.56	36.17
MW-51-104	38.41	39.02	36.49	36.03
MW-51-135	39.99	40.71	38.10	37.68
MW-51-163	36.15	36.77	34.30	33.90
MW-51-189	31.34	31.79	29.65	29.36
MW-52-11	8.47	8.85	8.65	8.44
MW-52-18	6.04	6.07	5.89	6.02
MW-52-48	6.53	5.95	6.20	6.14
MW-52-64	5.25	5.03	5.21	5.16
MW-52-118	4.44	4.32	4.36	4.68
MW-52-122	4.32	4.18	4.21	4.55
MW-52-162	-1.31	-0.80	-0.98	-1.30
MW-52-181	-1.56	-1.00	-1.30	-1.64
MW-53-82	11.99	12.60	10.35	NA
MW-53-120	10.87	11.49	9.76	NA
MW-54-35	6.27	6.36	6.16	6.41
MW-54-37	6.45	6.53	6.30	6.58
MW-54-58	5.60	5.55	5.53	5.76
MW-54-123	3.65	3.52	4.01	4.06
MW-54-144	6.60	6.48	6.92	6.97
MW-54-173	2.99	2.85	3.27	3.29
MW-54-190	2.91	2.76	3.16	3.13
MW-55-24	8.17	8.16	8.18	9.02

TABLE 2
QUARTERLY LOW TIDE GROUNDWATER ELEVATIONS
INDIAN POINT ENERGY CENTER
BUCHANAN, NY

Well ID	LOW RIVER TIDE GROUNDWATER ELEVATIONS (Feet msl)			
	Quarter 1 ¹ , 2008	Quarter 2 ² , 2008	Quarter 3 ³ , 2008	Quarter 4 ⁴ , 2008
MW-55-35	7.60	7.59	7.69	8.30
MW-55-54	8.08	8.32	8.22	8.82
MW-56-53	NA	29.93	NA	21.90
MW-56-83	26.41	29.16	NA	21.51
MW-57-11	10.99	NA	10.03	10.27
MW-57-20	NA	12.07	10.02	9.92
MW-57-45	NA	10.59	NA	NA
MW-58-26	8.32	NA	7.29	7.19
MW-58-65	NA	7.36	7.13	6.46
MW-59-32	0.42	0.77	0.81	0.47
MW-59-45	NA	9.23	NA	2.52
MW-59-68	0.90	-0.11	NA	-1.79
MW-60-55	1.58	1.63	0.82	2.04
MW-60-53	-2.04	-1.37	-1.76	-2.03
MW-60-55	-1.10	-0.47	-0.90	-1.21
MW-60-72	-0.68	-0.14	-0.64	NA
MW-60-135	-0.90	-0.27	-0.71	-1.02
MW-60-154	-2.07	-1.49	-1.91	-2.25
MW-60-176	-2.47	-1.82	-2.16	-2.59
MW-62-18	-0.79	0.13	0.06	-0.12
MW-62-37	-0.46	0.49	0.59	-0.15
MW-62-52	-1.13	-0.19	-0.29	-0.93
MW-62-53	-1.01	-0.10	-0.16	-0.84
MW-62-71	-1.26	-0.55	-0.56	-1.24
MW-62-92	-0.76	-0.11	-0.10	-0.85
MW-62-138	-0.49	0.13	0.26	-0.37
MW-62-181	-0.99	-0.32	-0.36	-0.92
MW-62-182	-0.78	-1.29	-1.25	-1.85
MW-63-18	-0.37	0.09	0.32	-0.08
MW-63-35	-0.40	0.13	0.05	-0.13
MW-63-50	-1.03	-0.47	-0.55	-1.24
MW-63-91	-0.87	-0.25	-0.16	-0.89
MW-63-93	-0.87	-0.30	-0.24	-0.98
MW-63-112	-2.05	-1.69	-1.60	-2.26
MW-63-121	-0.78	-0.24	-0.05	-0.86
MW-63-163	-1.48	-0.86	-0.90	-1.54
MW-63-174	-1.29	-0.62	-0.61	-1.19
MW-65-48	NA	38.60	43.22	NA
MW-65-80	NA	34.97	32.95	32.72
MW-66-21	-0.74	0.05	0.17	0.29
MW-66-36	-0.51	0.35	0.15	0.10
MW-67-39	-0.33	0.36	0.41	-0.02
MW-67-105	-0.04	0.57	0.65	0.16
MW-67-173	-0.83	-0.28	-0.26	-0.82
MW-67-219	-0.91	-0.32	-0.32	-0.86
MW-67-276	-0.13	0.44	0.41	-0.14
MW-67-323	-1.75	-1.13	-1.35	-1.93
MW-67-340	-1.31	-0.87	-0.96	-1.56
MW-107	121.79	118.94	115.00	115.76
MW-108	9.98	10.07	NA	9.02
MW-109	9.50	10.12	7.82	7.88
MW-111	10.74	11.24	9.74	10.48
OUT1	0.76	0.81	NA	NA
RW1	NA	30.04	29.52	29.05
UJCSS	NA	19.11	15.39	NA
U3-1	NA	NA	NA	NA
U3-2	NA	NA	NA	NA
U3-3	8.67	9.25	8.25	8.94
U3-4D	3.22	2.74	3.49	2.69
U3-4S	3.74	3.97	4.31	3.81
U3-C1	3.36	0.99	2.36	0.81
U3-T1	3.99	3.86	4.33	3.69
U3-T2	4.20	3.94	4.28	3.76

Notes:
NA: data not available

1. Quarter 1, 2008 groundwater elevations were measured on 1/3/08 at 1:14 a.m.
2. Quarter 2, 2008 groundwater elevations were measured on 4/4/08 at 5:14 pm.
3. Quarter 3, 2008 groundwater elevations were measured on 7/10/08 at 11:35 am.
4. Quarter 4, 2008 groundwater elevations were measured on 11/11/08 at 2:54 am.

TABLE 3
2006 GROUNDWATER ANALYTICAL RESULTS AND AVERAGES
INDIAN
POINT ENERGY CENTER
BUSHMAN, NY

Table with columns: Well ID, Sampling Quarter, Sample ID, Sample Zone, Sample Zone Center, Sample Zone Elevation, Date, Time, Tritium, Sr-90, Cx-137, C0-60, N143, C0-60, Cx-137, C0-60, Tritium, Sr-90, Cx-137, C0-60, Well ID. Rows contain analytical data for wells MW-30-69 through MW-39-67.

TABLE 4
2006 4th QUARTER
GROUNDWATER ANALYTICAL RESULTS
INDIAN POINT ENERGY CENTER
BUCHANAN, TN

Well ID	SAMPLE COLLECTOR			TRITIUM (pCi/L)			Sr 90 (pCi/L)			Cs 137 (pCi/L)			Cs 60 (pCi/L)			Ni 63 (pCi/L)			Well ID	
	Date	Time	Result	Std. Dev.	MDC	LL	Result	Std. Dev.	MDC	LL	Result	Std. Dev.	MDC	LL	Result	Std. Dev.	MDC	LL		
MW-55-54	10/21/2008	10:21	7.70E+03	6.65E+02	1.90E+02	2.04E+04	1.94E+01	2.37E+00	6.25E+01	4.61E+01	3.17E+00	5.29E+00	5.27E+00	positive	-1.63E+00	5.43E+00	5.54E+00	positive	MW-55-54	
MW-56-53	10/24/2008	12:21	2.98E+02	1.64E+02	5.05E+01	3.34E+03	5.40E+01	5.45E+01	5.45E+01	3.00E+00	-7.25E+02	5.88E+00	6.64E+00	positive	NA	NA	NA	positive	MW-56-53	
MW-56-83	10/24/2008	12:22	2.98E+02	7.91E+02	5.05E+01	3.34E+03	5.40E+01	5.45E+01	4.94E+01	7.72E+01	3.29E+00	7.44E+00	8.07E+00	positive	NA	NA	NA	positive	MW-56-83	
MW-57-11	11/12/2008	10:55	3.28E+03	2.70E+02	9.22E+03	1.00E+04	3.39E+00	7.68E+00	8.34E+01	3.34E+00	3.34E+00	7.25E+00	4.70E+00	positive	1.81E+01	3.78E+00	2.45E+01	positive	MW-57-11	
MW-57-20	11/12/2008	11:30	1.51E+03	2.10E+02	2.65E+03	3.10E+00	1.30E+00	1.44E+00	1.44E+00	3.19E+00	-1.91E+00	3.94E+00	3.82E+00	positive	-5.58E-01	1.94E+01	2.25E+01	positive	MW-57-20	
MW-57-45	11/12/2008	13:22	1.13E+03	2.01E+02	1.70E+03	1.20E+00	6.79E+01	4.45E+01	6.97E+01	4.45E+01	1.72E+01	3.63E+00	4.05E+00	positive	9.15E-01	4.42E+00	2.22E+01	positive	MW-57-45	
MW-60-63	007	11/5/2008	15:03	1.42E+02	1.80E+02	2.00E+03	5.91E+01	5.91E+01	6.09E+01	6.17E+00	-2.38E+00	5.87E+00	6.17E+00	positive	-3.83E+00	5.78E+00	NA	positive	MW-60-63	
MW-60-72	007	11/5/2008	14:52	1.38E+02	1.80E+02	2.00E+03	5.92E+01	5.92E+01	8.17E+00	8.17E+00	8.71E+00	5.22E+00	5.22E+00	positive	1.30E+01	5.78E+00	NA	positive	MW-60-72	
MW-60-72	007	11/5/2008	14:58	1.94E+02	1.64E+02	2.00E+03	2.95E+01	6.54E+01	7.88E+01	6.40E+00	-2.18E+02	5.71E+00	6.40E+00	positive	-3.93E+00	5.36E+00	NA	positive	MW-60-72	
MW-60-135	007	11/6/2008	10:49	4.25E+02	2.10E+02	1.99E+02	2.00E+03	2.00E+03	2.00E+03	2.00E+03	2.47E+00	2.47E+00	5.71E+00	5.71E+00	positive	5.49E+01	NA	NA	positive	MW-60-135
MW-60-154	007	11/6/2008	11:19	6.87E+02	4.10E+02	3.80E+02	2.00E+03	4.35E+01	7.19E+01	7.19E+01	4.90E+00	5.91E+00	5.91E+00	positive	-5.49E+01	NA	NA	positive	MW-60-154	
MW-60-176	007	11/6/2008	11:55	8.32E+02	4.35E+02	3.80E+02	2.00E+03	4.35E+01	7.19E+01	7.19E+01	4.90E+00	5.91E+00	5.91E+00	positive	-3.91E+00	5.23E+00	NA	positive	MW-60-176	
MW-62-18	007	10/29/2008	13:20	4.08E+02	1.65E+02	1.65E+02	2.00E+03	6.73E+01	6.73E+01	6.73E+01	-3.09E+02	5.10E+00	5.60E+00	positive	-3.91E+00	5.23E+00	NA	positive	MW-62-18	
MW-62-37	007	10/29/2008	13:57	5.35E+02	1.71E+02	1.65E+02	2.00E+03	3.10E+00	3.10E+00	4.77E+00	4.77E+00	5.33E+00	5.19E+00	positive	-2.20E+00	5.19E+00	NA	positive	MW-62-37	
MW-62-53	007	10/29/2008	13:51	4.08E+02	1.67E+02	1.67E+02	2.00E+03	6.63E+02	6.63E+02	4.94E+01	-3.92E+01	5.83E+00	6.51E+00	positive	-2.87E+00	8.09E+00	NA	positive	MW-62-53	
MW-62-71	007	10/29/2008	12:00	5.13E+02	1.70E+02	1.60E+02	2.00E+03	3.70E+01	4.81E+01	5.03E+01	2.00E+00	5.97E+00	6.37E+00	positive	-1.31E+00	6.40E+00	NA	positive	MW-62-71	
MW-62-92	007	10/29/2008	12:10	4.82E+02	1.68E+02	1.60E+02	2.00E+03	4.52E+02	4.52E+02	4.00E+00	1.64E+00	6.57E+00	7.61E+00	positive	2.71E+00	6.33E+00	NA	positive	MW-62-92	
MW-62-138	007	10/29/2008	12:25	7.50E+02	1.82E+02	1.60E+02	2.00E+03	1.24E+00	1.24E+00	1.40E+00	1.40E+00	6.06E+00	7.05E+00	positive	2.04E+00	8.28E+00	NA	positive	MW-62-138	
MW-62-182	007	10/29/2008	15:52	4.98E+02	1.70E+02	1.60E+02	2.00E+03	4.40E+02	4.40E+02	1.00E+00	1.60E+00	6.21E+00	6.92E+00	positive	2.99E+01	5.82E+00	NA	positive	MW-62-182	
MW-63-18	007	11/5/2008	10:53	3.20E+02	1.59E+02	1.65E+02	2.00E+03	3.25E+01	6.20E+01	7.03E+01	1.31E+00	5.91E+00	6.75E+00	positive	-1.52E+00	5.73E+00	NA	positive	MW-63-18	
MW-63-34	007	11/5/2008	11:03	4.14E+02	1.77E+02	1.82E+02	2.00E+03	3.15E+01	6.71E+01	7.88E+01	2.00E+00	5.91E+00	6.10E+00	positive	-1.40E+01	5.17E+00	NA	positive	MW-63-34	
MW-63-50	007	11/5/2008	9:19	3.17E+02	1.94E+02	1.98E+02	2.00E+03	6.79E+01	6.79E+01	6.79E+01	1.26E+00	3.63E+00	7.04E+00	positive	-7.21E+01	6.52E+00	NA	positive	MW-63-50	
MW-63-93	008	11/4/2008	12:41	2.75E+02	1.92E+02	3.78E+02	2.00E+03	5.67E+01	6.88E+01	2.00E+00	1.50E+00	5.10E+00	5.92E+00	positive	2.80E+01	6.24E+00	NA	positive	MW-63-93	
MW-63-112	007	11/4/2008	12:43	4.95E+02	2.08E+02	1.98E+02	2.00E+03	4.72E+01	5.88E+01	6.17E+00	2.00E+00	5.68E+00	6.43E+00	positive	-2.75E+00	8.34E+00	NA	positive	MW-63-112	
MW-63-163	007	11/4/2008	12:45	6.85E+02	1.86E+02	1.76E+02	2.00E+03	4.44E+01	5.37E+01	5.42E+00	5.97E+00	5.42E+00	5.97E+00	positive	1.20E+00	6.38E+00	NA	positive	MW-63-163	
MW-63-174	007	11/4/2008	12:44	4.77E+02	2.04E+02	1.99E+02	2.00E+03	2.76E+01	3.83E+01	7.46E+01	1.77E+01	5.37E+00	6.12E+00	positive	7.78E-01	6.21E+00	NA	positive	MW-63-174	
MW-66-36	006	11/4/2008	10:30	5.34E+02	2.37E+02	1.64E+02	4.61E+03	1.03E+00	6.95E+01	4.84E+01	1.44E+00	4.67E+00	5.42E+00	positive	2.98E+00	5.17E+00	NA	positive	MW-66-36	
MW-67-39*	006	11/3/2008	14:11	3.07E+03	4.07E+02	1.64E+02	9.93E+03	1.53E+01	1.34E+00	1.74E+01	6.91E+00	4.32E+00	4.90E+00	positive	1.78E+01	5.24E+00	NA	positive	MW-67-39*	
MW-67-105	006	12/18/2008	11:30	3.18E+03	2.68E+02	1.71E+02	9.93E+03	1.53E+01	1.34E+00	1.74E+01	6.91E+00	4.32E+00	4.90E+00	positive	1.37E+01	1.28E+01	NA	positive	MW-67-105	
MW-67-173	006	11/3/2008	14:21	2.91E+03	4.02E+02	1.66E+02	4.50E+03	1.11E+00	2.22E+01	4.64E+01	2.22E+01	6.36E+00	7.11E+00	positive	7.75E-02	6.87E+00	NA	positive	MW-67-173	
MW-67-219	006	11/3/2008	14:37	9.91E+02	2.58E+02	1.66E+02	2.06E+03	8.48E+02	2.00E+00	3.02E+01	2.00E+00	6.69E+00	6.32E+00	positive	-1.49E+00	6.66E+00	NA	positive	MW-67-219	
MW-67-276	006	11/3/2008	11:31	1.37E+03	2.93E+02	1.66E+02	2.20E+03	8.78E+02	1.69E+01	1.91E+01	2.00E+00	4.93E+00	5.80E+00	positive	4.00E+00	6.30E+00	NA	positive	MW-67-276	
MW-67-323	006	11/3/2008	11:39	1.18E+03	2.73E+02	1.66E+02	1.79E+03	5.08E+02	1.81E+01	2.00E+00	3.75E+01	5.69E+00	6.29E+00	positive	-7.43E+01	6.00E+00	NA	positive	MW-67-323	
MW-67-340	006	11/3/2008	11:44	8.81E+02	2.24E+02	1.66E+02	1.60E+03	4.02E+02	4.37E+01	2.00E+00	3.56E+00	5.21E+00	5.18E+00	positive	4.29E+01	5.12E+00	NA	positive	MW-67-340	
MW-67-340	028	10/21/2008	14:20	6.69E+02	2.23E+02	1.63E+02	2.59E+02	4.56E+01	5.43E+01	2.00E+00	2.23E+00	6.25E+00	7.45E+00	positive	3.65E+00	6.76E+00	NA	positive	MW-67-340	
MW-111	009	11/6/2008	14:48	2.66E+03	3.86E+02	2.06E+02	2.18E+03	9.08E+01	9.72E+01	1.95E+00	-9.53E+01	3.60E+00	3.79E+00	positive	5.10E+01	4.32E+00	NA	positive	MW-111	
U3-4D	018	10/20/2008	14:40	5.68E+02	1.71E+02	1.64E+02	4.33E+03	6.74E+00	1.20E+00	4.13E+01	3.53E+01	6.01E+00	7.29E+00	positive	-1.94E+00	6.45E+00	NA	positive	U3-4D	
U3-T1	022	10/20/2008	10:19	5.99E+02	5.63E+02	5.91E+02	1.02E+03	7.01E+01	5.20E+01	2.00E+00	2.31E+00	6.27E+00	7.46E+00	positive	1.51E+00	6.24E+00	NA	positive	U3-T1	
U3-T2	027	10/20/2008	10:36	9.28E+02	5.97E+02	5.96E+02	2.58E+03	4.73E+01	4.95E+01	2.00E+00	-4.68E+01	4.82E+00	5.31E+00	positive	-5.02E+00	6.54E+00	NA	positive	U3-T2	
UAF-002	10	10/17/2008	10:52	8.19E+02	1.53E+02	1.74E+02	2.00E+03	4.05E+01	7.90E+01	9.01E+01	2.53E+01	2.70E+00	3.10E+00	positive	-3.08E+02	3.09E+00	NA	positive	UAF-002	

Note:
 1. 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.
 2. Well IDs without a suffix are open borehole wells.
 3. Sampling depth within sampling interval (bottom of pump intake) have been established at location of most transmissive zone to the extent possible.
 4. LLs (lower detection limit) are predetermined detection limits assigned to each sampling location which, if reached or exceeded, require further investigation or action. LLs presented here are established for 2008 based on 2007 averages. Positive detections indicate that the result is positive.
 5. NA indicates that the instrument was not used.
 6. NA indicates that the instrument was not used.
 7. Data pattern denotes sampling interval is positioned within overburden soils. Open box indicates sampling interval is in bedrock.
 8. Due to unexpectedly high levels of Co-60 detected in the original set of the 4th Quarter 2008 samples collected from MW-67-39, 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, and reanalysis of the original sample confirmed the Co-60 detection. However, historical data and data for the second set of samples showed results below MDC and below detection limits (1 sigma uncertainty) for Co-60 at this interval, suggesting that the first set of results do not appropriately characterize activity at this interval. In addition, results from the NRC split sample of this interval were also positive. Thus, results for the first set of MW-67-39 samples during Quarter 4 were not used to calculate yearly averages.

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing	SAMPLE ZONE CENTER elevation ft msl	SAMPLE COLLECTION		TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)			Ni-63 (pCi/L)			Well ID			
				Date	Time	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		Result	Std. Dev.	MDC
MW-30-69	001	69.3		1/30/2006	15:40	2.37E+05	2.76E+04	6.26E+02	NA ³	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-30-69	
	003			6/23/2006	10:50	3.92E+05	3.55E+04	6.02E+03	3.34E+02	8.24E-01	1.39E+00	2.86E+01	1.40E-01	1.44E+01	4.23E+00	9.93E-01	1.14E+01	4.23E+00	9.93E-01	1.14E+01	4.23E+00	9.93E-01	1.36E+01	
	004			8/18/2006	14:45	1.20E+05	4.20E+03	7.10E+03	8.14E-01	1.40E+00	1.52E+00	7.33E+00	1.40E+01	1.41E+01	3.91E+00	1.51E-01	1.78E+01	3.91E+00	1.51E-01	1.78E+01	3.91E+00	1.51E-01	NA	
	005			11/29/2006	10:45	1.06E+05	3.30E+03	5.30E+02	2.30E+00	8.40E-01	8.10E-01	3.30E+03	3.30E+01	5.00E+00	1.20E+00	2.28E-00	2.50E+00	1.20E+00	2.28E-00	2.50E+00	1.20E+00	2.28E-00	1.20E+01	
	006			1/16/2007	14:05	8.17E+04	8.73E+03	6.34E+02	1.60E+00	1.47E+00	1.60E+00	0.00E+00	2.10E+00	2.40E+00	4.50E-01	2.07E+00	2.07E+00	4.50E+00	2.07E+00	4.50E+00	2.07E+00	4.50E+00	2.07E+00	2.00E+01
	007			6/12/2007	10:20	2.97E+05	8.73E+03	6.34E+02	2.63E-01	4.19E-01	6.45E-01	3.93E+01	3.75E+00	4.09E+00	6.88E-02	4.08E-02	3.94E+00	6.88E-02	4.08E-02	3.94E+00	6.88E-02	4.08E-02	3.94E+00	2.40E+01
	008			7/18/2007	9:55	8.21E+04	2.46E+03	7.00E+02	1.00E-01	6.16E-01	4.13E-01	4.32E+00	4.32E+00	3.95E+00	4.61E-01	2.81E-00	3.28E+00	4.61E-01	2.81E-00	3.28E+00	4.61E-01	2.81E-00	3.28E+00	NA
	009			7/25/2007	11:26	2.17E+05	6.51E+03	6.40E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	010			7/25/2007	11:26	2.32E+05	6.83E+03	5.81E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	011			8/8/2007	10:00	1.03E+05	5.09E+03	6.70E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	012			8/15/2007	11:00	9.96E+04	2.99E+03	6.33E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	013			8/21/2007	9:45	2.33E+05	6.99E+03	6.33E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	014			8/30/2007	11:32	9.80E+04	2.94E+03	7.05E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	015			9/19/2007	11:00	9.20E+04	2.76E+03	7.02E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	016			10/23/2007	11:48	1.32E+05	3.90E+03	4.24E+02	2.52E-01	6.16E-01	7.12E-01	2.40E+00	5.76E+00	4.45E+00	5.09E-01	3.66E-00	4.45E+00	5.09E-01	3.66E-00	4.45E+00	5.09E-01	3.66E-00	4.45E+00	3.86E+00
	017			2/4/2008	13:00	1.87E+05	5.51E+03	3.95E+02	1.57E-01	6.98E-01	8.57E-01	1.26E+00	3.05E+00	3.66E+00	5.60E-01	4.00E-01	3.66E+00	5.60E-01	4.00E-01	3.66E+00	5.60E-01	4.00E-01	3.66E+00	3.28E+00
	018			5/6/2008	11:00	1.53E+05	5.01E+03	4.06E+02	3.34E-01	3.98E-01	6.71E-01	4.94E-01	1.83E+00	3.21E+00	3.21E+00	5.70E-01	1.71E-00	3.21E+00	5.70E-01	1.71E-00	3.21E+00	5.70E-01	1.71E-00	3.21E+00
	019			6/6/2008	11:01	7.36E+04	2.02E+03	5.06E+02	2.02E-01	5.99E-01	5.82E-01	2.02E+00	2.10E+00	3.27E+00	4.91E-01	2.24E-00	3.27E+00	4.91E-01	2.24E-00	3.27E+00	4.91E-01	2.24E-00	3.27E+00	3.83E+00
	020			8/5/2008	11:22	1.99E+05	3.92E+03	4.95E+02	2.09E-01	3.07E-01	5.34E-01	1.57E-01	1.42E+00	2.38E+00	1.11E+00	1.28E-00	2.38E+00	1.11E+00	1.28E-00	2.38E+00	1.11E+00	1.28E-00	2.38E+00	2.33E+00
	021			9/3/2008	11:29	8.53E+04	2.03E+03	5.50E+02	-3.17E-01	5.12E-01	9.72E-01	-1.89E+00	2.22E+00	3.36E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	022			11/7/2008	10:27	9.55E+04	2.85E+03	3.06E+02	4.09E-01	5.53E-01	6.01E-01	8.83E-01	3.09E+00	3.66E+00	-1.07E-01	2.65E-00	3.66E+00	-1.07E-01	2.65E-00	3.66E+00	-1.07E-01	2.65E-00	3.66E+00	2.85E+00
023	83.8	-8.1		8/22/2006	13:15	1.25E+04	2.43E+03	1.61E+03	1.60E-01	8.82E-01	1.13E+00	1.09E+00	1.24E+01	2.52E+00	1.00E-01	1.03E+01	2.52E+00	1.00E-01	1.03E+01	2.52E+00	1.00E-01	1.03E+01	NA	
024			11/29/2006	14:30	1.01E+04	1.59E+03	1.10E+03	-9.40E-01	7.80E-01	8.70E-01	2.94E+02	1.68E+01	5.00E+00	3.10E+00	3.90E-00	4.80E+00	3.10E+00	3.90E-00	4.80E+00	3.10E+00	3.90E-00	4.80E+00	4.10E+00	
025			11/7/2007	9:45	7.53E+03	7.50E+02	5.30E+02	4.80E-01	3.40E+00	1.60E+00	1.18E+00	2.61E+00	2.40E+00	6.00E+00	2.91E-00	3.40E+00	6.00E+00	2.91E-00	3.40E+00	6.00E+00	2.91E-00	3.40E+00	NA	
026			6/12/2007	10:19	7.79E+03	9.47E+02	4.42E+02	-1.49E-01	4.40E-01	6.41E-01	-1.06E+00	2.29E+00	2.40E+00	2.40E+00	-6.93E-01	2.54E+00	2.40E+00	-6.93E-01	2.54E+00	2.40E+00	-6.93E-01	2.54E+00	2.03E+01	
027			7/18/2007	10:25	4.80E+03	7.20E+02	7.00E+02	1.56E-01	3.09E-01	3.48E-01	2.83E+00	3.38E+00	2.84E+00	2.03E+00	2.91E-00	2.84E+00	2.03E+00	2.91E-00	2.84E+00	2.03E+00	2.91E-00	2.84E+00	NA	
028			7/25/2007	13:00	5.02E+03	4.49E+02	2.43E+02	1.56E-01	5.02E-01	5.59E-01	1.56E+00	2.81E+00	3.38E+00	-1.17E+00	3.72E+00	3.38E+00	-1.17E+00	3.72E+00	3.38E+00	-1.17E+00	3.72E+00	3.38E+00	3.27E+00	
029			10/23/2007	12:49	4.27E+03	7.38E+02	4.03E+02	5.95E-01	5.53E-01	7.47E-01	-1.00E+00	2.55E+00	2.73E+00	-1.00E+00	4.52E-01	2.73E+00	-1.00E+00	4.52E-01	2.73E+00	-1.00E+00	4.52E-01	2.73E+00	2.79E+00	
030			2/4/2008	14:16	4.34E+03	2.61E+02	1.32E+02	-4.08E-01	4.55E-01	4.74E-01	-1.00E+00	2.55E+00	2.73E+00	-1.00E+00	4.52E-01	2.73E+00	-1.00E+00	4.52E-01	2.73E+00	-1.00E+00	4.52E-01	2.73E+00	NA	
031			5/6/2008	13:40	4.18E+03	2.83E+02	2.70E+02	3.26E-01	3.89E-01	6.51E-01	3.89E-01	2.37E+00	4.00E+00	-1.91E+00	2.53E-00	4.00E+00	-1.91E+00	2.53E-00	4.00E+00	-1.91E+00	2.53E-00	4.00E+00	3.69E+00	
032			6/6/2008	12:10	3.85E+03	5.33E+02	5.04E+02	1.54E-01	2.46E-01	4.34E-01	-8.97E-01	2.16E+00	3.57E+00	2.05E+00	2.31E-00	3.57E+00	2.05E+00	2.31E-00	3.57E+00	2.05E+00	2.31E-00	3.57E+00	4.29E+00	
033			8/5/2008	14:40	4.31E+03	2.28E+02	1.94E+02	2.77E-01	2.86E-01	4.67E-01	-1.87E-01	1.44E+00	2.58E+00	-1.04E-01	2.12E-00	2.58E+00	-1.04E-01	2.12E-00	2.58E+00	-1.04E-01	2.12E-00	2.58E+00	2.66E+00	
034			9/3/2008	11:59	3.78E+03	5.15E+02	5.35E+02	-4.62E-02	4.61E-01	9.06E-01	-3.02E-01	1.73E+00	2.89E+00	2.13E+00	5.34E-00	2.89E+00	2.13E+00	5.34E-00	2.89E+00	2.13E+00	5.34E-00	2.89E+00	6.53E+00	
035			11/7/2008	10:50	5.25E+03	3.23E+02	1.64E+02	1.07E-02	1.79E-02	7.61E-01	6.64E-01	4.63E+00	3.57E+00	1.30E+00	3.60E-00	3.57E+00	1.30E+00	3.60E-00	3.57E+00	1.30E+00	3.60E-00	3.57E+00	4.60E+00	
036			11/27/2008	11:45	2.98E+02	1.74E+02	1.70E+02	0.00E+00	1.62E+00	1.40E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
037			1/18/2007	9:13	1.20E+03	5.70E+02	5.30E+02	3.00E-01	1.62E+00	1.80E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
038			6/12/2007	14:24	1.48E+03	5.24E+02	4.37E+02	-1.51E-01	1.51E-01	7.52E-01	1.83E-01	2.12E+00	2.35E+00	1.26E-01	2.01E-00	2.35E+00	1.26E-01	2.01E-00	2.35E+00	1.26E-01	2.01E-00	2.35E+00	0.00E+00	
039			8/2/2007	10:23	1.19E+04	1.27E+03	5.43E+02	-5.17E-01	7.89E-01	8.83E-01	8.83E-01	1.35E+01	3.31E+00	1.80E-01	3.63E-00	3.31E+00	1.80E-01	3.63E-00	3.31E+00	1.80E-01	3.63E-00	3.31E+00	4.11E+00	
040			9/11/2007	13:10	6.98E+03	3.27E+02	1.59E+02	-2.76E-01	4.23E-01	6.01E-01	-1.70E+00	3.04E+00	3.24E+00	6.00E+00	4.96E-00	3.24E+00	6.00E+00	4.96E-00	3.24E+00	6.00E+00	4.96E-00	3.24E+00	4.75E+00	
041			10/24/2007	15:50	8.77E+03	9.99E+02	4.00E+02	5.14E-02	4.26E-01	5.36E-01	-6.76E-01	3.94E+00	3.57E+00	1.35E+00	2.12E-00	3.57E+00	1.35E+00	2.12E-00	3.57E+00	1.35E+00	2.12E-00	3.57E+00	3.52E+00	
042			1/16/2008	10:31	3.97E+02	1.94E+02	1.77E+02	-9.14E-02	6.86E-01	8.97E-01	-1.17E+00	4.74E+00	5.00E+00	-9.76E-01	4.41E-00	5.00E+00	-9.76E-01	4.41E-00	5.00E+00	-9.76E-01	4.41E-00	5.00E+00	4.63E+00	
043			6/6/2008	15:05	2.75E+04	1.25E+03	5.03E+02	2.83E-01	3.39E															

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID							
				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-31-63	006			10/24/2007	14:55	3.38E+04	1.94E+03	4.00E+02	-1.63E-01	4.38E-01	6.34E-01	1.07E+00	5.31E+00	4.01E+00	1.01E+00	3.40E+00	4.11E+00	NA	NA	NA	NA	NA	NA	MW-31-63	
	007			1/16/2008	11:32	1.24E+04	7.35E+02	6.88E+02	-6.88E-02	5.34E-01	7.40E-01	2.49E-01	4.04E+00	4.40E+00	-9.08E-01	4.19E+00	4.32E+00	NA	NA	NA	NA	NA	NA	NA	
	009			6/6/2008	16:16	1.02E+04	7.92E+02	5.01E+02	1.10E-01	3.40E-01	6.17E-01	-1.15E+00	2.11E+00	3.36E+00	2.47E+00	2.31E+00	4.15E+00	NA	NA	NA	NA	NA	NA	NA	
	010			8/7/2008	11:22	1.76E+04	4.17E+02	1.94E+02	-2.21E-01	2.61E-01	5.89E-01	-1.86E-01	1.28E+00	2.16E+00	3.67E+00	3.73E+00	1.43E+00	2.49E+00	NA	NA	NA	NA	NA	NA	NA
	011			8/30/2008	12:34	2.21E+04	1.07E+03	5.49E+02	-6.34E-01	3.76E-01	3.79E-01	3.76E-01	2.33E+00	4.04E+00	1.47E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	012			10/30/2008	12:14	2.30E+04	1.08E+03	1.73E+02	2.28E-01	2.33E-01	2.57E-01	2.21E+00	6.18E+00	7.37E+00	-5.17E+00	1.81E+00	7.37E+00	6.97E+00	NA	NA	NA	NA	NA	NA	NA
	013			11/18/2008	11:58	2.55E+04	8.07E+02	1.84E+02	3.95E-01	1.02E-01	8.36E-01	1.02E-02	5.89E+00	6.01E+00	6.01E+00	-1.47E+00	1.91E+00	6.97E+00	NA	NA	NA	NA	NA	NA	NA
MW-31-85	001	84.8	-9.2	11/27/2006	12:20	4.62E+02	1.74E+02	5.20E+02	-5.90E-01	1.44E+00	1.80E+00	1.60E+00	8.40E+00	3.20E+00	2.10E+01	2.19E+00	2.50E+00	NA	NA	NA	NA	NA	NA	MW-31-85	
	002			1/18/2007	9:16	2.66E+03	6.00E+02	1.69E+02	-3.83E-01	6.63E-01	9.31E-01	9.31E-01	2.76E+00	1.91E+00	5.71E+01	1.69E+00	1.00E+01	1.00E+01	8.33E+00	2.11E+01	9.30E+01	2.30E+01	2.30E+01		
	003			6/12/2007	14:05	3.17E+03	1.62E+02	5.31E+02	-7.29E-01	6.31E-01	9.31E-01	5.01E-02	3.29E+00	3.59E+00	-1.90E+00	3.58E+00	3.31E+00	NA	NA	NA	NA	NA	NA	NA	
	004			8/2/2007	10:58	2.69E+03	7.11E+02	5.31E+02	-7.29E-01	6.31E-01	9.31E-01	5.01E-02	3.29E+00	3.59E+00	-1.90E+00	3.58E+00	3.31E+00	NA	NA	NA	NA	NA	NA	NA	
	005			9/11/2007	13:20	4.32E+03	5.32E+02	3.98E+02	1.82E+02	7.48E-01	7.93E-01	-7.04E-01	3.04E+00	3.26E+00	-3.07E+00	3.68E+00	3.24E+00	NA	NA	NA	NA	NA	NA	NA	
	006			10/24/2007	14:40	5.51E+03	8.15E+02	3.98E+02	2.33E-01	4.08E-01	4.51E-01	2.90E+00	2.90E+00	3.38E+00	4.76E-01	2.75E+00	3.19E+00	NA	NA	NA	NA	NA	NA	NA	
	007			1/16/2008	11:26	1.31E+03	2.81E+02	1.84E+02	6.97E-01	7.67E-01	7.79E-01	2.68E+00	4.05E+00	4.83E+00	1.90E+00	3.80E+00	4.62E+00	NA	NA	NA	NA	NA	NA	NA	
MW-32-62 ²	009			6/6/2008	15:26	5.95E+03	6.30E+02	5.05E+02	1.32E-01	3.17E-01	5.69E-01	-8.07E-01	2.20E+00	3.45E+00	1.91E+00	2.45E+00	4.58E+00	NA	NA	NA	NA	NA	NA	NA	
	010			8/7/2008	11:13	2.30E+03	1.83E+02	1.94E+02	1.07E-01	1.30E-01	1.22E+00	1.94E+00	1.94E+00	1.63E+02	1.31E+00	2.18E+00	NA	NA	NA	NA	NA	NA	NA	NA	
	011			8/30/2008	12:08	8.34E+03	7.00E+02	5.52E+02	4.46E-01	4.87E-01	8.10E-01	-5.50E-01	1.86E+00	3.07E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	012			10/30/2008	12:09	3.89E+03	4.52E+02	4.08E+02	4.08E-01	5.33E-01	8.25E-01	5.63E+00	1.17E+00	4.73E+00	-4.82E+00	6.98E+00	6.56E+00	NA	NA	NA	NA	NA	NA	NA	
	013			11/18/2008	12:00	4.41E+03	2.97E+02	1.61E+02	-2.44E-01	5.37E-01	8.11E-01	2.13E+00	3.79E+00	4.76E+00	2.84E+00	3.82E+00	5.19E+00	NA	NA	NA	NA	NA	NA	NA	
	002	60.0	17.1	1/19/2007	9:30	7.67E+03	7.50E+02	5.20E+02	6.30E-01	1.47E+00	1.60E+00	-8.60E-01	1.98E+00	2.30E+00	2.30E+00	4.90E-01	2.28E+00	2.60E+00	NA	NA	NA	NA	NA	MW-32-62 ²	
	003			6/28/2007	14:25	2.10E+04	7.37E+02	1.65E+01	-1.65E-01	5.90E-01	7.97E-01	-1.74E+00	3.51E+00	3.30E+00	-1.42E+00	3.87E+00	3.34E+00	NA	NA	NA	NA	NA	NA	NA	
MW-32-59 ⁴	001	58.8	18.3	8/13/2007	13:07	1.42E+04	6.00E+02	1.99E+02	-2.71E-01	5.38E-01	7.38E-01	1.48E+00	2.10E+00	3.22E+00	4.45E+00	3.30E+00	3.65E+00	NA	NA	NA	NA	NA	NA	NA	
	002			10/26/2007	12:07	1.11E+04	4.61E+02	1.84E+02	3.22E-01	6.43E-01	7.36E-01	-1.94E-01	3.82E+00	3.87E+00	2.59E+00	3.06E+00	4.68E+00	NA	NA	NA	NA	NA	NA	NA	
	003			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-01	4.23E+00	4.79E+00	1.99E+00	3.81E+00	4.65E+00	NA	NA	NA	NA	NA	NA	NA	
	004			5/5/2008	15:33	4.15E+03	2.01E+02	1.82E+02	7.20E-02	5.20E-01	9.70E-01	-7.05E-01	1.89E+00	3.05E+00	1.25E+00	2.01E+00	3.77E+00	NA	NA	NA	NA	NA	NA	NA	
	005			6/9/2008	12:10	2.85E+03	4.81E+02	5.06E+02	-3.39E-01	6.20E-01	6.71E-01	-1.22E+00	1.94E+00	2.98E+00	-7.10E+00	2.43E+00	3.91E+00	NA	NA	NA	NA	NA	NA	NA	
	006			7/31/2008	13:23	1.54E+03	1.63E+02	1.94E+02	1.72E-01	3.81E-01	6.90E-01	4.66E-01	1.97E+00	3.33E+00	1.08E+00	2.48E+00	3.26E+00	NA	NA	NA	NA	NA	NA	NA	
	007			9/2/2008	13:52	2.14E+03	4.59E+02	5.53E+02	2.19E-01	5.54E-01	9.94E-01	7.77E-01	1.85E+00	3.21E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MW-32-92 ⁵	001	90.5	-13.4	10/24/2008	13:59	4.13E+03	2.00E+02	1.73E+02	1.63E-01	6.08E-01	7.44E-01	-3.50E-01	7.51E+00	7.30E+00	-1.32E+00	6.29E+00	6.60E+00	NA	NA	NA	NA	NA	NA	NA	
	002			1/19/2007	9:40	1.12E+04	8.40E+02	5.30E+02	3.20E-01	1.47E+00	1.66E+00	1.57E+00	2.82E+00	3.10E+00	9.00E-01	4.20E+00	4.80E+00	NA	NA	NA	NA	NA	NA	NA	
	003			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+00	3.19E+00	3.21E+00	NA	NA	NA	NA	NA	NA	NA	
	004			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	2.81E+00	3.15E+00	9.90E-01	2.98E+00	3.53E+00	NA	NA	NA	NA	NA	NA	NA	
	005			10/5/2007	11:12	1.56E+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	NA	NA	NA	NA	NA	
	006			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	NA	NA	NA	NA	NA	
	007			5/5/2008	14:10	8.36E+03	2.64E+02	1.81E+02	-6.65E-02	3.89E-01	7.59E-01	1.95E+00	2.16E+00	3.96E+00	-3.64E-01	2.06E+00	3.27E+00	NA	NA	NA	NA	NA	NA	NA	
MW-32-140	008			6/9/2008	12:25	1.11E+04	8.21E+02	5.04E+02	-9.56E-02	3.57E-01	7.17E-01	1.39E+00	2.01E+00	3.68E+00	-5.47E-01	2.04E+00	3.34E+00	NA	NA	NA	NA	NA	NA	NA	
	009			7/31/2008	14:35	7.48E+03	2.83E+02	1.93E+02	1.16E-01	3.35E-01	6.21E-01	2.14E-01	2.06E+00	3.50E+00	1.07E+00	1.88E+00	3.43E+00	NA	NA	NA	NA	NA	NA	NA	
	010			9/2/2008	14:40	8.05E+03	6.90E+02	5.52E+02	1.42E-01	4.15E-01	6.68E-01	-1.37E+00	2.45E+00	6.32E+00	3.08E+00	5.89E+00	7.32E+00	NA	NA	NA	NA	NA	NA		
	011			10/24/2008	14:50	8.62E+03	6.66E+02	1.73E+02	1.13E-01	4.56E-01	5.68E-01	-1.39E+00	2.57E+00	5.78E+00	6.62E+00	3.08E+00	5.89E+00	7.32E+00	NA	NA	NA	NA	NA		
	012			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	NA	NA	NA		
	013			6/28/2007	12:45	3.02E+03	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	NA	NA	NA	NA	
	014			8/13/2007	11:15	1.29E+02	1.70E+02	1.87E+02	2.69E-01	3.35E-01	8.51E-01	-8.09E-01	4.86E+00	4.85E+00	-1.19E+00	3.29E+00	3.22E+00	NA	NA	NA	NA	NA	NA	NA	
MW-32-131 ¹	004	130.8	-53.7	10/26/2007	10:11	3.74E+02	2.39E+02	2.42E+02	6.03E-01	1.81E-01	7.06E-01	-1.81E-01	3.48E+00	3.82E+00	-2.55E-01	3.92E+00	3.99E+00	NA	NA	NA	NA	NA	NA	NA	
	005			1/18/2008	11:23	5.04E+02	2.07E+02	1.79E+02	5.14E-01	7.92E-01	8.52E-01	2.19E+00													

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing ²	SAMPLE ZONE CENTER, elevation ft above/below sea level ²	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID			
				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-32-149 ⁴	008			10/24/2008	10:28	5.03E+02	2.10E+02	1.72E+02	4.69E-01	6.52E-01	6.99E-01	1.80E+00	5.22E+00	6.07E+00	1.25E+00	4.96E+00	5.82E+00	NA	NA	NA	MW-32-149 ⁴
MW-32-173 ⁴	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 ⁴	
	002			1/18/2008	11:05	1.13E+03	4.07E+02	1.82E+02	1.38E-01	1.31E-01	7.63E-01	-3.84E-01	2.00E+00	2.18E+00	-1.14E-01	2.09E+00	2.25E+00	NA	NA		
	003			5/5/2008	10:33	1.82E+03	1.52E+02	1.92E+02	1.11E-02	3.53E-01	7.04E-01	1.95E-01	2.18E+00	3.47E+00	5.47E-01	2.24E+00	3.91E+00	NA	NA		
	004			7/31/2008	10:52	1.08E+03	1.48E+02	1.92E+02	6.80E-01	4.52E-01	7.11E-01	-1.17E+00	1.58E+00	2.64E+00	6.06E-01	1.65E+00	2.96E+00	NA	NA		
	005			9/2/2008	11:30	9.72E+02	3.72E+02	5.48E+02	1.85E-01	4.64E-01	8.41E-01	-1.02E+00	2.67E+00	3.88E+00	NA	NA	NA	NA	NA		
	006			10/24/2008	10:25	1.03E+03	2.67E+02	1.74E+02	1.05E-01	4.36E-01	4.36E-01	8.63E-01	5.67E+00	6.61E+00	2.30E+00	6.36E+00	7.74E+00	NA	NA		
MW-32-197 ⁵	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	1.70E+00	1.40E+00	1.40E+00	1.50E+00	1.70E+00	NA	NA	MW-32-197 ⁵		
	002			6/28/2007	13:07	2.41E+03	2.72E+02	1.87E+02	-5.09E-02	6.12E-01	8.20E-01	1.52E+00	3.07E+00	3.04E+00	-1.29E+00	3.27E+00	3.37E+00	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	2.39E+00	NA	NA		
MW-32-190 ⁴	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 ⁴	
	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		
	006			5/5/2008	10:57	6.73E+03	2.41E+02	1.82E+02	-1.68E-01	4.28E-01	8.16E-01	-1.18E+00	2.08E+00	3.24E+00	-2.62E+00	3.16E+00	2.97E+00	NA	NA		
	007			7/31/2008	11:24	4.71E+03	2.35E+02	1.94E+02	3.21E-01	3.55E-01	5.51E-01	-8.54E-01	1.55E+00	2.53E+00	2.22E+00	1.77E+00	3.30E+00	NA	NA		
	008			9/2/2008	11:40	3.81E+03	5.20E+02	5.44E+02	5.92E-01	5.81E-01	9.53E-01	1.39E+00	2.82E+00	4.63E+00	NA	NA	NA	NA	NA		
	009			10/24/2008	10:31	3.25E+03	4.31E+02	1.73E+02	3.30E-03	5.75E-01	7.41E-01	5.89E-01	5.33E+00	5.98E+00	3.85E+00	5.68E+00	7.16E+00	NA	NA		
MW-33	001	19.2	-0.4	12/15/2005	8:00	1.42E+05	4.76E+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		
	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		
	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		
	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		
	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		
	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		
	008			2/5/2006	12:15	2.30E+05	2.84E+04	6.33E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	009			2/5/2006	16:00	2.14E+05	2.64E+04	6.37E+02	1.96E-01	5.06E-01	6.25E-01	NA	NA	NA	NA	NA	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		
	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		
	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		
	013			5/17/2006	12:50	1.35E+05	2.01E+04	1.66E+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		
	014			6/7/2006	10:15	1.41E+05	1.85E+04	1.32E+03	6.74E-01	5.03E-01	6.44E-01	-6.85E-01	8.72E+00	9.58E+00	-6.11E+00	8.63E+00	8.02E+00	NA	NA		
	015			7/5/2006	9:50	2.04E+05	2.01E+04	3.85E+03	4.78E-01	1.37E+00	1.57E+00	NA	NA	NA	1.27E+01	-5.24E+00	1.28E+01	1.21E+01	NA	NA	
	016			8/4/2006	8:15	1.84E+05	2.54E+04	1.87E+03	NA	NA	NA	NA	NA	NA	7.84E+00	1.14E+00	8.60E+00	NA	NA		
	017			8/30/2006	13:00	1.15E+05	1.77E+04	4.39E+03	NA	NA	NA	-6.99E-01	8.47E+00	8.90E+00	3.71E+00	7.21E+00	9.60E+00	NA	NA		
	018			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	3.59E+00	-8.12E-01	1.16E+01	1.37E+01	
	019	16	2.8	8/3/2007	10:20	2.30E+04	7.08E+02	2.04E+02	5.80E-01	8.49E-01	9.33E-01	1.68E-01	2.37E+00	2.83E+00	2.45E-01	2.13E+00	2.46E+00	NA	NA		
	020			4/28/2008	15:00	5.85E+04	1.16E+03	2.58E+02	1.69E-01	2.97E-01	5.22E-01	1.68E-01	1.87E+00	3.12E+00	-4.51E-02	2.12E+00	3.49E+00	NA	NA		
	021			9/4/2008	14:41	6.80E+04	1.82E+03	5.47E+02	1.33E-01	4.05E-01	7.55E-01	5.46E-01	1.61E+00	2.83E+00	NA	NA	NA	NA	NA		
MW-34	001	18.9	-0.4	12/13/2003	13:53	1.21E+05	3.63E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-34	
	002			12/19/2003	10:35	1.47E+05	4.41E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	003			12/29/2003	10:50	1.59E+05	4.77E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	004			1/6/2006	11:35	1.59E+05	4.77E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	005			1/13/2006	11:40	1.31E+05	5.93E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	006			1/29/2006	10:00	2.12E+05	6.36E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	007			1/27/2006	10:50	2.12E+05	6.36E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	008			2/5/2006	12:20	2.24E+05	2.69E+04	6.33E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	009			2/16/2006	13:55	1.99E+05	2.55E+04	6.36E+02	9.22E-02	3.78E-01	4.67E-01	NA	NA	NA	NA	NA	NA	NA	NA		
	010			4/7/2006	10:05	2.30E+05	6.90E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	011			4/7/2006	10:05	2.76E+05	8.28E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	012			5/17/2006	13:15	3.64E+04	3.52E+03	8.35E+02	2.30E-02	6.63E-01	9.24E-01	7.84E+00	1.39E+01	1.55E+01	2.72E+00	1.31E+01	1.44E+01	NA	NA		
	013			6/26/2006	10:20	1.05E+04	8.52E+02	3.41E+02	3.71E-01	6.49E-01	7.79E-01	1.83E+00	7.85E+00	8.96E+00	5.84E+00	7.34E+00	9.37E+00	NA	NA		
	014			7/26/2006	10:20	4.07E+04	3.51E+03	3.51E+03	2.18E-01	8.97E-01	1.16E+00	-1.73E-01	4.87E+00	5.24E+00	-2.54E+00	6.78E+00	6.78E+00	NA	NA		
	015																				

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE ZONE CENTER, elevation ft	SAMPLE COLLECTION		TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)			Ni-63 (pCi/L)			Well ID			
					Date	Time	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		Result	Std. Dev.	MDC
MW-34	016				8/24/2006	12:18	6.95E+04	1.05E+04	3.39E+03	NA	NA	1.62E+00	5.81E+00	6.78E+00	-1.60E+00	5.85E+00	5.85E+00	NA	NA	NA	NA	NA	MW-34		
	017				9/21/2006	9:45	1.61E+04	2.78E+02	5.86E+02	0.00E+00	1.12E+00	6.09E+02	1.69E+00	1.85E+00	-2.10E+01	1.65E+00	1.79E+00	NA	NA	NA	NA	NA	MW-34		
	018	16.5	2.0		8/5/2007	10:21	2.22E+01	7.41E+02	2.13E+02	3.91E+02	7.08E-01	-1.55E+00	4.53E+00	4.44E+00	2.12E+00	3.40E+00	4.01E+00	NA	NA	NA	NA	NA	MW-35		
	001	19.0	-0.4		12/13/2005	13:50	4.23E+04	3.18E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35		
	002				12/19/2005	10:17	7.60E+04	2.28E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35		
	003				12/29/2005	10:00	8.05E+04	2.42E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35		
	004				1/6/2006	11:10	9.51E+04	2.86E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35		
	005				1/13/2006	10:50	9.78E+04	2.93E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35		
006				1/20/2006	9:30	1.04E+05	3.12E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35			
007				1/27/2006	11:00	3.87E+04	1.16E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35			
008				2/5/2006	12:20	5.14E+04	1.29E+04	6.33E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35			
009				2/7/2006	14:40	8.44E+04	1.66E+04	6.37E+02	1.62E-01	4.32E-01	5.28E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35			
010				2/16/2006	13:30	9.04E+04	1.72E+04	6.36E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35			
011				3/5/2006	9:05	1.19E+05	3.57E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35			
012				4/7/2006	9:55	5.62E+04	1.69E+03	7.00E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-35			
013				5/17/2006	13:37	4.07E+04	6.15E+03	8.72E+02	4.70E-01	7.53E-01	7.87E-01	6.46E+00	2.07E+01	1.64E+01	3.04E+00	1.37E+01	1.53E+01	NA	NA	NA	NA	MW-35			
014				6/26/2006	10:40	1.74E+04	1.37E+03	4.79E+02	-2.30E-01	1.34E-01	1.09E-01	6.69E-01	1.01E+01	-2.45E+00	8.92E-00	9.36E+00	NA	NA	NA	NA	NA	MW-35			
015				9/21/2006	9:30	4.53E+04	7.19E+03	9.12E+02	6.76E-01	1.30E-00	1.41E-00	-3.15E-01	1.96E+00	1.82E+00	2.44E-01	1.49E+00	1.69E+00	NA	NA	NA	NA	MW-35			
016	15.0	3.6		6/15/2007	13:58	2.03E+03	5.87E+02	3.84E+02	2.26E-01	4.34E-01	4.91E-01	4.66E+01	8.82E+00	2.81E+00	-1.27E+00	2.58E+00	2.63E+00	6.18E+00	1.92E+01	2.20E+01	NA	MW-35			
017				8/5/2007	10:22	5.95E+03	5.58E+02	2.70E+02	9.45E-02	5.76E-01	6.98E-01	-9.20E-01	2.71E+00	2.82E+00	5.74E-01	2.88E+00	3.33E+00	NA	NA	NA	NA	MW-35			
018				4/28/2008	13:38	1.04E+03	1.77E+02	2.19E+02	2.34E-01	2.96E-01	5.03E-01	-2.93E-02	2.03E+00	3.34E+00	-5.77E-02	2.36E+00	3.87E+00	NA	NA	NA	NA	MW-35			
MW-36-24 ^f	001	16.1	-4.3		2/7/2006	17:00	3.04E+04	9.95E+03	6.36E+02	1.29E+00	5.48E-01	5.53E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-24 ^f			
	002				2/27/2006	9:45	3.42E+04	3.81E+03	1.86E+03	9.09E-01	6.47E-01	-3.86E+00	1.01E+01	1.05E+01	5.02E+00	9.33E-00	1.22E+01	NA	NA	NA	NA	MW-36-24 ^f			
	003				3/23/2006	16:00	NA	NA	NA	1.56E+00	7.68E-01	4.31E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-24 ^f			
	004				4/5/2006	10:30	2.02E+02	1.59E+02	1.51E+02	3.70E-01	4.85E-01	9.31E-01	3.99E+00	1.03E+01	1.21E+01	6.90E+02	1.02E-01	1.12E+01	NA	NA	NA	MW-36-24 ^f			
	005				6/5/2006	12:20	1.54E+02	1.80E+02	1.71E+02	5.90E-01	7.92E-01	8.46E-01	-1.04E+00	3.27E+00	3.32E+00	1.66E+00	3.06E-00	4.19E+00	NA	NA	NA	MW-36-24 ^f			
	006	17.0	-5.2		6/27/2007	10:40	2.45E+02	1.76E+02	1.93E+02	5.90E-01	7.92E-01	8.46E-01	3.31E-01	2.81E+00	3.17E+00	4.00E-01	3.03E-00	3.45E+00	NA	NA	NA	MW-36-24 ^f			
	007				8/6/2007	13:45	1.63E+02	1.85E+02	2.04E+02	-5.35E-01	6.81E-01	9.31E-01	1.53E-01	3.40E+00	3.77E+00	3.56E+00	3.40E-00	4.17E+00	NA	NA	NA	MW-36-24 ^f			
	008				10/18/2007	10:06	2.86E+02	1.91E+02	2.01E+02	8.56E-02	6.06E-01	9.26E-01	7.20E-01	2.91E+00	3.37E+00	3.11E+01	3.01E-00	3.47E+00	NA	NA	NA	MW-36-24 ^f			
010				1/23/2008	14:18	1.02E+03	2.36E+02	1.70E+02	1.03E-01	3.12E-01	3.76E-01	2.92E+02	2.39E+00	2.67E+00	-4.84E-01	2.37E-00	2.57E+00	NA	NA	NA	MW-36-24 ^f				
011				7/24/2008	13:57	1.02E+03	1.22E+02	1.63E+02	3.38E-01	3.75E-01	6.24E-01	3.07E-01	2.09E+00	3.61E+00	5.43E-01	2.37E-00	3.85E+00	NA	NA	NA	MW-36-24 ^f				
012				11/10/2008	15:33	2.01E+02	1.50E+02	1.61E+02	5.52E-01	7.53E-01	8.04E-01	0.00E+00	6.81E+00	4.46E+00	2.72E+00	3.84E-00	5.41E+00	NA	NA	NA	MW-36-24 ^f				
MW-36-41	001	37.0	-25.2		2/10/2006	11:10	4.75E+04	1.24E+04	6.38E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-41			
	002				2/27/2006	13:45	4.58E+04	1.22E+04	6.36E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-41			
	003				3/24/2006	12:45	5.52E+04	4.65E+03	1.86E+03	3.48E+00	5.46E-01	4.16E-01	-5.91E+00	1.39E+01	1.45E+01	2.97E+00	1.53E-01	1.74E+01	4.87E+01	1.65E+01	NA	MW-36-41			
	004				4/5/2006	12:55	NA	NA	NA	3.53E+00	6.24E-01	5.02E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-41			
	005				6/5/2006	11:30	2.05E+04	3.17E+03	6.01E+02	2.30E+00	6.59E-01	6.10E-01	-3.37E+00	1.27E+01	1.33E+01	6.21E+02	1.03E-01	1.13E+01	NA	NA	NA	MW-36-41			
	006				8/28/2006	10:10	2.01E+04	3.09E+03	6.45E+02	NA	NA	NA	1.96E+00	4.15E+00	5.22E+00	-2.78E+00	3.56E+00	3.78E+00	NA	NA	NA	MW-36-41			
	007				6/27/2007	12:30	6.11E+03	3.50E+02	1.74E+02	2.18E+00	1.17E+00	9.85E-01	4.30E-01	4.61E+00	1.74E+00	1.36E+00	2.91E-00	3.67E+00	NA	NA	NA	MW-36-41			
	008	49.7	-37.9		2/10/2006	10:30	2.24E+04	8.55E+03	6.38E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-41			
MW-36-52	001				2/27/2006	12:05	2.37E+04	9.14E+03	6.36E+02	4.11E+00	5.66E-01	5.14E-01	4.47E+00	9.06E+00	1.04E+01	-2.47E+00	9.69E-00	1.03E+01	1.18E+01	1.44E+01	1.54E+01	NA	MW-36-52		
	002				3/24/2006	16:00	2.68E+04	3.47E+03	1.87E+03	5.01E+00	7.23E-01	6.26E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-52			
	003				4/5/2006	14:30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-36-52			
	004				6/5/2006	11:30	2.40E+04	3.68E+03	6.40E+02	4.42E+00	8.33E-01	5.53E-01	3.49E+00	1.05E+01	1.21E+01	4.80E-01	1.04E-01	1.15E+01	NA	NA	NA	MW-36-52			
	005				8/28/2006	10:00	1.41E+04	2.19E+03	5.53E+02	NA	NA	NA	4.06E+01	6.32E+00	7.36E+00	-2.69E-01	5.23E-00	5.69E+00	NA	NA	NA	MW-36-52			
	006				6/27/2007	11:45	1.01E+04	4.89E+02	1.95E+02	2.62E+00	1.09E+00	3.28E-01	-3.82E-01	2.77E+00	2.98E+00	9.25E-01	2.61E-00	3.14E+00	NA	NA	NA	MW-36-52			
	007	50.0	-38.2		8/8/2007	14:15	1.25E+01	1.21E+03	4.66E+02	2.26E+00	1.09E+00	2.82E-01	1.30E+00	2.97E+00	3.51E+00	-8.83E-01	3.31E-00	3.55E+00	4.27E+00	2.10E+01	2.47E+01	NA	MW-36-52		
	008				1/23/2008	14:13	1.13E+04	4.47E+02	1.71E+02	4.85E+00	4.19E+00	4.24E-01	-2.89E-01	2.01E+00	2.25E+00	4.08E-01	1.86E-00	2.20E+00	NA	NA	NA	MW-36-52			
009				7/24/2008	16:00	1.26E+04	7.60E+02	3.74E+02	4.19E+00	6.35E-01	5.57E-01	-4.79E-01	2.24E+00	3.69E+00	2.77E+02	2.11E-00	3.53E+00	NA	NA	NA	MW-36-52				
010				7/24/2008	16:00	NA	NA																		

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

Well ID	SAMPLE COLLECTION		TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)			Ni-63 (pCi/L)			Well ID	
	SAMPLE ID	Date	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		
			Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC		
MW-37-22	002	2/28/2006	1.28E+04	2.03E+03	1.31E+03	2.37E+00	8.91E-01	8.44E-01	2.41E+00	1.92E+01	1.95E+01	3.60E+00	1.58E+00	1.77E+01	4.24E+01	1.48E+01	1.47E+01	MW-37-22	
	002	2/28/2006	NA	NA	NA	2.40E+00	9.10E-01	9.16E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	003	3/10/2006	2.32E+04	2.57E+03	1.28E+03	1.70E+00	9.81E-01	7.87E-01	4.61E+00	1.46E+01	1.63E+01	5.65E+00	1.39E-01	1.57E+01	2.08E+01	1.27E+01	1.33E+01		
	004	3/27/2006	3.49E+04	3.78E+03	1.81E+03	4.05E+00	8.07E-01	6.97E-01	9.75E+01	4.68E+00	5.21E+00	7.46E-01	4.48E-00	4.97E+00	5.43E+01	1.53E+01	1.52E+01		
	005	6/27/2006	1.05E+04	8.55E+02	3.40E+02	9.37E+00	7.87E-01	7.87E-01	3.20E+00	6.92E+00	8.00E+00	-8.05E-01	6.94E-00	7.43E+00	NA	NA	NA		
	006	9/29/2006	7.37E+03	1.22E+03	3.76E+02	1.42E+01	1.80E+00	9.01E-01	-3.84E-02	8.11E+00	9.49E+00	-1.03E+00	1.03E+00	7.69E+00	NA	NA	NA		
	007	6/27/2007	4.05E+03	3.35E+02	1.97E+02	1.99E+01	2.13E+00	8.72E-01	-2.26E+00	4.88E+00	3.50E+00	-1.12E+00	3.34E+00	NA	NA	NA	NA		
	008	8/7/2007	2.79E+03	2.09E+02	1.89E+02	1.83E+01	2.07E+00	8.57E-01	2.74E+00	3.93E+00	4.22E+00	4.23E-01	3.07E-00	3.44E+00	NA	NA	NA		
	009	10/15/2007	2.76E+03	2.22E+02	1.69E+02	2.29E+01	2.28E+00	4.67E-01	1.33E+00	3.25E+00	3.78E+00	-1.42E+00	3.44E+00	NA	NA	NA	NA		
	010	1/23/2008	6.52E+03	3.54E+02	1.71E+02	8.73E+00	1.27E+00	4.63E-01	-2.09E+00	2.66E+00	2.86E+00	2.34E+01	3.08E-00	3.49E+00	NA	NA	NA		
	011	7/24/2008	4.33E+03	2.28E+02	1.95E+02	1.22E+01	1.25E+00	7.14E-01	4.52E-01	2.13E+00	3.66E+00	2.97E+00	2.57E-00	4.83E+00	NA	NA	NA		
	MW-37-32	012	11/10/2008	2.89E+03	4.01E+02	1.71E+02	1.86E+01	1.95E+00	3.99E-01	1.71E+00	5.33E+00	6.24E+00	4.09E-01	5.37E-00	6.14E+00	NA	NA	NA	
002		2/28/2006	2.86E+04	2.73E+03	1.32E+03	1.78E+01	1.47E+00	2.22E+00	1.27E+01	1.93E+01	2.17E+01	1.50E+01	1.90E-01	2.20E+01	3.41E+01	1.46E+01	1.48E+01	MW-37-32	
002		2/28/2006	NA	NA	NA	1.82E+01	1.72E+00	2.28E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA		
003		3/10/2006	2.83E+04	2.79E+03	1.28E+03	1.52E+01	1.39E+00	1.90E+00	1.43E+01	1.59E+01	1.78E+01	1.51E+00	1.51E+00	1.65E+01	1.13E+01	1.26E+01	1.34E+01		
004		3/27/2006	1.11E+04	1.39E+03	1.72E+03	1.95E+01	1.59E+00	2.44E+00	1.10E+00	4.72E+00	5.25E+00	-8.50E-01	4.41E-00	4.80E+00	6.09E+00	1.40E+01	1.51E+01		
005		7/24/2008	9.15E+03	6.63E+02	2.99E+02	2.98E+01	2.64E+00	3.72E+00	-2.37E+00	5.24E+00	6.07E+00	-2.07E-01	4.75E-00	5.78E+00	NA	NA	NA		
006		9/29/2006	1.15E+04	1.88E+03	4.64E+03	1.53E+01	1.80E+00	1.91E+00	-3.21E+00	8.98E+00	8.67E+00	2.51E+00	8.73E-00	1.66E+01	NA	NA	NA		
001		2/24/2007	3.01E+04	9.93E+03	6.39E+03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
002		6/27/2007	3.13E+03	3.05E+02	1.95E+02	1.85E+01	2.37E+00	2.31E+00	-1.49E+00	3.86E+00	3.86E+00	1.63E+00	3.48E-00	4.14E+00	NA	NA	NA		
008		8/7/2007	3.81E+03	2.97E+02	1.87E+02	1.89E+01	2.02E+00	1.36E+00	1.99E+00	3.18E+00	3.88E+00	1.88E+00	3.19E-00	4.01E+00	NA	NA	NA		
009		10/15/2007	1.43E+03	2.30E+02	1.69E+02	2.13E+01	2.19E+00	2.66E+00	8.79E-01	4.61E+00	4.81E+00	2.53E+00	3.75E-00	4.70E+00	NA	NA	NA		
010		1/23/2008	6.76E+03	3.57E+02	1.70E+02	1.52E+01	1.59E+00	3.65E-01	1.09E+00	3.16E+00	3.16E+00	-5.32E-02	2.72E+00	2.55E+00	NA	NA	NA		
011	7/24/2008	1.06E+03	2.45E+02	1.95E+02	2.06E+01	1.51E+00	8.63E-01	-4.08E-01	1.58E+00	2.18E+00	-1.46E-01	2.04E-00	2.58E+00	NA	NA	NA			
012	11/10/2008	2.89E+03	4.01E+02	1.71E+02	1.86E+01	1.95E+00	3.99E-01	1.71E+00	5.33E+00	6.24E+00	4.09E-01	5.37E-00	6.14E+00	NA	NA	NA			
MW-37-40	001	2/21/2006	1.68E+04	7.41E+03	6.39E+03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-37-40	
	002	11/40	1.47E+04	2.13E+03	1.32E+03	3.86E+00	1.23E+00	1.19E+00	1.79E+01	1.71E+01	1.96E+01	1.53E+00	1.64E-01	1.81E+01	5.63E+01	1.63E+01	1.61E+01		
	002	2/28/2006	NA	NA	NA	4.91E+00	1.23E+00	1.08E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	002	3/10/2006	1.70E+04	2.30E+03	1.29E+03	1.55E+01	1.32E+00	7.28E-01	5.51E+00	1.45E+01	1.62E+01	1.99E+00	1.47E-01	1.62E+01	1.24E+01	1.35E+01	1.44E+01		
	004	3/27/2006	1.56E+04	2.82E+03	1.82E+03	1.11E+01	1.12E+00	5.90E-01	3.34E+00	6.14E+00	5.43E+00	4.03E+00	4.71E-00	5.39E+00	6.37E+00	1.35E+01	1.47E+01		
	006	6/27/2006	1.42E+04	1.13E+03	3.89E+02	2.44E+01	1.71E+00	7.03E-01	8.68E+00	7.68E+00	9.25E+00	-4.30E+00	6.70E-00	6.00E+00	NA	NA	NA		
	007	6/27/2007	6.55E+03	3.99E+02	1.95E+02	4.69E+00	1.14E+00	8.47E-01	5.92E-01	3.36E+00	3.91E+00	-1.07E+00	3.15E-00	3.22E+00	NA	NA	NA		
	008	8/7/2007	5.85E+03	3.50E+02	1.88E+02	9.76E+00	1.51E+00	6.27E-01	1.10E+00	3.12E+00	3.71E+00	-2.48E-01	3.36E-00	3.70E+00	NA	NA	NA		
	009	10/15/2007	5.69E+03	3.03E+02	1.69E+02	5.98E+00	1.28E+00	7.48E-01	7.63E-01	2.91E+00	3.38E+00	5.99E-01	2.82E-00	3.32E+00	NA	NA	NA		
	010	2/1/2008	6.75E+03	3.17E+02	1.53E+02	9.48E-01	1.28E+00	8.45E-01	3.69E-01	2.65E+00	2.95E+00	-3.70E-01	2.75E-00	2.94E+00	-4.35E+00	1.46E+01	1.76E+01		
	011	7/24/2008	5.24E+03	2.43E+02	1.91E+02	1.31E+00	1.10E+00	5.07E-01	-1.10E+00	1.52E+00	2.48E+00	-1.35E+00	2.11E-00	2.70E+00	NA	NA	NA		
	MW-37-57	001	11/10/2008	1.60E+04	7.22E+03	6.39E+03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-37-57
002		2/28/2006	1.33E+04	2.06E+03	1.32E+03	2.22E+01	1.75E+00	1.05E+00	1.81E+00	2.14E+01	2.44E+01	5.22E+00	1.82E-01	2.14E+01	2.91E+01	1.50E+01	1.54E+01		
002		2/28/2006	NA	NA	NA	2.27E+01	2.00E+00	1.02E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA		
003		3/10/2006	1.91E+04	2.40E+03	1.29E+03	2.29E+01	1.74E+00	7.68E-01	1.46E+00	1.76E+01	1.77E+01	7.74E+00	1.53E-01	1.73E+01	1.04E+01	1.33E+01	1.43E+01		
004		3/27/2006	1.59E+04	2.84E+03	1.81E+03	1.65E+01	1.38E+00	6.60E-01	2.52E+00	5.25E+00	5.80E+00	3.94E+00	4.86E+00	5.53E+00	3.71E+00	1.37E+01	1.49E+01		
005		6/27/2006	4.48E+04	3.42E+03	6.85E+02	2.75E+01	1.89E+00	8.18E-01	8.89E+00	8.18E-01	NA	2.04E+00	5.77E-00	6.52E+00	NA	NA	NA		
006		9/29/2006	1.05E+04	1.74E+03	4.52E+02	1.81E+01	1.85E+00	7.87E-01	-3.39E+00	8.04E+00	7.81E+00	2.60E+00	8.86E-00	1.07E+01	NA	NA	NA		
007		6/27/2007	5.89E+03	3.89E+02	1.95E+02	2.42E+01	3.03E+00	8.84E-01	1.45E+00	3.51E+00	3.42E+00	-9.58E-02	4.67E-00	4.8E+00	NA	NA	NA		
008		8/7/2007	6.68E+03	3.68E+02	1.88E+02	2.33E+01	2.15E+00	5.01E-01	-1.35E+00	3.27E+00	3.42E+00	-3.64E-02	3.86E-00	3.86E+00	NA	NA	NA		
009		10/15/2007	4.88E+03	2.85E+02	1.68E+02	2.78E+00	2.49E+00	5.53E-01	3.62E-01	2.67E+00	2.72E+00	1.20E-01	2.40E-00	2.77E+00	NA	NA	NA		
010		2/1/2008	6.63E+03	3.14E+02	1.33E+02	2.89E+01	3.20E+00	9.62E-01	-9.11E-01	3.73E+00	3.68E+00	-2.93E-01	3.12E-00	3.45E+00	8.47E-01	1.46E+01	1.71E+01		
011		7/24/2008	5.33E+03	2.47E+02	1.91E+02	2.12E+01	1.65E+00	5.27E-01	-7.11E-01	1.88E+00	3.07E+00	-1.17E+00	2.10E-00	3.24E+00	NA	NA	NA		
012	11/10/2008	4.27E+03	4.77E+02	1.71E+02	2.40E+01	2.29E+00	6.36E-01	-1.57E-01	1.68E+00	6.80E+00	9.78E-01	7.18E-00	8.14E+00	NA	NA	NA			
MW-38	002	12/8/2005	9.85E+02	4.38E+02	4.54E+02	-4.38E+00	9.29E+00	1.25E+01	2.93E+00	8.80E+00	6.57E+00	2.99E+00	7.98E-00	7.06E+00	NA	NA	NA		
	003	12/50/2005	2.50E+02	4.29E+02	4.71E+02	NA	NA	NA	NA	NA	6.39E+00	2.81E+00	8.43E-00	6.71E+00	NA	NA	NA		
	004	1/10/2006	1.01E+03	4.50E+02	4.66E+02	NA	NA	NA	3.71E+00	1.11E+01	8.02E+00	3.55E+00	1.06E-01	8.02E+00	NA	NA	NA		

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID									
				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-38	005			1/19/2006	13:15	7.88E+02	4.29E+02	4.61E+02	NA	NA	NA	3.13E+00	9.38E+00	7.14E+00	3.71E+00	1.11E+00	1.11E+00	8.77E+00	NA	NA	NA	NA	NA	NA	MW-38		
	006			1/25/2006	12:15	1.44E+03	4.59E+02	4.61E+02	NA	NA	NA	3.67E+00	1.10E+01	8.21E+00	4.18E+00	1.95E+01	9.71E+00	9.71E+00	9.71E+00	NA	NA	NA	NA	NA	NA	NA	
	007			2/1/2006	13:30	3.39E+02	4.23E+02	4.60E+02	NA	NA	NA	3.06E+00	9.19E+00	6.91E+00	3.03E+00	9.09E+00	7.30E+00	7.30E+00	7.30E+00	NA	NA	NA	NA	NA	NA	NA	
	008			2/8/2006	11:15	1.88E+02	3.30E+02	3.46E+02	1.35E-01	4.34E-01	5.15E-01	5.29E+00	1.16E+01	1.31E+01	2.41E+00	1.17E-01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	NA	NA	NA	NA	NA	NA	NA
	009			2/16/2006	10:05	1.47E+02	4.11E+02	4.54E+02	NA	NA	NA	8.74E+00	8.74E+00	2.48E+00	7.44E+00	7.44E+00	6.03E+00	6.03E+00	6.03E+00	NA	NA	NA	NA	NA	NA	NA	
	010			2/23/2006	13:25	2.63E+03	4.98E+02	4.61E+02	NA	NA	NA	1.97E+00	5.90E+00	4.22E+00	1.88E+00	5.63E+00	4.19E+00	4.19E+00	4.19E+00	4.19E+00	NA	NA	NA	NA	NA	NA	NA
	011			3/3/2006	8:50	3.70E+02	4.71E+02	4.66E+02	NA	NA	NA	2.65E+00	7.91E+00	6.38E+00	4.53E+00	1.36E-01	1.08E+01	1.08E+01	1.08E+01	1.08E+01	NA	NA	NA	NA	NA	NA	NA
	013			5/22/2006	9:20	7.39E+02	4.11E+02	4.40E+02	1.32E-01	2.88E-01	3.20E-01	3.42E+00	1.03E+01	7.57E+00	3.40E+00	1.02E-01	7.93E+00	7.93E+00	7.93E+00	7.93E+00	NA	NA	NA	NA	NA	NA	NA
	014			6/21/2006	9:48	9.16E+02	4.38E+02	4.60E+02	-2.96E+00	2.16E+00	2.40E+00	2.32E+00	7.36E+00	5.45E+00	2.50E+00	7.49E+00	5.29E+00	5.29E+00	5.29E+00	5.29E+00	1.10E+00	5.70E+00	6.40E+00	6.40E+00	6.40E+00	6.40E+00	6.40E+00
	015			7/6/2006	12:00	5.93E+02	4.20E+02	4.52E+02	-3.70E-01	4.50E-01	5.20E-01	3.40E+00	1.02E+01	7.07E+00	2.98E+00	2.07E-00	7.41E+00	7.41E+00	7.41E+00	7.41E+00	NA	NA	NA	NA	NA	NA	NA
016			8/7/2006	13:23	2.15E+02	1.80E+02	1.74E+02	5.00E-02	6.30E-01	7.10E-01	2.29E+00	6.47E+00	9.31E+00	-7.72E-01	6.90E+00	9.33E+00	2.75E+01	2.75E+01	2.75E+01	2.75E+01	2.94E+01	3.13E+01	3.13E+01	3.13E+01	3.13E+01	3.13E+01	
016-S1			8/7/2006	13:23	2.92E+02	4.14E+02	4.47E+02	-2.47E-01	1.44E+00	1.73E+00	2.69E+00	8.07E+00	5.79E+00	2.72E+00	8.13E-03	6.03E+00	6.03E+00	6.03E+00	6.03E+00	NA	NA	NA	NA	NA	NA	NA	
017			9/5/2006	11:30	3.33E+02	1.86E+02	1.67E+02	-5.30E-01	1.87E+01	8.70E+01	3.81E+01	7.68E+00	8.63E+00	-4.48E-01	6.20E+00	6.42E+00	6.42E+00	6.42E+00	6.42E+00	NA	NA	NA	NA	NA	NA	NA	
017-S1			9/5/2006	11:30	3.34E+02	3.99E+02	4.49E+02	NA	NA	NA	2.75E+00	8.26E+00	6.21E+00	3.23E+00	9.69E+00	7.53E+00	7.53E+00	7.53E+00	7.53E+00	NA	NA	NA	NA	NA	NA	NA	
018			11/22/2006	10:38	1.78E+02	4.08E+02	4.30E+02	-7.00E-02	6.60E-01	7.30E-01	3.13E+00	9.38E+00	7.14E+00	3.08E+00	9.23E+00	7.53E+00	7.53E+00	7.53E+00	7.53E+00	NA	NA	NA	NA	NA	NA	NA	
019			2/12/2007	9:58	2.74E+03	6.00E+02	5.30E+02	-5.10E-01	1.32E+00	1.50E+00	3.97E+00	1.92E+00	2.00E+00	-1.03E+00	1.41E+00	1.80E+00	1.80E+00	1.80E+00	1.80E+00	NA	NA	NA	NA	NA	NA	NA	
020	25.4	-11.1		8/16/2007	11:30	6.04E+02	1.44E+02	1.44E+02	9.21E-02	6.92E-01	8.85E-01	1.21E+00	3.07E+00	3.65E+00	2.48E+00	3.01E+00	3.98E+00	3.98E+00	3.98E+00	NA	NA	NA	NA	NA	NA	NA	
021	67.0	13.0		5/22/2007	9:53	4.73E+02	1.77E+02	1.31E+02	2.76E+00	8.57E-01	5.71E-01	1.23E-01	1.67E+00	1.85E+00	1.88E+00	2.68E+00	2.68E+00	2.68E+00	2.68E+00	-3.11E+00	1.06E+01	1.23E+01	1.23E+01	1.23E+01	1.23E+01	MW-39-67	
002				8/7/2007	16:30	3.25E+02	1.86E+02	1.95E+02	4.78E+00	1.13E+00	6.32E-01	2.39E+00	4.62E+00	3.57E+00	2.62E-01	2.59E+00	2.59E+00	2.59E+00	2.59E+00	NA	NA	NA	NA	NA	NA	NA	
003				1/17/2008	14:35	3.57E+02	1.95E+02	1.83E+02	1.83E+00	1.29E+00	8.53E-01	1.28E-01	3.17E+00	3.57E+00	1.76E+00	3.63E-00	4.25E+00	4.25E+00	4.25E+00	NA	NA	NA	NA	NA	NA	NA	
004				5/1/2008	13:48	3.18E+02	1.24E+02	1.96E+02	2.21E+00	6.17E-01	6.78E-01	1.58E+00	2.53E+00	3.64E-01	1.80E+00	3.11E+00	3.11E+00	3.11E+00	3.11E+00	NA	NA	NA	NA	NA	NA	NA	
005				10/23/2008	12:53	4.15E+02	2.01E+02	1.99E+02	3.31E+00	1.12E+00	7.74E-01	-1.28E-01	5.46E+00	5.95E+00	-1.22E-01	5.38E+00	6.06E+00	6.06E+00	6.06E+00	NA	NA	NA	NA	NA	NA	NA	
001	83.5	-3.5		5/22/2007	10:38	5.91E+02	1.89E+02	1.29E+02	1.29E+00	7.22E-01	5.57E-01	-9.07E-02	1.53E+00	1.69E+00	5.61E-01	1.58E+00	1.81E+00	1.81E+00	1.81E+00	-1.68E+00	9.99E+00	9.99E+00	9.99E+00	9.99E+00	9.99E+00	MW-39-84	
002				8/7/2007	15:30	2.32E+02	1.77E+02	1.91E+02	7.97E-01	1.18E-01	7.30E-01	3.55E-01	3.07E+00	3.44E+00	-1.11E+00	3.76E+00	3.76E+00	3.76E+00	3.76E+00	NA	NA	NA	NA	NA	NA	NA	
003				1/17/2008	13:25	1.13E+02	1.70E+02	1.81E+02	1.78E+00	9.47E-01	7.24E-01	-2.70E+00	2.99E+00	2.86E+00	8.36E-01	2.94E+00	3.50E+00	3.50E+00	3.50E+00	NA	NA	NA	NA	NA	NA	NA	
004				5/1/2008	14:10	1.50E+02	1.18E+02	1.96E+02	2.23E+00	2.23E+00	8.93E-01	-2.12E-01	2.24E+00	2.83E+00	-2.12E-01	2.24E+00	3.67E+00	3.67E+00	3.67E+00	NA	NA	NA	NA	NA	NA	NA	
005				10/23/2008	12:56	2.34E+02	1.88E+02	1.99E+02	1.04E+00	6.90E-01	1.74E+00	5.88E+00	6.93E+00	6.93E+00	1.12E+00	6.98E+00	8.05E+00	8.05E+00	8.05E+00	NA	NA	NA	NA	NA	NA	NA	
001	101.5	-21.5		5/22/2007	10:40	8.05E+02	2.13E+02	1.29E+02	1.32E+00	1.32E+00	6.21E-01	-3.99E-02	1.81E+00	1.99E+00	1.99E+00	6.54E-01	1.78E+00	2.11E+00	2.11E+00	6.39E+02	1.15E+01	1.32E+01	1.32E+01	1.32E+01	1.32E+01	MW-39-102	
002				8/7/2007	14:25	3.21E+02	1.79E+02	1.88E+02	4.71E-01	5.61E-01	5.95E-01	6.38E+00	3.35E+00	3.60E+00	2.47E+00	4.70E+00	4.70E+00	4.70E+00	4.70E+00	NA	NA	NA	NA	NA	NA	NA	
003				1/17/2008	13:32	1.54E+02	1.67E+02	1.79E+02	9.88E-01	8.30E-01	7.97E-01	7.42E-01	2.37E+00	2.83E+00	7.91E-01	3.43E+00	2.98E+00	2.98E+00	2.98E+00	NA	NA	NA	NA	NA	NA	NA	
004				4/30/2008	14:56	5.03E+02	1.69E+02	2.44E+02	8.83E-01	5.43E-01	7.95E-01	-1.02E+00	2.63E+00	4.00E+00	4.88E+00	1.90E+00	3.34E+00	3.34E+00	3.34E+00	-1.07E+01	1.40E+01	1.40E+01	1.40E+01	1.40E+01	1.40E+01		
005				10/22/2008	13:56	1.68E+02	1.83E+02	2.00E+02	1.33E+00	7.18E-01	5.92E-01	6.57E+01	6.18E+00	6.75E+00	-1.90E+00	5.47E+00	5.53E+00	5.53E+00	5.53E+00	NA	NA	NA	NA	NA	NA	NA	
001	124.0	-44.0		5/22/2007	9:50	2.61E+02	1.49E+02	1.31E+02	9.26E-01	9.70E-01	1.00E+00	-1.15E-01	1.64E+00	1.80E+00	5.31E-01	1.54E+00	1.63E+00	1.63E+00	3.55E+00	1.17E+01	1.32E+01	1.32E+01	1.32E+01	1.32E+01	1.32E+01	MW-39-124	
002				8/7/2007	13:40	1.92E+02	1.75E+02	1.88E+02	1.88E+00	5.90E-01	9.43E-01	-1.14E+00	2.94E+00	3.06E+00	4.97E-01	5.17E+00	5.61E+00	5.61E+00	5.61E+00	NA	NA	NA	NA	NA	NA	NA	
003				1/17/2008	15:40	1.67E+02	1.64E+02	1.73E+02	1.48E+00	9.71E-01	8.60E-01	6.55E-01	2.61E+00	3.00E+00	9.85E-01	2.03E+00	2.55E+00	2.55E+00	2.55E+00	NA	NA	NA	NA	NA	NA	NA	
004				4/30/2008	15:24	2.15E+02	9.50E+01	1.53E+02	1.79E+00	6.60E-01	8.91E-01	-1.23E+00	2.13E+00	3.40E+00	5.87E-01	2.19E+00	3.89E+00	3.89E+00	3.89E+00	-1.13E+01	1.42E+01	1.42E+01	1.42E+01	1.42E+01	1.42E+01		
005				10/22/2008	14:00	2.31E+02	1.88E+02	2.00E+02	9.42E-01	6.47E-01	5.64E-01	1.03E+00	6.64E+00	1.63E+00	6.98E+00	8.11E+00	8.11E+00	8.11E+00	8.11E+00	NA	NA	NA	NA	NA	NA	NA	
001	182.5	-102.5		5/22/2007	10:08	2.47E+02	1.45E+02	1.29E+02	6.51E-01	8.82E-01	9.53E-01	6.42E-01	1.88E+00	1.89E+00	3.09E+02	1.58E+00	1.79E+00	1.79E+00	0.00E+00	1.09E+01	1.25E+01	1.25E+01	1.25E+01	1.25E+01	1.25E+01	MW-39-183	
002				8/7/2007	12:40																						

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing?	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		TRITIUM (pCi/L)			Sr-90 (pCi/L)			Cs-137 (pCi/L)			Co-60 (pCi/L)			Ni-63 (pCi/L)			Well ID			
				Date	Time	Result	Std. Dev.	MDC	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	1.66E+02	3.17E-01	5.82E-01	8.88E-01	7.90E-01	3.39E+00	3.39E+00	-2.35E+00	2.70E+00	2.27E+00	2.70E+00	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	6.28E-01	-9.08E-01	3.79E+00	4.09E+00	-1.72E+00	3.07E+00	2.90E+00	3.07E+00	NA	NA	NA			
	003			10/12/2007	14:45	-1.59E-01	1.52E+02	1.71E+02	-2.11E-02	5.10E-01	6.85E-01	-3.80E-01	3.72E+00	3.59E+00	4.91E-01	3.72E+00	4.26E+00	3.72E+00	NA	NA	NA			
	004			1/7/2008	14:42	-1.90E-01	1.45E+02	1.80E+02	8.04E-01	8.55E-01	8.75E-01	-1.21E+00	2.84E+00	3.00E+00	1.10E+00	2.58E+00	2.82E+00	2.58E+00	NA	NA	NA			
	005			8/11/2008	13:35	1.68E+02	1.04E+02	1.71E+02	-3.23E-01	3.77E-01	8.09E-01	1.25E-01	1.99E+00	3.31E+00	1.09E+00	2.03E+00	3.64E+00	3.64E+00	1.17E+01	1.17E+01	2.01E+01	NA		
	006			10/28/2008	15:30	8.80E+01	1.74E+02	1.98E+02	6.53E-01	7.02E-01	8.70E-01	1.80E+00	3.77E+00	1.83E+00	7.49E+00	1.83E+00	6.30E+00	6.48E+00	9.34E-01	1.71E+01	1.96E+01	NA		
	007			6/5/2007	12:37	1.63E+02	1.59E+02	1.63E+02	-2.93E-02	6.98E-01	9.11E-01	-1.00E+00	3.09E+00	3.22E+00	-1.70E-03	3.79E+00	3.79E+00	4.82E+00	NA	NA	NA	MW-40-81		
	008			7/23/2007	13:00	6.95E+01	1.32E+02	1.72E+02	2.45E-01	6.00E-01	7.08E-01	-7.08E-01	4.95E+00	5.20E+00	2.31E+00	3.81E-00	4.95E+00	4.95E+00	NA	NA	NA			
	009			10/12/2007	10:52	6.99E+01	1.53E+02	1.73E+02	-9.63E-02	5.05E-01	7.10E-01	5.47E-01	4.00E+00	4.48E+00	2.40E+00	3.81E-00	4.02E+00	4.64E+00	NA	NA	NA			
	010			1/7/2008	14:35	1.09E+02	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	1.65E+00	NA	NA	NA	NA			
MW-40-100	001	100.2	-27.0	10/28/2008	11:20	3.04E+01	1.61E+02	1.93E+02	-1.84E-01	4.17E-01	6.28E-01	2.04E+00	5.28E+00	6.24E+00	-8.66E-01	6.75E+00	7.32E+00	-2.98E+00	1.10E+01	1.92E+01	1.92E+01			
	002			6/5/2007	11:15	1.76E+02	1.61E+02	1.64E+02	3.49E-01	6.18E-01	6.94E-01	-1.92E+00	3.06E+00	3.04E+00	-1.98E+00	3.87E+00	3.59E+00	NA	NA	NA	NA	MW-40-100		
	003			7/23/2007	13:20	8.12E+01	1.55E+02	1.75E+02	2.91E-01	6.16E-01	6.96E-01	-4.67E-01	1.91E+00	2.10E+00	1.78E-01	1.94E+00	2.20E+00	NA	NA	NA	NA			
	004			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-01	3.57E+00	3.87E+00	8.90E-01	3.30E+00	3.61E+00	NA	NA	NA	NA			
	005			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			
	006			5/30/2008	12:45	1.16E+02	9.84E+01	1.60E+02	1.16E-01	6.00E-01	9.81E-01	-7.43E-01	2.12E+00	3.48E+00	-8.73E-01	2.00E+00	3.15E+00	NA	NA	NA	NA			
	007			8/11/2008	10:10	1.93E+02	1.95E+02	1.71E+02	-3.44E-02	5.85E-01	5.83E-01	1.18E-01	1.59E+00	2.68E+00	6.78E-01	1.59E+00	2.70E+00	0.00E+00	1.99E+01	1.80E+01	1.80E+01	NA		
	008			10/28/2008	11:30	8.66E+01	1.73E+02	1.95E+02	1.13E-01	6.37E-01	7.83E-01	-1.25E+00	6.50E+00	7.11E+00	3.92E+00	7.02E+00	8.63E+00	-7.70E-01	1.79E+01	2.06E+01	2.06E+01	NA		
	009			6/5/2007	12:55	1.87E+02	1.62E+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	MW-40-127		
	010			7/23/2007	15:15	4.26E+01	1.44E+02	1.68E+02	3.83E-01	5.15E-01	-1.17E+00	1.76E+00	1.67E+00	2.04E-01	1.59E+00	1.77E+00	NA	NA	NA	NA	NA			
MW-40-162	001	161.7	-88.5	10/12/2007	11:30	2.83E+01	1.41E+02	1.79E+02	1.01E-01	6.97E-01	6.21E-01	-2.32E+00	3.90E+00	4.06E+00	-1.51E+00	3.72E+00	3.79E+00	NA	NA	NA	NA			
	002			1/7/2008	12:30	9.75E+00	1.48E+02	1.79E+02	5.17E-01	4.83E-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			
	003			5/30/2008	13:00	3.27E+01	9.16E+01	1.63E+02	-4.84E-01	5.30E-01	9.68E-01	6.92E-01	2.23E+00	3.43E+00	1.30E+00	2.00E+00	3.62E+00	NA	NA	NA	NA			
	004			8/11/2008	10:34	1.68E+02	1.04E+02	1.70E+02	1.65E-01	6.19E-01	4.18E-01	1.24E-01	1.65E+00	2.81E+00	7.30E+03	1.49E+00	2.51E+00	-8.77E+00	1.13E+01	2.01E+01	2.01E+01	NA		
	005			10/28/2008	12:10	7.53E-01	1.70E+02	1.95E+02	4.36E-01	7.10E-01	7.87E-01	-2.53E+00	4.66E+00	6.88E+00	-4.33E+00	8.23E+00	7.68E+00	0.00E+00	1.66E+01	1.93E+01	1.93E+01	NA		
	006			6/5/2007	14:45	1.40E+02	1.56E+02	1.64E+02	2.94E-01	4.43E-01	5.04E-01	-1.07E+00	5.33E+00	4.95E+00	8.85E-01	4.68E+00	4.53E+00	NA	NA	NA	NA	MW-40-162		
	007			7/23/2007	17:40	2.39E+01	1.46E+02	1.73E+02	1.19E-01	4.45E-01	5.07E-01	-2.51E+00	2.81E+00	1.75E+00	7.27E-01	1.45E+00	1.69E+00	NA	NA	NA	NA			
	008			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			
	009			1/7/2008	13:10	4.96E+01	1.56E+02	1.82E+02	7.93E-02	6.63E-01	4.48E-01	1.17E-01	2.52E+00	2.87E+00	3.63E-01	2.40E+00	2.72E+00	NA	NA	NA	NA			
	010			8/11/2008	11:44	2.30E+02	1.08E+02	1.75E+02	7.70E-02	4.19E-01	7.81E-01	6.25E-01	2.43E+00	4.16E+00	3.15E+00	2.07E+00	4.11E+00	-5.27E+00	1.22E+01	2.16E+01	2.16E+01	NA		
MW-41-40	001	34.4	20.5	10/28/2008	13:15	1.12E+02	1.77E+02	1.96E+02	2.80E-01	6.35E-01	7.35E-01	-2.00E+00	5.84E+00	6.26E+00	2.11E+00	6.08E+00	7.29E+00	3.75E+00	1.79E+01	2.04E+01	2.04E+01	NA		
	002			4/12/2006	15:00	7.66E+02	2.07E+02	1.56E+02	2.63E+00	1.74E+00	1.58E+00	2.91E+00	2.62E+00	3.03E+00	4.03E+00	-7.58E-01	2.55E+00	2.74E+00	NA	NA	NA			
	003			5/25/2006	10:00	6.07E+02	2.22E+02	1.88E+02	5.18E+00	1.46E+00	1.07E+00	4.25E+00	1.06E+01	1.24E+01	-1.16E+00	1.07E+01	1.14E+01	NA	NA	NA	NA			
	004			6/12/2006	9:50	6.76E+02	2.00E+02	1.51E+02	3.58E+00	6.83E-01	5.31E-01	3.30E+00	1.02E+01	1.19E+01	1.95E+01	9.42E-02	9.32E+00	1.02E+01	NA	NA	NA			
	005			7/14/2006	8:45	9.83E+02	2.64E+02	2.07E+02	7.02E+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			
	006			8/16/2006	13:15	4.47E+02	1.95E+02	1.68E+02	NA	NA	NA	7.59E-01	6.84E+00	8.78E+00	1.70E-01	5.46E-03	7.51E+00	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	6.90E-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	NA		
	008			6/19/2007	14:45	3.91E+03	7.32E+02	3.60E+02	5.99E+00	1.15E+00	7.49E-01	-3.09E+00	4.42E+00	3.28E+00	3.28E+00	-3.47E-01	2.81E+00	3.01E+00	2.21E-01	1.49E+01	1.49E+01	NA		
	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	4.08E+00	NA	NA	NA	NA			
	010			1/24/2008	16:28	2.15E+03	1.80E+02	1.93E+02	3.05E+00	1.07E+00	7.54E-01	2.67E+00	2.55E+00	2.21E+00	-5.18E-01	2.00E+00	2.16E+00	NA	NA	NA	NA			
MW-41-63	011			10/22/2008	14:49	2.21E+03	2.26E+02	5.92E+02	5.91E+00	1.10E+00	4.21E-01	3.07E+00	6.33E+00	7.66E+00	-3.60E+00	8.64E+00	8.40E+00	NA	NA	NA	NA			
	012			4/12/2006	14:45	7.01E+02	2.05E+02	1.55E+02	5.69E+00	2.21E+00	1.90E+00	6.98E-01	2.27E+00	2.52E+00	-3.89E+02	2.68E+00	2.78E+00	NA	NA	NA	NA			
	013			5/25/2006	10:20	3.61E+02	2.07E+02	1.92E+02	5.22E+00	1.10E+00	7.91E-01	7.91E-01	9.63E+00	1.15E+01	3.51E+00	7.87E-00	1.07E+01	NA	NA	NA	NA			
	014			6/12/2006	10:05	1.67E+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	1.21E+00	8.00E+00	8.29E+00	NA	NA	NA	NA		
	015			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+01	1.73E-									

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		TRITIUM (pCi/L)			Cs-137 (pCi/L)			Sr-90 (pCi/L)			C-14 (pCi/L)			Co-60 (pCi/L)			Ni-63 (pCi/L)			Well ID		
				Date	Time	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC	Result	Std. Dev.	MDC			
MW-42-49	002			3/31/2006	9:29	2.49E+03	4.49E+02	2.33E+02	2.10E+01	9.96E+01	3.67E+01	6.55E+03	1.24E+02	2.76E+01	2.29E+01	2.10E+01	2.50E+01	2.22E+03	1.76E+02	NA	NA	NA	NA	NA	MW-42-49	
	003			4/7/2006	17:52	2.51E+03	5.88E+02	7.37E+02	1.69E+02	2.16E+00	4.09E+01	8.11E+04	7.08E+02	1.01E+02	8.81E+01	2.52E+01	1.97E+01	2.03E+03	4.53E+01	1.41E+01	NA	NA	NA	NA		
	004	41.0	28.7	6/18/2007	15:00	1.34E+03	5.00E+02	3.74E+02	7.73E+01	4.01E+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	1.41E+01	NA	NA	NA	NA		
	005			8/22/2007	14:37	1.50E+03	6.26E+02	5.55E+02	5.02E+01	2.96E+00	9.41E+01	2.48E+04	2.25E+03	2.17E+01	3.55E+00	4.61E+00	5.86E+00	8.03E+02	5.2E+01	2.19E+01	NA	NA	NA	NA		
	006			8/17/2007	9:30	1.60E+03	2.49E+02	1.71E+02	2.01E+01	2.00E+00	6.03E+01	3.69E+04	2.10E+03	1.68E+01	4.63E+01	4.86E+00	4.62E+00	3.99E+01	1.88E+01	NA	NA	NA	NA	NA	NA	
	007			10/4/2007	12:40	2.46E+03	2.87E+02	1.93E+02	4.65E+01	3.12E+00	6.02E+01	3.38E+04	3.14E+03	1.83E+01	1.59E+01	6.2E+00	3.61E+00	1.17E+03	4.94E+01	1.88E+01	NA	NA	NA	NA	NA	
	008			1/21/2008	16:11	1.32E+03	5.25E+02	4.15E+02	3.31E+01	3.18E+00	9.11E+01	3.69E+04	2.93E+03	2.02E+01	0.00E+00	4.13E+00	5.12E+00	5.01E+02	5.01E+01	2.68E+01	NA	NA	NA	NA	NA	
	009	0.0		5/13/2008	13:20	3.24E+03	2.56E+02	1.44E+02	2.56E+01	1.54E+00	5.48E+01	1.41E+04	7.89E+02	1.47E+01	1.69E+01	4.47E+00	4.67E+00	7.34E+02	2.83E+01	2.19E+01	NA	NA	NA	NA	NA	
	010			8/4/2008	14:24	3.16E+03	2.65E+02	1.91E+02	3.56E+01	1.72E+00	5.39E+01	1.06E+04	6.13E+02	1.70E+01	8.47E+03	2.69E+00	4.52E+00	3.13E+02	2.60E+01	2.61E+01	NA	NA	NA	NA	NA	
	011			9/5/2008	12:52	1.32E+04	8.36E+02	5.08E+02	2.96E+02	4.98E+00	4.02E+01	2.21E+04	1.38E+03	1.58E+01	NA	NA	NA	NA	4.63E+02	2.17E+01	2.03E+01	NA	NA	NA	NA	
012			10/31/2008	13:27	2.60E+03	3.77E+02	1.65E+02	9.61E+01	4.31E+00	4.16E+01	1.78E+04	1.58E+03	1.83E+01	5.88E+01	5.88E+01	6.96E+00	7.78E+00	2.71E+02	2.73E+01	1.99E+01	NA	NA	NA	NA		
013			11/17/2008	14:56	1.12E+03	2.01E+02	1.73E+02	1.02E+02	6.96E+00	1.28E+00	1.54E+04	1.16E+03	1.74E+01	3.26E+00	5.21E+00	6.76E+00	2.44E+02	3.00E+01	2.23E+01	NA	NA	NA	NA	NA		
014			3/24/2006	9:45	1.28E+03	5.87E+02	5.75E+02	3.09E+01	3.90E+01	4.08E+01	4.46E+03	1.36E+02	2.22E+01	1.08E+01	1.71E+01	2.68E+01	NA	NA	NA	NA	NA	NA	NA	NA	MW-42-78	
015			4/7/2006	17:38	7.92E+02	7.04E+02	7.30E+02	1.03E+01	3.68E+01	3.98E+01	1.98E+03	1.19E+02	3.13E+01	2.34E+01	2.34E+01	2.51E+01	3.66E+01	1.39E+01	1.49E+01	NA	NA	NA	NA	NA		
016			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	NA	NA	NA	NA	NA		
017			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	3.12E+00	3.79E+00	6.81E+00	1.99E+01	1.99E+01	2.28E+01	NA	NA	NA	NA	NA		
018			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	NA	NA	NA	NA	NA		
019			10/4/2007	13:25	4.34E+03	1.94E+02	1.94E+02	2.33E+01	3.09E+01	3.43E+01	3.04E+02	3.44E+01	4.71E+00	4.04E+00	5.18E+00	6.84E+01	1.53E+01	6.84E+01	1.77E+01	NA	NA	NA	NA	NA		
020			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	1.52E+01	3.35E+00	1.71E+01	3.33E+00	3.61E+00	9.73E+00	2.42E+01	2.75E+01	NA	NA	NA	NA	NA		
021			8/4/2008	12:07	6.18E+02	1.50E+02	1.91E+02	3.91E+01	3.76E+01	3.76E+01	2.71E+00	2.02E+00	3.75E+00	-6.44E+01	2.10E+00	3.29E+00	-7.57E+01	1.52E+01	2.68E+01	NA	NA	NA	NA	NA		
022			10/31/2008	13:34	5.62E+02	2.12E+02	1.65E+02	4.17E+02	3.01E+01	3.87E+01	3.31E+01	5.68E+00	6.34E+00	8.32E+01	6.72E+00	7.68E+00	3.69E+00	1.77E+01	2.02E+01	NA	NA	NA	NA	NA	MW-43-28	
023	23.5	25.3		5/25/2006	12:10	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	NA	NA	NA	NA		
024			6/12/2006	12:45	2.30E+02	1.62E+02	1.52E+02	1.39E+01	4.27E+01	5.27E+01	2.85E+00	6.93E+00	7.82E+00	7.93E+00	5.93E+00	6.39E+00	NA	NA	NA	NA	NA	NA	NA	NA		
025			7/12/2006	9:40	1.09E+02	1.88E+02	1.95E+02	1.10E+00	1.69E+00	1.72E+00	1.72E+00	9.87E+00	1.11E+01	-7.95E+01	8.58E+00	9.11E+00	NA	NA	NA	NA	NA	NA	NA	NA		
026			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	NA	NA	NA	NA	NA		
027	25.0	25.8		6/18/2007	13:30	2.78E+02	1.70E+02	1.74E+02	1.07E+00	5.97E+01	4.80E+01	-3.68E+01	3.13E+00	3.68E+00	-3.72E+01	3.31E+00	3.46E+00	3.58E+00	1.50E+01	1.73E+01	NA	NA	NA	NA		
028			8/13/2007	11:35	9.30E+01	1.71E+02	1.93E+02	-6.23E+01	7.50E+01	1.02E+00	1.02E+00	-7.36E+01	3.57E+00	3.68E+00	2.77E+01	2.70E+00	3.12E+00	NA	NA	NA	NA	NA	NA	NA		
029			1/25/2008	11:11	3.06E+02	2.82E+02	2.96E+02	1.46E+01	6.06E+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	NA	NA	NA	NA	NA		
030			10/31/2008	14:17	2.65E+02	1.58E+02	1.66E+02	-1.08E+01	3.95E+01	5.66E+01	4.07E+00	5.19E+00	6.44E+00	6.21E+00	6.63E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA		
031			4/12/2006	11:55	2.00E+02	1.65E+02	1.58E+02	4.34E+01	4.03E+01	4.83E+01	3.27E+00	4.04E+00	3.73E+00	1.82E+00	3.09E+00	3.47E+00	NA	NA	NA	NA	NA	NA	NA	NA	MW-43-62	
032	51.0	-2.2		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	NA	NA	NA	NA		
033			6/12/2006	12:40	1.29E+02	1.40E+02	1.38E+02	1.55E+00	5.58E+01	5.86E+01	4.97E+00	7.02E+00	7.98E+00	-6.81E+01	7.19E+00	7.85E+00	NA	NA	NA	NA	NA	NA	NA	NA		
034			7/12/2006	10:05	2.04E+01	1.53E+02	1.65E+02	4.76E+01	1.46E+00	1.54E+00	1.54E+00	1.10E+01	1.06E+01	1.36E+01	1.01E+01	1.11E+01	NA	NA	NA	NA	NA	NA	NA	NA		
035			8/16/2006	11:55	1.98E+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	NA	NA	NA	NA	NA		
036			6/19/2007	9:36	1.97E+02	1.88E+02	2.02E+02	8.55E+01	6.38E+01	6.40E+01	-6.77E+01	3.21E+00	3.42E+00	-3.52E+01	3.10E+00	3.26E+00	1.38E+00	1.33E+01	1.55E+01	NA	NA	NA	NA	NA		
037	54.0	-5.2		8/13/2007	12:42	1.14E+02	1.73E+02	1.92E+02	1.29E+01	6.97E+01	8.27E+01	-1.18E+00	3.67E+00	3.89E+00	1.53E+01	3.31E+00	3.80E+00	NA	NA	NA	NA	NA	NA	NA		
038			10/31/2008	13:16	2.25E+02	1.50E+02	1.60E+02	1.00E+01	4.13E+01	4.74E+01	5.52E+01	2.42E+00	2.39E+00	-1.11E+00	2.07E+00	2.10E+00	3.76E+00	1.67E+01	1.91E+01	NA	NA	NA	NA	NA		
039			3/28/2006	14:05	3.38E+02	1.91E+02	1.73E+02	7.38E+02	1.53E+00	1.67E+00	1.67E+00	6.54E+01	1.05E+01	1.17E+01	-2.87E+00	6.02E+00	NA	NA	NA	NA	NA	NA	NA	NA	MW-44-66	
040			5/24/2006	9:05	2.37E+02	1.97E+02	1.92E+02	7.41E+01	4.11E+01	-3.07E+01	8.97E+00	9.69E+00	6.96E+00	4.85E+00	9.06E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA		
041			7/29/2006	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	9.59E+00	6.24E+01	7.37E+00	8.48E+00	NA	NA	NA	NA	NA	NA	NA	NA		
042																										

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID			
				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-44-102	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	2.38E+00	-4.92E+00	1.31E+01	1.88E+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	2.53E+00	NA	NA	NA	
	007			10/31/2007	12:01	3.51E+02	1.76E+02	1.82E+02	-2.58E-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	1.18E+01	6.04E-01	1.03E+01	4.64E+00	3.19E+00	-4.44E+03	2.85E-00	3.11E+00	NA	NA	NA	
	009			4/30/2008	15:28	2.56E+02	1.22E+02	1.96E+02	7.90E-02	3.71E-01	7.13E-01	2.03E+00	3.03E+00	-2.07E+00	3.04E-00	NA	NA	NA	NA	NA	
	010			7/25/2008	12:18	4.37E+02	2.46E+02	2.83E+02	-2.83E-02	1.83E-01	-4.07E-01	1.78E+00	2.88E+00	1.35E+00	1.87E+00	1.35E+00	1.87E+00	NA	NA	NA	
	011			10/23/2008	13:48	4.75E+02	2.68E+02	1.65E+02	2.01E-01	4.65E-01	5.41E-01	1.72E+00	6.21E+00	2.88E+00	2.39E+00	8.12E-00	8.47E+00	NA	NA	NA	
MW-45-42	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	MW-45-42	
	002			5/25/2006	9:25	1.82E+03	3.74E+02	2.45E+02	9.78E-01	1.14E+01	1.18E+00	-7.92E+00	1.21E+01	-3.97E+00	1.21E-01	1.21E+01	1.23E+01	NA	NA	NA	
	003			6/12/2006	10:45	2.27E+03	4.13E+02	2.15E+02	1.02E+00	6.80E-01	7.49E-01	9.66E-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	1.45E+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	11:50	4.15E+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	5.60E+00	5.00E-01	6.90E-00	8.30E+00	3.09E-01	3.60E+00	4.10E+00	
MW-45-61	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	3.58E+00	1.30E+01	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	1.92E+00	2.76E+00	3.41E+00	1.19E+00	2.60E-00	2.60E-00	3.23E+00	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	0.00E+00	4.13E+00	1.99E+00	6.65E-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	1.60E-01	6.03E-01	1.60E+00	2.43E+00	2.88E+00	5.96E-01	2.31E-00	2.21E+00	NA	NA	NA	
	012			5/1/2008	15:15	1.13E+03	1.51E+02	1.96E+02	-4.10E-02	3.11E-01	6.29E-01	6.65E-01	1.99E+00	3.47E+00	-1.17E+00	3.62E-00	4.55E+00	NA	NA	NA	
	013			7/25/2008	16:40	2.32E+03	3.77E+02	3.74E+02	9.98E-01	3.24E-01	3.75E-01	-1.77E+00	1.76E+00	2.53E+00	1.09E+00	1.76E-00	3.19E+00	NA	NA	NA	
	014			7/25/2008	16:40	NA	NA	NA	NA	NA	4.42E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MW-46	005	57.7	-4.1	10/22/2008	14:55	3.14E+03	8.03E+02	5.91E+02	4.62E-01	5.15E-01	5.29E-01	-1.69E+00	5.07E+00	5.32E+00	-3.00E+00	4.93E-00	4.36E+00	NA	NA	NA	
	006			4/4/2006	17:00	2.98E+02	2.18E+02	2.23E+02	1.82E-01	5.03E-01	5.39E-01	8.62E-01	1.14E+01	1.32E+01	1.40E+01	1.02E+01	1.17E+01	NA	NA	MW-45-61	
	007			5/25/2006	9:10	1.71E+03	3.37E+02	2.37E+02	5.63E-01	8.81E-01	1.03E+00	7.76E-01	9.14E+00	1.02E+01	5.35E+00	1.06E-01	1.31E+01	NA	NA	NA	
	008			6/12/2006	11:00	1.02E+03	2.31E+02	1.56E+02	4.81E-01	5.85E-01	6.90E-01	-4.60E+00	6.63E+00	7.11E+00	9.35E+02	6.22E-00	7.59E+00	NA	NA	NA	
	009			7/20/2006	12:50	3.72E+02	1.88E+02	1.66E+02	0.00E+00	1.36E+00	1.59E+00	-3.98E-01	5.08E+00	5.30E+00	1.33E+00	3.96E-00	5.02E+00	NA	NA	NA	
	010			8/11/2006	9:45	1.35E+03	2.88E+02	1.91E+02	NA	NA	NA	6.43E+00	9.17E+00	1.16E+01	-8.33E-01	9.00E-00	9.75E+00	NA	NA	NA	
	011			9/13/2006	9:30	1.45E+03	3.09E+02	2.04E+02	NA	NA	NA	-6.35E+00	7.21E+00	5.92E+00	7.35E-00	6.87E+00	NA	NA	NA		
MW-46	002	58.0	-4.4	11/13/2006	11:20	9.57E+02	1.44E+02	1.40E+02	1.73E+00	7.50E-01	7.60E-01	-3.00E-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	
	003			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	4.72E+00	3.52E+00	7.21E-01	3.56E-00	3.69E+00	3.33E+00	1.49E+01	1.71E+01	
	004			8/15/2007	11:55	1.30E+03	1.88E+02	1.41E+02	4.74E-02	7.90E-01	9.41E-01	3.33E+00	4.25E+00	4.03E+00	-6.51E-01	3.86E-00	3.59E+00	NA	NA	NA	
	005			10/5/2007	11:30	2.15E+03	3.03E+02	1.52E+02	4.87E-01	5.23E-01	5.36E-01	-1.73E-01	1.43E+00	1.56E+00	6.59E+02	1.46E-00	1.62E+00	NA	NA	NA	
	006			1/25/2008	11:55	2.66E+03	4.80E+02	2.96E+02	4.76E-01	5.76E-01	6.21E-01	2.40E+00	3.60E+00	2.52E+00	-2.05E-01	2.88E-00	3.19E+00	NA	NA	NA	
	007			5/1/2008	10:16	2.21E+03	1.80E+02	1.95E+02	6.93E-01	4.96E-01	7.66E-01	3.16E-01	2.07E+00	3.59E+00	-1.29E+00	2.25E-00	3.53E+00	NA	NA	NA	
	008			7/25/2008	13:51	1.80E+03	3.46E+02	3.76E+02	2.36E-01	2.45E-01	-1.88E+00	1.91E+00	2.80E+00	7.83E-01	1.91E-00	5.40E+00	NA	NA	NA	NA	
MW-46	009			10/22/2008	9:33	1.27E+03	6.35E+02	5.90E+02	1.99E-01	5.82E-01	6.91E-01	-1.52E+00	5.07E+00	5.32E+00	1.04E+00	5.73E-00	6.58E+00	NA	NA	NA	
	010			5/24/2006	12:55	9.00E+02	1.71E+03	6.33E+02	3.07E-01	6.15E-01	7.47E-01	-7.06E-02	9.87E+00	1.18E+01	5.38E+00	8.80E-00	1.21E+01	NA	NA	MW-46	
	011			5/24/2006	12:55	6.23E+02	2.24E+02	1.87E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	012			6/13/2006	13:10	6.79E+02	1.80E+02	1.91E+02	3.46E-01	1.04E+01	1.33E+00	2.38E+00	7.28E+00	8.29E+00	-9.79E-01	8.23E-00	8.81E+00	NA	NA	NA	
	013			7/12/2006	13:23	7.86E+02	2.36E+02	1.92E+02	5.77E-01	1.21E+01	1.23E+00	1.33E+00	9.37E+00	1.09E+01	4.49E+00	8.68E-00	1.06E+01	NA	NA	NA	
	014			8/4/2006	8:40	1.15E+03	2.75E+02	1.98E+02	NA	NA	NA	1.15E+00	5.05E+00	6.52E+00	-3.50E+00	5.84E-00	5.97E+00	NA	NA	NA	
	015			9/13/2006	13:15	1.47E+03	3.20E+02	2.19E+02	NA	NA	NA	3.73E-01	6.01E+00	6.95E+00	2.75E+00	7.27E+00	6.27E+00	NA	NA	NA	
MW-47-56	002	18.1	9.0	6/14/2007	13:50	3.43E+03	5.64E+02	2.95E+02	2.15E-01	4.65E-01	5.35E-01	3.08E-01	5.92E+00	4.37E+00	8.52E+02	3.65E-00	4.69E+00	-1.05E+00	1.52E+01	1.78E+01	
	003			10/22/2007	14:20	1.67E+03	5.27E+02	4.01E+02	2.17E-01	4.68E-01	5.44E-01	4.68E-01	2.97E+00	3.34E+00	-7.20E-01	2.94E-00	3.69E+00	NA	NA	NA	
	004			1/22/2008	12:19	5.49E+02	1.74E+02	1.27E+02	5.30E-01	7.71E-01	8.47E-01	-3.99E-01	2.64E+00	2.84E+00	1.73E+00	2.61E-00	3.31E+00	NA	NA	NA	
	005			4/29/2008	16:00	5.21E+02	1.53E+02	2.00E+02	4.10E-01	3.51E-01	5.04E-01	7.87E-01	2.12E+00	3.75E+00	4.57E-01	2.24E-00	3.90E+00	NA	NA	NA	
	006			7/24/2008	16:56	7.71E+02	2.75E+02	3.77E+02	2.74E-01	3.07E-01	5.10E-01	1.06E+00	1.96E+00	3.38E+00	-1.89E+00	2.10E-00	3.69E+00	NA	NA	NA	
	007			10/20/2008	15:27	1.38E+03	6.44E+02	5.80E+02	9.33E-01	5.85E-01	5.11E-01	-2.27E+00	5.88E+00	5.91E+00	-5.88E-01	5.63E-00	6.09E+00	NA	NA	NA	
	008			4/12/2006	17:15	3.88E+03	2.81E+02	1.76E+02	6.24E-01	4.89E-01	7.28E-01	2.98E+00	3.31E+00	-5.30E-01	2.67E-00	2.88E+00	NA	NA	NA	NA	
MW-47-56	002	53.2	17.1	4/13/2006	12:05	7.60E+02	2.22E+02	1.67E+02	7.65E-0												

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft msl ¹	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID					
				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-47-26	004			6/29/2007	10:07	NA	NA	NA	NA	NA	NA	0.00E+00	4.28E+00	3.79E+00	1.63E+00	3.17E-00	3.79E+00	1.63E+00	3.81E+00	1.32E+01	1.51E+01	MW-47-26	
	005			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	3.75E+00	3.75E+00	1.49E-01	2.94E-00	3.37E+00	1.49E-01	NA	NA	NA	MW-47-80
	001	71.0	-3.7	4/13/2006	11:45	2.33E+03	4.28E+02	2.29E+02	2.73E+00	7.35E-01	6.53E-01	-5.83E-01	4.18E+00	5.14E+00	2.25E-01	3.91E-00	4.76E+00	2.25E-01	NA	NA	NA	MW-47-80	
MW-47-80	002			7/18/2006	8:51	1.87E+03	5.87E+02	2.58E+02	2.86E+00	1.43E+00	1.14E+00	1.07E+00	1.05E+01	1.19E+00	1.19E+00	9.21E-00	1.69E+01	1.19E+00	NA	NA	NA	MW-47-80	
	003			6/19/2007	11:00	2.36E+03	5.94E+02	3.27E+02	3.27E+00	8.98E+00	3.27E+00	3.27E+00	3.27E+00	3.27E+00	3.27E+00	3.27E+00	3.27E+00	3.27E+00	4.08E-01	1.18E+01	1.38E+01	MW-48-23	
	004	72.0	-1.7	8/10/2007	12:21	3.51E+03	7.25E+02	4.52E+02	3.51E+00	9.05E-01	9.05E-01	-9.39E-02	3.25E+00	3.56E+00	-8.20E-02	3.18E-00	3.50E+00	3.18E-00	NA	NA	NA	MW-48-23	
MW-48-23	002	20.4	-5.0	2/8/2006	10:10	1.66E+02	3.26E+02	3.42E+02	1.93E-01	5.01E-01	5.01E-01	2.14E-01	1.01E+01	1.13E+01	1.13E+01	1.13E+01	1.13E+01	1.13E+01	1.13E+01	1.13E+01	1.13E+01	1.13E+01	MW-48-23
	003			4/12/2006	9:38	1.24E+02	4.08E+02	4.32E+02	-1.10E-01	3.90E-01	4.40E-01	3.25E+00	9.75E+00	7.26E+00	2.49E+00	7.47E-00	6.18E+00	2.49E+00	NA	NA	NA	MW-48-23	
	002			4/27/2006	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+00	4.40E-00	5.27E+00	-1.19E+00	NA	NA	NA	MW-48-23	
MW-48-37	004			5/22/2006	10:30	7.55E+03	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	9.67E+00	4.29E+00	1.60E+01	1.53E+01	1.62E+01	MW-48-37	
	005			6/9/2006	11:15	6.03E+01	4.39E+02	6.24E+02	3.70E-01	3.68E-01	4.00E-01	2.59E+00	7.76E+00	5.80E+00	3.25E+00	9.74E-00	7.61E+00	3.25E+00	NA	NA	NA	MW-48-37	
	005			6/9/2006	11:15	2.95E+02	4.14E+02	4.55E+02	3.10E-01	9.88E-01	1.26E+00	1.09E+00	5.21E+00	5.60E+00	3.08E+00	5.41E-00	5.56E+00	3.08E+00	NA	NA	NA	MW-48-37	
MW-48-37	005			6/9/2006	11:15	7.37E+02	2.09E+02	1.56E+02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	MW-48-37	
	006			7/6/2006	12:00	4.17E+02	4.17E+02	4.52E+02	-2.20E-01	4.20E-01	4.90E-01	2.55E+00	7.64E+00	5.49E+00	2.60E+00	7.79E-00	5.78E+00	2.60E+00	NA	NA	NA	MW-48-37	
	007			8/6/2006	10:30	1.04E+02	1.68E+02	1.72E+02	7.00E-02	6.30E-01	7.00E-01	1.93E+00	4.76E+00	5.56E+00	1.99E+00	4.41E-00	5.37E+00	1.99E+00	NA	NA	NA	MW-48-37	
MW-49-42	007-S1			8/6/2006	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	NA	NA	NA	MW-49-42	
	008			9/5/2006	10:05	2.14E+01	1.59E+02	1.72E+02	-6.00E-02	7.80E-01	8.60E-01	-2.90E+00	7.82E+00	8.12E+00	1.05E-01	8.58E-00	1.02E+01	1.05E-01	NA	NA	NA	MW-49-42	
	008-S1			9/5/2006	10:05	7.40E+03	4.20E+02	4.49E+03	NA	NA	NA	3.34E+00	1.00E-01	7.56E+00	3.32E+00	9.97E-00	8.01E+00	3.32E+00	NA	NA	NA	MW-49-42	
MW-49-42	009			11/22/2006	9:23	1.67E+02	4.08E+02	4.50E+02	-7.00E-02	6.30E-01	7.10E-01	3.91E+00	1.17E+01	8.71E+00	3.22E+00	9.67E-00	7.56E+00	3.22E+00	NA	NA	NA	MW-49-42	
	010	15.8	-0.4	2/9/2007	10:54	2.72E+02	1.68E+02	1.70E+02	-1.60E-01	1.53E+00	1.70E+00	1.80E+00	4.92E+00	2.60E+00	8.30E-01	2.07E-00	2.30E+00	8.30E-01	NA	NA	NA	MW-49-42	
	011	36.0	-20.6	8/16/2007	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	5.36E-01	3.03E-00	3.55E+00	5.36E-01	NA	NA	NA	MW-49-42	
MW-49-42	002			2/10/2006	14:10	1.00E+01	4.26E+02	4.73E+02	2.10E-01	3.90E-01	4.30E-01	1.81E+00	3.54E+00	2.53E+00	2.07E+00	6.21E-00	4.39E+00	2.07E+00	NA	NA	NA	MW-49-42	
	002			4/27/2006	10:00	-5.40E+01	4.02E+02	4.52E+02	2.10E-01	3.90E-01	4.30E-01	1.70E+00	5.09E+00	3.33E+00	2.34E+00	1.00E-01	6.89E+00	2.34E+00	NA	NA	NA	MW-49-42	
	004			2/15/2006	13:20	-2.15E+02	1.77E+02	2.04E+02	-4.96E-02	3.79E-01	4.20E-01	3.95E+00	9.91E+00	1.01E+01	-3.17E+00	8.42E-00	9.20E+00	-3.17E+00	NA	NA	NA	MW-49-42	
MW-49-42	004			5/22/2006	10:00	1.39E+02	4.02E+02	4.46E+02	-1.20E-01	3.60E-01	4.10E-01	1.35E+00	4.05E+00	2.94E+00	2.31E+00	6.94E-00	5.00E+00	2.31E+00	4.88E+00	1.35E+01	1.46E+01	MW-49-42	
	005			6/9/2006	11:30	1.66E+03	4.11E+02	4.53E+03	2.08E+00	4.50E-01	4.00E-01	2.40E+00	7.20E+00	4.95E+00	4.11E+00	1.24E-00	8.50E+00	4.11E+00	NA	NA	NA	MW-49-42	
	005			6/9/2006	11:30	5.96E+02	1.38E+03	6.24E+02	1.05E-01	7.89E-01	1.03E+00	1.50E+00	5.71E+00	6.44E+00	-1.58E+00	5.23E-00	5.52E+00	-1.58E+00	NA	NA	NA	MW-49-42	
MW-49-42	006			6/9/2006	11:30	1.43E+02	1.67E+02	1.66E+02	NA	NA	NA	2.10E+00	6.31E+00	4.44E+00	4.21E+00	1.26E-01	8.77E+00	4.21E+00	NA	NA	NA	MW-49-42	
	006			7/6/2006	8:45	1.47E+02	4.08E+02	4.52E+02	1.70E-01	8.10E-01	8.80E-01	2.10E+00	5.68E+00	6.65E+00	2.95E-01	5.29E-00	5.93E+00	2.95E-01	NA	NA	NA	MW-49-42	
	007			8/8/2006	10:20	1.09E+01	1.55E+02	1.69E+02	6.00E-02	6.90E-01	7.80E-01	3.40E+00	1.02E+01	6.97E+00	5.94E+00	1.78E-01	1.22E+01	5.94E+00	NA	NA	NA	MW-49-42	
MW-49-42	007-S1			8/8/2006	10:20	1.27E+02	4.08E+02	4.47E+02	NA	NA	NA	-2.86E-01	5.59E+00	6.04E+00	1.60E+00	5.35E-00	6.37E+00	1.60E+00	NA	NA	NA	MW-49-42	
	008			9/5/2006	10:20	5.73E+02	2.12E+02	1.75E+02	0.00E+00	6.90E-01	7.70E-01	-2.86E-01	5.59E+00	6.04E+00	1.60E+00	5.35E-00	6.37E+00	1.60E+00	NA	NA	NA	MW-49-42	
	008-S1			9/5/2006	10:20	2.00E+02	3.99E+02	4.47E+02	NA	NA	NA	1.94E+00	5.82E+00	4.05E+00	3.21E+00	9.62E-00	6.66E+00	3.21E+00	NA	NA	NA	MW-49-42	
MW-49-42	009			11/22/2006	9:24	2.62E+03	4.11E+02	4.50E+03	0.00E+00	6.30E-01	7.00E-01	1.60E+00	4.80E+00	3.29E+00	3.58E+00	1.07E-01	7.47E+00	3.58E+00	NA	NA	NA	MW-49-42	
	010			2/9/2007	10:39	2.70E+01	1.65E+02	1.70E+02	-1.40E-01	1.58E+00	1.50E+00	-6.10E-01	1.26E+00	1.59E+00	4.70E-01	1.58E-00	1.60E+00	4.70E-01	NA	NA	NA	MW-49-42	
	011	35.8	-20.4	8/16/2007	11:07	1.29E+02	1.59E+02	1.75E+02	4.11E-02	4.11E-02	4.29E-01	1.78E+00	4.35E+00	4.53E+00	-4.00E-01	4.51E-00	5.01E+00	-4.00E-01	NA	NA	NA	MW-49-42	
MW-49-42	003	10.1	-4.4	3/22/2006	16:50	1.54E+04	2.81E+03	1.82E+03	1.84E+01	9.66E-01	4.29E-01	-5.28E-01	9.40E+00	1.02E+01	-1.33E+00	9.98E-00	6.96E+00	-1.33E+00	NA	NA	NA	MW-49-42	
	003			5/19/2006	14:55	1.42E+04	6.75E+03	6.29E+02	9.03E+00	9.40E-01	5.45E-01	2.65E+00	7.87E+00	9.09E+00	1.15E+00	5.99E-00	6.92E+00	1.15E+00	NA	NA	NA	MW-49-42	
	003			5/19/2006	14:55	1.40E+04	2.16E+03	4.95E+02	1.41E+01	1.17E+00	5.80E-01	6.14E+00	1.18E+01	1.41E+01	2.42E+00	1.02E-01	1.21E+01	2.42E+00	NA	NA	NA	MW-49-42	
MW-49-42	004			6/6/2006	9:55	1.00E+04	2.06E+03	1.51E+03	1.76E+01	2.67E+00	1.51E+00	-5.93E+00	6.06E+00	4.56E+00	-3.09E+00	5.14E+00	4.31E+00	-3.09E+00	NA	NA	NA	MW-49-42	
	005			7/7/2006	9:15	1.00E+04	2.06E+03	1.51E+03	NA	NA	NA	-5.93E+00	6.06E+00	4.56E+00	-3.09E+00	5.14E+00	4.31E+00	-3.09E+00	NA	NA	NA	MW-49-42	
	006			8/1/2006	9:28	1.37E+04	1.13E+03	6.16E+03	NA	NA	NA	-5.93E+00	6.06E+00	4.56E+00	-3.09E+00	5.14E+00	4.31E+00	-3.09E+00	NA	NA	NA	MW-49-42	
MW-49-42	007			8/28/2006	12:30	1.10E+04	1.12E+03	7.68E+02	NA	NA	NA	-2.69E+00	5.42E+00	3.40E+00	-3.57E+00	4.78E+00	3.71E+00	-3.57E+00	NA	NA	NA	MW-49-42	
	008			11/15/2006	11:28	6.39E+03	1.38E+03	1.00E+03	1.55E+01	1.95E+00	7.70E-01	8.60E-01	3.00E+00	3.50E+00	3.00E+00	4.20E-00	5.00E+00	3.00E+00	8.40E+00	2.04E+01			

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID			
				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-50-66	015			5/12/2008	15:40	2.80E+03	2.39E+02	1.44E+02	3.38E+01	1.85E+00	7.01E-01	7.08E-01	1.23E+00	3.87E+00	1.23E+00	2.43E+00	3.83E+00	7.86E+00	1.28E+01	2.17E+01	MW-50-66
	016			7/31/2008	17:02	2.71E+03	2.48E+02	1.91E+02	3.30E+01	1.59E+00	4.02E-01	2.31E+00	1.82E+00	3.43E+00	6.60E-01	1.46E+00	2.68E+00	3.58E+00	1.40E+01	2.43E+01	
	017			9/8/2008	16:21	2.08E+03	4.17E+02	5.01E+02	3.23E+01	1.66E+00	4.88E-01	-8.81E-01	2.69E+00	3.96E+00	NA	NA	NA	1.22E+01	1.23E+01	2.06E+01	
	018			11/6/2008	12:38	2.73E+03	4.17E+02	1.98E+02	3.20E+01	3.00E+00	7.41E-01	-1.98E+00	5.97E+00	6.05E+00	2.61E+00	8.90E-00	8.45E+00	-1.63E+00	2.07E+01	2.39E+01	
	019			11/19/2008	16:29	2.43E+03	2.49E+02	1.73E+02	4.99E+01	3.75E+00	8.66E-01	2.30E+00	5.26E+00	3.75E+00	5.13E+01	2.70E+00	3.17E+00	-5.06E-01	1.98E+01	2.29E+01	
MW-51-40	001	30.7	28.0	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	3.85E+00	1.61E+00	3.23E+00	3.77E+00	NA	NA	NA	MW-51-40
	002			7/21/2007	15:30	2.23E+02	1.59E+02	1.60E+02	7.09E-02	4.71E-01	5.38E-01	1.65E-02	3.39E+00	3.77E+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	1.90E+02	-2.63E-01	3.09E-01	3.73E-01	5.15E+00	4.05E+00	3.08E+00	7.44E-01	1.83E+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	3.32E+00	-5.71E-02	3.15E+00	3.49E+00	NA	NA	NA	
	005			1/8/2008	10:47	5.86E+01	1.56E+02	1.79E+02	1.57E-01	6.77E-01	8.30E-01	1.83E+02	2.66E+00	2.93E+00	7.71E-01	2.75E+00	2.87E+00	NA	NA	NA	
	007			5/30/2008	10:27	1.41E+02	1.01E+02	1.60E+02	3.71E-01	3.19E-01	9.67E-01	3.19E-01	2.03E+00	3.41E+00	2.18E+00	2.36E+00	3.50E+00	NA	NA	NA	
	008			8/8/2008	14:40	3.29E+02	1.60E+02	2.03E+02	3.74E-01	4.02E-01	6.70E-01	1.39E+00	2.19E+00	3.98E+00	-1.99E+00	1.79E+00	2.99E+00	-8.33E+00	1.02E+01	1.83E+01	
	009			10/27/2008	13:11	1.68E+02	1.85E+02	1.95E+02	1.84E-02	4.26E-01	5.67E-01	4.51E-01	4.28E+00	4.88E+00	-1.93E+00	1.79E+00	6.59E+00	-5.03E+00	2.11E+01	2.46E+01	
MW-51-79	001	78.7	-11.0	5/30/2007	12:42	9.89E+01	1.55E+02	1.72E+02	-2.36E-01	6.98E-01	9.58E-01	2.20E+00	3.63E+00	3.80E+00	3.52E-01	3.31E+00	3.76E+00	NA	NA	NA	MW-51-79
	002			7/24/2007	17:00	4.24E+01	1.43E+02	1.67E+02	8.02E-02	5.85E-01	6.15E-01	-6.37E-01	3.88E+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	2.66E+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	1.89E+02	1.79E+02	-4.60E-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	
	007			5/30/2008	10:55	6.70E+01	9.41E+01	1.61E+02	2.46E-02	4.09E-01	9.94E-01	-1.14E+00	3.45E+00	4.80E+00	-5.13E-01	2.70E+00	4.31E+00	NA	NA	NA	
	008			8/8/2008	12:55	1.61E+02	1.31E+02	2.03E+02	2.03E-01	2.99E-01	5.18E-01	9.63E-01	2.17E+00	3.82E+00	5.04E+00	2.30E+00	3.58E+00	-1.07E+01	1.07E+01	1.93E+01	
	009			10/27/2008	13:30	1.14E+01	1.62E+02	1.99E+02	3.14E-03	6.14E-01	7.85E-01	8.42E-01	5.07E+00	5.75E+00	2.41E+00	5.21E+00	6.37E+00	3.72E+00	1.77E+01	2.02E+01	
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	3.87E-01	9.90E-01	1.25E+00	3.62E+00	3.35E+00	7.70E+00	3.23E+00	3.62E+00	NA	NA	NA	MW-51-104
	002			7/24/2007	17:06	9.07E+01	1.47E+02	1.64E+02	3.62E-01	4.86E-01	5.41E-01	-4.20E+00	4.27E+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	-8.32E-01	4.11E+00	3.68E+00	NA	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	-1.26E+00	2.85E+00	2.92E+00	1.15E+00	2.61E+00	3.18E+00	NA	NA	NA	
	005			1/8/2008	12:15	4.18E+00	1.45E+02	1.78E+02	-6.19E-03	7.22E-01	9.24E-01	-9.37E-01	2.09E+00	2.26E+00	-3.84E-01	2.54E+00	2.50E+00	NA	NA	NA	
	006			8/8/2008	10:50	2.82E+02	1.35E+02	2.08E+02	-2.60E-01	4.00E-01	7.92E-01	1.50E+00	2.03E+00	3.60E+00	-1.21E+00	2.07E+00	3.58E+00	-4.19E+00	1.34E+01	2.36E+01	
	007			10/27/2008	10:07	1.21E+02	1.29E+02	1.49E+02	1.19E-01	4.97E-01	6.13E-01	5.61E+00	6.81E+00	8.52E+00	-5.72E+00	8.93E+00	8.26E+00	-1.01E+00	1.84E+01	2.12E+01	
MW-51-135	001	135.2	-67.5	5/30/2007	13:00	8.24E+01	1.50E+02	1.70E+02	-4.68E-01	5.93E-01	8.40E-01	-4.01E-01	3.62E+00	4.03E+00	2.56E+00	3.84E-00	4.48E+00	NA	NA	NA	MW-51-135
	002			7/21/2007	12:10	9.51E+01	1.43E+02	1.59E+02	5.33E-02	5.01E-01	5.76E-01	-4.56E-01	4.07E+00	4.36E+00	3.42E-01	3.30E+00	3.87E+00	NA	NA	NA	
	003			10/2/2007	12:05	3.04E+01	1.71E+02	1.90E+02	-3.08E-02	4.20E-01	5.49E-01	2.16E+01	5.76E+00	2.80E+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	3.66E+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	1.63E+00	1.88E+00	2.09E+00	1.43E-02	1.71E+00	1.90E+00	NA	NA	NA	
	006			8/8/2008	11:50	2.09E+02	1.29E+02	1.99E+02	5.09E-02	3.40E-01	4.57E-01	-1.03E+00	2.08E+00	2.92E+00	1.01E+02	2.01E+00	3.34E+00	-6.78E+00	1.14E+01	2.02E+01	
	007			10/27/2008	10:05	7.68E+01	1.73E+02	1.99E+02	2.72E-04	5.05E-01	6.63E-01	-1.74E+00	5.26E+00	5.63E+00	3.92E+00	6.09E+00	7.69E+00	-2.03E+00	1.74E+01	2.01E+01	
MW-51-163	001	162.7	-95.0	5/30/2007	14:30	1.18E+02	1.56E+02	1.69E+02	3.29E-01	1.16E+00	1.36E+00	-2.81E+00	3.09E+00	3.45E+00	1.77E-01	2.82E+00	3.20E+00	NA	NA	NA	MW-51-163
	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	3.23E-00	3.63E+00	NA	NA	NA	
	003			10/2/2007	13:35	7.30E+01	1.71E+02	1.96E+02	2.08E-01	3.20E-01	3.64E-01	1.16E+01	7.20E+00	4.49E+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	3.12E-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	8.22E-01	9.29E-01	-1.74E+00	2.66E+00	2.46E+00	8.69E+02	2.15E+00	2.44E+00	NA	NA	NA	
	006			8/8/2008	11:16	6.92E+01	1.47E+02	1.80E+02	-1.22E-01	2.75E-01	3.63E-01	1.54E+00	2.55E+00	3.65E+00	3.78E-01	1.97E+00	3.39E+00	4.33E+00	1.26E+01	2.15E+01	
	007			10/27/2008	10:20	5.58E+01	1.67E+02	1.95E+02	2.55E-01	5.76E-01	6.67E-01	-1.70E+00	6.18E+00	6.74E+00	5.42E-01	5.38E+00	6.25E+00	2.11E+00	1.88E+01	2.14E+01	
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	8.99E-01	1.11E+00	-3.62E-02	3.98E+00	3.82E+00	4.36E+00	3.57E+00	4.63E+00	NA	NA	NA	MW-51-189
	002			7/24/2007	13:15	9.49E+01	1.46E+02	1.63E+02	3.93E-01	4.08E-01	4.48E-01	1.11E+00	4.11E+00	3.83E+00	1.57E+00	4.02E+00	4.31E+00	NA	NA	NA	
	003			10/2/2007	12:20	8.45E+00	1.70E+02	1.96E+02	-5.06E-02	2.16E-01	1.38E-01	1.28E+01	5.45E+00	2.97E+00	-4.14E-01	2.79E+00	3.04E+00	NA	NA	NA	
	004			11/9/2007	13:05	-6.26E-00	1.48E+02	1.71E+02	1.93E-01	3.04E+00	4.08E-01	3.04E+00	3.27E+00	4.							

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing	SAMPLE ZONE CENTER, elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID							
				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-52-18	002			8/6/2007	13:45	6.73E+02	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	NA	NA	NA	NA	NA	NA	NA	MW-52-18
MW-52-48	001	33.1	48.0	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	-2.74E+00	8.16E+00	9.55E+00	NA	NA	NA	MW-52-48	
MW-52-64	002			8/6/2007	14:00	1.15E+02	1.76E+02	1.96E+02	-5.58E-01	4.83E-01	7.33E-01	7.85E-01	3.21E+00	3.75E+00	4.31E-01	3.29E-00	3.75E+00	NA	NA	NA	NA	NA	NA	NA	MW-52-64
MW-52-122	002			8/6/2007	14:44	3.82E+00	1.70E+02	1.98E+02	-3.20E-01	7.68E-01	9.27E-01	-1.03E+00	3.25E+00	3.45E+00	8.80E-01	3.54E-00	4.11E+00	-2.85E+00	9.12E+00	1.07E+01	NA	NA	NA	MW-52-122	
MW-52-122	001	172.0	-107.1	5/24/2007	14:55	6.78E+01	1.47E+02	1.66E+02	-4.24E-01	6.62E-01	9.60E-01	2.52E+00	3.59E+00	3.68E+00	-1.70E+00	3.38E-00	3.29E+00	-1.94E+00	9.68E+00	1.13E+01	NA	NA	NA	MW-52-122	
MW-52-162	003			4/28/2008	15:23	8.87E+01	8.60E+01	1.44E+02	1.21E-01	2.92E-01	5.22E-01	-1.25E+00	2.05E+00	3.24E+00	2.72E+00	2.38E-00	4.52E+00	NA	NA	NA	NA	NA	NA	MW-52-162	
MW-52-162	002	161.5	-146.6	5/24/2007	11:55	2.82E+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	3.88E+00	-7.54E+01	9.75E+00	3.88E+00	1.13E+01	NA	NA	NA	MW-52-162	
MW-52-181	003			4/28/2008	10:22	1.45E+02	8.73E+01	1.43E+02	1.03E+00	3.62E-01	6.03E-01	3.61E+02	3.44E+00	3.77E+00	-3.73E+02	3.12E-00	3.52E+00	NA	NA	NA	NA	NA	NA	MW-52-181	
MW-52-181	001	181.0	-166.1	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	3.30E+00	3.52E+00	-2.81E+01	3.74E-00	4.19E+00	-2.23E+01	1.01E+01	1.17E+01	NA	NA	NA	MW-52-181	
MW-53-82	003			8/6/2007	11:30	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	NA	NA	NA	NA	NA	NA	MW-53-82	
MW-53-82	002			4/29/2008	10:24	1.56E+02	8.77E+01	1.44E+02	1.62E-01	2.46E-01	4.28E-01	1.08E+00	2.25E+00	3.96E+00	4.11E-01	2.12E-00	3.63E+00	NA	NA	NA	NA	NA	NA	MW-53-82	
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+01	7.20E+00	6.37E+00	1.30E+00	1.02E+01	1.16E+01	4.44E+00	9.39E+00	1.02E+01	NA	NA	NA	MW-53-82	
MW-53-120	001	109.8	-39.5	8/30/2006	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	1.30E+00	4.20E+00	4.60E+00	NA	NA	NA	MW-53-120	
MW-53-120	002			11/9/2006	11:20	7.90E+03	1.47E+03	1.00E+03	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	1.73E+00	1.38E+01	1.47E+01	NA	NA	NA	MW-53-120	
MW-53-120	003	105.0	-31.7	6/22/2007	14:22	9.61E+03	1.10E+03	4.33E+02	3.57E+01	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	1.93E+01	2.14E+01	2.35E+01	NA	NA	MW-53-120	
MW-53-120	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	1.93E+01	2.14E+01	2.35E+01	NA	NA	NA	MW-53-120	
MW-53-120	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	-2.22E+01	3.35E-00	3.72E+00	7.06E+00	2.10E+01	2.38E+01	NA	NA	NA	MW-53-120	
MW-53-120	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	1.44E-01	3.30E-00	3.71E+00	1.71E+01	1.85E+01	2.02E+01	NA	NA	NA	MW-53-120	
MW-53-120	007			5/13/2008	10:10	5.91E+03	3.38E+02	1.43E+02	3.11E+01	1.73E+00	6.73E-01	-1.39E+00	1.98E+00	3.10E+00	1.33E+00	2.15E-00	3.99E+00	2.22E+01	1.28E+01	2.08E+01	NA	NA	NA	MW-53-120	
MW-53-120	008			8/4/2008	10:15	5.80E+03	3.46E+02	1.91E+02	3.03E+01	1.52E+00	3.11E-01	-9.74E-01	1.93E+00	3.02E+00	-1.15E-01	2.33E-00	3.20E+00	2.65E+01	1.30E+01	2.11E+01	NA	NA	NA	MW-53-120	
MW-53-120	009			9/5/2008	10:55	5.76E+03	5.90E+02	5.07E+02	3.10E+01	1.59E+00	4.10E-01	-3.34E-01	2.41E+00	3.94E+00	0.00E+00	9.13E-00	9.76E+00	5.82E+00	1.69E+01	3.88E+01	NA	NA	NA	MW-53-120	
MW-53-120	010			10/50/2008	13:00	5.57E+03	5.39E+02	1.66E+02	2.53E+01	2.04E+00	3.80E-01	2.73E+00	4.75E+00	5.74E+00	0.00E+00	9.13E-00	9.76E+00	5.82E+00	1.69E+01	3.88E+01	NA	NA	NA	MW-53-120	
MW-53-120	011			1/17/2008	10:31	5.04E+03	3.23E+02	1.72E+02	4.25E+01	3.63E+00	6.74E-01	3.25E-01	1.72E+00	5.28E+00	1.96E+02	4.09E+00	4.49E+00	2.12E+01	2.03E+01	2.21E+01	NA	NA	NA	MW-53-120	
MW-53-120	012			5/9/2007	16:19	8.01E+02	3.14E+02	3.02E+02	1.25E+01	2.12E+00	7.94E-01	2.44E+00	3.65E+00	4.42E+00	-1.49E+00	2.71E-00	2.51E+00	6.09E+00	1.98E+01	2.27E+01	NA	NA	NA	MW-53-120	
MW-53-120	013			7/31/2007	13:25	1.04E+03	4.26E+02	3.66E+02	5.19E+00	1.37E+00	1.11E+00	1.46E+00	2.54E+00	3.03E+00	-2.64E+00	2.82E-00	3.13E+00	-4.74E+00	1.83E+01	2.14E+01	NA	NA	NA	MW-53-120	
MW-53-120	014			1/15/2008	13:18	1.07E+03	4.97E+02	4.18E+02	6.79E+00	1.47E+00	1.74E+00	6.04E-01	3.30E+00	3.84E+00	6.61E-01	3.54E-00	4.19E+00	1.04E+01	1.59E+01	1.77E+01	NA	NA	NA	MW-53-120	
MW-53-120	015			5/2/2008	13:59	8.70E+02	1.47E+02	1.43E+02	5.08E+00	7.50E-01	5.59E-01	-9.28E-01	2.12E+00	3.29E+00	-8.38E+01	2.56E-00	4.06E+00	3.37E+00	1.24E+01	2.12E+01	NA	NA	NA	MW-53-120	
MW-53-120	016			7/22/2008	17:00	9.50E+02	1.08E+02	1.31E+02	6.20E+00	7.50E-01	4.63E-01	1.34E+00	2.22E+00	3.94E+00	-4.43E+00	2.09E-00	3.34E+00	1.42E+00	1.68E+01	2.95E+01	NA	NA	NA	MW-53-120	
MW-53-120	017			1/11/2008	13:16	1.55E+03	2.07E+02	1.73E+02	7.33E+00	1.45E+00	5.76E-01	-2.50E+00	6.27E+00	6.87E+00	2.81E+00	5.14E-00	6.50E+00	7.49E+00	1.92E+01	2.21E+01	NA	NA	NA	MW-53-120	
MW-53-120	018			5/5/2007	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	3.69E+00	7.50E+00	1.88E+01	2.12E+01	NA	NA	NA	MW-53-120	
MW-53-120	019			7/31/2007	9:55	6.95E+02	2.62E+02	1.62E+02	1.76E+00	8.59E-01	7.52E-01	-1.32E+00	3.12E+00	3.23E+00	8.17E-03	5.01E-00	3.55E+00	1.97E+01	1.80E+01	2.68E+01	NA	NA	NA	MW-53-120	
MW-53-120	020			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	3.34E+00	3.56E+00	3.96E+00	3.59E+00	2.09E+00	1.59E+01	1.81E+01	NA	NA	NA	MW-53-120	
MW-53-120	021			1/15/2008	13:45	4.47E+02	1.49E+02	1.43E+02	2.32E+00	1.09E+00	8.13E-01	1.61E+00	4.59E+00	3.18E+00	-7.34E+01	3.06E-00	3.27E+00	4.41E+00	2.34E+01	2.71E+01	NA	NA	NA	MW-53-120	
MW-53-120	022			5/2/2008	14:15	7.33E+02	1.39E+02	1.48E+02	1.69E+00	9.97E-01	5.77E-01	6.65E-01	2.13E+00	3.75E+00	1.63E+00	2.46E-00	4.54E+00	9.78E+01	1.27E+01	2.20E+01	NA	NA	NA	MW-53-120	
MW-53-120	023			7/22/2008	17:05	5.78E+02	9.94E+01	1.31E+02	1.71E+00	5.24E-01	4.67E-01	2.07E+00	3.59E+00	-1.41E-01	2.67E-00	4.23E+00	1.37E+01	1.99E+01	1.68E+01	2.85E+01	NA	NA	NA	MW-53-120	
MW-53-120	024			11/11/2008	13:02	6.98E+02	1.85E+02	1.74E+02	9.02E+00	1.65E+00	5.87E-01	-7.43E-01	3.71E+00	3.89E+00	-1.72E+00	3.50E-00	3.31E+00	3.01E+00	1.91E+01	2.18E+01	NA	NA	NA	MW-53-120	
MW-53-120	025			5/5/2007	14:18	1.11E+03	3.57E+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	7.15E+00	1.79E+01	2.03E+01	NA	NA	NA	MW-53-120	
MW-53-120	026			7/31/2007	11:10	9.63E+02	4.29E+02	3.65E+02	1.55E+01	1.47E+00	8.87E-01	4.00E+00	4.68E+00	4.49E+00	2.96E+00	4.02E-00	3.61E+00	-5.63E+00	1.86E+01	2.17E+01	NA	NA	NA	MW-53-120	
MW-53-120	027			10/19/2007	12:09	7.01E+02	3.87E+02	3.62E+02	1.16E+01	1.88E+00	8.13E-01	4.62E+00	3.5												

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID																	
				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											
MW-54-123	006			7/22/2008	15:30	6.12E+02	9.77E+01	1.32E+02	9.32E+00	8.15E+01	5.30E+01	-2.82E+01	2.22E+00	3.72E+00	-2.93E+00	2.52E+00	4.33E+00	1.57E+01	2.73E+01	2.73E+01	2.73E+01	1.57E+01	4.33E+00	1.57E+01	2.73E+01	MW-54-123									
	007			11/11/2008	11:03	5.80E+02	1.77E+02	1.71E+02	1.26E+01	2.10E+00	7.26E+01	-6.72E+01	5.14E+00	5.51E+00	5.62E+00	4.29E+00	4.68E+00	2.62E+00	2.15E+01	2.15E+01	2.15E+01	2.62E+00	4.29E+00	2.62E+00	2.15E+01										
	001	141.0	-130.9	5/5/2007	14:31	1.34E+03	5.61E+02	4.68E+02	1.61E+01	2.42E+00	6.97E+01	-1.31E+00	3.62E+00	3.78E+00	5.23E+01	3.36E+00	4.61E+00	1.68E+01	1.93E+01	1.93E+01	1.68E+01	3.36E+00	4.61E+00	1.68E+01	1.93E+01	MW-54-114									
	002			7/31/2007	13:33	1.89E+03	5.67E+02	2.06E+02	1.92E+01	1.98E+00	6.71E+01	-1.19E+00	2.90E+00	3.03E+00	5.02E+02	3.33E+00	3.77E+00	-6.13E+00	1.89E+01	2.23E+01	2.23E+01	1.89E+01	3.33E+00	3.77E+00	-6.13E+00	1.89E+01									
MW-54-173	003			10/19/2007	12:12	1.34E+03	4.73E+02	3.62E+02	1.38E+01	2.15E+00	7.69E+01	-3.53E+01	2.85E+00	3.33E+00	-4.41E+01	3.18E+00	3.39E+00	4.35E+01	1.54E+01	1.78E+01	1.78E+01	3.39E+00	4.35E+01	1.54E+01	1.78E+01										
	004			1/15/2008	11:20	1.40E+03	5.34E+02	4.16E+02	1.53E+01	2.34E+00	8.48E+01	-3.67E+00	5.04E+00	3.49E+00	4.86E+01	3.98E+00	4.3E+00	9.81E+00	2.24E+01	2.54E+01	2.54E+01	3.49E+00	4.3E+00	9.81E+00	2.24E+01	2.54E+01									
	006			7/22/2008	15:35	1.13E+03	1.13E+02	1.31E+02	1.09E+01	1.23E+00	5.01E+01	-1.57E+00	1.91E+00	3.48E+00	-1.06E+00	2.37E+00	3.65E+00	2.02E+00	1.21E+01	1.21E+01	1.21E+01	1.91E+00	3.48E+00	2.02E+00	1.21E+01	1.21E+01									
	007			11/11/2008	11:06	1.14E+03	2.03E+02	1.72E+02	2.02E+01	2.27E+00	4.69E+01	-6.18E+01	3.90E+00	4.30E+00	5.67E+01	5.17E+00	5.96E+00	4.08E+00	2.09E+01	2.39E+01	2.39E+01	5.17E+00	5.96E+00	4.08E+00	2.09E+01	2.39E+01									
	002	172.5	-150.4	5/4/2007	14:43	1.90E+03	6.27E+02	4.71E+02	2.09E+01	2.67E+00	8.31E+01	-4.52E+01	3.82E+00	4.16E+00	1.92E+00	3.46E+00	4.77E+00	5.00E+00	1.94E+01	2.21E+01	2.21E+01	3.82E+00	4.16E+00	1.92E+00	3.46E+00	4.77E+00	5.00E+00	MW-54-173							
	003			7/31/2007	13:40	2.98E+03	5.94E+02	2.68E+02	1.45E+01	1.85E+00	8.29E+01	-1.65E+00	2.63E+00	3.10E+00	7.55E+01	2.22E+00	2.74E+00	3.92E+00	1.31E+01	1.70E+01	1.70E+01	1.85E+00	2.63E+00	3.10E+00	7.55E+01	2.22E+00	2.74E+00	3.92E+00							
	004			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	3.79E+00	-3.08E+01	2.87E+00	3.18E+00	1.37E+00	1.49E+01	1.70E+01	1.70E+01	3.29E+00	3.79E+00	3.18E+00	1.37E+00	1.49E+01	1.70E+01								
	005			1/15/2008	11:15	1.84E+03	5.84E+02	4.16E+02	1.41E+01	1.80E+00	9.29E+01	-3.68E+01	2.81E+00	3.68E+00	5.21E+01	3.00E+00	4.79E+00	2.30E+01	2.65E+01	2.65E+01	2.65E+01	2.81E+00	3.68E+00	5.21E+01	3.00E+00	4.79E+00	2.30E+01	2.65E+01							
	006			5/2/2008	10:35	2.11E+03	2.10E+02	1.42E+02	1.22E+01	1.18E+00	9.06E+01	-6.44E+01	2.22E+00	3.66E+00	1.71E+00	2.10E+00	4.01E+00	4.47E+00	1.23E+01	2.10E+01	2.10E+01	1.18E+00	9.06E+01	2.22E+00	3.66E+00	1.71E+00	2.10E+00	4.01E+00	4.47E+00	1.23E+01	2.10E+01				
	007			7/22/2008	15:51	1.65E+03	1.35E+02	1.30E+02	1.29E+01	1.08E+00	5.25E+01	-6.92E+02	2.07E+00	3.32E+00	-1.62E+00	2.11E+00	3.15E+00	7.86E+00	1.59E+01	2.72E+01	2.72E+01	1.08E+00	5.25E+01	2.07E+00	3.32E+00	-1.62E+00	2.11E+00	3.15E+00	7.86E+00	1.59E+01	2.72E+01				
MW-54-190	001	19.0	-176.9	5/8/2007	15:00	1.87E+03	6.23E+02	4.71E+02	1.95E+01	2.56E+00	7.00E+01	1.82E+00	3.33E+00	3.90E+00	3.32E+01	3.90E+00	1.54E+00	1.88E+01	2.18E+01	2.18E+01	2.56E+00	7.00E+01	1.82E+00	3.33E+00	3.90E+00	3.32E+01	3.90E+00	1.54E+00	1.88E+01	2.18E+01					
	002			7/31/2007	13:45	2.55E+03	6.12E+02	2.66E+02	1.70E+01	1.15E+00	7.00E+01	-2.13E+00	3.35E+00	3.12E+00	9.32E+01	3.08E+00	3.67E+00	-5.07E+00	1.66E+01	1.94E+01	1.94E+01	1.15E+00	7.00E+01	-2.13E+00	3.35E+00	3.12E+00	9.32E+01	3.08E+00	3.67E+00	-5.07E+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	3.33E+00	-3.38E+00	1.71E+01	1.97E+01	1.97E+01	2.46E+00	7.97E+01	-1.04E+00	3.45E+00	3.07E+00	7.41E+01	4.05E+00	3.33E+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	2.28E+00	2.50E+00	2.42E+01	2.75E+01	2.75E+01	2.75E+01	2.54E+00	8.15E+01	-6.45E+01	2.64E+00	3.11E+00	-3.88E+01	2.28E+00	2.50E+00	2.42E+01	2.75E+01	2.75E+01			
	005			5/2/2008	10:30	1.84E+03	1.98E+02	1.43E+02	1.95E+01	1.40E+00	7.88E+01	8.19E+01	1.98E+00	3.46E+00	8.81E+01	1.95E+00	3.51E+00	6.07E+00	1.23E+01	1.97E+01	1.97E+01	1.40E+00	7.88E+01	8.19E+01	1.98E+00	3.46E+00	8.81E+01	1.95E+00	3.51E+00	6.07E+00	1.23E+01	1.97E+01	1.97E+01		
	006			7/22/2008	15:50	1.25E+03	1.15E+02	1.30E+02	1.13E+01	1.37E+00	5.60E+01	-8.45E+01	1.98E+00	3.11E+00	-1.67E+00	2.06E+00	3.62E+00	-8.42E+00	1.61E+01	2.92E+01	2.92E+01	1.37E+00	5.60E+01	-8.45E+01	1.98E+00	3.11E+00	-1.67E+00	2.06E+00	3.62E+00	-8.42E+00	1.61E+01	2.92E+01	2.92E+01		
	007			11/11/2008	11:09	1.44E+03	2.10E+02	1.69E+02	1.68E+01	1.30E+00	6.14E+01	-5.41E+01	5.00E+00	5.54E+00	-6.47E+00	3.54E+00	3.63E+00	4.80E+01	1.91E+01	2.20E+01	2.20E+01	1.30E+00	6.14E+01	-5.41E+01	5.00E+00	5.54E+00	-6.47E+00	3.54E+00	3.63E+00	4.80E+01	1.91E+01	2.20E+01	2.20E+01		
	002	19.1	-0.8	11/9/2006	13:20	2.00E+03	1.11E+03	1.00E+03	1.68E+01	2.40E+00	1.90E+00	7.00E+00	0.00E+00	4.30E+00	5.80E+00	4.00E+00	6.70E+00	1.16E+00	3.81E+00	3.81E+00	1.68E+01	2.40E+00	1.90E+00	7.00E+00	0.00E+00	4.30E+00	5.80E+00	4.00E+00	6.70E+00	1.16E+00	3.81E+00	3.81E+00			
	001	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	0.00E+00	4.00E+00	3.70E+00	1.16E+00	3.81E+00	3.81E+00	1.16E+00	3.81E+00	3.81E+00	3.51E+00	3.51E+00	1.06E+00	4.00E+00	3.70E+00	1.16E+00	3.81E+00	3.81E+00	1.16E+00	3.81E+00	3.81E+00				
	003			8/2/2007	11:17	2.11E+03	7.28E+02	5.47E+02	2.31E+01	2.67E+00	9.10E+01	-4.91E+01	2.79E+00	3.02E+00	1.40E+00	2.94E+00	3.47E+00	-7.94E+00	1.91E+01	2.31E+01	2.31E+01	2.67E+00	9.10E+01	-4.91E+01	2.79E+00	3.02E+00	1.40E+00	2.94E+00	3.47E+00	-7.94E+00	1.91E+01	2.31E+01	2.31E+01		
MW-55-24	004			10/16/2007	10:15	2.20E+03	5.36E+02	3.68E+02	2.29E+01	2.61E+00	8.43E+01	2.62E+01	3.63E+00	4.21E+00	7.40E+01	3.29E+00	2.90E+00	2.00E+00	1.96E+01	2.28E+01	2.28E+01	2.61E+00	8.43E+01	2.62E+01	3.63E+00	4.21E+00	7.40E+01	3.29E+00	2.90E+00	2.00E+00	1.96E+01	2.28E+01	2.28E+01		
	005			1/28/2008	12:57	1.14E+03	3.63E+02	2.26E+02	2.20E+01	2.46E+00	9.42E+01	-3.33E+00	3.26E+00	2.50E+00	1.55E+00	2.51E+00	1.44E+00	1.82E+01	2.00E+01	2.00E+01	2.46E+00	9.42E+01	-3.33E+00	3.26E+00	2.50E+00	1.55E+00	2.51E+00	1.44E+00	1.82E+01	2.00E+01	2.00E+01				
	006			4/25/2008	14:15	1.05E+03	1.59E+02	1.44E+02	2.55E+01	1.57E+00	4.89E+01	1.08E+00	2.31E+00	4.02E+00	-9.53E+01	2.5E+00	4.02E+00	1.23E+00	1.44E+01	1.44E+01	1.44E+01	1.57E+00	1.57E+00	4.89E+01	1.08E+00	2.31E+00	4.02E+00	-9.53E+01	2.5E+00	4.02E+00	1.23E+00	1.44E+01	1.44E+01	1.44E+01	
	007			8/1/2008	13:15	1.04E+03	1.93E+02	1.91E+02	2.22E+01	1.36E+00	5.73E+01	-7.37E+03	2.19E+00	3.69E+00	2.85E+00	2.34E+00	4.16E+00	6.11E+00	1.24E+01	2.05E+01	2.05E+01	1.36E+00	5.73E+01	-7.37E+03	2.19E+00	3.69E+00	2.85E+00	2.34E+00	4.16E+00	6.11E+00	1.24E+01	2.05E+01	2.05E+01		
	008			10/21/2008	13:19	7.82E+02	2.57E+02	1.93E+02	1.68E+01	1.80E+00	5.55E+01	1.30E+00	5.13E+00	5.92E+00	-3.49E+00	6.60E+00	6.59E+00	4.30E+00	5.40E+00	5.40E+00	5.55E+01	1.30E+00	5.13E+00	5.92E+00	-3.49E+00	6.60E+00	6.59E+00	4.30E+00	5.40E+00	5.40E+00	5.40E+00	5.40E+00	5.40E+00		
	009			11/9/2006	13:40	9.04E+03	1.50E+03	1.00E+																											

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing ²	SAMPLE ZONE CENTER, elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID			
				Date	Time	TRITIUM (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-56-83	003			1/4/2007	13:20	1.28E+03	5.70E+02	5.20E+02	2.30E+00	1.18E+01	4.80E+00	4.40E+00	1.00E-01	3.00E-02	3.60E+00	-7.00E+00	7.80E+00	8.80E+00	MW-56-83		
	004	74.0	-3.7	6/22/2007	10:44	1.85E+03	5.76E+02	4.30E+02	1.87E+00	1.47E+01	3.39E+00	3.85E+00	-1.87E+00	2.82E+00	2.46E+00	2.82E+00	1.27E+01	1.46E+01			
	005			8/10/2007	11:10	1.99E+03	5.52E+02	4.55E+02	2.43E+00	-9.15E-01	3.86E+00	4.02E+00	1.87E-01	2.75E-00	3.15E+00	N/A	N/A	N/A			
	006			1/31/2008	9:30	1.94E+03	1.97E+02	3.56E+00	1.34E+00	-8.03E-01	3.69E+00	3.23E+00	1.60E+00	1.34E+00	2.78E+00	3.57E+00	6.57E-01	1.59E+01	1.85E+01		
	007			10/24/2008	12:22	2.98E+03	7.91E+02	5.91E+02	2.13E+00	4.94E-01	4.62E+00	4.98E+00	3.29E+00	5.58E+00	5.58E+00	8.07E+00	2.24E+01	1.79E+01	1.91E+01	MW-57-11	
MW-57-11	001	10.0	5.0	6/22/2007	12:17	4.61E+03	8.10E+02	4.36E+02	3.96E+00	7.97E-01	6.40E+00	4.31E+00	3.69E+02	3.87E+00	4.77E+00	-1.12E+00	1.35E+01	2.34E+01			
	002			8/6/2007	12:30	4.09E+03	3.21E+06	1.97E+02	2.77E+00	1.25E+00	3.78E+00	4.16E+00	3.95E+03	3.01E+00	3.71E+00	-5.75E-01	2.16E+01	2.50E+01			
	003			5/5/2008	12:43	2.17E+03	2.29E+02	2.65E+02	2.27E+01	9.08E-01	8.71E+01	2.21E+00	3.83E+00	2.87E+00	2.26E+00	4.47E+00	-1.12E+00	1.35E+01	2.34E+01		
	004			11/12/2008	10:55	3.28E+03	2.76E+02	1.73E+02	4.16E+01	3.34E+00	7.64E+00	4.76E+00	1.81E+00	3.28E+00	5.03E+00	-1.12E+00	2.03E+01	2.34E+01			
	005	19.0	-4.0	6/22/2007	12:30	1.55E+03	5.58E+02	4.31E+02	1.96E+00	1.07E+00	3.69E+00	3.90E+00	-9.51E-01	3.65E+00	3.84E+00	4.77E-01	1.36E+01	1.50E+01	MW-57-20		
MW-57-20	002			8/6/2007	12:15	9.96E+02	2.15E+02	1.96E+02	1.23E+00	5.78E-01	1.21E+00	3.99E+00	3.64E+00	6.05E-01	2.75E-00	3.22E+00	-1.19E+01	2.06E+01	2.46E+01		
	003			5/5/2008	13:18	7.27E+02	1.45E+02	1.23E+02	1.23E+00	2.85E-01	1.99E+00	2.84E+00	-9.61E-01	3.60E-00	4.56E+00	-6.89E+00	9.27E+00	1.62E+01			
	004			11/12/2008	11:30	1.51E+03	6.98E+02	1.72E+02	3.06E+00	1.91E+00	3.94E+00	3.82E+00	-4.35E-01	3.52E+00	3.67E+00	-5.58E-01	1.94E+01	2.25E+01			
	005	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	7.36E+00	1.19E+00	6.33E-00	7.50E+00	8.29E+00	9.09E+00	9.70E+00	MW-57-45		
	006			8/24/2006	9:30	4.06E+03	8.82E+02	7.71E+02	N/A	N/A	N/A	4.80E+00	-1.81E-01	3.89E+00	4.37E+00	N/A	N/A	N/A			
MW-58-26	001			6/22/2007	12:55	9.55E+02	4.85E+02	4.35E+02	1.90E+00	1.05E+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			
	002			8/6/2007	12:17	7.40E+02	2.07E+02	1.98E+02	2.55E+00	8.77E-01	3.15E+00	3.42E+00	-3.91E-01	1.68E+00	3.59E+00	-1.15E+01	2.09E+01	2.49E+01			
	003			5/5/2008	14:50	5.65E+02	1.38E+02	1.97E+02	2.26E+00	2.91E-01	1.68E+00	2.84E+00	-1.36E-01	1.68E+00	2.60E+00	-3.60E+00	9.38E+00	1.62E+01			
	004			11/12/2008	13:22	1.13E+03	2.01E+02	1.73E+02	1.20E+00	6.79E-01	5.97E+00	4.05E+00	9.15E-01	4.42E+00	5.17E+00	-2.81E+00	1.91E+01	2.22E+01			
	005	21.6	-7.0	11/16/2006	13:25	-2.60E-01	1.59E+02	1.60E+02	3.70E-01	7.50E-01	8.20E+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		
MW-58-26	002			1/5/2007	8:57	2.60E+02	1.80E+02	1.80E+02	-8.00E-02	1.04E+00	6.09E-01	5.25E-01	1.62E+00	2.97E+00	3.20E+00	9.50E-01	2.73E+00	3.10E+00			
	003	20.0	-5.4	6/21/2007	11:10	5.97E+02	2.00E+02	1.86E+02	1.07E+00	6.09E-01	1.07E+00	3.88E+00	-3.94E-01	2.42E+00	2.60E+00	1.07E+00	1.24E+01	1.45E+01			
	004			7/31/2007	11:00	8.36E+02	3.99E+02	2.58E+02	1.02E+00	6.33E-01	5.78E-01	1.81E+00	3.31E+00	4.20E-01	3.01E+00	3.51E+00	N/A	N/A			
	005			1/22/2008	13:20	2.95E+02	1.62E+02	1.70E+02	-1.43E-01	4.65E-01	1.91E+01	2.31E+00	2.67E+00	-5.41E-02	2.57E+00	2.61E+00	N/A	N/A			
	006	57.6	-43.0	11/16/2006	13:18	-9.60E-01	1.59E+02	1.60E+02	-6.00E-02	7.20E-01	8.10E-01	3.00E+00	3.30E+00	-9.00E-01	4.20E+00	4.90E+00	-3.40E+00	6.90E+00	MW-58-65		
MW-59-32	001	54.0	-39.4	1/5/2007	9:25	5.50E+02	5.40E+02	5.20E+02	1.60E-01	8.10E-01	8.86E-01	1.95E+00	3.00E+00	1.30E+01	2.73E+00	3.20E+00	1.40E+00	7.80E+00			
	002			6/21/2007	11:10	1.35E+02	1.77E+02	1.81E+02	-1.90E-01	5.90E-01	5.60E-01	2.65E+00	2.65E+00	-2.89E+00	3.17E+00	2.50E+00	2.80E+00	1.20E+01	1.45E+01		
	003			7/31/2007	11:00	3.42E+02	3.02E+02	2.72E+02	6.20E-03	5.19E-01	1.18E+00	3.39E+00	3.37E+00	1.02E+00	3.24E+00	3.39E+00	N/A	N/A	N/A		
	004			1/22/2008	12:00	1.62E+02	1.62E+02	1.62E+02	1.21E-01	5.85E-01	7.22E-01	3.92E+00	3.92E+00	-1.23E-01	3.29E-00	3.63E+00	N/A	N/A	N/A		
	005	26.2	-11.7	11/16/2006	11:05	2.80E+01	1.77E+02	1.80E+02	-6.00E-02	7.20E-01	7.90E-01	8.60E-01	2.91E+00	3.30E+00	3.00E-01	4.20E+00	4.90E+00	-2.60E+00	6.00E+00	MW-59-32	
MW-59-32	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	3.00E+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	3.96E+00	4.59E+00	4.46E+00	4.71E+00	-4.37E-01	1.24E+01	1.45E+01		
	004	40.4	-25.9	7/31/2007	14:35	1.69E+02	1.59E+02	1.63E+02	2.00E-01	6.72E-01	7.96E-01	3.74E+00	3.73E+00	7.97E-01	3.19E+00	3.75E+00	N/A	N/A			
	005			11/16/2006	11:18	5.50E+01	1.74E+02	1.70E+02	2.00E-01	8.00E-01	8.00E-01	3.70E+00	3.70E+00	2.60E+00	4.20E+00	4.50E+00	1.60E+00	5.70E+00	6.60E+00	MW-59-45	
	006	42.0	-27.5	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	1.26E+00	1.49E+00	2.00E-01	5.90E+00	4.60E+00	-2.50E+00	7.50E+00	8.60E+00	
MW-59-45	001	60.6	-46.1	6/21/2007	13:58	2.49E+02	1.74E+02	1.65E+02	1.64E-01	6.88E-01	9.10E-01	1.10E+00	2.50E+00	2.83E+00	8.14E-02	2.16E+00	2.49E+00	7.74E-01	1.71E+01		
	002			7/31/2007	13:38	2.49E+02	1.74E+02	1.65E+02	1.64E-01	6.88E-01	9.10E-01	1.10E+00	2.50E+00	2.83E+00	8.14E-02	2.16E+00	2.49E+00	7.74E-01	1.71E+01		
	003	58.0	-43.5	1/5/2007	10:05	1.35E+02	1.83E+02	1.80E+02	3.30E-01	8.10E-01	8.90E-01	1.03E+00	6.00E+00	4.10E+00	-8.00E-01	3.60E+00	3.60E+00	2.30E+00	5.70E+00	6.40E+00	MW-59-68
	004			6/21/2007	13:58	8.19E+02	4.02E+02	2.68E+02	3.66E-01	7.08E-01	7.98E-01	9.02E-01	2.88E+00	2.95E+00	3.72E-01	2.77E+00	3.17E+00	N/A	N/A		
	005	34.9	-22.4	5/8/2007	13:27	-9.12E+00	1.49E+02	1.79E+02	-1.79E-01	5.28E-01	7.62E-01	1.41E+00	4.84E+00	3.90E+00	2.45E+00	3.72E+00	4.67E+00	0.00E+00	1.81E+01	2.12E+01	MW-60-55
MW-59-68	001			7/27/2007	13:07	7.81E+02	2.40E+02	1.78E+02	6.48E-02	5.80E-01	4.66E-01	5.95E-01	4.26E+00	3.25E+00	-5.51E+00	2.67E+00	3.59E+00	N/A	N/A		
	002			10/9/2007	13:20	1.84E+02	1.48E+02	1.51E+02	3.01E-01	1.51E+00	6.06E+00	3.54E+00	0.00E+00	3.00E+00	5.00E+00	2.61E+00	N/A	N/A			
	003			1/14/2008	17:05	7.78E+01	1.78E+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	N/A	N/A		
	004			4/24/2008	15:30	5.51E+01	1.14E+02	1.95E+02	3.45E-01	4.83E-01	8.34E-01	8.41E-01	2.06E+00	3.37E+00	-8.73E-01	1.68E+00	2.50E+00	N/A	N/A		
	005			7/30/2008	16:10	3.95E+02	1.21E+02	2.85E-01	1.91E+02	2.85E-01	3.50E-01	5.92E-01	1.99E+00	3.30E+00	-1.19E+00	2.07E+00	3.20E+00	N/A	N/A		
MW-60-53	001	53.4	-40.9	11/5/2008	15:03	1.42E+02	1.80E+02	1.99E+02	1.62E-01	5.01E-01	6.09E-01	2.38E+00	5.87E+00	3.83E+00	8.52E-00	7.56E+00	N/A	N/A			
	002			5/8/2007	11:52	5.30E+01	1.58E+02	1.80E+02	-4.92E-01	5.52E-01	8.96E-01	4.86E+00	4.07E+00	2.15E-01	3.50E-00	4.12E+00	3.58E+00	1.84E+01	2.12E+01	MW-60-53	
	003			7/27/2007	12:50	1.25E+02	1.71E+02	1.87E+02	-4.72E-01	5.26E-01	7.31E-01	1.46E+00	3.01E+00	3.34E+00	7.87E-01	3.25E+00	3.79E+00	N/A	N/A		
	00																				

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing ²	SAMPLE ZONE CENTER, elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID						
				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-60-53	006			7/30/2008	13:23	1.28E+02	9.80E+01	1.63E+02	6.53E-01	5.33E-01	8.58E-01	1.68E-01	8.38E-01	3.43E+00	1.05E+00	2.04E+00	3.63E+00	NA	NA	NA	NA	NA	NA	MW-60-53
	007			11/5/2008	14:32	1.38E+02	1.80E+02	1.99E+02	-1.95E-01	5.82E-01	8.17E-01	8.17E-01	8.17E-01	5.22E+00	1.30E+00	4.58E+00	6.68E+00	NA	NA	NA	NA	NA	NA	MW-60-72
	001	72.4	-59.9	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	4.79E-01	3.33E+00	9.40E-01	3.21E+00	3.82E+00	8.28E-01	1.69E+01	1.97E+01	NA	NA	NA	MW-60-72
	002			7/27/2007	13:22	1.10E+02	1.64E+02	1.81E+02	-3.27E-01	3.96E+00	4.51E+00	4.79E-01	3.96E+00	4.51E+00	-1.10E+00	3.94E+00	4.17E+00	NA	NA	NA	NA	NA	NA	MW-60-72
	003			10/9/2007	14:15	1.24E+02	1.43E+02	1.54E+02	1.64E-01	6.00E-01	7.12E-01	7.48E-01	3.78E+00	4.27E+00	1.37E+00	3.76E+00	4.33E+00	NA	NA	NA	NA	NA	NA	MW-60-72
	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	3.92E+00	8.47E-01	2.97E+00	3.54E+00	NA	NA	NA	NA	NA	NA	MW-60-72
	005			4/24/2008	12:20	1.65E+02	1.17E+02	1.93E+02	3.08E-01	4.82E-01	8.38E-01	-5.33E-01	2.37E+00	3.02E+00	1.80E-01	2.23E+00	3.58E+00	NA	NA	NA	NA	NA	NA	MW-60-72
	006			7/30/2008	13:25	8.27E+01	9.09E+01	1.03E+02	5.64E-01	3.01E-01	4.27E-01	-8.79E-01	2.39E+00	3.91E+00	-1.11E+00	2.47E+00	3.96E+00	NA	NA	NA	NA	NA	NA	MW-60-72
	007			11/5/2008	14:58	1.94E+02	1.64E+02	1.78E+02	2.09E-01	6.54E-01	7.78E-01	-9.52E-01	5.68E+00	6.09E+00	-1.43E+00	5.36E+00	5.64E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	001	134.9	-122.4	5/8/2007	12:03	2.34E+01	1.55E+02	1.81E+02	3.85E-01	6.77E-01	7.74E-01	-1.05E+00	3.50E+00	3.08E+00	1.74E-01	3.12E+00	3.52E+00	4.51E+00	1.77E+01	2.02E+01	NA	NA	NA	MW-60-135
	002			7/27/2007	16:00	3.92E+02	2.03E+02	1.85E+02	-2.13E-01	5.09E-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	NA	NA	NA	MW-60-135
	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	NA	NA	NA	MW-60-135
	004			1/14/2008	14:19	3.70E+02	1.89E+02	1.74E+02	-1.70E-01	6.17E-01	8.52E-01	-1.33E+00	3.14E+00	3.25E+00	4.27E-01	3.17E+00	3.59E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	005			4/24/2008	12:31	5.85E+02	1.33E+02	1.93E+02	-1.98E-02	3.17E-01	6.59E-01	1.60E+00	2.24E+00	3.93E+00	-1.70E+00	2.67E+00	3.93E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	006			7/30/2008	13:33	4.91E+02	1.42E+02	1.99E+02	1.70E-01	5.44E-01	6.18E-01	-4.68E-01	1.79E+00	2.88E+00	1.43E+00	2.00E+00	3.61E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	007			11/6/2008	10:49	4.75E+02	2.01E+02	1.99E+02	-1.71E-01	5.01E-01	7.18E-01	-2.18E-02	5.71E+00	6.40E+00	-3.93E+00	6.25E+00	5.99E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	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	NA	NA	NA	MW-60-135
	002			7/27/2007	16:18	4.62E+02	2.09E+02	1.79E+02	-1.53E-01	5.46E-01	4.09E-01	8.69E-01	4.23E+00	4.60E+00	3.74E+00	2.42E+00	3.80E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	003			10/9/2007	14:23	5.89E+02	1.88E+02	1.50E+02	-1.92E-02	4.98E-01	6.33E-01	-1.63E+00	3.50E+00	3.68E+00	2.20E-01	3.30E+00	3.76E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	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	NA	NA	NA	MW-60-135
	005			4/24/2008	12:36	4.53E+02	1.28E+02	1.94E+02	-2.44E-01	3.65E-01	7.77E-01	-1.25E+00	2.37E+00	3.69E+00	1.29E+00	2.06E+00	3.79E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	006			7/30/2008	13:35	5.16E+02	1.44E+02	1.91E+02	5.10E-01	2.52E-01	3.27E-01	-8.80E-01	2.67E+00	3.38E+00	4.30E-01	1.89E+00	3.25E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	007			11/6/2008	13:35	6.87E+02	4.16E+02	3.86E+02	4.32E-01	6.04E-01	2.87E-01	2.47E+00	4.96E+00	5.91E+00	5.49E-01	5.87E+00	6.61E+00	NA	NA	NA	NA	NA	NA	MW-60-135
	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	7.26E-01	3.79E-01	4.51E+00	4.38E+00	1.14E+00	3.90E+00	3.98E+00	7.69E+00	1.73E+01	1.96E+01	NA	NA	NA	MW-60-176
	002			7/27/2007	17:35	8.49E+02	2.49E+02	1.78E+02	-4.00E-01	5.84E-01	7.87E-01	2.00E+00	3.29E+00	4.00E+00	-1.70E+00	2.71E+00	3.03E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	003			10/9/2007	14:57	7.02E+02	2.01E+02	1.53E+02	-3.94E-02	5.11E-01	6.04E-01	-2.68E-01	2.63E+00	2.83E+00	3.91E-01	2.17E+00	3.09E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	004			1/14/2008	12:25	6.68E+02	2.25E+02	1.83E+02	-7.68E-02	7.89E-01	1.04E+00	2.22E-01	3.99E+00	4.52E+00	5.49E-01	3.54E+00	4.09E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	005			4/24/2008	13:10	7.77E+02	2.04E+02	2.73E+02	2.68E-01	4.91E-01	8.54E-01	-1.81E+00	2.70E+00	4.00E+00	-9.94E-01	2.53E+00	3.95E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	006			8.95E+02	14:08	8.95E+02	1.67E+02	1.91E+02	-2.08E-02	2.96E-01	5.88E-01	-3.15E-01	2.12E+00	3.44E+00	-2.03E-01	2.03E+00	3.34E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	007			11/6/2008	11:55	8.32E+02	4.35E+02	3.86E+02	2.17E-01	4.71E-01	5.45E-01	-2.63E+00	5.09E+00	5.07E+00	-1.06E-01	5.66E+00	6.33E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	001	13.5	1.2	5/17/2007	13:10	4.52E+02	1.83E+02	1.55E+02	2.98E-02	5.53E-01	7.27E-01	-5.10E-01	2.61E+00	2.89E+00	1.00E-01	2.79E+00	3.19E+00	4.61E+00	1.52E+01	1.74E+01	NA	NA	NA	MW-60-176
	002			7/26/2007	15:45	5.08E+02	2.13E+02	1.78E+02	4.68E-01	4.93E-01	5.35E-01	9.64E-01	3.75E+00	4.35E+00	-2.80E+00	4.88E+00	3.80E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	003			10/10/2007	13:50	3.76E+02	1.73E+02	1.55E+02	1.80E+00	6.67E-01	4.87E-01	0.00E+00	3.99E+00	1.87E+00	-7.14E-02	1.71E+00	1.92E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	004			1/31/2008	15:15	3.50E+02	1.34E+02	1.34E+02	4.95E-01	7.55E-01	8.27E-01	1.18E+00	4.23E+00	4.46E+00	5.24E-01	3.38E+00	3.56E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	006			8/6/2008	12:55	2.69E+02	1.41E+02	2.25E+02	5.31E-01	3.30E-01	4.89E-01	9.69E-02	1.67E+00	2.82E+00	-1.26E-01	1.99E+00	3.33E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	007			10/29/2008	13:20	4.08E+02	1.65E+02	1.66E+02	5.23E-01	6.23E-01	6.37E-01	-3.09E-02	5.10E+00	5.60E+00	-3.91E+00	5.25E+00	4.70E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	002			5/17/2007	11:10	2.97E+02	1.70E+02	1.59E+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	1.01E+01	1.81E+01	2.04E+01	NA	NA	NA	MW-60-176
	003			7/26/2007	15:35	2.50E+02	1.58E+02	1.47E+02	-1.67E-01	4.48E-01	6.10E-01	1.12E+00	1.81E+00	2.02E+00	-7.67E-01	1.74E+00	1.83E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	004			1/19/2008	13:55	3.97E+02	1.68E+02	1.71E+02	1.34E-01	6.05E-01	7.24E-01	8.35E-01	4.43E+00	4.62E+00	-2.10E-01	3.87E+00	4.19E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	006			8/6/2008	12:00	3.94E+02	1.19E+02	1.45E+02	2.23E-01	2.69E-01	4.54E-01	-2.35E+00	4.52E+00	2.06E+00	2.06E+00	2.58E+00	2.58E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	007			10/29/2008	13:57	5.35E+02	1.71E+02	1.66E+02	1.36E+00	6.57E-01	5.24E-01	4.20E-01	4.77E+00	5.33E+00	-2.20E+00	5.19E+00	5.20E+00	NA	NA	NA	NA	NA	NA	MW-60-176
	001	53.1	-40.3	5/10/2007	15:00	3.03E+02	1.91E+02	1.72E+02	4.41E-01	7.97E-01	8.96E-01	6.50E-01	3.40E+00	3.86E+00	-9.12E-01	3.52E+00	3.74E+00							

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft msl ²	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID						
				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-62-71	006			8/6/2008	11:42	4.64E+02	1.60E+02	2.53E+02	3.31E-01	2.60E-01	3.94E-01	5.85E-01	2.01E+00	3.53E+00	-4.96E-01	2.23E-00	3.60E+00	NA	NA	NA	NA	NA	NA	MW-62-71
	007			10/9/2008	12:00	5.12E+02	1.70E+02	1.66E+02	3.70E-01	4.81E-01	5.03E-01	2.34E+00	5.97E+00	-1.31E+00	6.46E-00	7.60E+00	3.60E+00	NA	NA	NA	NA	NA	NA	
MW-62-92	001	78.8		5/10/2007	11:18	7.00E+02	2.16E+02	1.68E+02	7.11E-01	9.21E-01	9.85E-01	1.58E+00	1.63E+00	3.30E+00	7.45E-01	3.12E-00	3.72E+00	-7.73E+00	1.30E+01	1.65E+01	1.30E+01	1.65E+01	MW-62-92	
	002			7/26/2007	12:35	4.37E+02	2.07E+02	1.80E+02	-2.28E+02	5.39E-01	3.94E-01	6.50E-01	3.15E+00	3.61E+00	8.32E-01	3.38E-00	3.95E+00	NA	NA	NA	NA	NA	NA	
	003			10/10/2007	12:15	4.28E+02	1.73E+02	1.50E+02	1.91E+01	6.54E-01	6.23E-01	1.88E+00	2.07E+00	2.07E+00	1.85E+00	1.80E+00	2.21E+00	NA	NA	NA	NA	NA	NA	
	004			1/10/2008	11:09	3.94E+02	1.92E+02	1.94E+02	1.38E-01	6.59E-01	7.90E-01	3.75E-01	2.94E+00	3.39E+00	3.47E-01	3.47E-00	3.62E+00	NA	NA	NA	NA	NA	NA	
	005			8/6/2008	11:19	4.95E+02	1.99E+02	2.38E+02	2.13E-01	3.29E-01	5.6E-01	1.51E+00	2.29E+00	4.11E+00	5.16E+00	2.59E+00	5.35E+00	NA	NA	NA	NA	NA	NA	
MW-62-138	007	138.1	-125.3	10/29/2008	12:10	4.82E+02	1.68E+02	1.66E+02	-4.52E+02	8.40E-01	7.12E-01	1.64E+00	6.57E+00	7.61E+00	2.71E+00	6.33E-00	7.68E+00	NA	NA	NA	NA	NA	NA	
	001			5/10/2007	10:22	4.55E+02	1.98E+02	1.74E+02	8.19E-01	8.16E-01	8.00E-01	1.73E+00	3.78E+00	-1.40E+00	3.42E+00	3.55E+00	-4.93E+00	1.32E+01	1.64E+01	1.64E+01	1.64E+01	1.64E+01	MW-62-138	
	002			7/26/2007	15:55	5.38E+02	2.19E+02	1.82E+02	5.76E-01	5.70E-01	6.09E-01	6.88E+02	3.51E+00	3.98E+00	6.80E-01	3.93E-00	4.54E+00	NA	NA	NA	NA	NA	NA	
	003			10/10/2007	14:46	7.78E+02	2.09E+02	1.54E+02	8.37E-01	8.30E-01	8.69E-01	6.00E+00	2.67E+00	3.80E+00	-1.19E+00	2.44E-00	2.50E+00	NA	NA	NA	NA	NA	NA	
	004			1/10/2008	10:05	7.69E+02	1.82E+02	1.74E+02	7.34E-01	4.32E-01	5.52E-01	4.50E+00	3.36E+00	3.88E+00	1.03E-01	3.47E-00	3.91E+00	NA	NA	NA	NA	NA	NA	
	006			8/6/2008	11:31	5.33E+02	1.55E+02	2.28E+02	1.21E+00	4.18E-01	5.01E-01	8.24E-01	2.44E+00	4.27E+00	3.85E-01	2.41E-00	4.20E+00	NA	NA	NA	NA	NA	NA	
MW-62-182	007	182.1	-169.3	10/29/2008	12:25	7.50E+02	1.82E+02	1.66E+02	1.24E+00	5.53E-01	3.58E-01	1.40E+00	6.66E+00	7.05E+00	2.04E+00	8.28E-00	8.60E+00	NA	NA	NA	NA	NA	NA	
	001			5/10/2007	10:43	4.17E+02	2.09E+02	1.76E+02	1.22E-01	7.18E-01	8.90E-01	-1.16E+00	3.10E+00	3.33E+00	-2.40E-01	3.23E-00	3.53E+00	-1.76E+00	1.24E+01	1.50E+01	1.50E+01	1.50E+01	MW-62-182	
	002			7/26/2007	16:20	4.94E+02	1.83E+02	1.82E+02	-9.56E+02	1.48E-01	4.40E-01	6.04E-01	1.91E+00	1.91E+00	5.45E-01	1.92E-00	2.23E+00	NA	NA	NA	NA	NA	NA	
	003			10/10/2007	14:42	4.70E+02	1.68E+02	1.71E+02	8.15E-02	1.13E-01	6.33E-01	-1.17E-01	2.96E+00	2.96E+00	9.22E-01	1.31E-00	2.33E+00	NA	NA	NA	NA	NA	NA	
	004			1/10/2008	11:15	4.70E+02	1.68E+02	1.71E+02	8.15E-02	1.13E-01	6.33E-01	-1.17E-01	2.96E+00	2.96E+00	9.22E-01	1.31E-00	2.33E+00	NA	NA	NA	NA	NA	NA	
	006			8/6/2008	13:54	3.99E+02	1.52E+02	2.34E+02	5.30E-02	3.33E-01	6.16E-01	8.48E-01	2.19E+00	3.85E+00	-2.67E-01	2.40E-00	3.97E+00	NA	NA	NA	NA	NA	NA	
MW-63-18	007	18.9	9.7	10/29/2008	15:52	4.98E+02	1.70E+02	1.66E+02	4.40E-02	7.13E-01	9.16E-01	1.60E+00	6.21E+00	6.92E+00	-2.99E-01	5.82E-00	6.54E+00	7.36E+00	1.91E+01	1.82E+01	1.82E+01	1.82E+01	MW-63-18	
	001			5/18/2007	10:35	2.30E+02	1.59E+02	1.57E+02	4.75E-02	3.37E-01	8.56E-01	8.56E-01	2.44E+00	2.67E+00	1.11E+00	2.65E-00	2.74E+00	NA	NA	NA	NA	NA	NA	
	002			7/30/2007	13:10	2.00E+02	1.71E+02	1.89E+02	-2.18E-01	3.91E-01	4.68E-01	1.98E+00	2.65E+00	3.03E+00	-1.31E+00	2.50E-00	2.74E+00	NA	NA	NA	NA	NA	NA	
	003			10/11/2007	12:43	1.49E+02	1.56E+02	1.71E+02	3.08E-01	6.23E-01	7.12E-01	1.16E+00	2.63E+00	3.16E+00	-1.41E-01	2.52E-00	2.74E+00	NA	NA	NA	NA	NA	NA	
	004			1/9/2008	14:55	1.23E+02	1.36E+02	1.73E+02	-6.34E+02	5.55E-01	7.38E-01	2.55E+00	3.29E+00	3.42E+00	1.97E+00	2.94E-00	3.75E+00	NA	NA	NA	NA	NA	NA	
	005			4/23/2008	14:50	2.57E+02	1.53E+02	2.43E+02	2.31E-02	4.68E-01	8.62E-01	8.04E-01	2.35E+00	4.03E+00	7.68E-01	2.06E-00	3.69E+00	8.53E+00	1.43E+01	2.42E+01	2.42E+01	2.42E+01		
	006			7/30/2008	11:13	1.79E+02	1.20E+02	1.91E+02	3.29E+00	5.61E-01	4.68E-01	-1.71E-02	1.75E+00	2.97E+00	-1.16E+00	2.04E-00	2.49E+00	NA	NA	NA	NA	NA	NA	
	006			7/30/2008	11:13	NA	NA	NA	1.07E-01	2.00E-01	3.51E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	007			11/5/2008	10:53	3.20E+02	1.59E+02	1.65E+02	3.25E-01	6.20E-01	7.03E-01	1.31E-01	5.91E+00	6.75E+00	-1.52E+00	5.73E-00	6.04E+00	NA	NA	NA	NA	NA	NA	
MW-63-34	001	31.5	-17.3	5/18/2007	13:03	2.28E+02	1.58E+02	1.55E+02	-1.69E-01	5.43E-01	7.77E-01	4.10E-01	2.21E+00	2.51E+00	-3.25E-00	2.44E+00	1.57E+00	NA	NA	NA	NA	NA	NA	
	002			7/30/2007	13:28	2.80E+02	1.77E+02	1.90E+02	-1.6E-01	3.36E-01	4.03E-01	1.73E-01	3.66E+00	3.56E+00	3.98E-01	3.68E-00	4.24E+00	NA	NA	NA	NA	NA	NA	
	003			10/11/2007	12:50	2.31E+02	1.61E+02	1.74E+02	-2.75E-01	4.44E-01	6.73E-01	-6.24E-01	3.60E+00	3.38E+00	3.81E-01	2.65E-00	3.10E+00	NA	NA	NA	NA	NA	NA	
	004			1/9/2008	14:20	3.26E+02	1.65E+02	1.71E+02	1.24E-01	5.57E-01	6.84E-01	1.83E+00	3.63E+00	4.44E+00	3.53E-01	3.90E-00	4.35E+00	NA	NA	NA	NA	NA	NA	
	005			4/23/2008	13:55	4.90E+02	1.68E+02	2.45E+02	3.82E-01	5.68E-01	9.80E-01	1.71E+00	2.05E+00	3.78E+00	-1.77E+00	3.53E-00	4.19E+00	5.77E+00	1.46E+01	2.49E+01	2.49E+01	2.49E+01		
	006			7/30/2008	11:12	4.11E+02	1.39E+02	1.91E+02	1.15E+02	4.60E-01	6.45E-01	-1.48E-02	2.26E+00	3.87E+00	-7.91E-01	2.52E-00	3.65E+00	NA	NA	NA	NA	NA	NA	
	007			11/5/2008	11:03	4.14E+02	3.77E+02	3.85E+02	3.15E-01	6.77E-01	7.78E-01	5.73E-01	5.43E+00	6.10E+00	-1.40E-01	5.17E-00	5.67E+00	NA	NA	NA	NA	NA	NA	
MW-63-50	001	40.5	-37.2	5/15/2007	11:48	3.26E+02	1.83E+02	1.73E+02	9.70E-02	6.15E-01	8.37E-01	7.87E-01	5.28E+00	5.01E+00	6.64E-01	4.23E-00	4.81E+00	NA	NA	NA	NA	NA	NA	
	002			7/25/2007	14:00	2.25E+02	1.80E+02	1.95E+02	1.29E-01	6.03E-01	6.84E-01	2.08E+00	3.18E+00	3.90E+00	1.58E+00	3.19E-00	3.86E+00	NA	NA	NA	NA	NA	NA	
	003			10/11/2007	11:10	2.89E+02	1.62E+02	1.73E+02	-3.41E-01	5.10E-01	7.07E-01	6.21E-01	2.98E+00	3.39E+00	1.56E+00	3.17E-00	3.86E+00	NA	NA	NA	NA	NA	NA	
	004			1/9/2008	12:32	3.56E+02	1.67E+02	1.72E+02	4.48E-01	7.41E-01	8.26E-01	3.37E+00	2.66E+00	3.02E+00	-1.42E+00	3.14E-00	3.20E+00	NA	NA	NA	NA	NA	NA	
	005			4/23/2008	13:04	2.70E+02	1.63E+02	2.65E+02	4.27E-01	5.45E-01	9.26E-01	1.10E+00	1.85E+00	2.93E+00	9.01E-01	1.75E-00	3.27E+00	2.43E+00	1.40E+01	2.41E+01	2.41E+01	2.41E+01		
	006			7/30/2008	10:29	3.35E+02	1.32E+02	1.91E+02	6.10E-01	4.97E-01	8.02E-01	-1.77E+00	1.83E+00	2.66E+00	-1.22E+00	1.91E-00	2.80E+00	NA	NA	NA	NA	NA	NA	
	007			11/5/2008	9:39	3.17E+02	1.94E+02	1.99E+02	5.67E-01	6.38E-01	6.79E-01	1.26E+00	6.36E+00	7.04E+00	-7.72E-01	6.52E-00	7.08E+00	NA	NA	NA	NA	NA	NA	
MW-63-93	001	93.0	-80.7	10/2/2006	13:10	5.16E+02	1.95E+02	5.70E+01	7.81E-02	6.73E-01	7.32E-01	5.46E-												

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing ²	SAMPLE ZONE CENTER, elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID								
				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-63-112	002			7/25/2007	14:52	2.69E+02	1.83E+02	1.97E+02	6.32E-02	3.46E-01	6.92E-01	3.99E-01	4.19E+00	4.14E+00	4.19E+00	-0.53E-01	3.94E-00	4.34E+00	NA	NA	NA	NA	NA	NA	MW-63-112	
	003			10/11/2007	13:45	2.78E+02	1.62E+02	1.72E+02	-7.94E-02	6.73E-01	8.71E-01	3.99E-01	4.52E+00	5.49E+00	4.52E+00	7.65E-01	3.50E-00	4.15E+00	NA	NA	NA	NA	NA	NA		
	004			1/9/2008	10:20	4.69E+02	1.73E+02	1.72E+02	2.19E-01	5.07E-01	5.92E-01	3.90E-01	3.34E+00	3.30E+00	3.34E+00	2.87E-01	3.56E-00	3.75E+00	NA	NA	NA	NA	NA	NA		
	005			4/23/2008	11:08	3.72E+02	1.68E+02	2.65E+02	-3.90E-02	3.96E-01	7.94E-01	3.89E+00	3.89E+00	2.30E+00	2.30E+00	1.07E+00	1.75E+00	2.78E-00	4.52E+00	NA	NA	NA	NA	NA	NA	
	006			7/29/2008	14:20	2.07E+02	1.01E+02	1.63E+02	7.08E-01	3.59E-01	8.66E-01	6.16E-01	2.23E+00	3.89E+00	1.70E+00	2.46E+00	1.07E+00	2.46E+00	4.41E+00	NA	NA	NA	NA	NA	NA	
	007			11/4/2008	12:41	2.75E+02	1.92E+02	2.01E+02	4.72E-01	5.88E-01	6.17E-01	1.89E-01	5.68E+00	6.43E+00	8.34E+00	8.34E+00	-2.75E-00	3.78E+00	7.58E+00	NA	NA	NA	NA	NA	NA	
	008			5/15/2007	13:12	3.11E+02	1.83E+02	1.75E+02	3.00E-01	3.00E-01	9.37E-01	6.30E-01	4.20E+00	4.20E+00	-1.19E+00	-1.19E+00	3.65E-00	3.87E+00	2.29E+00	NA	NA	NA	NA	NA	NA	MW-63-121
MW-63-121	002			7/25/2007	11:50	2.96E+02	1.82E+02	1.94E+02	3.19E-01	5.31E-01	5.93E-01	-1.31E+00	3.29E+00	3.46E+00	1.70E-01	3.46E-00	3.87E+00	NA	NA	NA	NA	NA	NA	NA		
	003			10/11/2007	13:51	4.62E+02	1.70E+02	1.74E+02	2.39E-01	6.25E-01	7.37E-01	4.84E+00	4.51E+00	4.94E+00	1.54E+00	4.00E+00	4.54E+00	NA	NA	NA	NA	NA	NA	NA		
	004			1/9/2008	10:42	5.40E+02	1.74E+02	1.71E+02	2.06E-02	4.70E-01	6.09E-01	2.54E+00	3.38E+00	4.15E+00	1.09E+00	3.41E-00	4.02E+00	NA	NA	NA	NA	NA	NA	NA		
	005			4/23/2008	11:17	4.54E+02	1.54E+02	1.98E+02	5.36E-01	4.94E-01	8.04E-01	-3.56E-01	9.40E-01	1.55E+00	1.55E+00	-1.33E+00	2.71E-00	1.81E+00	NA	NA	NA	NA	NA	NA	NA	
	006			7/29/2008	14:30	3.44E+02	1.04E+02	1.61E+02	8.36E-01	1.46E-01	2.05E-01	2.86E-01	2.08E+00	3.57E+00	1.23E+00	2.30E-00	4.11E+00	NA	NA	NA	NA	NA	NA	NA	NA	
	007			7/29/2008	14:30	NA	NA	NA	6.63E-01	3.83E-01	5.73E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	008			11/4/2008	12:43	4.95E+02	2.06E+02	1.98E+02	3.81E-01	7.52E-01	8.55E-01	-7.97E-01	5.42E+00	5.97E+00	1.20E+00	6.38E-00	7.41E+00	NA	NA	NA	NA	NA	NA	NA	NA	
MW-63-163	001			5/15/2007	11:38	5.78E+02	2.10E+02	1.73E+02	-6.43E-02	5.60E-01	8.74E-01	-8.04E-01	2.84E+00	2.59E+00	9.51E-01	2.25E-00	2.64E+00	NA	NA	NA	NA	NA	NA	NA	MW-63-163	
	002			7/25/2007	12:13	4.79E+02	1.91E+02	1.96E+02	-7.20E-01	3.46E-01	6.26E-01	-3.18E+00	5.16E+00	4.39E+00	-4.54E-01	3.75E-00	3.99E+00	NA	NA	NA	NA	NA	NA	NA		
	003			10/11/2007	14:18	3.49E+02	1.65E+02	1.73E+02	7.93E-02	7.98E-01	9.60E-01	-4.46E-01	3.00E+00	3.28E+00	-1.91E-02	2.94E-00	3.30E+00	NA	NA	NA	NA	NA	NA	NA		
	004			1/9/2008	10:51	5.68E+02	1.77E+02	1.72E+02	3.19E-03	5.55E-01	7.17E-01	-4.52E-01	3.50E+00	3.89E+00	2.23E+00	6.11E-00	4.38E+00	NA	NA	NA	NA	NA	NA	NA	NA	
	005			4/23/2008	11:23	4.44E+02	1.70E+02	2.65E+02	1.82E-01	4.33E-01	7.87E-01	8.04E-01	1.06E+00	1.84E+00	6.60E-01	1.13E-00	1.94E+00	5.30E+00	NA	NA	NA	NA	NA	NA	NA	
	006			7/29/2008	14:56	4.48E+02	1.07E+02	1.63E+02	8.02E-01	3.27E-01	4.10E-01	-2.09E+00	2.34E+00	3.61E+00	9.03E-01	2.59E-00	4.48E+00	NA	NA	NA	NA	NA	NA	NA	NA	
	007			7/29/2008	14:40	NA	NA	NA	-8.79E-02	2.50E-01	4.37E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
MW-63-174	001			11/4/2008	12:45	6.85E+02	1.76E+02	1.76E+02	-1.44E-01	5.53E-01	7.46E-01	-1.77E-01	5.37E+00	6.12E+00	7.78E-01	6.21E-00	7.23E+00	NA	NA	NA	NA	NA	NA	NA		
	002			5/15/2007	11:54	5.93E+02	2.12E+02	1.73E+02	2.64E-01	5.62E-01	9.04E-01	-6.91E-01	2.52E+00	2.70E+00	8.16E-03	2.49E-00	2.36E+00	NA	NA	NA	NA	NA	NA	NA	MW-63-174	
	003			7/25/2007	12:00	5.28E+02	1.94E+02	1.97E+02	-2.78E-01	4.41E-01	6.39E-01	6.28E-01	3.98E+00	4.55E+00	-3.03E-01	3.45E-00	3.80E+00	NA	NA	NA	NA	NA	NA	NA		
	004			10/11/2007	14:22	3.70E+02	1.65E+02	1.72E+02	-2.83E-01	1.14E-01	9.39E-01	1.94E+00	2.90E+00	2.70E+00	-8.59E-01	2.56E-00	2.71E+00	NA	NA	NA	NA	NA	NA	NA	NA	
	005			1/9/2008	10:15	6.23E+02	1.79E+02	1.72E+02	6.16E-01	6.95E-01	7.24E-01	-1.24E+00	3.14E+00	3.33E+00	1.48E+00	3.03E-00	3.77E+00	NA	NA	NA	NA	NA	NA	NA	NA	
	006			4/23/2008	11:21	4.89E+02	1.72E+02	2.65E+02	-6.82E-02	3.65E-01	7.48E-01	-5.74E-01	2.01E+00	3.30E+00	3.50E+00	5.66E-01	1.13E-00	1.94E+00	NA	NA	NA	NA	NA	NA	NA	
	007			7/29/2008	14:40	4.49E+02	1.40E+02	1.92E+02	2.79E+00	4.82E-01	3.52E-01	-3.76E-01	2.23E+00	3.71E+00	-1.72E+00	2.63E-00	3.79E+00	NA	NA	NA	NA	NA	NA	NA	NA	
MW-65-48	001			11/4/2008	12:44	4.77E+02	2.04E+02	1.99E+02	-2.76E-01	5.52E-01	7.83E-01	-2.68E+00	4.83E+00	4.74E+00	1.18E+00	5.45E-00	6.30E+00	NA	NA	NA	NA	NA	NA	NA		
	002			1/4/2007	12:00	2.08E+02	1.83E+02	1.80E+02	0.00E+00	7.80E-01	8.60E-01	1.60E+00	3.00E+00	3.90E+00	-5.00E-01	3.00E-00	3.70E+00	NA	NA	NA	NA	NA	NA	NA	MW-65-48	
	003			9/8/2006	9:40	3.29E+01	1.62E+02	1.74E+02	4.72E-01	9.80E-01	1.04E+00	-5.15E-01	1.99E+00	2.18E+00	-2.34E-01	1.81E-00	1.98E+00	NA	NA	NA	NA	NA	NA	NA		
	004			1/4/2007	12:35	1.83E+02	1.80E+02	1.80E+02	1.60E-01	7.80E-01	8.70E-01	-2.50E-01	2.22E+00	2.50E+00	-1.13E+00	2.31E-00	2.80E+00	NA	NA	NA	NA	NA	NA	NA		
	005			7/29/2007	13:45	3.57E+03	2.91E+02	1.96E+02	1.79E+00	7.68E-01	2.08E+03	1.77E-01	3.07E+00	3.51E+00	2.21E+00	3.27E-00	4.20E+00	NA	NA	NA	NA	NA	NA	NA	MW-66-21	
	006			10/15/2007	10:45	1.04E+03	2.24E+02	1.95E+02	2.42E+00	7.97E-01	5.30E-01	-8.32E-01	5.03E+00	2.74E+00	1.01E-01	2.79E+00	3.18E+00	1.48E+00	NA	NA	NA	NA	NA	NA		
	007			1/14/2008	11:33	8.18E+02	4.62E+02	4.16E+02	1.09E+00	8.96E-01	8.19E-01	1.68E+00	3.77E+00	2.35E+00	3.77E+00	2.35E+00	3.86E+00	4.26E+00	-5.07E+00	2.12E+01	2.55E+01	2.55E+01	2.55E+01	2.55E+01		
MW-65-80	001			4/21/2008	14:10	9.53E+02	1.51E+02	1.93E+02	1.01E+00	2.05E-01	2.82E-01	6.53E-01	2.36E+00	4.07E+00	1.88E+02	2.26E-00	3.74E+00	NA	NA	NA	NA	NA	NA	NA		
	002			7/29/2008	11:48	7.83E+02	1.02E+02	1.30E+02	9.07E-01	4.39E-01	4.39E-01	-1.01E+00	1.88E+00	2.92E+00	1.71E+00	2.17E+00	3.99E+00	NA	NA	NA	NA	NA	NA	NA		
	003			11/4/2008	10:30	5.34E+02	2.07E+02	1.94E+02	1.03E+00	6.95E-01	6.05E-01	1.44E+00	4.67E+00	5.42E+00	2.98E+00	5.17E-00	6.47E+00	NA	NA	NA	NA	NA	NA	NA		
	004			7/29/2007	12:49	9.10E+03	4.13E+02	1.92E+02	6.20E+00	1.19E+00	6.05E-01	-9.84E-01	2.67E+00	2.76E+00	-5.59E-01	2.90E-00	3.06E+00	NA	NA	NA	NA	NA	NA	NA		
	005			10/15/2007	10:16	8.95E+03	4.61E+02	1.92E+02	1.12E+01	1.61E+00	5.63E-01	0.00E+00	8.34E+00	4.32E+00	-2.97E-01	4.34E-00	4.68E+00	NA	NA	NA	NA	NA	NA	NA	MW-66-36	
	006			11/4/2008	11:40	7.26E+03	1.01E+03	4.16E+02	1.51E+01	2.40E+00	8.34E-01	2.34E+00	3.38E+00	4.14E+00	-1.08E+00	3.78E-00	3.99E+00	NA	NA	NA	NA	NA	NA	NA		
	007			4/21/2008	13:25	6.09E+03	2.89E+02	1.97E+02	1.52E+01	5.27E-01	6.20E-01	-2.89E+00	2.09E+00	3.46E+00	-2.09E+00	3.54E-00	4.13E+00	-3.35E+00	8.98E+00	1.54E+01	1.54E+01	1.54E+01	1.54E+01	1.54E+01		
MW-67-39	001			7																						

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER depth ft below top of casing ²	SAMPLE ZONE CENTER elevation ft	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID				
				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-67-105	002			10/1/2007	11:40	2.64E+03	2.96E+02	1.95E+02	4.12E-01	8.28E-01	9.46E-01	9.46E-01	0.00E+00	6.11E+00	3.77E+00	-4.57E-01	3.63E-02	3.90E+00	1.03E+01	1.58E+01	1.76E+01	MW-67-105
	003			1/11/2008	15:15	2.43E+03	6.40E+02	4.15E+02	7.88E-01	9.98E-01	1.07E+00	1.07E+00	9.30E+00	5.13E+00	2.83E+00	7.44E-01	3.60E-01	3.70E+00	1.81E+01	2.49E+01	2.67E+01	
	004			2/25/2008	13:44	2.38E+03	6.89E+02	5.30E+02	1.13E+00	7.89E-01	8.12E-01	8.12E-01	-1.27E+00	3.25E+00	3.88E+00	-4.39E-02	2.97E-00	3.25E+00	1.24E+01	1.74E+01	1.93E+01	
	005			7/23/2008	14:25	2.16E+03	1.40E+02	1.37E+02	9.63E-01	3.54E-01	4.16E-01	4.16E-01	-2.48E-01	1.59E+00	2.78E+00	7.65E-01	1.51E-00	2.78E+00	6.32E+00	1.65E+01	1.85E+01	
MW-67-173	006			1/13/2008	14:21	2.93E+03	4.02E+02	1.66E+02	1.11E+00	5.60E-01	4.64E-01	4.64E-01	-1.46E+00	3.63E+00	3.68E+00	1.19E+02	3.74E-01	7.59E+00	6.32E+00	1.68E+01	1.90E+01	
	007	172.3	-159.8	8/31/2007	13:04	1.05E+03	4.28E+02	3.37E+02	3.73E-01	3.77E-01	4.17E-01	4.17E-01	-1.46E+00	3.79E+00	3.68E+00	1.19E+02	3.74E-01	7.59E+00	6.32E+00	1.68E+01	1.90E+01	
	002			10/1/2007	12:30	1.91E+03	2.25E+02	1.95E+02	1.48E-01	1.34E+00	3.79E+00	3.79E+00	-1.34E+00	3.79E+00	4.01E+00	2.82E+00	3.25E-02	3.77E+00	4.12E+00	1.71E+01	1.96E+01	
	003			1/11/2008	13:35	6.95E+02	4.41E+02	4.11E+02	2.14E-01	8.33E-01	1.91E+00	1.91E+00	5.82E+00	2.90E+00	2.90E+00	-1.79E+00	2.58E-02	1.82E+00	1.36E+01	2.39E+01	2.67E+01	
	004			2/25/2008	14:00	9.51E+02	5.51E+02	5.30E+02	4.12E-01	6.06E-01	7.76E-01	7.76E-01	6.65E-01	2.82E+00	3.93E+00	-3.63E-01	2.70E+00	2.70E+00	5.95E+00	2.37E+01	2.82E+01	
	005			7/28/2008	14:42	9.12E+02	1.09E+02	1.36E+02	1.05E-01	2.66E-01	4.85E-01	4.85E-01	-1.22E+00	2.06E+00	3.19E+00	-3.63E-01	2.14E-00	3.49E+00	5.88E+00	1.65E+01	2.84E+01	
MW-67-219	006			11/3/2008	14:37	9.93E+02	2.58E+02	1.66E+02	3.48E-02	3.29E-01	3.02E-01	3.02E-01	-1.41E+00	6.69E+00	6.32E+00	1.49E+00	6.69E+00	7.65E+00	-1.40E+00	1.69E+01	1.97E+01	
	007			8/31/2007	13:13	1.25E+03	4.46E+02	3.30E+02	3.27E-02	3.00E-01	3.47E-01	3.47E-01	-1.58E+00	3.04E+00	3.32E+00	9.02E-01	6.06E-00	3.65E+00	NA	NA	NA	MW-67-219
	002	218.8	-206.3	10/1/2007	12:53	9.46E+02	2.22E+02	1.95E+02	2.27E-01	7.50E-01	1.03E+00	1.03E+00	4.25E+00	2.90E+00	2.90E+00	-1.01E+00	3.11E-00	3.18E+00	1.21E+01	2.64E+01	2.99E+01	
	003			1/11/2008	12:05	1.28E+03	5.18E+02	4.12E+02	4.22E-01	8.07E-01	9.91E-01	9.91E-01	-1.33E+00	3.98E+00	2.09E+00	-1.01E+00	3.11E-00	3.18E+00	9.12E+00	2.27E+01	2.58E+01	
	004			2/25/2008	11:43	1.23E+03	5.81E+02	5.31E+02	-7.61E-02	4.93E-01	6.12E-01	6.12E-01	-2.91E+00	3.03E+00	3.18E+00	1.08E+00	3.15E-02	3.78E+00	1.23E+01	1.81E+01	2.03E+01	
	005			7/28/2008	11:00	1.17E+03	1.16E+02	1.36E+02	-7.49E-02	2.34E-01	4.85E-01	4.85E-01	-1.33E+00	3.33E+00	3.33E+00	2.64E+00	1.92E-00	3.18E+00	5.99E+00	1.68E+01	2.90E+01	
	006			11/3/2008	11:31	1.97E+03	2.93E+02	1.68E+02	8.78E-02	1.69E-01	1.91E-01	1.91E-01	1.32E+00	4.93E+00	5.86E+00	4.00E+00	6.30E-00	8.05E+00	2.30E+00	1.65E+01	1.88E+01	
MW-67-276	001	275.3	-262.8	8/31/2007	12:20	3.67E+02	5.83E+02	3.11E+02	3.34E-01	3.57E-01	4.29E-01	4.29E-01	1.36E+00	3.83E+00	4.02E+00	-9.09E-01	3.75E-00	4.10E+00	NA	NA	NA	MW-67-276
	002			10/1/2007	13:04	1.11E+03	2.30E+02	1.96E+02	3.82E-02	3.83E-01	9.91E-01	9.91E-01	-3.32E+00	3.63E+00	3.34E+00	-3.17E+01	3.51E-00	3.31E+00	5.04E+00	1.59E+01	1.84E+01	
	003			1/11/2008	13:00	1.03E+03	4.89E+02	4.14E+02	9.99E-02	5.50E-01	1.17E+00	1.17E+00	4.55E+00	3.03E+00	3.32E+00	-4.84E+00	3.36E-00	3.01E+00	8.92E+00	2.22E+01	2.52E+01	
	004			2/25/2008	11:48	1.07E+03	5.64E+02	5.29E+02	4.43E-01	7.06E-01	7.88E-01	7.88E-01	2.00E+00	3.45E+00	4.21E+00	1.79E+00	4.11E-00	4.33E+00	1.08E+01	1.89E+01	2.11E+01	
	005			7/23/2008	11:09	1.16E+03	1.16E+02	1.66E+02	-5.05E-02	2.76E-01	5.47E-01	5.47E-01	-8.94E-01	1.98E+00	3.18E+00	5.92E-01	1.97E-00	3.45E+00	7.29E+00	1.62E+01	2.77E+01	
	006			11/3/2008	11:39	1.18E+03	2.75E+02	1.66E+02	-5.08E-02	1.81E-01	2.16E-01	2.16E-01	3.75E-01	5.63E+00	6.29E+00	-7.43E-01	6.00E-00	6.50E+00	7.59E+00	1.62E+01	2.77E+01	
MW-67-323	001	322.3	-309.8	8/31/2007	13:20	3.13E+02	5.50E+02	1.54E+02	2.41E-01	3.06E-01	3.74E-01	3.74E-01	1.14E+00	3.71E+00	4.33E+00	1.29E+00	3.76E-00	4.32E+00	NA	NA	NA	MW-67-323
	002			10/1/2007	14:08	1.99E+03	2.50E+02	1.96E+02	5.67E-01	3.08E-01	9.37E-01	9.37E-01	-5.77E-01	3.04E+00	3.24E+00	-6.19E-01	3.35E-00	3.58E+00	5.25E+00	1.65E+01	1.92E+01	
	003			1/11/2008	13:52	3.74E+02	1.91E+02	1.96E+02	3.98E-01	8.15E-01	9.31E-01	9.31E-01	3.85E+00	4.10E+00	3.69E+00	1.69E+00	3.33E-00	3.76E+00	1.54E+00	2.21E+01	2.59E+01	
	004			2/25/2008	11:59	3.72E+02	2.87E+02	3.61E+02	3.61E-01	7.60E-01	8.62E-01	8.62E-01	-2.08E-01	2.97E+00	3.32E+00	1.29E+00	3.50E-00	4.18E+00	6.83E+00	1.38E+01	2.13E+01	
	005			7/23/2008	11:25	3.38E+02	9.08E+01	1.36E+02	2.38E-01	3.69E-01	7.29E-01	7.29E-01	-2.30E+00	3.99E+00	3.99E+00	2.22E+00	5.12E-00	5.87E+00	-7.38E+00	1.59E+01	2.86E+01	
	006			11/3/2008	11:44	6.84E+02	2.24E+02	1.64E+02	4.20E-02	3.40E-01	4.37E-01	4.37E-01	-3.56E+00	5.21E+00	5.18E+00	4.29E-01	5.12E-00	5.87E+00	7.29E+00	1.59E+01	1.87E+01	
MW-67-340	001	339.8	-327.3	8/31/2007	12:54	3.69E+02	1.61E+02	1.60E+02	1.69E-01	2.71E-01	3.04E-01	3.04E-01	6.52E-01	4.61E+00	5.13E+00	-4.53E+00	5.43E-00	5.20E+00	NA	NA	NA	MW-67-340
	002			10/1/2007	14:00	3.90E+02	1.92E+02	1.96E+02	1.42E-01	1.03E+00	4.20E-01	4.20E-01	7.29E+00	3.46E+00	3.96E+00	-1.22E+00	3.33E-00	3.50E+00	3.89E+00	1.54E+01	1.76E+01	
	003			1/11/2008	13:15	4.92E+02	1.95E+02	1.92E+02	1.07E-01	8.25E-01	1.03E+00	1.03E+00	5.82E+00	3.74E+00	2.33E+00	3.88E+02	2.12E-00	2.37E+00	-8.32E+00	2.24E+01	2.62E+01	
	004			2/25/2008	12:00	4.78E+02	2.82E+02	2.86E+02	-2.17E-01	5.53E-01	6.94E-01	6.94E-01	-1.58E+00	3.99E+00	3.94E+00	-7.69E-01	3.19E-00	3.43E+00	5.70E+00	1.83E+01	2.09E+01	
	005			7/23/2008	11:18	5.11E+02	9.36E+01	1.30E+02	-3.39E-01	2.28E-01	5.49E-01	5.49E-01	3.13E+00	2.21E+00	3.81E+00	9.03E-01	2.25E-00	3.68E+00	-6.94E+00	1.57E+01	2.78E+01	
	006			11/3/2008	11:54	6.69E+02	2.22E+02	1.63E+02	8.08E-02	4.26E-01	5.43E-01	5.43E-01	2.23E+00	6.23E+00	6.23E+00	3.65E+00	6.76E+00	8.47E+00	-8.34E+00	1.59E+01	1.88E+01	
MW-107	004	20.1	111.0	9/28/2005	12:00	3.09E+02	3.87E+02	4.2CE+02	NA	NA	NA	NA	3.86E+00	1.16E+01	8.53E+00	NA	NA	NA	NA	NA	MW-107	
	001			12/8/2005	11:15	1.28E+02	4.11E+02	4.54E+02	7.65E+00	1.53E+01	1.33E+01	1.33E+01	2.55E+00	7.64E+00	5.59E+00	4.11E+00	1.23E-01	8.97E+00	NA	NA	NA	
	002			4/18/2006	11:15	1.27E+02	4.11E+02	4.51E+02	9.00E+00	3.90E+01	4.40E+01	4.40E+01	2.65E+00	7.94E+00	5.62E+00	4.30E+00	1.31E-01	9.21E+00	NA	NA	NA	
	003			6/6/2006	13:30	1.05E+02	1.53E+02	1.56E+02	-2.07E-01	5.43E-01	7.13E-01	7.13E-01	1.65E+00	8.31E+00	9.24E+00	-3.66E-01	8.36E-00	9.65E+00	NA	NA	NA	
	005	32.7	110.1	7/23/2007	14:18	8.92E+01	1.52E+02	1.70E+02	1.66E-01	5.19E-01	5.87E-01	5.87E-01	8.13E+00	2.73E+00	1.60E+00	1.03E-01	1.41E-00	1.60E+00	NA	NA	NA	
	006			4/24/2008	15:41	1.91E+02	8.90E+01	1.44E+02	-6.22E-02	2.21E-01	4.42E-01	4.42E-01	-2.03E+00	2.78E+00	4.11E+00	-1.38E+00	2.12E-00	3.07E+00	NA	NA	NA	
	007			5/30/2008	15:25	4.62E+01	9.02E+01	1.58E+02	6.62E-02	5.51E-01	9.60E-01	9.60E-01	2.22E+00	1.88E+00	3.36E+00	5.48E-01	2.20E-00	3.57E+00				

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing ²	SAMPLE ZONE CENTER, elevation ft above msl ²	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID						
				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			
03-T1	006			5/26/2006	13:30	7.32E+02	2.33E+02	1.89E+02	1.27E+00	1.02E+00	1.01E+00	1.21E+00	8.34E+00	9.42E+00	5.92E+00	8.98E+00	1.15E+01	NA	NA	NA	NA	NA	NA	03-T1
01	014			7/12/2006	12:50	6.84E+02	2.36E+02	1.98E+02	3.36E-01	1.36E+00	1.44E+00	-4.00E+00	6.82E+00	1.18E+01	-1.14E+00	1.18E-01	1.26E+01	NA	NA	NA	NA	NA	NA	03-T1
01	015			8/15/2006	11:30	7.06E+02	2.25E+02	1.73E+02	NA	NA	NA	-1.04E+00	6.82E+00	1.33E+01	2.15E+00	1.18E-01	8.29E+00	NA	NA	NA	NA	NA	NA	03-T1
01	016			6/12/2007	12:54	5.06E+02	4.25E+02	4.39E+02	6.25E-01	8.75E-01	9.54E-01	-8.51E-02	2.94E+00	2.22E+00	7.17E-01	2.00E-00	2.33E+00	NA	NA	NA	NA	NA	NA	03-T1
01	017			8/1/2007	13:20	4.90E+02	3.38E+02	2.73E+02	5.21E-02	5.13E-01	3.47E-01	8.49E-01	3.57E+00	4.15E+00	2.88E-01	3.42E-00	3.92E+00	NA	NA	NA	NA	NA	NA	03-T1
01	018			10/22/2007	16:13	5.30E+02	4.01E+02	4.01E+02	3.41E-01	5.49E-01	6.09E-01	-1.08E+00	3.44E+00	3.64E+00	-1.34E+00	3.52E-00	3.68E+00	NA	NA	NA	NA	NA	NA	03-T1
01	019			1/22/2008	16:11	7.29E+02	3.27E+02	2.96E+02	6.26E-01	7.29E-01	7.69E-01	1.21E+00	3.14E+00	3.76E+00	-1.79E-01	3.56E-00	3.93E+00	8.87E+00	1.85E+01	1.85E+01	1.85E+01	1.85E+01	03-T1	
01	019-B8			1/22/2008	16:11	2.54E+01	1.68E+02	1.94E+02	1.62E-01	6.14E-01	7.38E-01	7.29E-01	2.57E+00	3.04E+00	-2.53E-01	3.14E-00	3.46E+00	-1.42E+00	1.82E+01	1.82E+01	1.82E+01	1.82E+01	03-T1	
01	019-D8			1/22/2008	16:11	6.05E+02	3.15E+02	2.97E+02	6.43E-01	7.41E-01	7.79E-01	1.11E+00	2.75E+00	3.21E+00	-2.36E-01	2.51E-00	2.75E+00	1.14E+01	1.65E+01	1.65E+01	1.65E+01	1.65E+01	03-T1	
01	020			7/23/2008	11:16	2.38E+03	4.62E+02	2.97E+02	1.07E+01	1.68E+00	6.89E-01	1.73E+02	2.04E+01	3.50E+00	-2.53E-01	3.02E-00	3.34E+00	2.61E+02	3.20E+01	3.20E+01	3.20E+01	3.20E+01	03-T1	
01	021			5/2/2008	15:24	7.09E+02	1.63E+02	2.22E+02	7.24E-01	5.19E-01	8.26E-01	1.84E+00	3.19E+00	1.15E+00	1.87E-00	2.82E+00	1.87E+00	2.82E+00	2.82E+00	2.82E+00	2.82E+00	2.82E+00	03-T1	
01	022			7/23/2008	11:16	5.56E+02	2.58E+02	3.79E+02	6.40E-01	5.19E-01	8.37E-01	2.41E+00	2.24E+00	4.18E+00	6.54E-01	2.44E-00	4.01E+00	NA	NA	NA	NA	NA	NA	03-T1
01	022			10/20/2008	10:19	5.09E+02	5.63E+02	5.91E+02	7.01E-01	5.47E-01	5.20E-01	2.51E+00	6.27E+00	7.46E+00	1.51E+00	6.27E+00	7.35E+00	NA	NA	NA	NA	NA	NA	03-T1
01	013	5.7	2.6	10/7/2005	12:00	7.03E+02	3.93E+02	4.15E+02	NA	NA	NA	3.67E+00	1.10E+01	8.06E+00	4.13E+00	1.24E-01	9.39E+00	NA	NA	NA	NA	NA	03-T1	
01	013			10/21/2005	12:00	1.47E+03	5.63E+02	4.27E+02	NA	NA	NA	3.33E+00	1.00E+01	7.33E+00	3.07E+00	9.00E-00	6.50E+00	NA	NA	NA	NA	NA	03-T1	
01	014			10/28/2005	12:00	1.28E+03	4.56E+02	4.72E+02	NA	NA	NA	3.44E+00	1.03E+01	7.67E+00	4.23E+00	1.28E-01	8.81E+00	NA	NA	NA	NA	NA	03-T1	
01	015			11/4/2005	12:00	1.19E+03	4.59E+02	4.76E+02	NA	NA	NA	3.41E+00	1.02E+01	7.53E+00	3.86E+00	1.16E-01	8.81E+00	NA	NA	NA	NA	NA	03-T1	
01	016			11/10/2005	12:00	1.64E+03	4.59E+02	4.61E+02	NA	NA	NA	3.81E+00	1.14E+01	8.34E+00	3.98E+00	1.19E-01	9.09E+00	NA	NA	NA	NA	NA	03-T1	
01	017			11/18/2005	12:00	1.13E+03	4.65E+02	4.81E+02	NA	NA	NA	3.97E+00	1.19E+01	8.70E+00	4.15E+00	1.29E-01	9.55E+00	NA	NA	NA	NA	NA	03-T1	
01	018			12/2/2005	12:00	1.33E+03	4.56E+02	4.64E+02	NA	NA	NA	2.31E+00	6.92E+00	5.23E+00	2.48E+00	7.74E-00	6.11E+00	NA	NA	NA	NA	NA	03-T1	
01	018			12/15/2005	13:30	1.29E+03	4.62E+02	4.70E+02	NA	NA	NA	2.77E+00	8.30E+00	6.09E+00	2.85E+00	8.55E-00	6.57E+00	NA	NA	NA	NA	NA	03-T1	
01	020			12/50/2005	10:50	1.69E+03	4.74E+02	4.71E+02	NA	NA	NA	3.81E+00	1.14E+01	8.46E+00	3.49E+00	1.05E-01	8.31E+00	NA	NA	NA	NA	NA	03-T1	
01	025			1/6/2006	8:45	2.42E+03	4.92E+02	4.66E+02	NA	NA	NA	2.86E+00	8.57E+00	6.56E+00	4.04E+00	1.21E-01	9.38E+00	NA	NA	NA	NA	NA	03-T1	
01	004			1/13/2006	13:20	1.78E+03	4.77E+02	4.72E+02	NA	NA	NA	4.01E+00	1.20E+01	8.74E+00	3.41E+00	1.02E-01	7.94E+00	NA	NA	NA	NA	NA	03-T1	
01	005			1/20/2006	11:00	1.75E+03	4.56E+02	4.61E+02	NA	NA	NA	3.40E+00	1.02E+01	7.71E+00	3.27E+00	9.82E-00	7.59E+00	NA	NA	NA	NA	NA	03-T1	
01	006			1/25/2006	11:10	2.32E+03	4.86E+02	4.61E+02	NA	NA	NA	3.96E+00	1.19E+01	8.77E+00	3.17E+00	9.50E-00	7.64E+00	NA	NA	NA	NA	NA	03-T1	
01	007			2/1/2006	11:15	2.13E+03	4.80E+02	4.60E+02	NA	NA	NA	3.17E+00	9.51E+00	7.02E+00	3.47E+00	1.04E-01	7.69E+00	NA	NA	NA	NA	NA	03-T1	
01	009			3/16/2006	12:00	1.69E+03	3.36E+02	2.04E+02	5.87E-01	9.21E-01	1.00E+00	-7.43E-01	6.36E+00	6.83E+00	-1.22E-01	6.33E-00	6.88E+00	NA	NA	NA	NA	NA	03-T1	
01	011			5/25/2006	13:15	1.90E+03	3.86E+02	2.48E+02	1.69E+00	1.11E+00	1.01E+00	1.64E+00	1.01E+01	1.22E+01	5.67E+00	9.40E-00	1.25E+01	NA	NA	NA	NA	NA	03-T1	
01	019			7/12/2006	12:25	1.83E+03	3.78E+02	2.51E+02	7.27E-01	1.72E+00	1.80E+00	-2.58E+00	6.90E+00	8.07E+00	1.30E+00	6.69E-00	7.77E+00	NA	NA	NA	NA	NA	03-T1	
01	020			8/15/2006	10:30	1.58E+03	3.79E+02	2.72E+02	NA	NA	NA	-8.37E-01	7.17E+00	7.64E+00	3.29E+00	9.10E-00	1.14E+01	NA	NA	NA	NA	NA	03-T1	
01	021			6/12/2007	9:25	1.45E+03	5.19E+02	4.36E+02	-3.89E-01	7.05E-01	9.59E-01	2.03E-01	2.29E+00	2.54E+00	-1.00E-01	2.42E+00	2.74E+00	5.88E+00	1.39E+01	1.39E+01	1.39E+01	1.39E+01	03-T1	
01	022			8/1/2007	14:14	1.25E+03	4.62E+02	2.55E+02	-4.84E-02	5.37E-01	6.11E-01	-1.75E+00	3.23E+00	3.20E+00	1.99E-02	3.54E-00	4.00E+00	NA	NA	NA	NA	NA	03-T1	
01	023			10/22/2007	15:07	1.17E+03	4.76E+02	4.02E+02	2.36E-01	5.28E-01	6.08E-01	-7.13E-02	2.82E+00	3.11E+00	2.53E+00	3.50E-02	3.81E+00	NA	NA	NA	NA	NA	03-T1	
01	024			1/22/2008	16:16	1.33E+03	3.83E+02	2.97E+02	4.31E-01	8.54E-01	9.63E-01	7.39E-01	2.97E+00	3.39E+00	-1.14E+00	3.39E-00	2.86E+00	2.78E+00	1.62E+01	1.62E+01	1.62E+01	1.62E+01	03-T1	
01	025			5/2/2008	14:44	1.02E+03	1.77E+02	2.22E+02	6.52E-01	3.31E-01	4.70E-01	5.80E-01	2.06E+00	3.53E+00	7.90E-01	1.63E-00	3.60E+00	NA	NA	NA	NA	NA	03-T1	
01	026			7/23/2008	13:40	9.97E+02	2.85E+02	3.64E+02	7.16E-01	5.31E-01	4.36E-01	4.36E-01	3.57E+02	1.72E+00	2.93E+00	-1.02E+00	3.59E+00	NA	NA	NA	NA	NA	03-T1	
01	027			7/23/2008	13:10	NA	NA	NA	5.90E-01	5.19E-01	8.40E-01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	03-T1	
01	027			10/20/2008	10:36	9.28E+02	5.97E+02	5.90E+02	4.73E-01	4.95E-01	4.85E-01	-4.68E-01	4.82E+00	5.31E+00	-5.02E+00	6.54E+00	6.60E+00	NA	NA	NA	NA	NA	03-T1	
01	027			1/30/2007	11:45	1.76E+03	6.00E+02	5.70E+02	1.95E+02	2.19E+00	1.70E+00	7.00E-01	1.32E+00	1.40E+00	-3.20E-01	1.38E-00	1.60E+00	1.64E+01	2.67E+01	2.67E+01	2.67E+01	2.67E+01	03-T1	
01	002		6.1	2/27/2007	11:24	4.32E+03	6.90E+02	5.70E+02	1.38E+01	2.31E+00	2.10E+00	1.11E+00	1.95E+00	2.10E+00	7.00E-01	1.95E+00	2.20E+00	-1.30E+00	2.55E+01	2.55E+01	2.55E+01	2.55E+01	03-T1	
01	004			6/13/2007	11:39	5.33E+03	5.25E+02	4.35E+02	1.45E+01	1.91E+00	6.24E+01	8.50E-01	3.57E+00	4.15E+00	2.82E+00	4.28E-00	4.93E+00	4.42E+00	1.95E+01	1.95E+01	1.95E+01	1.95E+01	03-T1	
01	004			8/6/2007	15:55	2.80E+03	2.81E+02	1.95E+02	2.68E+01	2.33E+00	5.71E+01	2.53E+00	4.30E+00	4.00E+00	4.48E+00	6.84E-00	4.17E+00	NA	NA	NA	NA	NA	03-T1	
01	005			1/15/2008	14:54	4.95E+02	2.04E+02	1.76E+02	7.73E+00	1.31E+00	6.91E-01	2.85E+00												

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

Well ID	SAMPLE ID	SAMPLE ZONE CENTER, depth ft below top of casing ²	SAMPLE ZONE CENTER, elevation ft above msl ³	SAMPLE COLLECTION		ANALYSIS RESULTS												Well ID						
				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			
1AF-002	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	9.00E-01	5.40E-01	5.40E+00	-2.50E+00	7.20E+00	8.10E+00	NA	NA	NA	1AF-002	
	005			3/7/2007	14:45	-8.30E-01	1.56E+02	1.60E+02	8.30E-01	1.90E+00	1.60E+00	4.80E+00	4.80E+00	1.70E+00	-1.70E+00	5.40E-01	6.30E+00	7.30E+00	NA	NA	NA	NA	1AF-002	
006	006			6/7/2007	13:18	-8.85E-00	1.33E+02	1.54E+02	3.19E-01	6.02E-01	6.79E-01	7.80E-01	2.65E+00	3.04E+00	6.55E-01	2.60E-00	3.04E+00	NA	NA	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	-5.43E-01	2.10E+00	1.69E+00	-1.44E+00	1.78E-00	1.59E+00	NA	NA	NA	NA	NA	NA	NA
008	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	NA	NA	NA
	009			4/10/2008	0:00	4.65E+01	1.44E+02	1.44E+02	4.73E-01	3.02E-01	4.56E-01	1.91E+00	2.14E+00	3.95E+00	1.61E+00	2.46E-00	4.56E+00	NA	NA	NA	NA	NA	NA	NA
RW-1	010			10/17/2008	10:32	8.19E+01	1.55E+02	1.74E+02	4.05E-01	7.90E-01	9.01E-01	2.36E-01	2.76E+00	3.16E+00	-3.08E-02	3.09E-00	3.46E+00	-4.61E+00	2.01E+01	2.35E+01	NA	NA	NA	NA
	001	107.5	-30.0	10/5/2006	11:37	6.41E+04	4.88E+03	8.52E+02	-8.44E-01	1.29E+00	1.32E+00	9.50E-01	4.75E+00	5.45E+00	8.01E-01	4.62E-00	5.32E+00	NA	NA	NA	NA	NA	NA	NA
002	002			10/5/2006	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	5.32E+00	NA	NA	NA	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	NA	NA	NA
004	004			10/31/2006	15:55	2.63E+04	2.04E+03	5.51E+02	-1.06E-01	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	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	NA	NA	NA
006	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	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	NA	NA	NA
MH-5 ⁴	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	NA	NA	NA
	001	NA	NA	6/29/2007	12:15	1.41E+03	2.33E+02	1.87E+02	-3.20E-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	NA	NA	NA
002	002			8/10/2007	15:15	1.17E+03	5.21E+02	4.56E+02	3.17E-02	8.28E-01	9.38E-01	-5.40E-01	3.17E+00	2.87E+00	-8.50E-01	2.84E-00	2.93E+00	NA	NA	NA	NA	NA	NA	NA
	003			10/26/2007	13:30	1.02E+03	2.30E+02	1.84E+02	1.60E-01	6.00E-01	7.10E-01	2.15E-01	2.64E+00	2.95E+00	-5.20E-01	2.90E-00	3.60E+00	NA	NA	NA	NA	NA	NA	NA
004	004			1/19/2008	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	2.53E-00	2.90E+00	NA	NA	NA	NA	NA	NA	NA
	001	NA	NA	6/29/2007	12:35	7.93E+02	2.07E+02	1.80E+02	-3.83E-01	6.75E-01	9.80E-01	0.00E+00	7.04E+00	4.44E+00	-9.13E-01	3.30E-00	3.40E+00	NA	NA	NA	NA	NA	NA	NA
B-1 ⁵	002			8/14/2007	11:30	1.10E+03	2.25E+02	1.90E+02	1.29E-02	5.93E-01	7.38E-01	0.00E+00	6.71E+00	3.93E+00	9.94E-01	3.50E-00	4.16E+00	NA	NA	NA	NA	NA	NA	NA
	003			10/22/2007	14:49	1.10E+03	4.68E+02	4.01E+02	-1.56E-01	5.72E-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	NA	NA	NA
004	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	NA	NA	NA
	001			4/18/2008	18:25	1.17E+03	1.57E+02	2.01E+02	-1.14E-01	3.81E-01	7.82E-01	2.00E+01	3.70E+00	3.07E+00	-2.48E-01	1.76E-00	2.97E+00	NA	NA	NA	NA	NA	NA	NA
B-6 ⁶	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	NA	NA	NA
	002			8/11/2007	8:30	5.16E+01	1.68E+02	1.92E+02	-3.06E-01	6.20E-01	8.32E-01	2.97E+00	3.42E+00	-2.88E+00	3.31E-00	2.55E+00	NA	NA	NA	NA	NA	NA	NA	NA
003	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	3.65E+00	NA	NA	NA	NA	NA	NA	NA
	004			1/19/2008	16:30	4.23E+01	1.79E+02	1.79E+02	1.05E-01	7.05E-01	8.83E-01	3.96E+00	4.41E+00	3.32E+00	1.29E+00	3.13E-00	3.60E+00	NA	NA	NA	NA	NA	NA	NA
005			4/25/2008	14:15	5.23E+01	8.45E+01	1.43E+02	-1.20E-01	2.59E-01	5.25E-01	-2.89E-01	1.96E+00	3.24E+00	-7.50E-01	3.43E-00	4.21E+00	NA	NA	NA	NA	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 Multi-level 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 U5T1, sample IDs 019-B, 019-D, and 019-S were collected for laboratory and field QA/QC (B=Blind, D=Duplicate, S=Spike). QA/QC samples were not included in calculations for rolling averages.
- These locations are storm drains, not monitoring wells.



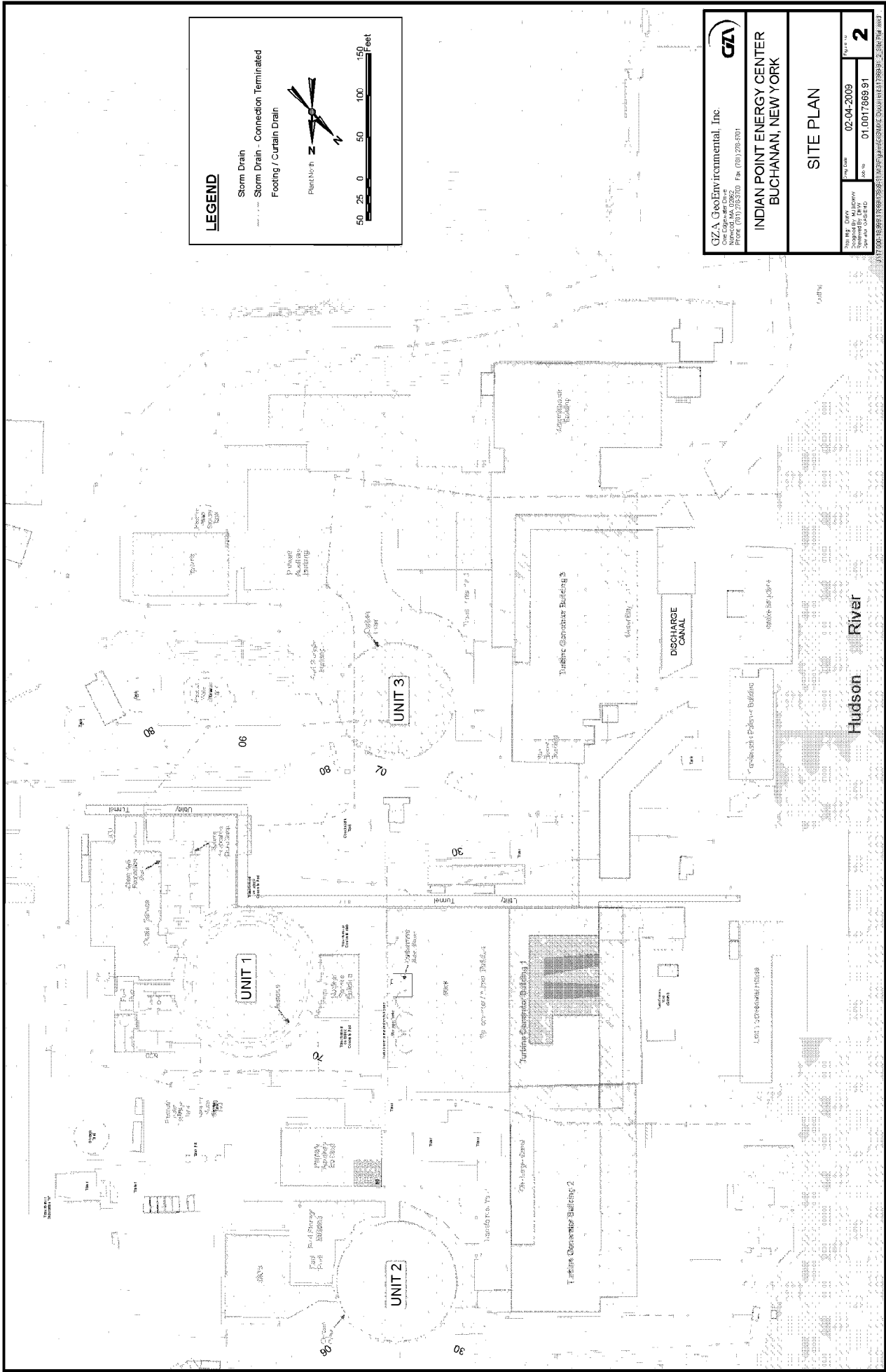
FIGURES

- 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 5 4th Quarter 2008 Shallow and Deep Groundwater Contours**
- Figure 6 4th Quarter 2008 Average Tritium Activity Map**
- Figure 7 4th Quarter 2008 Average Strontium-90 Activity Map**
- Figure 8 4th Quarter 2008 Average Cesium, Cobalt, and Nickel Activity Map**



<p>GZA GeoEnvironmental, Inc. One Edgewood Drive Peekskill, NY 10570 Phone: (914) 293-2700 Fax: (914) 278-5771</p>	
INDIAN POINT ENERGY CENTER BUCHANAN, NEW YORK	
SITE LOCUS PLAN	
Proj. No. M.E.B. Designed By: M.B. Drawn By: M.B. Checked By: M.B.	Date: 02-04-2009 Scale: 01:00178669.91
Figure No. 1	

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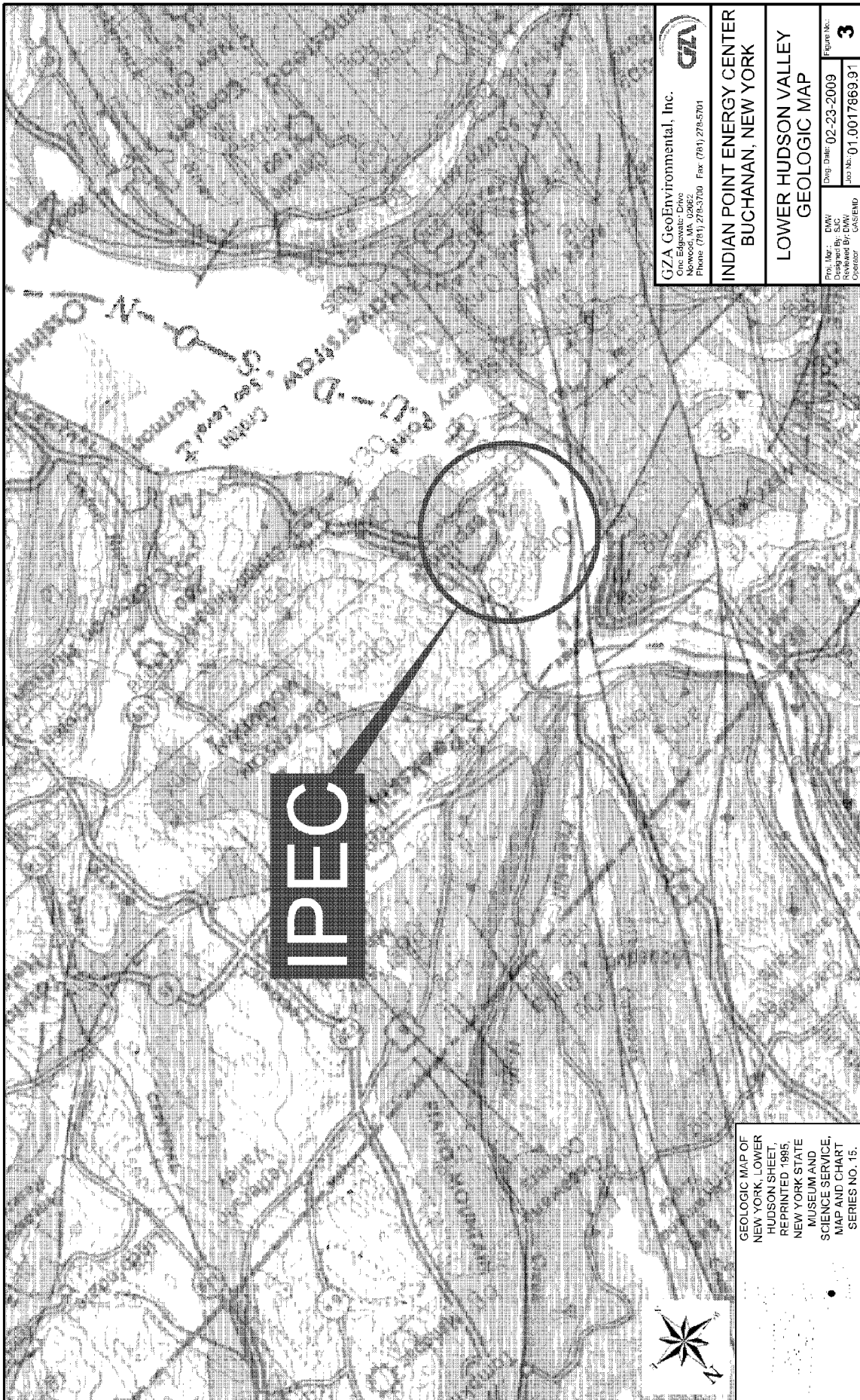
GZA GeoEnvironmental, Inc.
 One Cambridge Court
 Norwood, MA 02062
 Phone: (978) 235-9300 Fax: (978) 235-9701

INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK

SITE PLAN

Project No.	02-04-2009
Revision No.	01.D0017669.91
Scale	AS SHOWN
Sheet No.	2

DATE PLOTTED: 10/28/09 10:58:23 AM C:\PROJECTS\INDIAN POINT ENERGY CENTER\SITE PLAN\2-01.D0017669.91



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 One Edgewater Drive
 Phone: (761) 274-3700 Fax: (761) 274-5701

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

**LOWER HUDSON VALLEY
 GEOLOGIC MAP**

Proj. No.: DWV
 Drawn by: SJC
 Checked by: BR
 Operator: CAS/FMD

Fig. No.: 02-23-2009
 Job No.: 01.0017869.97

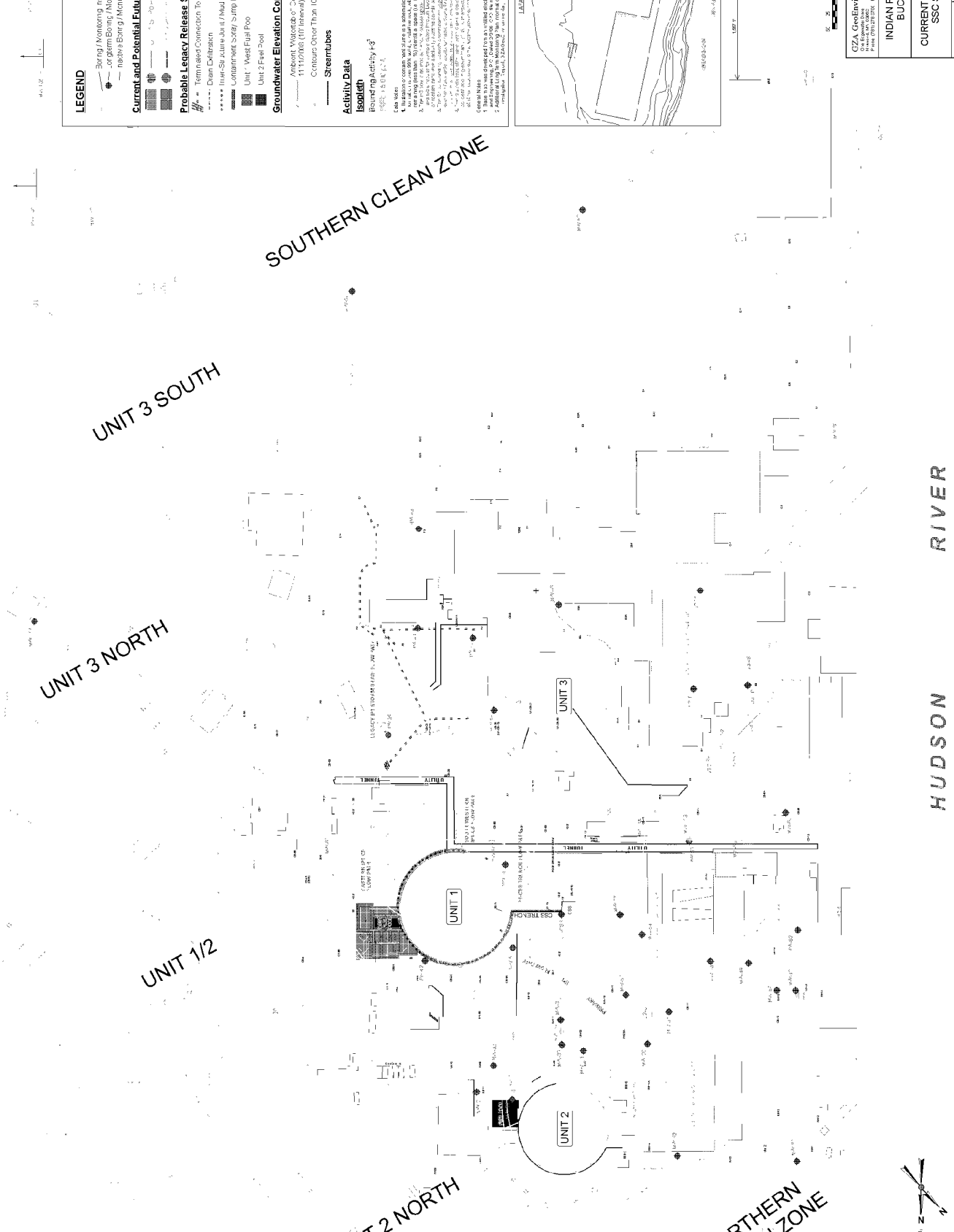
Figure No.: **3**

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



GZA--C:\77000-16,969\17869-91.mxd\Figures\CAD\17869-91_Lower Hudson Valley Geologic Map.dwg [FIG-3] February 24, 2009 - 8:33am gregory.scott

CURRENT AND POTENTIAL FUTURE SSC SOURCE LOCATIONS



UNIT 3 SOUTH

UNIT 3 NORTH

UNIT 1/2

UNIT 2 NORTH

UNIT 2 SOUTH

SOUTHERN CLEAN ZONE

UNIT 1

UNIT 2

UNIT 3

HUDSON RIVER

NORTHERN CLEAN ZONE

LEGEND

● Boring / Monitoring Installation Designator
 ○ Boring / Monitoring Installation Designator
 ○ Boring / Monitoring Installation Designator
 ○ Boring / Monitoring Installation Designator

■ Current and Potential Future Source Locations

■ Probable Legacy Release SSCs

--- Terminated Connection to Storm Drain
 --- Contaminated Storm Drain
 --- Unit 1 West Fuel Pool
 --- Unit 2 Fuel Pool

Groundwater Elevation Contours
 --- Ambient Water Table Contours
 --- Contours Other Than 10' Interval

Stream/Tubes

Activity Data
 Isopleth
 --- Boarding Activity 900'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

Scale: 1" = 100'

GZA GeoEnvironmental, Inc.
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INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK

CURRENT AND POTENTIAL FUTURE SSC SOURCE LOCATIONS

Project No.	05-06-2009	Page No.	4
Revision No.	01 (007)589-01		



4th QUARTER 2008 SHALLOW AND DEEP GROUNDWATER CONTOURS

WPT ID	SHALLOW CONTOUR DATA (RELATIVE TO 100' ELEVATION)		DEEP CONTOUR DATA (RELATIVE TO 100' ELEVATION)	
	CONTOUR VALUE	DATE	CONTOUR VALUE	DATE
WPT001	10.5	10/15/08	10.5	10/15/08
WPT002	10.5	10/15/08	10.5	10/15/08
WPT003	10.5	10/15/08	10.5	10/15/08
WPT004	10.5	10/15/08	10.5	10/15/08
WPT005	10.5	10/15/08	10.5	10/15/08
WPT006	10.5	10/15/08	10.5	10/15/08
WPT007	10.5	10/15/08	10.5	10/15/08
WPT008	10.5	10/15/08	10.5	10/15/08
WPT009	10.5	10/15/08	10.5	10/15/08
WPT010	10.5	10/15/08	10.5	10/15/08
WPT011	10.5	10/15/08	10.5	10/15/08
WPT012	10.5	10/15/08	10.5	10/15/08
WPT013	10.5	10/15/08	10.5	10/15/08
WPT014	10.5	10/15/08	10.5	10/15/08
WPT015	10.5	10/15/08	10.5	10/15/08
WPT016	10.5	10/15/08	10.5	10/15/08
WPT017	10.5	10/15/08	10.5	10/15/08
WPT018	10.5	10/15/08	10.5	10/15/08
WPT019	10.5	10/15/08	10.5	10/15/08
WPT020	10.5	10/15/08	10.5	10/15/08
WPT021	10.5	10/15/08	10.5	10/15/08
WPT022	10.5	10/15/08	10.5	10/15/08
WPT023	10.5	10/15/08	10.5	10/15/08
WPT024	10.5	10/15/08	10.5	10/15/08
WPT025	10.5	10/15/08	10.5	10/15/08
WPT026	10.5	10/15/08	10.5	10/15/08
WPT027	10.5	10/15/08	10.5	10/15/08
WPT028	10.5	10/15/08	10.5	10/15/08
WPT029	10.5	10/15/08	10.5	10/15/08
WPT030	10.5	10/15/08	10.5	10/15/08
WPT031	10.5	10/15/08	10.5	10/15/08
WPT032	10.5	10/15/08	10.5	10/15/08
WPT033	10.5	10/15/08	10.5	10/15/08
WPT034	10.5	10/15/08	10.5	10/15/08
WPT035	10.5	10/15/08	10.5	10/15/08
WPT036	10.5	10/15/08	10.5	10/15/08
WPT037	10.5	10/15/08	10.5	10/15/08
WPT038	10.5	10/15/08	10.5	10/15/08
WPT039	10.5	10/15/08	10.5	10/15/08
WPT040	10.5	10/15/08	10.5	10/15/08
WPT041	10.5	10/15/08	10.5	10/15/08
WPT042	10.5	10/15/08	10.5	10/15/08
WPT043	10.5	10/15/08	10.5	10/15/08
WPT044	10.5	10/15/08	10.5	10/15/08
WPT045	10.5	10/15/08	10.5	10/15/08
WPT046	10.5	10/15/08	10.5	10/15/08
WPT047	10.5	10/15/08	10.5	10/15/08
WPT048	10.5	10/15/08	10.5	10/15/08
WPT049	10.5	10/15/08	10.5	10/15/08
WPT050	10.5	10/15/08	10.5	10/15/08

WPT ID	SHALLOW CONTOUR DATA (RELATIVE TO 100' ELEVATION)		DEEP CONTOUR DATA (RELATIVE TO 100' ELEVATION)	
	CONTOUR VALUE	DATE	CONTOUR VALUE	DATE
WPT051	10.5	10/15/08	10.5	10/15/08
WPT052	10.5	10/15/08	10.5	10/15/08
WPT053	10.5	10/15/08	10.5	10/15/08
WPT054	10.5	10/15/08	10.5	10/15/08
WPT055	10.5	10/15/08	10.5	10/15/08
WPT056	10.5	10/15/08	10.5	10/15/08
WPT057	10.5	10/15/08	10.5	10/15/08
WPT058	10.5	10/15/08	10.5	10/15/08
WPT059	10.5	10/15/08	10.5	10/15/08
WPT060	10.5	10/15/08	10.5	10/15/08
WPT061	10.5	10/15/08	10.5	10/15/08
WPT062	10.5	10/15/08	10.5	10/15/08
WPT063	10.5	10/15/08	10.5	10/15/08
WPT064	10.5	10/15/08	10.5	10/15/08
WPT065	10.5	10/15/08	10.5	10/15/08
WPT066	10.5	10/15/08	10.5	10/15/08
WPT067	10.5	10/15/08	10.5	10/15/08
WPT068	10.5	10/15/08	10.5	10/15/08
WPT069	10.5	10/15/08	10.5	10/15/08
WPT070	10.5	10/15/08	10.5	10/15/08
WPT071	10.5	10/15/08	10.5	10/15/08
WPT072	10.5	10/15/08	10.5	10/15/08
WPT073	10.5	10/15/08	10.5	10/15/08
WPT074	10.5	10/15/08	10.5	10/15/08
WPT075	10.5	10/15/08	10.5	10/15/08
WPT076	10.5	10/15/08	10.5	10/15/08
WPT077	10.5	10/15/08	10.5	10/15/08
WPT078	10.5	10/15/08	10.5	10/15/08
WPT079	10.5	10/15/08	10.5	10/15/08
WPT080	10.5	10/15/08	10.5	10/15/08

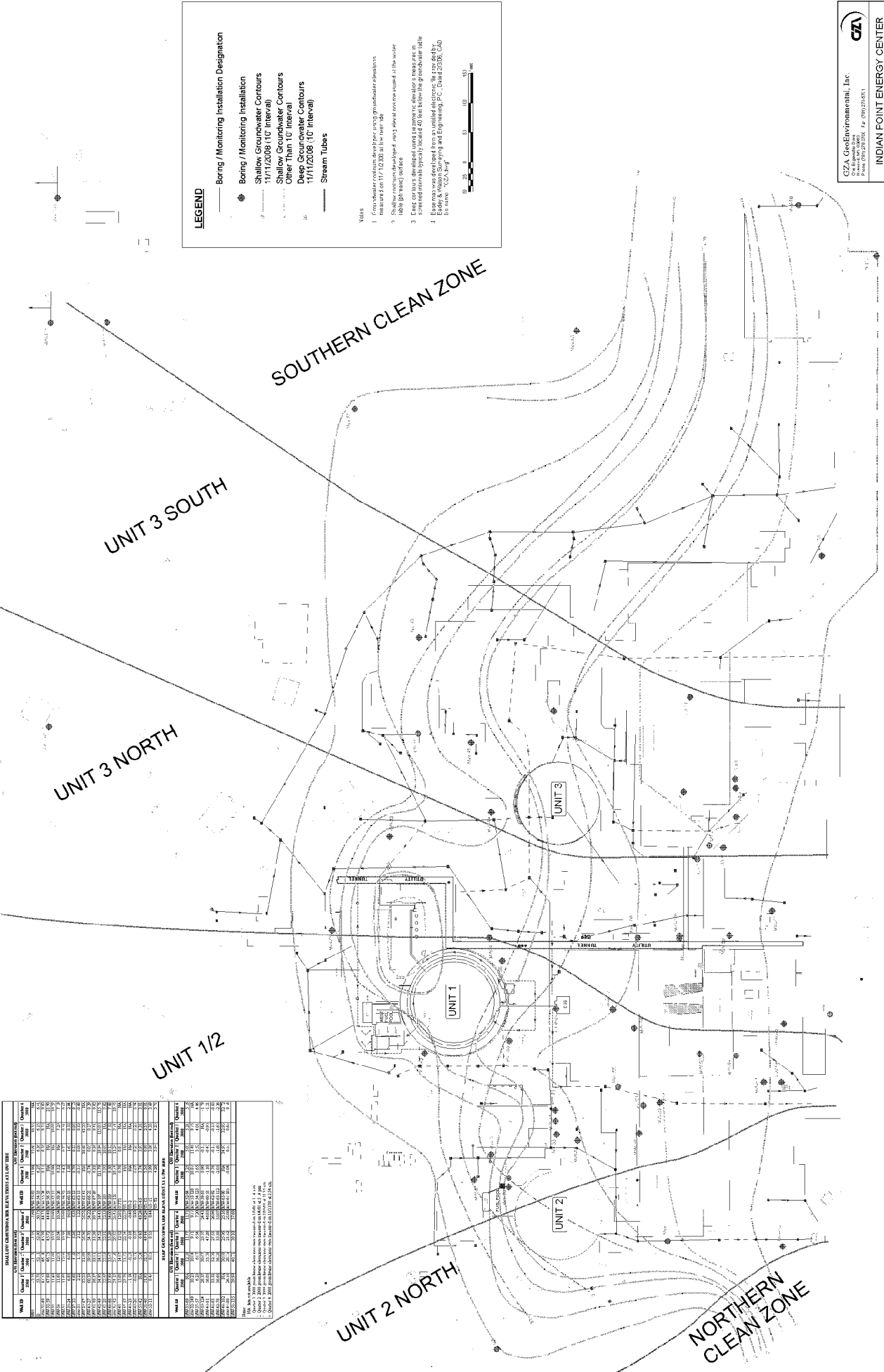
LEGEND

- Boring / Monitoring Installation
- Boring / Monitoring Installation
- Shallow Groundwater Contours
11/11/2008 (10' interval)
- Shallow Groundwater Contours
Other Than 10' interval
- Deep Groundwater Contours
11/11/2008 (10' interval)
- Stream Tubes

Notes

- Contour values were developed using groundwater elevations measured on 11/11/2008. The water table may have changed since that time.
- Each contour developed using a hydraulic head interval of 10 feet.
- Each contour developed using a hydraulic head interval of 10 feet. Contours are shown as solid lines for intervals greater than 10 feet and as dashed lines for intervals of 10 feet or less.
- Streams were developed from a uniaxial electronic log run on 11/11/2008. The stream tubes were developed using the stream tube method.

Scale: 0 50 100 150 feet



GZA Geoscientific, Inc.
 4th Quarter 2008
 SHALLOW AND DEEP
 GROUNDWATER CONTOURS

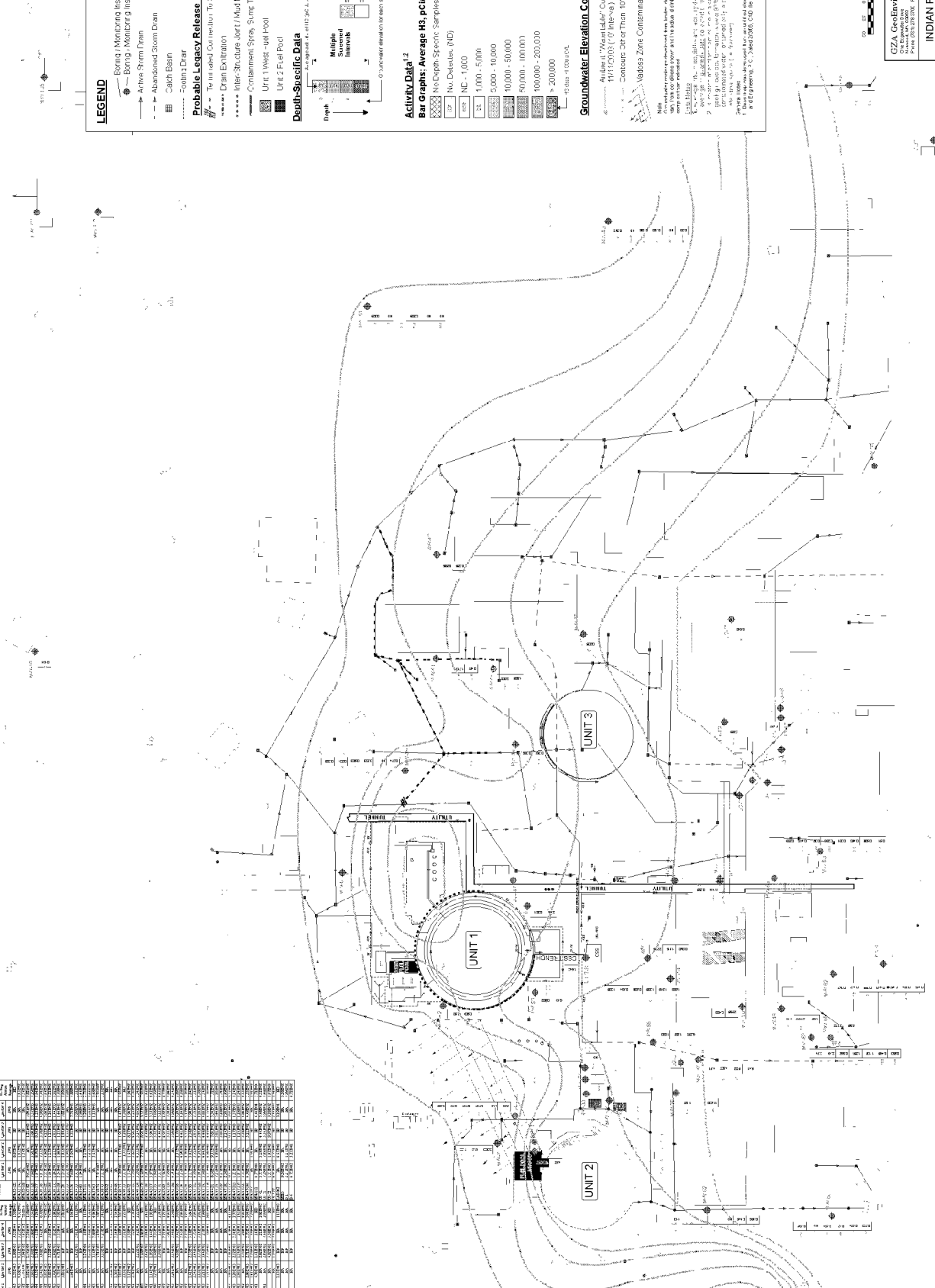
INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK

4th QUARTER 2008
 SHALLOW AND DEEP
 GROUNDWATER CONTOURS

DATE: 11/11/2008
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NO.: 410017589.01
 PAGE: 5

4th QUARTER 2008 ROLLING AVERAGE TRITIUM ACTIVITY MAP

UNIT	DATE	TIME	ACTIVITY (BPM)		
UNIT 1	12/15/08	08:00	100		
		08:15	105		
		08:30	110		
		08:45	115		
		09:00	120		
		09:15	125		
		09:30	130		
		09:45	135		
		10:00	140		
		10:15	145		
		10:30	150		
		10:45	155		
		11:00	160		
		11:15	165		
		11:30	170		
		11:45	175		
		12:00	180		
		12:15	185		
		12:30	190		
		12:45	195		
		13:00	200		
		UNIT 2	12/15/08	08:00	100
				08:15	105
				08:30	110
08:45	115				
09:00	120				
09:15	125				
09:30	130				
09:45	135				
10:00	140				
10:15	145				
10:30	150				
10:45	155				
11:00	160				
11:15	165				
11:30	170				
11:45	175				
12:00	180				
12:15	185				
12:30	190				
12:45	195				
13:00	200				
UNIT 3	12/15/08			08:00	100
				08:15	105
				08:30	110
		08:45	115		
		09:00	120		
		09:15	125		
		09:30	130		
		09:45	135		
		10:00	140		
		10:15	145		
		10:30	150		
		10:45	155		
		11:00	160		
		11:15	165		
		11:30	170		
		11:45	175		
		12:00	180		
		12:15	185		
		12:30	190		
		12:45	195		
		13:00	200		



LEGEND

- Monitoring Installation Designation
 - Boring - Monitoring Installation Location
 - Active Storm Drain
 - Abandoned Storm Drain
 - Catch Basin
 - Storm Drain
- Probable Legacy Release Locations
 - Perished Contaminant To Storm Drain
 - Drain Exit Point
 - Inter-Structure Joint / Mud Mat
 - Containment Spill / Storm Trench
 - Unit 1 Waste - Fuel Pool
 - Unit 2 Fuel Pool
- Depth-Specific Data
 - Multiple Intervals
 - Storage Interval
 - Storage Interval

ACTIVITY DATA

Bar Graphs: Average H3, pCi/L

Isopleths: Average H3, pCi/L

No. Depth-Specific Samples

No. Devices (ND)

ND - 1,000

1,000 - 5,000

5,000 - 10,000

10,000 - 50,000

50,000 - 100,000

100,000 - 200,000

> 200,000

15 days - 10 Contours

Groundwater Elevation Contours

Above 4' "Water Table" Contours

11112000 (10' Interval)

Contours Above 10' Interval

Masses Zone Contaminant Transport

Contaminant transport is indicated by the dashed lines. The dashed lines are not to be used as a basis for determining the extent of contamination. The dashed lines are only a visual aid to show the general direction of transport. The dashed lines are not to be used as a basis for determining the extent of contamination. The dashed lines are only a visual aid to show the general direction of transport.

Scale: 1" = 100' (Horizontal), 1" = 10' (Vertical)

North Arrow

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INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK

4th QUARTER 2008 ROLLING
 AVERAGE TRITIUM ACTIVITY MAP

File No. 05-05-2008
 Date of Issue 05-05-2008
 Revision 01 0017389 01

Page 6

4th QUARTER 2008 ROLLING AVERAGE STRONTIUM-90 ACTIVITY MAP

Sample ID	Location	Depth (ft)	Activity (pCi/L)	Remarks
101	Unit 1	0-1	0.25	Sampled in situ
102	Unit 1	1-2	0.25	Sampled in situ
103	Unit 1	2-3	0.25	Sampled in situ
104	Unit 1	3-4	0.25	Sampled in situ
105	Unit 1	4-5	0.25	Sampled in situ
106	Unit 1	5-6	0.25	Sampled in situ
107	Unit 1	6-7	0.25	Sampled in situ
108	Unit 1	7-8	0.25	Sampled in situ
109	Unit 1	8-9	0.25	Sampled in situ
110	Unit 1	9-10	0.25	Sampled in situ
111	Unit 1	10-11	0.25	Sampled in situ
112	Unit 1	11-12	0.25	Sampled in situ
113	Unit 1	12-13	0.25	Sampled in situ
114	Unit 1	13-14	0.25	Sampled in situ
115	Unit 1	14-15	0.25	Sampled in situ
116	Unit 1	15-16	0.25	Sampled in situ
117	Unit 1	16-17	0.25	Sampled in situ
118	Unit 1	17-18	0.25	Sampled in situ
119	Unit 1	18-19	0.25	Sampled in situ
120	Unit 1	19-20	0.25	Sampled in situ
121	Unit 1	20-21	0.25	Sampled in situ
122	Unit 1	21-22	0.25	Sampled in situ
123	Unit 1	22-23	0.25	Sampled in situ
124	Unit 1	23-24	0.25	Sampled in situ
125	Unit 1	24-25	0.25	Sampled in situ
126	Unit 1	25-26	0.25	Sampled in situ
127	Unit 1	26-27	0.25	Sampled in situ
128	Unit 1	27-28	0.25	Sampled in situ
129	Unit 1	28-29	0.25	Sampled in situ
130	Unit 1	29-30	0.25	Sampled in situ
131	Unit 1	30-31	0.25	Sampled in situ
132	Unit 1	31-32	0.25	Sampled in situ
133	Unit 1	32-33	0.25	Sampled in situ
134	Unit 1	33-34	0.25	Sampled in situ
135	Unit 1	34-35	0.25	Sampled in situ
136	Unit 1	35-36	0.25	Sampled in situ
137	Unit 1	36-37	0.25	Sampled in situ
138	Unit 1	37-38	0.25	Sampled in situ
139	Unit 1	38-39	0.25	Sampled in situ
140	Unit 1	39-40	0.25	Sampled in situ
141	Unit 1	40-41	0.25	Sampled in situ
142	Unit 1	41-42	0.25	Sampled in situ
143	Unit 1	42-43	0.25	Sampled in situ
144	Unit 1	43-44	0.25	Sampled in situ
145	Unit 1	44-45	0.25	Sampled in situ
146	Unit 1	45-46	0.25	Sampled in situ
147	Unit 1	46-47	0.25	Sampled in situ
148	Unit 1	47-48	0.25	Sampled in situ
149	Unit 1	48-49	0.25	Sampled in situ
150	Unit 1	49-50	0.25	Sampled in situ
151	Unit 1	50-51	0.25	Sampled in situ
152	Unit 1	51-52	0.25	Sampled in situ
153	Unit 1	52-53	0.25	Sampled in situ
154	Unit 1	53-54	0.25	Sampled in situ
155	Unit 1	54-55	0.25	Sampled in situ
156	Unit 1	55-56	0.25	Sampled in situ
157	Unit 1	56-57	0.25	Sampled in situ
158	Unit 1	57-58	0.25	Sampled in situ
159	Unit 1	58-59	0.25	Sampled in situ
160	Unit 1	59-60	0.25	Sampled in situ
161	Unit 1	60-61	0.25	Sampled in situ
162	Unit 1	61-62	0.25	Sampled in situ
163	Unit 1	62-63	0.25	Sampled in situ
164	Unit 1	63-64	0.25	Sampled in situ
165	Unit 1	64-65	0.25	Sampled in situ
166	Unit 1	65-66	0.25	Sampled in situ
167	Unit 1	66-67	0.25	Sampled in situ
168	Unit 1	67-68	0.25	Sampled in situ
169	Unit 1	68-69	0.25	Sampled in situ
170	Unit 1	69-70	0.25	Sampled in situ
171	Unit 1	70-71	0.25	Sampled in situ
172	Unit 1	71-72	0.25	Sampled in situ
173	Unit 1	72-73	0.25	Sampled in situ
174	Unit 1	73-74	0.25	Sampled in situ
175	Unit 1	74-75	0.25	Sampled in situ
176	Unit 1	75-76	0.25	Sampled in situ
177	Unit 1	76-77	0.25	Sampled in situ
178	Unit 1	77-78	0.25	Sampled in situ
179	Unit 1	78-79	0.25	Sampled in situ
180	Unit 1	79-80	0.25	Sampled in situ
181	Unit 1	80-81	0.25	Sampled in situ
182	Unit 1	81-82	0.25	Sampled in situ
183	Unit 1	82-83	0.25	Sampled in situ
184	Unit 1	83-84	0.25	Sampled in situ
185	Unit 1	84-85	0.25	Sampled in situ
186	Unit 1	85-86	0.25	Sampled in situ
187	Unit 1	86-87	0.25	Sampled in situ
188	Unit 1	87-88	0.25	Sampled in situ
189	Unit 1	88-89	0.25	Sampled in situ
190	Unit 1	89-90	0.25	Sampled in situ
191	Unit 1	90-91	0.25	Sampled in situ
192	Unit 1	91-92	0.25	Sampled in situ
193	Unit 1	92-93	0.25	Sampled in situ
194	Unit 1	93-94	0.25	Sampled in situ
195	Unit 1	94-95	0.25	Sampled in situ
196	Unit 1	95-96	0.25	Sampled in situ
197	Unit 1	96-97	0.25	Sampled in situ
198	Unit 1	97-98	0.25	Sampled in situ
199	Unit 1	98-99	0.25	Sampled in situ
200	Unit 1	99-100	0.25	Sampled in situ

LEGEND

- Removal Monitoring Insulator Disposition
- Removal Monitoring Insulator Location
- Active Staff Drain
- Abandoned Storm Drain
- Catch Basin
- Footing Drain
- Probable Legacy Release Locations
- Removal Monitoring 17-Strain Train
- Drain Elevation
- Inter-Structure Joint / Man Walk
- Contaminated Spill / Sump Inflow
- Unit 1 West Fuel Pool
- Unit 2 Fuel Pool
- Depth-Specific Data

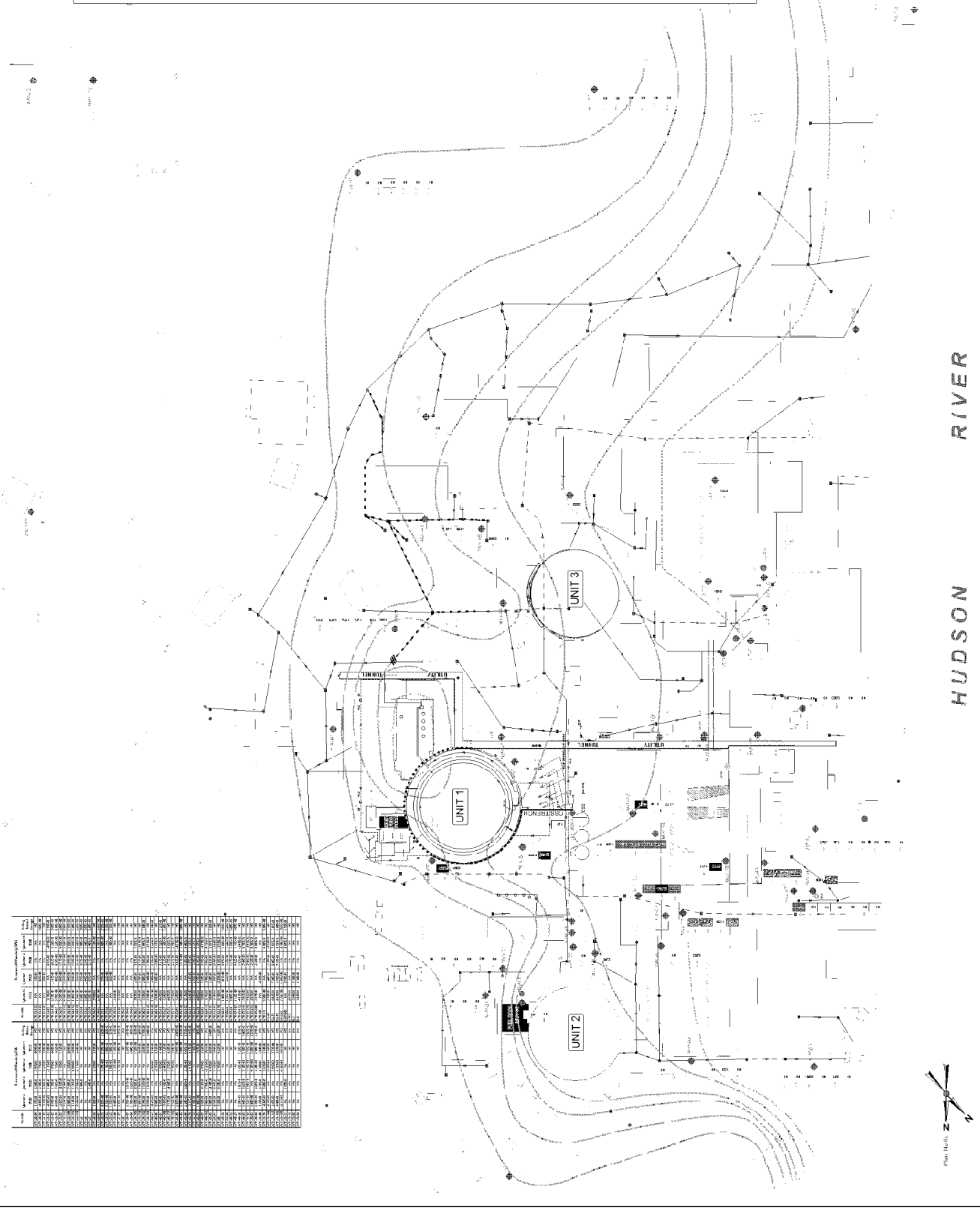


Activity Data [4]

Base Counts, Average Sr-90, pCi/L	Isopleths, Average Sr-90, pCi/L
XXXX No Sample	2-4
XXXX Not Detected (ND)	4-8
XXXX ND-1	8-16
XXXX 17-20	16-25
XXXX 23-40	> 25
XXXX 41-80	
XXXX 81-25	
XXXX > 25	

Groundwater Elevation Contours

Arbeits "Waterable" Contours
 1/11/2008 (10 min interval)
 Contours are at 10' intervals
 Values are Contaminant Transport



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INDIAN POINT ENERGY CENTER
 BUCHANAN, NEW YORK
 4th QUARTER 2008 ROLLING
 AVERAGE STRONTIUM-90
 ACTIVITY MAP

File No.: 05-06-2008
 Date of Issue: 05/06/2008
 Revision No.: 41 0017389 01

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4th QUARTER 2008 ROLLING AVERAGE CESIUM, COBALT, AND NICKEL ACTIVITY MAP

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-001	10	120	150	180
W-002	20	110	140	170
W-003	30	100	130	160
W-004	40	90	120	150
W-005	50	80	110	140
W-006	60	70	100	130
W-007	70	60	90	120
W-008	80	50	80	110
W-009	90	40	70	100
W-010	100	30	60	90
W-011	110	20	50	80
W-012	120	10	40	70
W-013	130	5	30	60
W-014	140	2	20	50
W-015	150	1	10	40
W-016	160	0.5	5	20
W-017	170	0.2	2	10
W-018	180	0.1	1	5
W-019	190	0.05	0.5	2
W-020	200	0.02	0.2	1
W-021	210	0.01	0.1	0.5
W-022	220	0.005	0.05	0.2
W-023	230	0.002	0.02	0.1
W-024	240	0.001	0.01	0.05
W-025	250	0.0005	0.005	0.02
W-026	260	0.0002	0.002	0.01
W-027	270	0.0001	0.001	0.005
W-028	280	0.00005	0.0005	0.002
W-029	290	0.00002	0.0002	0.001
W-030	300	0.00001	0.0001	0.0005

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-031	10	120	150	180
W-032	20	110	140	170
W-033	30	100	130	160
W-034	40	90	120	150
W-035	50	80	110	140
W-036	60	70	100	130
W-037	70	60	90	120
W-038	80	50	80	110
W-039	90	40	70	100
W-040	100	30	60	90
W-041	110	20	50	80
W-042	120	10	40	70
W-043	130	5	30	60
W-044	140	2	20	50
W-045	150	1	10	40
W-046	160	0.5	5	20
W-047	170	0.2	2	10
W-048	180	0.1	1	5
W-049	190	0.05	0.5	2
W-050	200	0.02	0.2	1
W-051	210	0.01	0.1	0.5
W-052	220	0.005	0.05	0.2
W-053	230	0.002	0.02	0.1
W-054	240	0.001	0.01	0.05
W-055	250	0.0005	0.005	0.02
W-056	260	0.0002	0.002	0.01
W-057	270	0.0001	0.001	0.005
W-058	280	0.00005	0.0005	0.002
W-059	290	0.00002	0.0002	0.001
W-060	300	0.00001	0.0001	0.0005

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-061	10	120	150	180
W-062	20	110	140	170
W-063	30	100	130	160
W-064	40	90	120	150
W-065	50	80	110	140
W-066	60	70	100	130
W-067	70	60	90	120
W-068	80	50	80	110
W-069	90	40	70	100
W-070	100	30	60	90
W-071	110	20	50	80
W-072	120	10	40	70
W-073	130	5	30	60
W-074	140	2	20	50
W-075	150	1	10	40
W-076	160	0.5	5	20
W-077	170	0.2	2	10
W-078	180	0.1	1	5
W-079	190	0.05	0.5	2
W-080	200	0.02	0.2	1
W-081	210	0.01	0.1	0.5
W-082	220	0.005	0.05	0.2
W-083	230	0.002	0.02	0.1
W-084	240	0.001	0.01	0.05
W-085	250	0.0005	0.005	0.02
W-086	260	0.0002	0.002	0.01
W-087	270	0.0001	0.001	0.005
W-088	280	0.00005	0.0005	0.002
W-089	290	0.00002	0.0002	0.001
W-090	300	0.00001	0.0001	0.0005

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-091	10	120	150	180
W-092	20	110	140	170
W-093	30	100	130	160
W-094	40	90	120	150
W-095	50	80	110	140
W-096	60	70	100	130
W-097	70	60	90	120
W-098	80	50	80	110
W-099	90	40	70	100
W-100	100	30	60	90
W-101	110	20	50	80
W-102	120	10	40	70
W-103	130	5	30	60
W-104	140	2	20	50
W-105	150	1	10	40
W-106	160	0.5	5	20
W-107	170	0.2	2	10
W-108	180	0.1	1	5
W-109	190	0.05	0.5	2
W-110	200	0.02	0.2	1
W-111	210	0.01	0.1	0.5
W-112	220	0.005	0.05	0.2
W-113	230	0.002	0.02	0.1
W-114	240	0.001	0.01	0.05
W-115	250	0.0005	0.005	0.02
W-116	260	0.0002	0.002	0.01
W-117	270	0.0001	0.001	0.005
W-118	280	0.00005	0.0005	0.002
W-119	290	0.00002	0.0002	0.001
W-120	300	0.00001	0.0001	0.0005

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-121	10	120	150	180
W-122	20	110	140	170
W-123	30	100	130	160
W-124	40	90	120	150
W-125	50	80	110	140
W-126	60	70	100	130
W-127	70	60	90	120
W-128	80	50	80	110
W-129	90	40	70	100
W-130	100	30	60	90
W-131	110	20	50	80
W-132	120	10	40	70
W-133	130	5	30	60
W-134	140	2	20	50
W-135	150	1	10	40
W-136	160	0.5	5	20
W-137	170	0.2	2	10
W-138	180	0.1	1	5
W-139	190	0.05	0.5	2
W-140	200	0.02	0.2	1
W-141	210	0.01	0.1	0.5
W-142	220	0.005	0.05	0.2
W-143	230	0.002	0.02	0.1
W-144	240	0.001	0.01	0.05
W-145	250	0.0005	0.005	0.02
W-146	260	0.0002	0.002	0.01
W-147	270	0.0001	0.001	0.005
W-148	280	0.00005	0.0005	0.002
W-149	290	0.00002	0.0002	0.001
W-150	300	0.00001	0.0001	0.0005

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-151	10	120	150	180
W-152	20	110	140	170
W-153	30	100	130	160
W-154	40	90	120	150
W-155	50	80	110	140
W-156	60	70	100	130
W-157	70	60	90	120
W-158	80	50	80	110
W-159	90	40	70	100
W-160	100	30	60	90
W-161	110	20	50	80
W-162	120	10	40	70
W-163	130	5	30	60
W-164	140	2	20	50
W-165	150	1	10	40
W-166	160	0.5	5	20
W-167	170	0.2	2	10
W-168	180	0.1	1	5
W-169	190	0.05	0.5	2
W-170	200	0.02	0.2	1
W-171	210	0.01	0.1	0.5
W-172	220	0.005	0.05	0.2
W-173	230	0.002	0.02	0.1
W-174	240	0.001	0.01	0.05
W-175	250	0.0005	0.005	0.02
W-176	260	0.0002	0.002	0.01
W-177	270	0.0001	0.001	0.005
W-178	280	0.00005	0.0005	0.002
W-179	290	0.00002	0.0002	0.001
W-180	300	0.00001	0.0001	0.0005

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-181	10	120	150	180
W-182	20	110	140	170
W-183	30	100	130	160
W-184	40	90	120	150
W-185	50	80	110	140
W-186	60	70	100	130
W-187	70	60	90	120
W-188	80	50	80	110
W-189	90	40	70	100
W-190	100	30	60	90
W-191	110	20	50	80
W-192	120	10	40	70
W-193	130	5	30	60
W-194	140	2	20	50
W-195	150	1	10	40
W-196	160	0.5	5	20
W-197	170	0.2	2	10
W-198	180	0.1	1	5
W-199	190	0.05	0.5	2
W-200	200	0.02	0.2	1
W-201	210	0.01	0.1	0.5
W-202	220	0.005	0.05	0.2
W-203	230	0.002	0.02	0.1
W-204	240	0.001	0.01	0.05
W-205	250	0.0005	0.005	0.02
W-206	260	0.0002	0.002	0.01
W-207	270	0.0001	0.001	0.005
W-208	280	0.00005	0.0005	0.002
W-209	290	0.00002	0.0002	0.001
W-210	300	0.00001	0.0001	0.0005

Well ID	Depth (ft)	Cs-137 (dpm)	Co-60 (dpm)	Ni-63 (dpm)
W-211	10	120	150	180
W-212	20	110	140	170
W-213	30	100	130	160
W-214	40	90	120	150
W-215	50	80	110	140
W-216	60	70	100	130
W-217	70	60	90	120
W-218	80	50	80	110
W-219	90	40	70	100
W-220	100	30	60	90
W-221	110	20	50	80
W-222	120	10	40	70
W-223	130	5	30	60
W-224	140	2	20	50
W-225	150	1	10	40
W-226	160	0.5	5	20
W-227	170	0.2	2	10
W-228	180	0.1	1	5
W-229	190	0.05	0.5	2
W-230	200	0.02	0.2	1
W-231	210	0.01	0.1	0.5
W-232	220	0.005	0.05	0.2
W-233	230	0.002	0.02	0.1
W-234	240	0.001	0.01	0.05
W-235	250	0.0005	0.005	0.02
W-236	260	0.0002	0.002	0.01
W-237	270	0.0001	0.001	0.005
W-238	280	0.00005	0.0005	0.002
W-239	290	0.00002	0.0002	0.001
W-240	300	0.00001	0.0001	0.0005



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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-37-22
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	57.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	15.021	DATE	11/25/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.852		
SERIAL NUMBER	6753	CASING DIAMETER (INCH)	2		

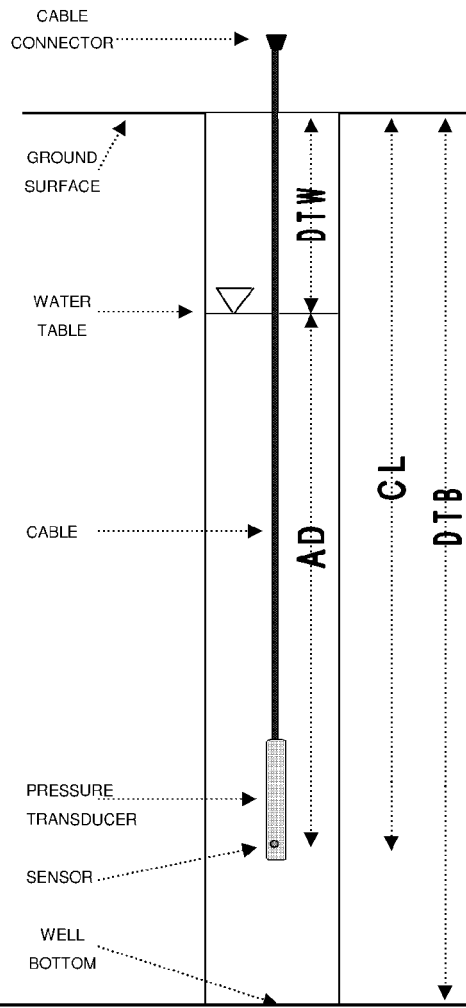
STATIC GROUNDWATER TABLE ELEVATION (FT) * 5.55

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)

DEPTH TO BOTTOM:	<u>22.00</u>	FT
GROUND ELEVATION:	<u>15.021</u>	FT M.S.L.
CASING ELEVATION:	<u>14.852</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-0.17</u>	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	<u>1416</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>9.30</u>	FT
ACTUAL DEPTH:	+ <u>12.54</u>	FT
THEORETICAL CABLE LENGTH:	= <u>21.84</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	<u>14.852</u>	*FT M.S.L.
DEPTH TO WATER:	- <u>9.30</u>	FT
REFERENCE ELEVATION:	= <u>5.552</u>	*FT M.S.L.
TEST NAME:	<u>MW37-22</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>1416</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-37-22

TRANSDUCER INSTALLATION LOG

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-37-32
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	57.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	15.021	DATE	11/10/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.791		
SERIAL NUMBER	6100	CASING DIAMETER (INCH)	1		

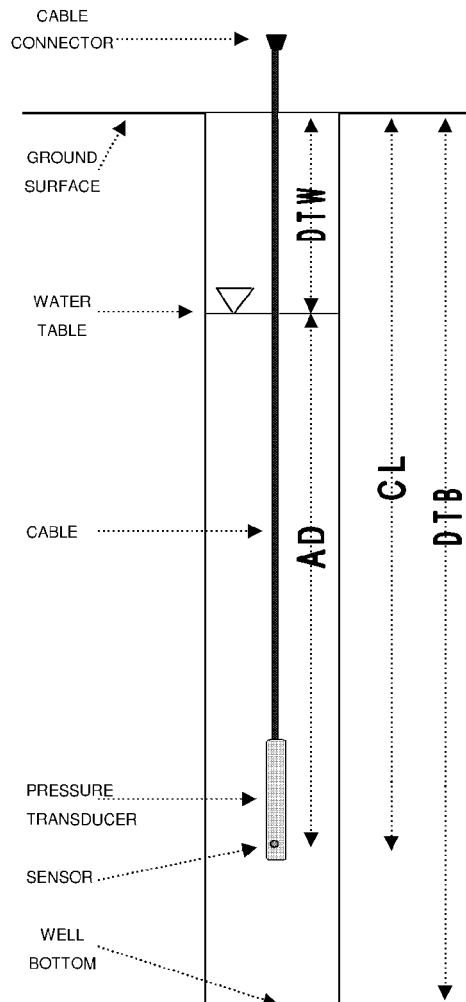
STATIC GROUNDWATER TABLE ELEVATION (FT) 5.90

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)

DEPTH TO BOTTOM:	32.00	FT
GROUND ELEVATION:	15.021	FT M.S.L.
CASING ELEVATION:	14.791	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.230	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	847	HRS
MEASUREMENT TAKEN FROM:	TOC	
DEPTH TO WATER:	8.89	FT
ACTUAL DEPTH:	+ 15.167	FT
THEORETICAL CABLE LENGTH:	= 24.057	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	14.791	FT M.S.L.
DEPTH TO WATER:	- 8.89	FT
REFERENCE ELEVATION:	= 5.901	FT M.S.L.
TEST NAME:	MW-37-32	
LOGGING INTERVAL:	20	MIN
TEST START TIME:	849	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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-37-57
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	57.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	15.021	DATE	11/25/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.788		
SERIAL NUMBER	11802	CASING DIAMETER (INCH)	1		

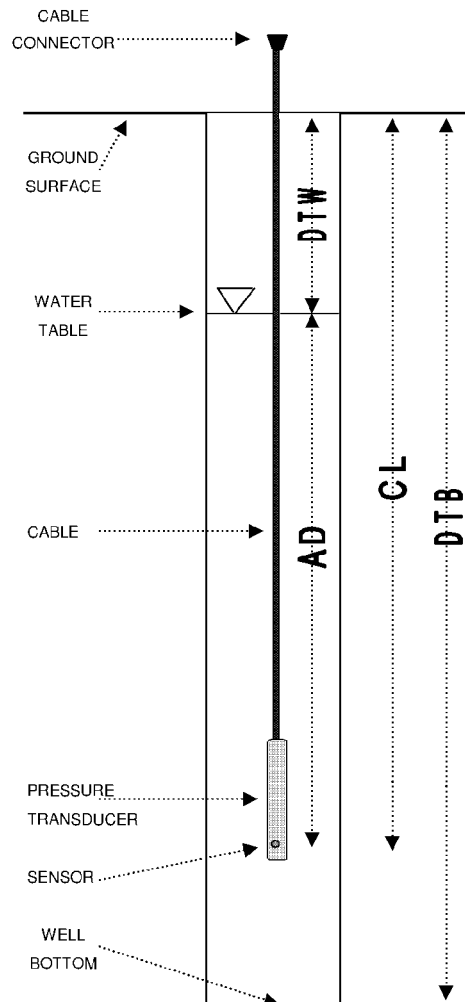
STATIC GROUNDWATER TABLE ELEVATION (FT) 7.49

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)

DEPTH TO BOTTOM:	56.50	FT
GROUND ELEVATION:	15.021	FT M.S.L.
CASING ELEVATION:	14.788	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.233	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	1357	HRS
MEASUREMENT TAKEN FROM:	TOC	
DEPTH TO WATER:	7.30	FT
ACTUAL DEPTH:	+ 43.139	FT
THEORETICAL CABLE LENGTH:	= 50.439	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	14.788	FT M.S.L.
DEPTH TO WATER:	- 7.30	FT
REFERENCE ELEVATION:	= 7.488	FT M.S.L.
TEST NAME:	MW-37-57	
LOGGING INTERVAL:	20	MIN
TEST START TIME:	1357	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-37-57

TRANSDUCER INSTALLATION LOG

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-41-40
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	64.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	54.87	DATE	10/22/08
PSI CAPACITY	30	CASING ELEVATION (FT)	54.13		
SERIAL NUMBER	13981	CASING DIAMETER (INCH)	2		

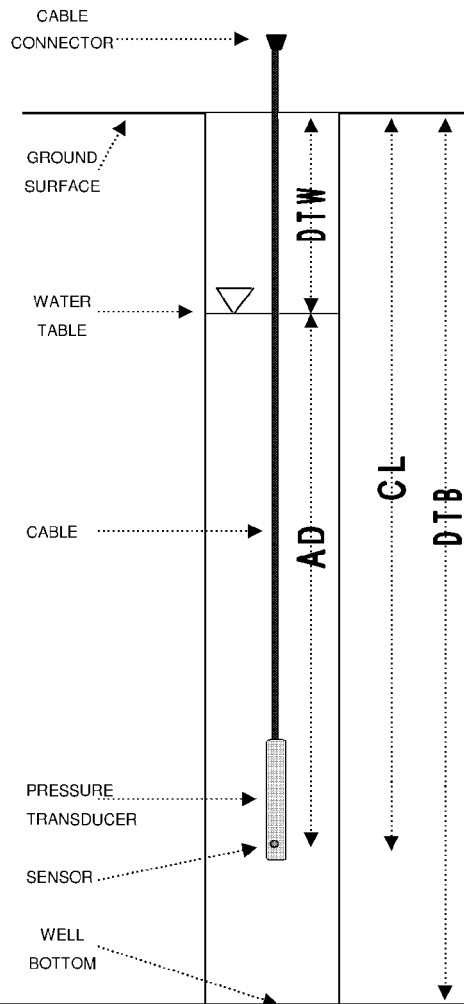
STATIC GROUNDWATER TABLE ELEVATION (FT) 29.85

GZA ENGINEER A. Altieri

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

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

DEPTH TO BOTTOM:	<u>40.00</u>	FT
GROUND ELEVATION:	<u>54.87</u>	FT M.S.L.
CASING ELEVATION:	<u>54.13</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-0.74</u>	FT
MEASURED CABLE LENGTH:	<u>--</u>	FT
TIME OF MEASUREMENT:	<u>1149</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>24.28</u>	FT
ACTUAL DEPTH:	+ <u>11.630</u>	FT
THEORETICAL CABLE LENGTH:	= <u>35.910</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	<u>54.13</u>	FT M.S.L.
DEPTH TO WATER:	- <u>24.28</u>	FT
REFERENCE ELEVATION:	= <u>29.85</u>	FT M.S.L.
TEST NAME:	<u>MW-41-40</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>11:50</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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-45-42
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	65.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	53.66	DATE	11/24/08
PSI CAPACITY	30	CASING ELEVATION (FT)	53.20		
SERIAL NUMBER	6082	CASING DIAMETER (INCH)	2		

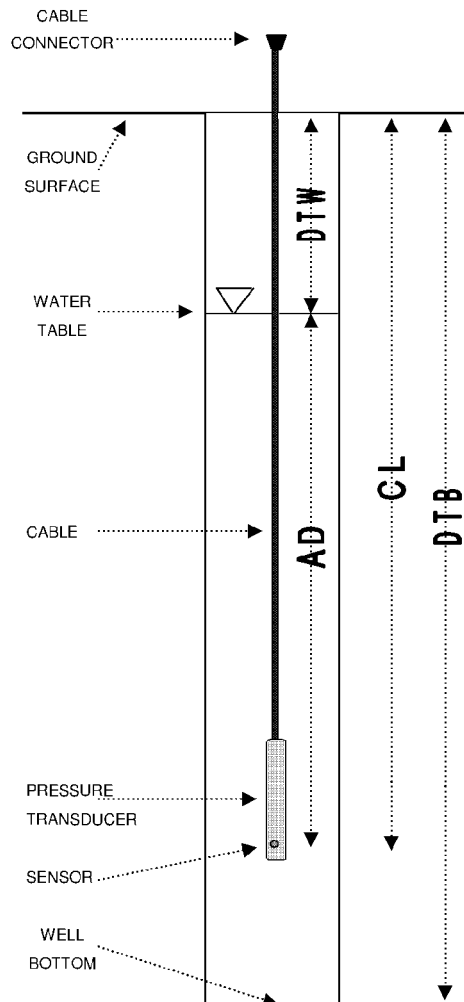
STATIC GROUNDWATER TABLE ELEVATION (FT) 28.60

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)

DEPTH TO BOTTOM:	42.00	FT
GROUND ELEVATION:	53.66	FT M.S.L.
CASING ELEVATION:	53.20	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.46	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	1044	HRS
MEASUREMENT TAKEN FROM:	TOC	
DEPTH TO WATER:	24.60	FT
ACTUAL DEPTH:	+ 16.470	FT
THEORETICAL CABLE LENGTH:	= 41.070	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	53.20	FT M.S.L.
DEPTH TO WATER:	- 24.60	FT
REFERENCE ELEVATION:	= 28.60	FT M.S.L.
TEST NAME:	MW-45-42	
LOGGING INTERVAL:	20	MIN
TEST START TIME:	1044	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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-47-80
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	80.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	70.32	DATE	11/24/08
PSI CAPACITY	30	CASING ELEVATION (FT)	69.742		
SERIAL NUMBER	9445	CASING DIAMETER (INCH)	1		

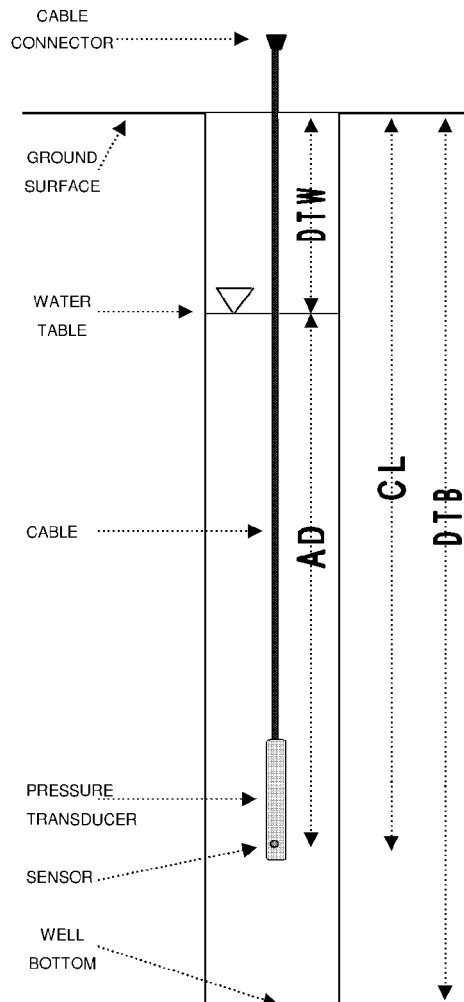
STATIC GROUNDWATER TABLE ELEVATION (FT) 23.44

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)

DEPTH TO BOTTOM:	<u>80.00</u>	FT
GROUND ELEVATION:	<u>70.32</u>	FT M.S.L.
CASING ELEVATION:	<u>69.742</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-0.58</u>	FT
MEASURED CABLE LENGTH:	<u>--</u>	FT
TIME OF MEASUREMENT:	<u>1352</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>46.30</u>	FT
ACTUAL DEPTH:	+ <u>4.768</u>	FT
THEORETICAL CABLE LENGTH:	= <u>51.068</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	<u>69.742</u>	FT M.S.L.
DEPTH TO WATER:	- <u>46.30</u>	FT
REFERENCE ELEVATION:	= <u>23.442</u>	FT M.S.L.
TEST NAME:	<u>MW-47-80</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>1353</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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	Energy	WELL ID	MW-48-23
		Indian Point Energy Center	SHEET	1 of 1
			FILE NO.	01.0017869.91
			PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	40.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	15.389	DATE	11/26/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.759		
SERIAL NUMBER	3048	CASING DIAMETER (INCH)	2		

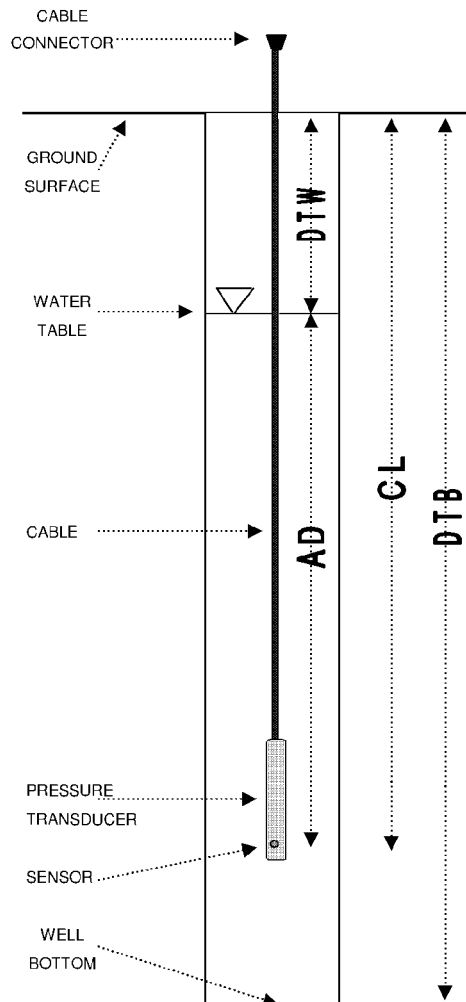
STATIC GROUNDWATER TABLE ELEVATION (FT) 2.54

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)

DEPTH TO BOTTOM:	23.00		FT	
GROUND ELEVATION:	15.389		FT M.S.L.	
CASING ELEVATION:	14.759		FT M.S.L.	
CASING ABOVE (+) OR BELOW (-) GROUND:	below			
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.63		FT	
MEASURED CABLE LENGTH:	--		FT	
TIME OF MEASUREMENT:	1144		HRS	
MEASUREMENT TAKEN FROM:	TOC			
DEPTH TO WATER:	12.22		FT	
ACTUAL DEPTH:	+ 9.805		FT	
THEORETICAL CABLE LENGTH:	= 22.025		FT	
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check	
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check	
ELEVATION OF MEASURING POINT:	14.759		FT M.S.L.	
DEPTH TO WATER:	- 12.22		FT	
REFERENCE ELEVATION:	= 2.539		FT M.S.L.	
TEST NAME:	MW-48-23			
LOGGING INTERVAL:	20		MIN	
TEST START TIME:	1144		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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-49-26
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	26.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.650	DATE	11/5/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.171		
SERIAL NUMBER	11948	CASING DIAMETER (INCH)	2		

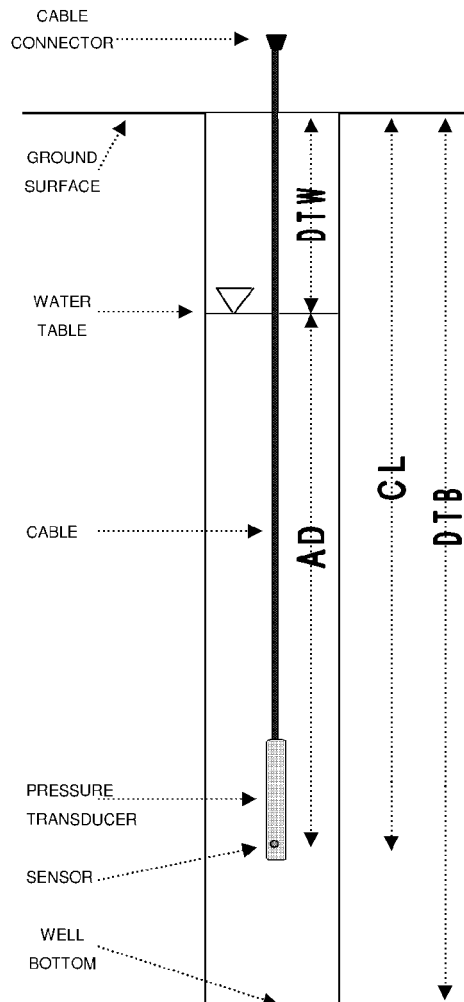
STATIC GROUNDWATER TABLE ELEVATION (FT) 0.42

GZA ENGINEER M.Britos/ A. Altieri

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

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

DEPTH TO BOTTOM:	<u>26.00</u>	FT
GROUND ELEVATION:	<u>14.650</u>	FT M.S.L.
CASING ELEVATION:	<u>14.171</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-0.48</u>	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	<u>1146</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>13.75</u>	FT
ACTUAL DEPTH:	+ <u>11.007</u>	FT
THEORETICAL CABLE LENGTH:	= <u>24.757</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	<u>14.17</u>	FT M.S.L.
DEPTH TO WATER:	- <u>13.75</u>	FT
REFERENCE ELEVATION:	= <u>0.42</u>	FT M.S.L.
TEST NAME:	<u>MW-49-26</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>1147</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-49-26

TRANSDUCER INSTALLATION LOG

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW49-42
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	66.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.650	DATE	11/5/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.223		
SERIAL NUMBER	5395	CASING DIAMETER (INCH)	2		

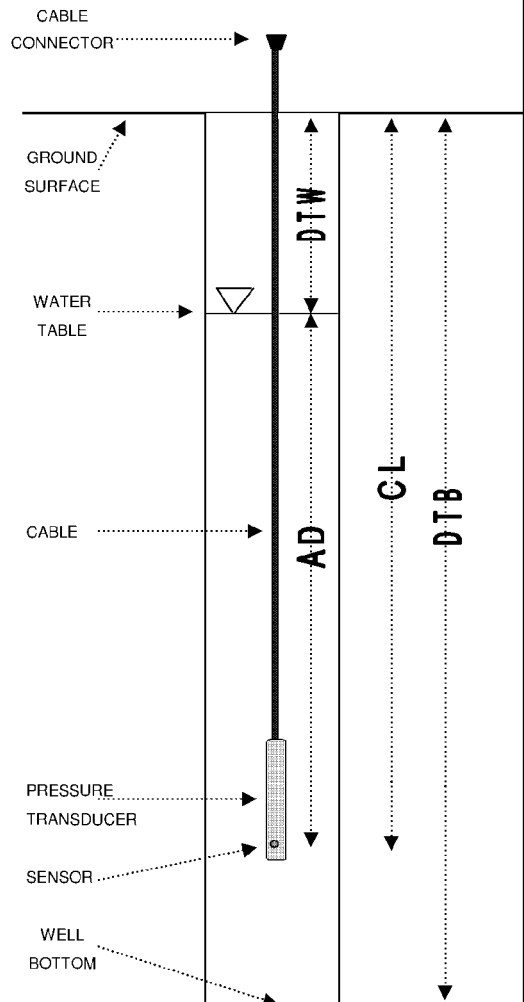
STATIC GROUNDWATER TABLE ELEVATION (FT) 0.74

GZA ENGINEER M. Britos/ A. Altieri

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

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

DEPTH TO BOTTOM:	<u>66.00</u>	FT
GROUND ELEVATION:	<u>14.650</u>	FT M.S.L.
CASING ELEVATION:	<u>14.223</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-0.43</u>	FT
MEASURED CABLE LENGTH:	<u>--</u>	FT
TIME OF MEASUREMENT:	<u>1155</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>13.48</u>	FT
ACTUAL DEPTH:	+ <u>13.338</u>	FT
THEORETICAL CABLE LENGTH:	= <u>26.818</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	<u>14.223</u>	FT M.S.L.
DEPTH TO WATER:	- <u>13.48</u>	FT
REFERENCE ELEVATION:	= <u>0.743</u>	FT M.S.L.
TEST NAME:	<u>MW49-42</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>1156</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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	Energy	WELL ID	MW-50-66
		Indian Point Energy Center	SHEET	1 of 1
			FILE NO.	01.0017869.91
			PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	67.00	DATUM	NGVD 29
MAKE	MiniTroll nonvented	GROUND ELEVATION (FT)	14.92	DATE	11/6/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.61		
SERIAL NUMBER	14459	CASING DIAMETER (INCH)	1		

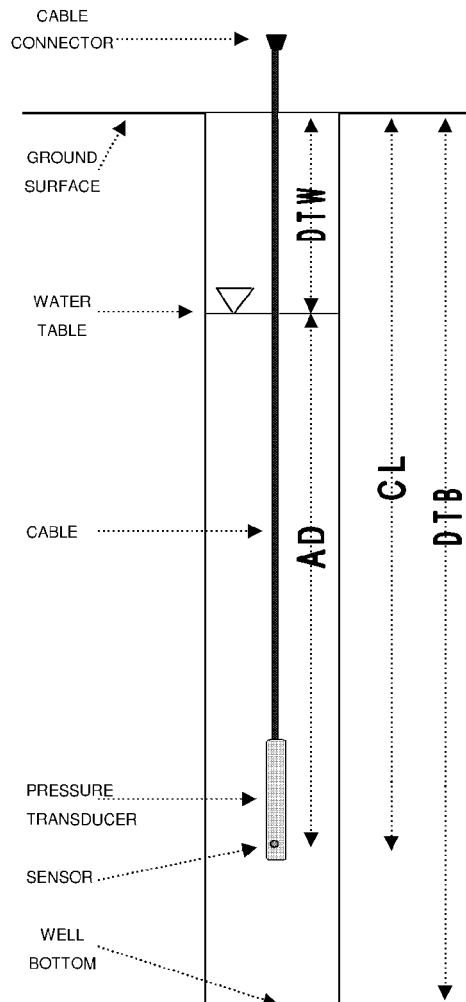
STATIC GROUNDWATER TABLE ELEVATION (FT) 4.30

GZA ENGINEER M. Britos/ A. Altieri

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

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

DEPTH TO BOTTOM:	65.75		FT
GROUND ELEVATION:	14.92		FT M.S.L.
CASING ELEVATION:	14.61		FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below		
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.31		FT
MEASURED CABLE LENGTH:	--		FT
TIME OF MEASUREMENT:	852		HRS
MEASUREMENT TAKEN FROM:	TOC		
DEPTH TO WATER:	10.31		FT
ACTUAL DEPTH:	+ NA		FT
THEORETICAL CABLE LENGTH:	= NA		FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check
ELEVATION OF MEASURING POINT:	14.614		FT M.S.L.
DEPTH TO WATER:	- 10.31		FT
REFERENCE ELEVATION:	= 4.304		FT M.S.L.
TEST NAME:	MW-50-66		
LOGGING INTERVAL:	20		MIN
TEST START TIME:	856		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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-52-11
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	12.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	16.77	DATE	11/21/08
PSI CAPACITY	30	CASING ELEVATION (FT)	16.28		
SERIAL NUMBER	5533	CASING DIAMETER (INCH)	2		

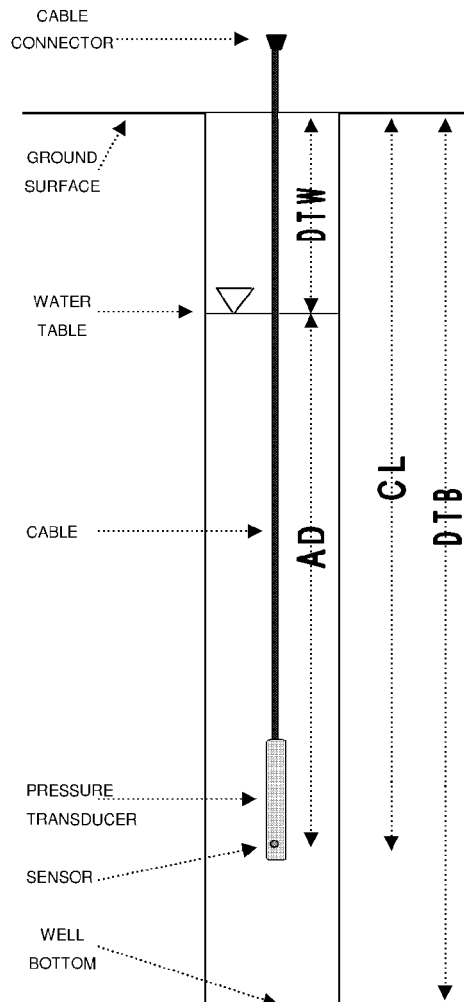
STATIC GROUNDWATER TABLE ELEVATION (FT) 7.85

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)

DEPTH TO BOTTOM:	<u>11.00</u>	FT
GROUND ELEVATION:	<u>16.77</u>	FT M.S.L.
CASING ELEVATION:	<u>16.28</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-0.49</u>	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	<u>1527</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>8.43</u>	FT
ACTUAL DEPTH:	+ <u>1.72</u>	FT
THEORETICAL CABLE LENGTH:	= <u>10.15</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	* <u>16.28</u>	FT M.S.L.
DEPTH TO WATER:	- <u>8.43</u>	FT
REFERENCE ELEVATION:	= <u>7.85</u>	FT M.S.L.
TEST NAME:	<u>MW-52-12</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>1527</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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	Energy	WELL ID	MW-56-83
		Indian Point Energy Center	SHEET	1 of 1
			FILE NO.	01.0017869.91
			PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	88.50	DATUM	NGVD 29
MAKE	Non-Vented MiniTroll	GROUND ELEVATION (FT)	70.258	DATE	10/24/08
PSI CAPACITY	30	CASING ELEVATION (FT)	69.207		
SERIAL NUMBER	16394	CASING DIAMETER (INCH)	1		

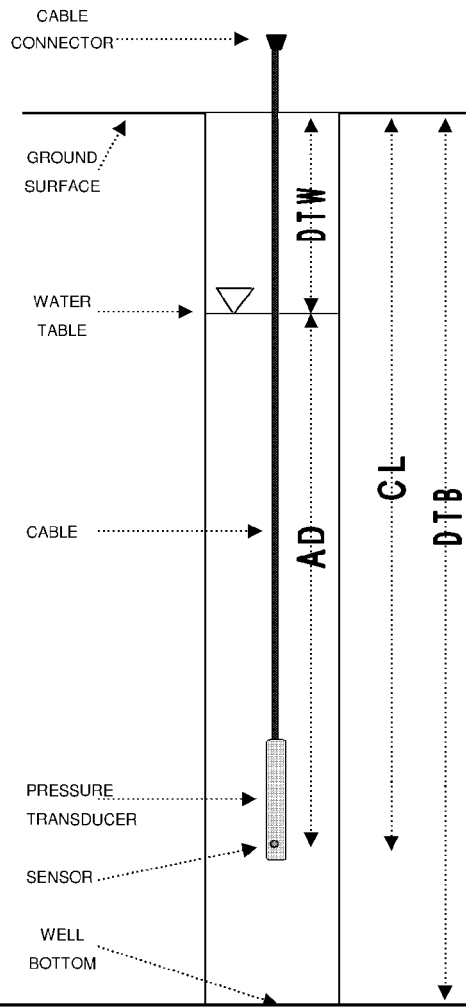
STATIC GROUNDWATER TABLE ELEVATION (FT) 20.45

GZA ENGINEER M. Britos/ A. Altieri

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

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

DEPTH TO BOTTOM:	83.00		FT
GROUND ELEVATION:	70.258		FT M.S.L.
CASING ELEVATION:	69.207		FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below		
DISTANCE FROM CASING TO GROUND (+ OR -):	-1.05		FT
MEASURED CABLE LENGTH:	--		FT
TIME OF MEASUREMENT:	1245		HRS
MEASUREMENT TAKEN FROM:	TOC		
DEPTH TO WATER:	48.76		FT
ACTUAL DEPTH:	+ NA		FT
THEORETICAL CABLE LENGTH:	= NA		FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check
ELEVATION OF MEASURING POINT:	69.207		FT M.S.L.
DEPTH TO WATER:	- 48.76		FT
REFERENCE ELEVATION:	= 20.447		FT M.S.L.
TEST NAME:	MW-56-83		
LOGGING INTERVAL:	20		MIN
TEST START TIME:	1247		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-56-83

TRANSDUCER INSTALLATION LOG

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-56-83
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	88.50	DATUM	NGVD 29
MAKE	Non-Vented MiniTroll	GROUND ELEVATION (FT)	70.258	DATE	11/4/08
PSI CAPACITY	30	CASING ELEVATION (FT)	69.207		
SERIAL NUMBER	16394	CASING DIAMETER (INCH)	1		

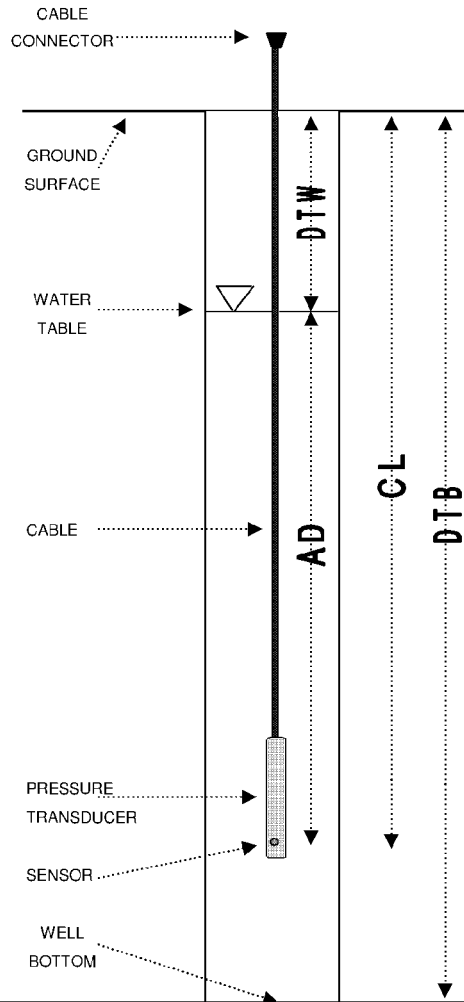
STATIC GROUNDWATER TABLE ELEVATION (FT) 22.04

GZA ENGINEER M. Britos/ A. Altieri

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

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

DEPTH TO BOTTOM:	<u>83.00</u>	FT
GROUND ELEVATION:	<u>70.258</u>	FT M.S.L.
CASING ELEVATION:	<u>69.207</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-1.05</u>	FT
MEASURED CABLE LENGTH:	<u>--</u>	FT
TIME OF MEASUREMENT:	<u>1351</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>47.17</u>	FT
ACTUAL DEPTH:	+ <u>NA</u>	FT
THEORETICAL CABLE LENGTH:	= <u>NA</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	<u>69.207</u>	FT M.S.L.
DEPTH TO WATER:	- <u>47.17</u>	FT
REFERENCE ELEVATION:	= <u>22.037</u>	FT M.S.L.
TEST NAME:	<u>MW-56-83</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>1353</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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-57-45	
		Energy	SHEET	1 of 1
		Indian Point Energy Center	FILE NO.	01.0017869.91
			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	11/7/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.81		
SERIAL NUMBER	16642	CASING DIAMETER (INCH)	1		

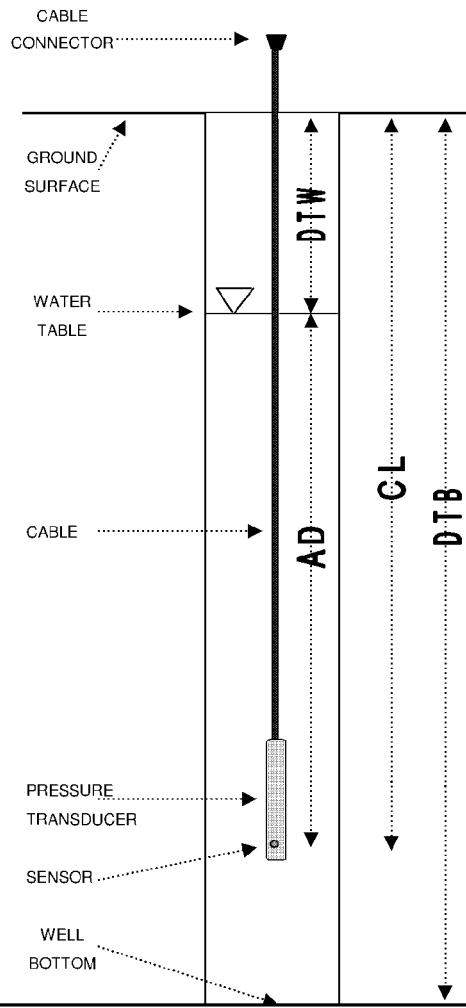
STATIC GROUNDWATER TABLE ELEVATION (FT) 9.83

GZA ENGINEER M. Britos/ A. Altieri

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

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

DEPTH TO BOTTOM:	45.00		FT	
GROUND ELEVATION:	14.98		FT M.S.L.	
CASING ELEVATION:	14.81		FT M.S.L.	
CASING ABOVE (+) OR BELOW (-) GROUND:	below			
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.17		FT	
MEASURED CABLE LENGTH:	--		FT	
TIME OF MEASUREMENT:	1447		HRS	
MEASUREMENT TAKEN FROM:	TOC			
DEPTH TO WATER:	4.98		FT	
ACTUAL DEPTH:	+	NA	FT	
THEORETICAL CABLE LENGTH:	=	NA	FT	
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check	
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check	
ELEVATION OF MEASURING POINT:	14.81		FT M.S.L.	
DEPTH TO WATER:	-	4.98	FT	
REFERENCE ELEVATION:	=	9.83	FT M.S.L.	
TEST NAME:	MW-57-45			
LOGGING INTERVAL:	20		MIN	
TEST START TIME:	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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-58-65
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	72.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.57	DATE	11/7/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.25		
SERIAL NUMBER	5619	CASING DIAMETER (INCH)	1		

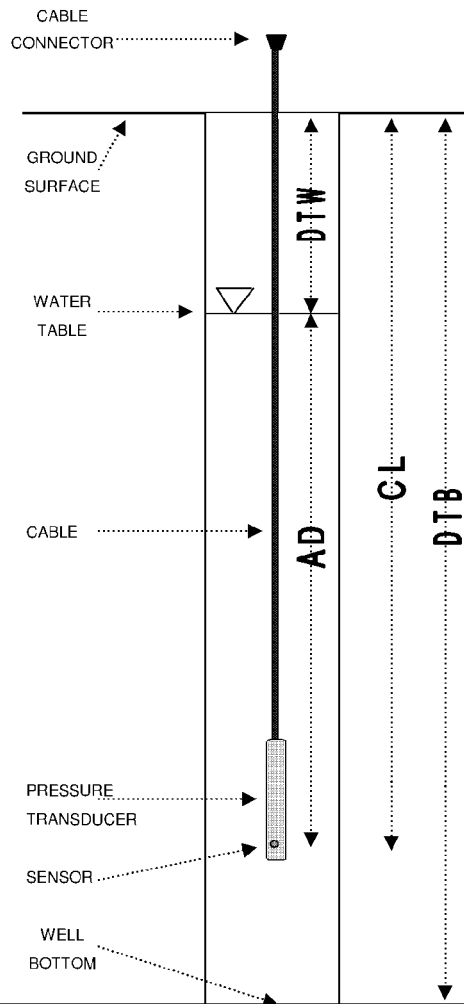
STATIC GROUNDWATER TABLE ELEVATION (FT) 7.12

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)

DEPTH TO BOTTOM:	<u>65.00</u>	FT
GROUND ELEVATION:	<u>14.57</u>	FT M.S.L.
CASING ELEVATION:	<u>14.25</u>	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	<u>-0.32</u>	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	<u>1140</u>	HRS
MEASUREMENT TAKEN FROM:	<u>TOC</u>	
DEPTH TO WATER:	<u>7.13</u>	FT
ACTUAL DEPTH:	+ <u>60.520</u>	FT
THEORETICAL CABLE LENGTH:	= <u>67.650</u>	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	<u>14.25</u>	FT M.S.L.
DEPTH TO WATER:	- <u>7.13</u>	FT
REFERENCE ELEVATION:	= <u>7.12</u>	FT M.S.L.
TEST NAME:	<u>MW-58-65</u>	
LOGGING INTERVAL:	<u>20</u>	MIN
TEST START TIME:	<u>1141</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-58-65

TRANSDUCER INSTALLATION LOG

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-59-45	
		Energy	SHEET	1 of 1
		Indian Point Energy Center	FILE NO.	01.0017869.91
			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	10/9/08
PSI CAPACITY	30	CASING ELEVATION (FT)	13.90		
SERIAL NUMBER	14340	CASING DIAMETER (INCH)	1		

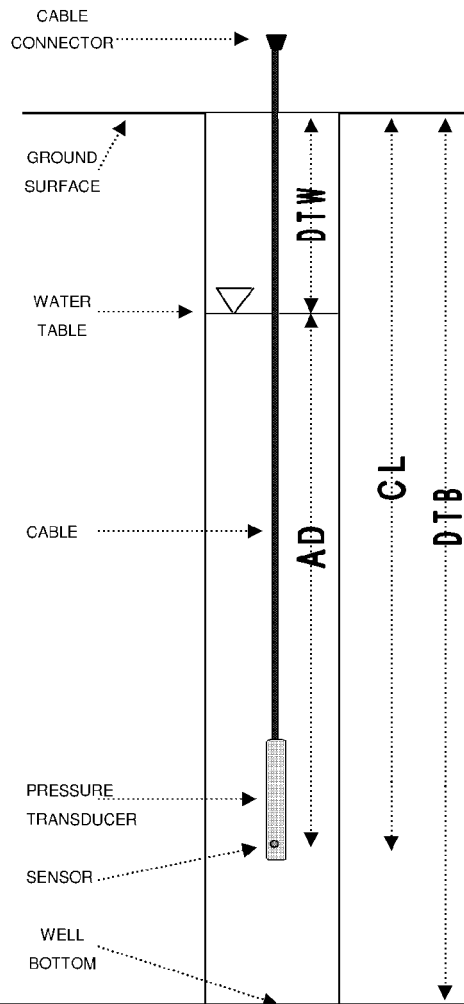
STATIC GROUNDWATER TABLE ELEVATION (FT) 2.51

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)

DEPTH TO BOTTOM:	45.00		FT
GROUND ELEVATION:	14.52		FT M.S.L.
CASING ELEVATION:	13.90		FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below		
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.62		FT
MEASURED CABLE LENGTH:	--		FT
TIME OF MEASUREMENT:	1057		HRS
MEASUREMENT TAKEN FROM:	TOC		
DEPTH TO WATER:	11.39		FT
ACTUAL DEPTH:	+	-	FT
THEORETICAL CABLE LENGTH:	=	NA	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check
ELEVATION OF MEASURING POINT:	13.90		FT M.S.L.
DEPTH TO WATER:	-	11.39	FT
REFERENCE ELEVATION:	=	2.51	FT M.S.L.
TEST NAME:	MW-59-45		
LOGGING INTERVAL:	20		MIN
TEST START TIME:	1057		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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	Energy	WELL ID	MW59-68
		Indian Point Energy Center	SHEET	1 of 1
			FILE NO.	01.0017869.91
			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	10/8/08
PSI CAPACITY	30	CASING ELEVATION (FT)	14.23		
SERIAL NUMBER	14361	CASING DIAMETER (INCH)	1		

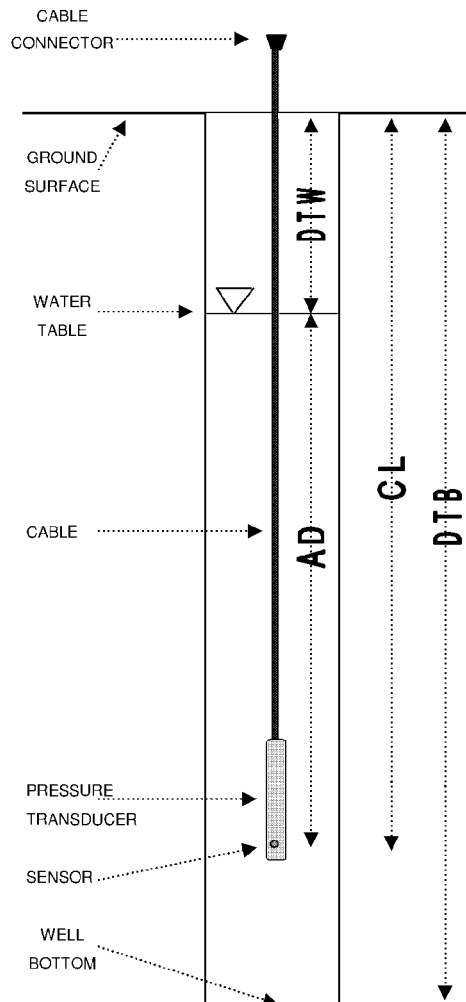
STATIC GROUNDWATER TABLE ELEVATION (FT) 3.41

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)

DEPTH TO BOTTOM:	68.30		FT
GROUND ELEVATION:	14.52		FT M.S.L.
CASING ELEVATION:	14.23		FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	-		
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.29		FT
MEASURED CABLE LENGTH:	--		FT
TIME OF MEASUREMENT:	1432		HRS
MEASUREMENT TAKEN FROM:	TOC		
DEPTH TO WATER:	10.82		FT
ACTUAL DEPTH:	+	NA	FT
THEORETICAL CABLE LENGTH:	=	NA	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check
ELEVATION OF MEASURING POINT:	14.23		FT M.S.L.
DEPTH TO WATER:	-	10.82	FT
REFERENCE ELEVATION:	=	3.41	FT M.S.L.
TEST NAME:	MW59-68		
LOGGING INTERVAL:	20		MIN
TEST START TIME:	1433		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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-66-21
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	37.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.122	DATE	10/9/08
PSI CAPACITY	30	CASING ELEVATION (FT)	13.407		
SERIAL NUMBER	15849	CASING DIAMETER (INCH)	2		

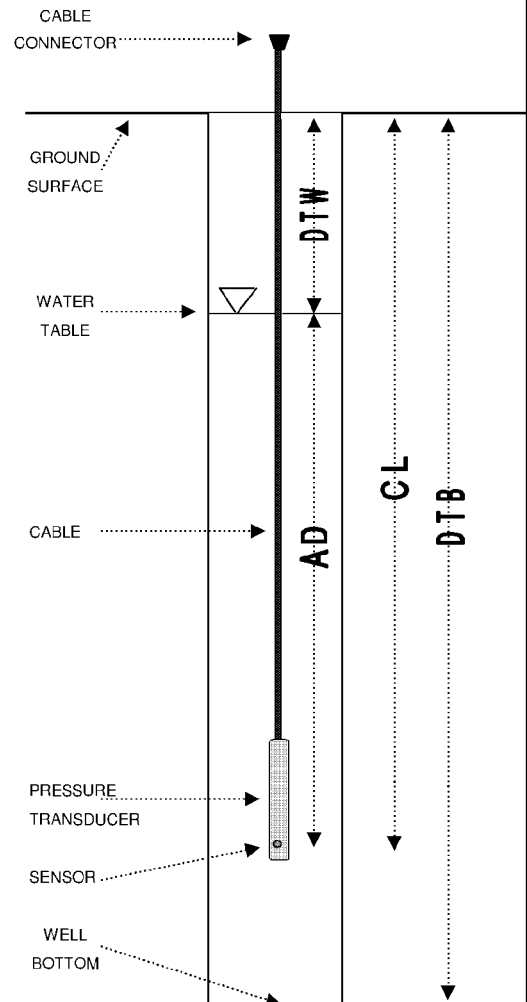
STATIC GROUNDWATER TABLE ELEVATION (FT) 1.31

GZA ENGINEER M. Britios

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

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

DEPTH TO BOTTOM:	21.00	FT
GROUND ELEVATION:	14.122	FT M.S.L.
CASING ELEVATION:	13.407	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	below	
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.72	FT
MEASURED CABLE LENGTH	--	FT
TIME OF MEASUREMENT:	1004	HRS
MEASUREMENT TAKEN FROM:	TOC	
DEPTH TO WATER:	12.10	FT
ACTUAL DEPTH:	+ 8.38	FT
THEORETICAL CABLE LENGTH:	= 20.48	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	13.407	FT M.S.L.
DEPTH TO WATER:	- 12.10	FT
REFERENCE ELEVATION:	= 1.307	FT M.S.L.
TEST NAME:	MW-66-21	
LOGGING INTERVAL:	20	MIN
TEST START TIME:	1005	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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	MW-66-36	
		Energy	SHEET	1 of 1
		Indian Point Energy Center	FILE NO.	01.0017869.91
			PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	37.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	14.122	DATE	10/9/08
PSI CAPACITY	30	CASING ELEVATION (FT)	13.364		
SERIAL NUMBER	11840	CASING DIAMETER (INCH)	1		

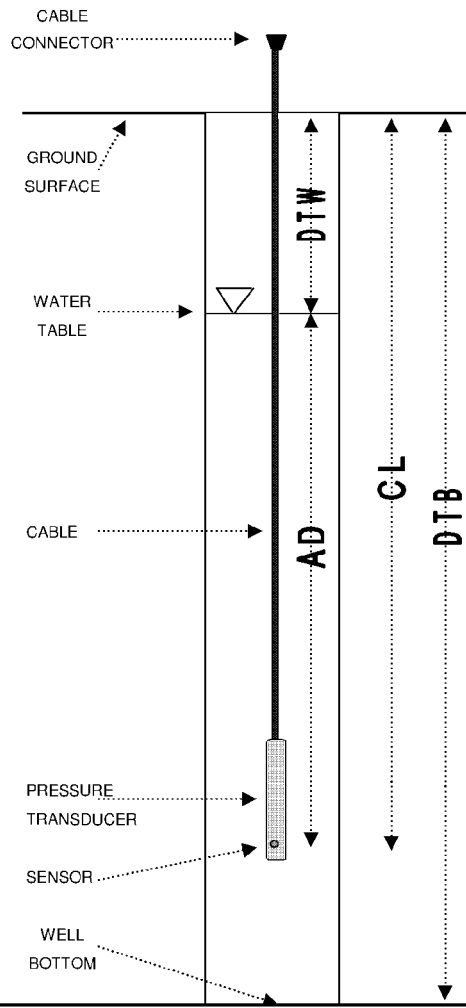
STATIC GROUNDWATER TABLE ELEVATION (FT) 1.47

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)

DEPTH TO BOTTOM:	36.00		FT	
GROUND ELEVATION:	14.122		FT M.S.L.	
CASING ELEVATION:	13.364		FT M.S.L.	
CASING ABOVE (+) OR BELOW (-) GROUND:	below			
DISTANCE FROM CASING TO GROUND (+ OR -):	-0.76		FT	
MEASURED CABLE LENGTH	--		FT	
TIME OF MEASUREMENT:	947		HRS	
MEASUREMENT TAKEN FROM:	TOC			
DEPTH TO WATER:	11.89		FT	
ACTUAL DEPTH:	+ 14.43		FT	
THEORETICAL CABLE LENGTH:	= 26.32		FT	
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check	
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check	
ELEVATION OF MEASURING POINT:	13.364		FT M.S.L.	
DEPTH TO WATER:	- 11.89		FT	
REFERENCE ELEVATION:	= 1.474		FT M.S.L.	
TEST NAME:	MW-66-36			
LOGGING INTERVAL:	20		MIN	
TEST START TIME:	948		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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	WELL ID	OUT-1
	Energy	SHEET	1 of 1
	Indian Point Energy Center	FILE NO.	01.0017869.91
		PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	--	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	8.20	DATE	11/4/08
PSI CAPACITY	30	CASING ELEVATION (FT)	11.89		
SERIAL NUMBER	15214	CASING DIAMETER (INCH)	2		

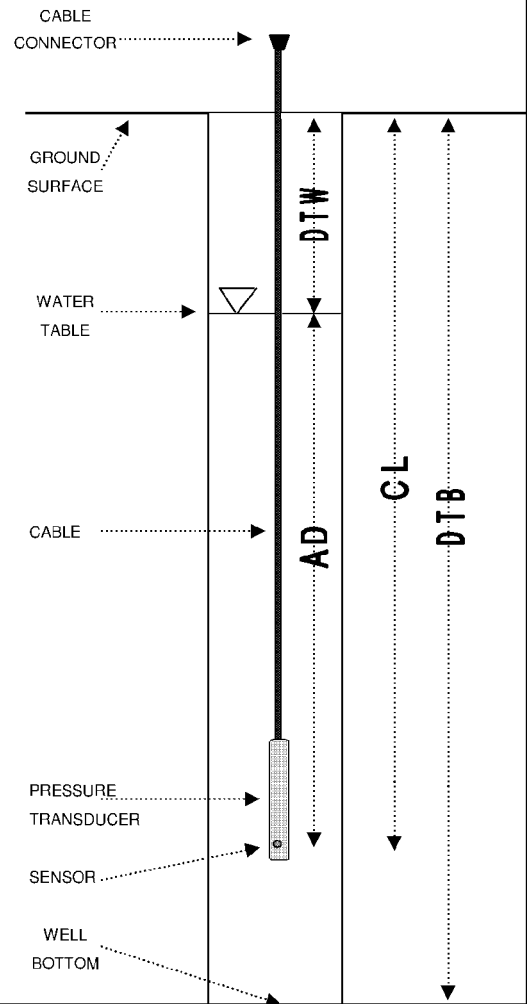
STATIC GROUNDWATER TABLE ELEVATION (FT) 3.99

GZA ENGINEER M. Britos/ A. Altieri

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

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

DEPTH TO BOTTOM:	--	FT
GROUND ELEVATION:	8.20	FT M.S.L.
CASING ELEVATION:	11.89	FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	above	
DISTANCE FROM CASING TO GROUND (+ OR -):	3.69	FT
MEASURED CABLE LENGTH:	--	FT
TIME OF MEASUREMENT:	1429	HRS
MEASUREMENT TAKEN FROM:	TOC	
DEPTH TO WATER:	7.90	FT
ACTUAL DEPTH:	+ 7.860	FT
THEORETICAL CABLE LENGTH:	= 15.760	FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check
ELEVATION OF MEASURING POINT:	11.891	FT M.S.L.
DEPTH TO WATER:	- 7.900	FT
REFERENCE ELEVATION:	= 3.991	FT M.S.L.
TEST NAME:	OUT-1	
LOGGING INTERVAL:	20	MIN
TEST START TIME:	1431	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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	Energy	WELL ID	U-3-T1
		Indian Point Energy Center	SHEET	1 of 1
			FILE NO.	01.0017869.91
			PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	2.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	3.267	DATE	11/20/08
PSI CAPACITY	30	CASING ELEVATION (FT)	8.518		
SERIAL NUMBER	3062	CASING DIAMETER (INCH)	2		

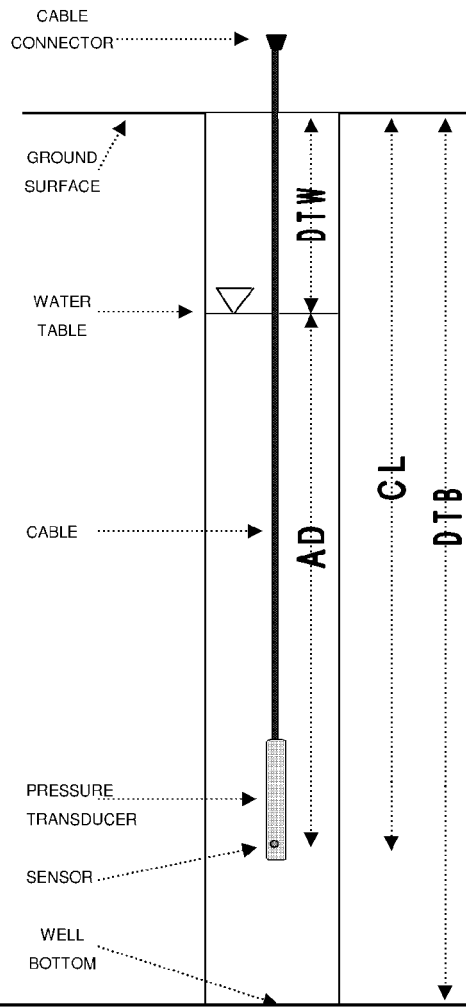
STATIC GROUNDWATER TABLE ELEVATION (FT) 3.86

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)

DEPTH TO BOTTOM:	2.00		FT
GROUND ELEVATION:	3.267		FT M.S.L.
CASING ELEVATION:	8.518		FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	above		
DISTANCE FROM CASING TO GROUND (+ OR -):	5.251		FT
MEASURED CABLE LENGTH:	--		FT
TIME OF MEASUREMENT:	1315		HRS
MEASUREMENT TAKEN FROM:	TOC		
DEPTH TO WATER:	4.66		FT
ACTUAL DEPTH:	+ 2.380		FT
THEORETICAL CABLE LENGTH:	= 7.040		FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>	check	
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>	check	
ELEVATION OF MEASURING POINT:	8.518		FT M.S.L.
DEPTH TO WATER:	- 4.66		FT
REFERENCE ELEVATION:	= 3.858		FT M.S.L.
TEST NAME:	U3-T1		
LOGGING INTERVAL:	20		MIN
TEST START TIME:	1318		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

GZA GEOENVIRONMENTAL OF NEW YORK 440 NINTH AVENUE, 18th FLOOR NEW YORK, NEW YORK 10001 SCIENTISTS AND ENGINEERS	Client	Energy	WELL ID	U-3-T2
		Indian Point Energy Center	SHEET	1 of 1
			FILE NO.	01.0017869.91
			PROJECT LOCATION	Indian Point

MANUFACTURER	In-Situ	FINAL BORING DEPTH (FT)	2.00	DATUM	NGVD 29
MAKE	MiniTroll	GROUND ELEVATION (FT)	3.259	DATE	11/20/08
PSI CAPACITY	30	CASING ELEVATION (FT)	8.512		
SERIAL NUMBER	16240	CASING DIAMETER (INCH)	2		

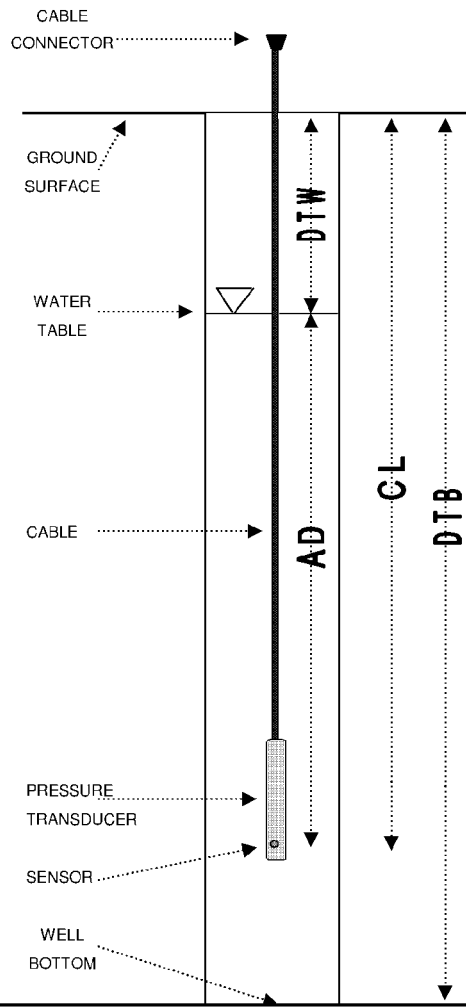
STATIC GROUNDWATER TABLE ELEVATION (FT) 4.00

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)

DEPTH TO BOTTOM:	2.00		FT
GROUND ELEVATION:	3.259		FT M.S.L.
CASING ELEVATION:	8.512		FT M.S.L.
CASING ABOVE (+) OR BELOW (-) GROUND:	above		
DISTANCE FROM CASING TO GROUND (+ OR -):	5.253		FT
MEASURED CABLE LENGTH:	--		FT
TIME OF MEASUREMENT:	1240		HRS
MEASUREMENT TAKEN FROM:	TOC		
DEPTH TO WATER:	4.51		FT
ACTUAL DEPTH:	+ 2.287		FT
THEORETICAL CABLE LENGTH:	= 6.797		FT
HAVE CLOCKS BEEN SYNCHRONIZED?	<input checked="" type="checkbox"/>		check
IS TRANSDUCER SET TO TAKE "SURFACE" READINGS?	<input checked="" type="checkbox"/>		check
ELEVATION OF MEASURING POINT:	8.512		FT M.S.L.
DEPTH TO WATER:	- 4.51		FT
REFERENCE ELEVATION:	= 4.002		FT M.S.L.
TEST NAME:	U3-T2		
LOGGING INTERVAL:	20		MIN
TEST START TIME:	1244		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 : U-3-T2



APPENDIX C: CHAINS OF CUSTODY

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 _____
Energy Ground Water Monitoring Prog
EL Quote # _____
XC Number (4): _____
X Number: 50013510

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

GEL Work Order Number:

Sample Analysis Requested (6) (Fill in the number of containers for each test)		Sample Shipping and Delivery Details	
Sample ID	Preservative Type (6)	Method of Shipment:	Date Shipped:
MW-45-42-(014)	Strontium 90 (Sr90)	FEDEX	
MW-45-01-(014)	Gamma Spec (GS)		
	Tritium (H3)		
	Total number of containers		
	Should this sample be considered:		
	Radioactive		
	TSCA Regulated		
	Comments		
	Note: extra sample is required for sample specific QC		
	2 Liter Poly		
	2 Liter Poly		

Sample ID	Date Collected (mm-dd-yy)	*Lits Collected (Military) (liters)	QC Code (N)	Field Filtered (N)	Sample Matrix (GW)	Should this sample be considered:	Radioactive	TSCA Regulated	Total number of containers	Comments
MW-45-42-(014)	10/22/08	145	N	N	GW	Y	Y		1	
MW-45-01-(014)	10/22/08	933	N	N	GW	Y	Y		1	
		445								

TAT Requested: Normal: Rush: _____ Specify: _____ 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

marks: 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
	10/21/08	1640	15066 storage	10/21/08	1640

Chain of Custody Number - Client Determined

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

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

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

Sample Analysis Requested: Analytical method requested (i.e. 8248B, 6010B/7100) and number of containers provided for each (i.e. 6166B, 3, 6010B/7100 - 1)

Preservative Type: BA - Hydrochloric Acid, NI - Nitric Acid, SH - Sodium Hydroxide, SA - Sulfuric Acid, AA - Acetic Acid, HX - Hexane, ST - Sodium Thiosulfate, If no preservative is added - In-use field blank

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: _____

GEL Chain of Custody and Analytical Request

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

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

GEL Work Order Number:

Phone #: (914) 736-8405

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

Fax #: (914) 734-6247

Project Site Name: Indian Point Energy Center

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

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

Sample ID

* For comparison - indicate start and stop date/time

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code	Field Filtered (Y/N)	Sample Matrix (G)	Should the sample be considered:		Total number of containers	Tritium (13)	Gamma Spec (CS)	Strontium 90 (Sr90)	Comments
						Is a Required	Is a Preservative Type (6)					
MW-39-102-(005)	10/22/08	1356	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-39-124-(005)	10/22/08	1400	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-39-183-(005)	10/22/08	1407	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-39-195-(005)	10/22/08	1426	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-39-67-(005)	10/23/08	1253	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-39-84-(005)	10/23/08	1256	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

TAI Requested: Normal Rush: Specify: (subject to surcharge) Fax Results: Yes / No
 Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

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

Chain of Custody Signatures

Requisition by (Signed)	Date	Time	Received by (Signed)	Date	Time
<i>[Signature]</i>	10/23/08	1445	SECURED	10/23/08	1445
			STORAGE		

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

Sample Shipping and Delivery Details

GEL PM: Cheryl Duffy
 For Lab Receiving Use Only
 Custody Seal Intact? YES NO
 Cooler Temp. C

- Chain of Custody Number - Client Determined
 - QC Codes: N - Normal Sample, TE - Trip Blank, FD - Field Duplicate, EB - Equipment Blank, MS - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, G - Grab, C - Composite
 - Field Filtered - For liquid matrices, indicate with a Y - for yes, the sample was field filtered or N - for no, the sample was not field filtered
 - Matrix Codes: DW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, MW - Misc. Liquid, SO - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, O - Oil, P - Filter, P - W - P, U - Urine, F - Fecal, N - Nails
 - Sample Analysis Requests: Analytical method requested (i.e. 8260B, 8210B, 8210B) and number of containers provided for each (i.e. 8260B - 3, 8210B - 1)
 - Preservative Type: HA - Hydrochloric Acid, NI - Nitric Acid, SF - Sulfuric Acid, AA - Acetic Acid, HX - Hexanic Acid, HZ - Heptanic Acid, HCl - Hydrochloric Acid, NI - Nitric Acid, SF - Sulfuric Acid, AA - Acetic Acid, HX - Hexanic Acid, HZ - Heptanic Acid, 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

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

GEL Work Order Number:

Client Name: Entergy Phone #: (974) 736-8405
Project Site Name: Indian Point Energy Center Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: AA / MB Send Results To: Patrick Donahue

Sample ID <small>*For copy/print - include site and any date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military)	QC Code (m)	Field Filtered (h)	Sample Matrix (h)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (6): (Fill in the number of containers for each test)						Preservative Type (6)	Comments Note: extra sample is required for sample specific QC
						Radionuclide	TSCA Required		Gamma Spec (GS)	Tritium (H3)	Sr90	Level 1	Level 2	Level 3		
MW-32-131-(007)			N	N	GW	Y	Y	1	1	1	1	1	1	1	2 Liter Poly	
MW-32-149-(008)	10/24/08	1028	N	N	GW	Y	Y	1	1	1	1	1	1	1	2 Liter Poly	
MW-32-173-(006)	10/24/08	1025	N	N	GW	Y	Y	1	1	1	1	1	1	1	2 liter Poly	
MW-32-190-(009)	10/24/08	1031	N	N	GW	Y	Y	1	1	1	1	1	1	1	2 Liter Poly	
MW-32-59-(007)	10/24/08	1359	N	N	GW	Y	Y	1	1	1	1	1	1	1	2 Liter Poly	
MW-32-85-(010)	10/24/08	1450	N	N	GW	Y	Y	1	1	1	1	1	1	1	2 Liter Poly	

LAT 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 10/24/08 1545
 1545
 2
 3

Method of Shipment: FEDEX Date Shipped:
 Airbill #:
 Airbill #:
 For Lab Receiving Use Only
 Custody Seal Intact? YES NO
 Cooler Temp: C

1) Chain of Custody Number - Client Determined
 2) QC Codes: N - Normal Sample, TB - Trip Blank, EP - Field Duplicate, EB - Equipment Blank, MS - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, G - Grab, C - Composite
 3) Field Filtered - Six digit number, indicate with a Y - (a) yes 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, MW - Water, MI - Micro Liquid, SO - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, O - Oil, P - Filter, P - Waste, P - Fuel, N - Fuel
 5) Sample Analysis Requested - Analytical method requested (i.e. 8160H, 8010B, 7470) and number of containers provided for each (i.e. 82006, 3, 0010874704 - 1)
 6) Preservative Type: BA - Hydrochloric Acid, NF - Nitric Acid, SH - Sulfuric Acid, SA - Acetic Acid, HA - Ascorbic Acid, HX - Hexane, 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) 556-3171
Fax: (843) 766-1178

GEL Work Order Number:
Phone #: (914) 736-8405
Fax #: (914) 734-6247

Project w/ Entergy Ground Water Monitoring Prog
GEL Quote #
COC Number: 50013510
PG Number: Entergy
Client Name: Indian Point Energy Center
Address: 450 Broadway, Suite 3, Buchanan, NY 10511
Collected by: Miguel Britos
Send Results To: Patrick Donahue

Sample ID <small>* For composite - indicate start and stop date/time</small>	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered:		Total number of containers	Sample Analysis Requested ^(d) (Fill in the number of containers for each test)				Preservative Type (b)	Comments
						Radioactive	TSCA Regulated		Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	Tritium (H3)		
MW-51-104-(007)	10/27/08	1007	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly	
MW-51-135-(007)	10/27/08	1005	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly	
MW-51-163-(007)	10/27/08	1020	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly	
MW-51-189-(007)	10/27/08	1011	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly	
MW-51-40-(009)	10/27/08	1311	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly	
MW-51-79-(009)	10/27/08	1330	N	N	GW	Y	Y	1	1	1	1		2 Liter Poly	

TAT Requested: Normal Rush: _____ Specify: _____ 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

Relinquished By (Signed)	Date	Received by (Signed)	Date	Time
<i>Miguel Britos</i>	10/29/08	SECURED	10/28/08	1645

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

For Lab Receiving Use Only

Custody Seal Intact?
 YES NO
 Cooler Temp: C

1) Chain of Custody Number - Client Determined.
 2) QC Codes: N = Normal Sample, EB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MB = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, Q = 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 Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc. Liquid, SD=Soil, SD=Soil, S=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fuel, N=Nasal
 5) Sample Analysis Requested: Analytical method requested (i.e. #2618, #01074) and number of containers provided for each (i.e. #2608, 3, #01074/2A - 1).
 6) Preservative Type: BA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Acetic Acid, HX = Hexane, ST = Sodium Toluolate. If no preservative is added = leave field blank

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: 1 of 1
 Project #: Entergy Ground Water Monitoring Prod
 GEL Quote #
 CCK Number: 50013510
 PO Number:

GEL Chain of Custody and Analytical Request

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

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

GEL Work Order Number:

Client Name: Entergy
Phone #: (914) 738-8405
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

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (d) (Fill in the number of containers for each test)				Preservative Type (e)	Comments		
						Radwaste	TSCA Required		Tritium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)			Level 1	Level 2
MW-67-105-(006)	11/03/08	1421	N	N	GW	Y	Y	1	1	1	1				2 Liter Poly	
MW-67-173-(006)	1437		N	N	GW	Y	Y	1	1	1	1				2 Liter Poly	
MW-67-219-(006)	1131		N	N	GW	Y	Y	1	1	1	1				2 Liter Poly	
MW-67-276-(006)	1139		N	N	GW	Y	Y	1	1	1	1				2 Liter Poly	
MW-67-323-(006)	1144		N	N	GW	Y	Y	1	1	1	1				2 Liter Poly	
MW-67-340-(006)	1154		N	N	GW	Y	Y	1	1	1	1				2 Liter Poly	
MW-67-39-(006)	1411		N	N	GW	Y	Y	1	1	1	1				2 Liter Poly	

LAT Requested: Normal: Rush: Specify: (Subject to Surcharge) Fax Results: Yes No

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
<i>Miguel Britos</i>	11/3/08	1500
<i>Cheryl Duffy</i>	11/3/08	1500

Sample Shipping and Delivery Details

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

For Lab Receiving Use Only
Custody Seal Intact?
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Cooler Temp: C

- Chain of Custody Number - Client Determined
- QC Codes: N - Normal Sample, EB - Trip Blank, FD - Field Duplicate, EB - Equipment Blank, MS - Matrix Spike Sample, MSP - Matrix Spike Duplicate Sample, CP - Grab, C - Composite
- Field Filtered: For liquid matrices, indicate with a Y. For gas the sample was field filtered or N. For sample was not field filtered
- Matrix Code: DW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, ML - Muds, Liquid, SP - Soil, SD - Solids, SL - Sludge, S9 - Solid Waste, O - Oil, P - Filter, P - Wipe, U - Urine, P - Fecal, N - Nails
- Sample Analysis Requested - Analytical method requested (e.g. 8246B, 6010B/7470/4 - 1)
- Preservative Type: HA - Hydrochloric Acid, NI - Nitric Acid, SH - Sodium Hydroxide, SA - Sulfuric Acid, AA - Ascorbic Acid, HX - Hexane, SE - Sodium Thiosulfate. If no preservative is added - leave field blank

WHITE = LABORATORY

PINK = CLIENT

YELLOW = FILE

GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1138

Page: 1 of 1
Project #: Entergy Ground Water Monitoring Program
GEL Quote #:
COC Number: 50013510
PU Number: 50013510

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

GEL Work Order Number:

Client Name: Entergy
Phone #: (914) 735-8405
Project/Site Name: Indian Point Energy Center
Fax #: (914) 734-6247
Address: 450 Broadway, Suite 3, Buchanan, NY 10511

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

Sample ID <small>* For composites indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military (hhmm))	QC Code (#)	Field Filtered (#)	Sample Matrix (#)	Should this sample be considered?	TSCA Required	Total number of containers	Sample Analysis Requested (6)		Comments Note: extra sample is required for sample specific QC
									Preservative Type	Volume	
MW-63-112-(007)	11/04/08	1241	N	N	GW	Y	Y	1	1	1	2 Liter Poly
MW-63-121-(007)	11/04/08	1243	N	N	GW	Y	Y	1	1	1	2 Liter Poly
MW-63-163-(007)	11/04/08	1245	N	N	GW	Y	Y	1	1	1	2 Liter Poly
MW-63-174-(007)	11/04/08	1244	N	N	GW	Y	Y	1	1	1	2 Liter Poly
MW-63-18-(007)	11/05/08	1053	N	N	GW	Y	Y	1	1	1	2 Liter Poly
MW-63-34-(007)	11/05/08	1103	N	N	GW	Y	Y	1	1	1	2 Liter Poly
MW-63-50-(007)	11/05/08	0939	N	N	GW	Y	Y	1	1	1	2 Liter Poly
MW-63-93-(008)	11/05/08	1014	N	N	GW	Y	Y	1	1	1	2 Liter Poly

TAT Requested: Normal: Rush: Specify: _____
 (Subject to Surcharges) 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

Chain of Custody Signatures		Sample Shipping and Delivery Details	
Requisitioned By (Signed)	Date	Time	Date Shipped:
<i>Angela Albert</i>	11/5/08	1620	

GEL PM: Cheryl Duffy
 Method of Shipment: FEDEX
 Airbill #: _____
 Airbill #: _____
 For Lab Receiving Use Only
 Custody Seal Intact? YES NO
 Cooler Temp: _____ C

1. Chain of Custody Number = Client Determined
 2. QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Urns, 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, SLP = Soil, SD = Sediment, SL = Sludge, SS = Solid Waste, D-Oil, P-Filter, P-Water, U-Urine, F-Fecal, N-Nasal
 5. Sample Analysis Requested: Analytical method requested (i.e. 8200B, 9910B, 9700) and number of containers provided for each (i.e. 8200B-3, 9910B/9700A - 3)
 6. Preservative Type: BA = Boric Acid, HX = Hydrochloric Acid, NA = Nitric Acid, SF = Sulfuric Acid, AA = Acetic Acid, SA = Sulfuric Acid, AA = Acetic Acid, ST = Sodium Thiosulfate, if no preservative is added - leave field blank
WHITE = LABORATORY
PINK = CLIENT
YELLOW = FILE

GEL Chain of Custody and Analytical Request

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

Page: 1 of 1
Project #: Energy Ground Water Monitoring Prog
GEL Order #: _____
COC Number: 50013510
PO Number: _____

GEL Work Order Number:

Phone #: (914) 736-8405

Client Name: Entergy

Project Site Name: Indian Point Energy Center

Fax #: (914) 734-6247

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

Collected by: AA, MS Send Results To: Patrick Donahue

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

Sample ID <small>* For completion - include date and step description</small>	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code (N)	Field Filtered (N)	Sample Matrix (H)	Should this sample be considered:		Total number of containers		Sample Analysis Requested (6)						Comments Note: extra sample is required for sample specific QC
						Radionuclide	TSCA Regulated	Tritium (H3)	Gamm Spec (GS)	Strontium 90 (Sr90)	Level 1	Level 2	Level 3	Level 4	Level 5	
MW-60-135-(007)	11/06/08	1049	N	N	GW	Y	Y	1	1	1						2 Liter Poly
MW-60-154-(007)	11/06/08	1119	N	N	GW	Y	Y	1	1	1						2 Liter Poly
MW-60-176-(007)	11/06/08	1155	N	N	GW	Y	Y	1	1	1						2 Liter Poly
MW-60-35-(007)	11/05/08	1503	N	N	GW	Y	Y	1	1	1						2 Liter Poly
MW-60-53-(007)	11/05/08	1432	N	N	GW	Y	Y	1	1	1						2 Liter Poly
MW-60-72-(007)	11/05/08	1453	N	N	GW	Y	Y	1	1	1						2 Liter Poly

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

Sample Collection Time/Zone:
 Eastern
 Pacific
 Other
 Mountain

1 A1 Requested: Normal: Rush: _____ Specify: _____ (Subject to Surcharge) Fax Results: Yes / No

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

Chain of Custody Signatures

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time
<i>[Signature]</i>	11/06/08	1520	<i>[Signature]</i>	11/06/08	1530

Sample Shipping and Delivery Details

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

1) Chain of Custody Number - Client Determined
 2) QC Checks: N - Normal Sample, TB - Trip Blank, ED - Field Duplicate, EB - Equipment Blank, MS - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, G - Grab, C - Composite
 3) Field Filtered - For liquid matrices, indicate with a Y - for yes the sample was field filtered or N - for sample was not field filtered
 4) Matrix codes: DW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, Wa - Water, M - Misc. Liquid, SD - Soil, SD-Settling, SL - Sludge, SS - Solid Waste, O - Oil, FS - Filter, P - Pipe, P - Pool, N - Nodal
 5) Sample Analysis Requested: Analytical method requested (ie. 8100B, 8010B/7470 and number of containers provided for each (ie. 8/20/08: 1, 60/08/7470A - 1))
 6) Preservative Type: BA - Boroboric Acid, NI - Nitric Acid, SH - Sodium Hydroxide, SA - Sulfuric Acid, AA - Acetic Acid, IX - Hexane, ST - Sodium Thiosulfate. If no preservative is added - leave field blank
WHITE = LABORATORY
YELLOW = FILE
PINK = CLIENT

For Lab Receiving Use Only

Correctly Seal Inact? YES/NO

Cooler Temp: _____

GEL Chain of Custody and Analytical Request

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

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

GEL Work Order Number:

Client Name: Entergy

Phone #: (914) 736-8405

Sample Analysis Requested (3) (Fill in the number of containers for each test)

Project/Site Name: Indian Point Energy Center

Fax #: (914) 734-6247

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

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

Sample ID

* For containers - indicate start and stop date/time

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hh:mm)	QC Code (3)	Field Filtered (3)	Sample Matrix (3)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (3)			Comments
						Radiactive	TSCA Regulated		Preservative Type (6)	Level 1	Level 2	
MW-37-22-(012)	11/10/08	1210	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-37-32-(012)	11/10/08	1220	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-37-40-(012)	11/10/08	1617	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly
MW-37-57-(012)	11/10/08	1104	N	N	GW	Y	Y	1	1	1	1	2 Liter Poly

IAI Requested: Normal: Rush: Specify: (Subject to Surcharges) Fax Results: Yes / No

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

Sample Collection Time Zone
 Eastern
 Central
 Mountain
 Pacific
 Other

Chain of Custody Signatures

Signature	Date	Time
<i>[Signature]</i>	11/10/08	17:51
<i>[Signature]</i>	11/10/08	17:51
<i>[Signature]</i>	11/10/08	17:51

GEL PM: Cheryl Duffy

Method of Shipment: FEDEX

Date Shipped:

Arbill #:

Arbill #:

Sample Shipping and Delivery Details

1) Chain of Custody Number - Client Determined
 2) QC Codes: N - Normal Sample, TB - Trip Blank, FD - Field Duplicate, EB - Equipment Blank, MS - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, G - Grab, C - Composite
 3) Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or N - for sample was not field filtered
 4) Matrix Codes: BW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, MW - Misc. Liquid, SO - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, G - Oil, F - Filter, P - Filter, P - Waste, U - Urine, F - Fecal, N - Nails
 5) Sample Analysis - Requested Analytical method requested (i.e. B260B, 6010B/7470B) and number of containers provided for each (i.e. 4200B-3, 6010B/7470B - 1)
 6) Preservative Type: HA - Hydrochloric Acid, NI - Nitric Acid, SH - Sodium Hydroxide, SA - Sulfuric Acid, AA - Ascorbic Acid, HX - Hexane, ST - Sodium Thiosulfate. If no preservative is added = leave field blank

WHITE = LABORATORY
 YELLOW = FILE
 PINK = CLIENT

For Lab Receiving Use Only

Custody Seal Intact?

YES / NO

Cooler Temp:

C

GEL Chain of Custody and Analytical Request

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

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

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

GEL Work Order Number:

Client Name: Energy Phone #: (914) 736-8405
Project/Site Name: Indian Point Energy Center Fax #: (914) 734-0247

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

Collected by: Miguel Britos Send Results To: Patrick Donahue

Sample ID

** For composites - indicate start and stop date/time*

Sample ID	Date Collected (mm-dd-yy)	Time Collected (Military) (hh:mm)	QC Code	Field Filtered	Sample Matrix	Should this sample be considered:	Sample Analysis Requested (6) (fill in the number of containers for each test)						Comments
							TSCA Regulated	Trilium (H3)	Gamma Spec (GS)	Strontium 90 (Sr90)	Nickel 63 (Ni63)	Preservative Type (6)	
MW-54-123-(007)	11/11/08	1103	N	N	GW	Y	1	1	1	1	1	2 Liter Poly	Note: extra sample is required for sample specific QC
MW-54-144-(007)	11/11/08	1106	N	N	GW	Y	1	1	1	1	1	2 Liter Poly	
MW-54-173-(007)	11/11/08	1107	N	N	GW	Y	1	1	1	1	1	2 Liter Poly	
MW-54-190-(007)	11/11/08	1109	N	N	GW	Y	1	1	1	1	1	2 Liter Poly	
MW-54-37-(007)	11/11/08	1316	N	N	GW	Y	1	1	1	1	1	2 Liter Poly	
MW-54-58-(007)	11/11/08	1302	N	N	GW	Y	1	1	1	1	1	2 Liter Poly	

TAI Requested: Normal, Rush: Specify: _____ Fax Results: Yes / No / Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

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

Chain of Custody Signatures

Received by (Signed)	Date	Time	Received by (Signed)	Date	Time
<i>Miguel Britos</i>	11/11/08	1450	SECURED STORAGE	11/11/08	1450

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

Sample Shipping and Delivery Details

Sample Collection Time Zones: Eastern Pacific Other
Mountain

For Lab Receiving Use Only

Custody Seal Intact? YES NO
Cooler Temp: C

1) Chain of Custody Number = Client Determined
2) QC Codes: N=Normal Sample, TB=Trip Blank, FD=Field Duplicate, EB=Equipment Blank, MS=Matrix Spike Sample, MSD=Matrix Spike Duplicate Sample, GS=Grab, C=Composite
3) Field Filtered: For liquid matrices, indicate with a Y - for gas 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=Soil, P=Paper, U=Urine, E=Food, N=Nasal
5) Sample Analysis Requested: Analytical method requested (i.e. BK608, 6010B/7470B) and number of containers provided for each (i.e. 2/608, 1, 6010B/7470B - 1)
6) Preservative Type: BA=Hydrochloric Acid, NI=Nitric Acid, SH=Sodium Hydroxide, SA=Sulfuric Acid, AA=Ascorbic Acid, HN=Hexane, 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

Page _____ of _____
Project #: _____ Entergy Ground Water Monitoring Program
GEL Quote #:
COC Number #: _____
PO Number: 50013510

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

GEL Work Order Number:

Client Name: Entergy

Phone #: (914) 734-9405

Project/Site Name: Indian Point Energy Center

Fax #: (914) 734-6247

Address: 450 Broadway, Suite 3, Buchanan, NY 10611

Collected by: Angela Altieri / Miguel Britos Send Results To: Patrick Donahue

Sample ID

* For composites - indicate start and stop time

U1-CSS-(010)

Date Collected (mm-dd-yy)

*Time Collected (Military) (hh:mm)

QC Code

Field Filtered (Y/N)

Sample Matrix (G)

Radiation

Y

1

1

1

1

1

1

1

1

1

1

2 Liter Poly

Total number of containers
Tritium (H3) Gamma Spec (GS) Strontium 90 (Sr90)

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

Preservative Type (6)

Comments

Note: extra sample is required for sample specific QC

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

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

Chain of Custody Signatures

Requisitioned By (Signed)	Date	Time	Received by (Signed)	Date	Time
<i>Request of Day</i>	11/19/08	1700	SECURED STORAGE	11/19/08	1700

Sample Shipping and Delivery Details

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

Sample Collection Time Zone
Eastern
Central
Mountain
Pacific
Other

For Lab Receiving Use Only
Custody Seal Intact?
YES
Cooler Temp. _____

- Chain of Custody Number - Client Determined
- QC Codes: N - Normal Sample, TR - Trip Blank, ER - Field Duplicate, ER - Equipment Blank, MS - Matrix Spike Sample, MSD - Matrix Spike Duplicate Sample, G - Grab, C - Composite
- Field Filtered: For liquid matrices, indicate with a Y - for yes the sample was field filtered or N - for sample was not field filtered
- Matrix Codes: DW - Drinking Water, GW - Groundwater, SW - Surface Water, WW - Waste Water, NL - NLE-Mix Liquid, SO - Soil, SD - Sediment, SL - Sludge, SS - Solid Waste, O - Oil, F - Filter, P - W - Pre-Use, U - Urine, F - Fecal, N - Nails
- Sample Analysis Requested: Analytical method requested (i.e. 8160H, 8180/7470) and number of containers provided for each (i.e. 8260H 3, 6020H/7470 1)
- Preservative Type: BA - Hydrochloric Acid, NE - Nitric Acid, NH - Sodium Hydroxide, SA - Sulfuric Acid, AA - Acetic Acid, ES - Hexane, ST - Sodium Thiosulfate. If no preservative is added - leave field blank

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT



APPENDIX D: 4TH QUARTER 2008 SAMPLING DATA SHEETS

WELL ID: MW 31.49

SAMPLE ID 012

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

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: 40, Partly Cloudy

PROJECT NO: 01 X11804 NE
DATE: 10/30/08
SAMPLER(S): APMB

SAMPLING INTERVAL (depth in ft below top of casing):
34.8 to 49.3

TOTAL VOLUME PURGED: 4.1 gal

SAMPLING PORT:
49

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

WATER QUALITY:

Time	Purged Volume (gal)	pH (SC)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (mg/l)	Temp (°C)	ORP	Drive/Vent Cycle (seconds)	Drive Pressure (psi)
945	Pump on							107	39
951	0.15	6.65	1.840	2.01	1.97	17.91	220.6		
957	0.5	6.56	1.795	1.97	1.29	18.07	60.0		
1003	0.8	6.60	1.756	1.91	1.15	18.62	65.7		
1009	1.2	6.63	1.686	0.84	1.07	18.16	83.9		
1014	1.4	6.64	1.658	0.65	1.11	18.10	93.3		
1020	1.8	6.68	1.570	0.12	2.06	17.92	53.5		
1026	2.2	6.88	1.228	0.42	5.70	17.89	93.7		
1032	2.5	6.95	0.935	0.34	6.40	17.97	94.7		
1038	2.9	6.98	0.911	1.41	6.69	17.81	97.5		
1046	3.3	7.00	0.889	1.33	6.72	17.70	98.0		
1051	3.5	7.00	0.884	1.28	6.71	17.76	98.8		
1057	3.8	7.01	0.877	1.29	6.85	17.81	98.4		
1100	Pump off								
1104	Start sampling								
1130	End sampling								

Equipment Used	Equipment Identification #
YS1556 MPS Reader and 5563 Sonde turbidity meter	<u>4</u> J00704093

NOTES AND OBSERVATIONS:

WELL ID: MW 31 63

SAMPLE ID: 012

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

CLIENT: Emergy - IPEC
 SITE: Buchanan NY
 WEATHER: 40F, sunny, windy

PROJECT NO: 010017869-01
 DATE: 10/30/03
 SAMPLER: SR

SAMPLING INTERVAL (depth in ft below top of casing):
55.3 to 63.8

TOTAL VOLUME PURGED: 1.65 gal

SAMPLING PORT:
63

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)
942	Flow	6.57						117	29
952	0.05	6.12	1.096	1.00	2.45	15.18	-53.6		
958	0.1	6.52	1.059	7.20	1.30	15.52	-76.0		
1003	0.2	6.72	1.003	2.72	1.71	15.73	63.6		
1009	0.35	7.03	0.957	1.92	1.03	16.24	-54.7		
1014	0.45	7.16	0.954	2.17	2.12	16.39	-41.4		
1020	0.55	7.21	0.957	1.05	2.12	16.24	-22.2		
1027	0.65	7.23	0.977	1.29	2.09	16.11	-5.0		
1033	0.8	7.24	0.993	0.51	2.07	16.30	2.7		
1039	0.9	7.26	1.029	0.40	2.06	15.44	0.5		
1046	1.0	7.24	1.041	0.36	2.02	15.43	-5.4		
1052	1.1	7.22	1.056	0.38	1.86	15.59	-15.1		
1057	1.2	7.22	1.069	0.78	1.72	15.50	-24.2		
1055	1.35	7.22	1.050	0.71	1.74	15.57	-27.0		
1111	1.45	7.27	1.089	0.79	1.94	15.52	28.2		
1113	pump off								
1117	stop sampling								
1214	and sampling								

Equipment Used	Equipment Identification #
YSI 55e MPS Reader and 55e3 Sonde	6
turbidity meter	700704293

NOTES AND OBSERVATIONS:

WELL ID: MW 31 85

SAMPLE ID: 012

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy IPEC
 SITE: Buchanan NY
 WEATHER: 41°F, clear, cloudy

PROJECT NO: 0110017869 9)
 DATE: 11/30/05
 SAMPLER(S): AA/MB

SAMPLING INTERVAL (depth in ft below top of casing):
69.8 to 85.4

TOTAL VOLUME PURGED: 28 gal

SAMPLING PORT:
85

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)
945	Flush on							6.7	29
953	0.1	6.84	1.570	2.12	2.36	16.71	-168.1		
959	0.2	7.01	1.591	1.76	1.85	17.06	-148.2		
1004	0.35	7.02	1.597	2.07	1.88	17.23	-123.9		
1010	0.6	7.04	1.600	1.32	1.87	17.54	-161.2		
1015	0.75	7.06	1.603	0.87	1.90	17.51	-95.6		
1021	1.1	7.06	1.605	1.08	1.93	17.34	-72.7		
1027	1.35	7.06	1.603	0.75	1.87	17.33	-55.5		
1033	1.5	7.06	1.603	0.40	1.84	17.41	-41.9		
1040	1.7	7.07	1.585	4.70	1.93	17.00	-35.4		
1047	1.85	7.06	1.587	0.52	2.03	16.72	-20.7		
1052	2.0	7.06	1.544	0.82	2.18	16.77	-8.6		
1058	2.1	7.07	1.536	1.27	2.25	16.79	0.4		
1106	2.25	7.07	1.525	0.78	2.27	16.89	8.8		
1112	2.35	7.07	1.515	0.84	2.29	16.87	13.4		
1119	2.5	7.07	1.508	0.76	2.28	16.86	17.9		
1121	Flush off								
1125	start sampling								
1209	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MFS Reader and 5562 Sonde	
turbidity meter	260704293

NOTES AND OBSERVATIONS:

WELL ID: MW 3-24

SAMPLE ID: 012

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 50's, sun

PROJECT NO: 01.0017869.91
 DATE: 11/10/08
 SAMPLER(S): 161AA
 PUMP DEPTH: 17 ft

WATER QUALITY: DTW 3.20

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1336	20.284								
1343	Pump on							1.8	
1355	20.376	7.26	3.947	8.23	4.21	22.59	104.2		
1400	20.317	7.36	4.094	4.89	3.16	22.57	105.5		
1410	20.299	7.45	4.172	3.69	2.66	22.70	102.0		
1411	20.296	7.50	4.192	3.48	2.23	22.87	100.6		
1415	20.322	7.55	4.323	5.54	2.19	22.76	96.5		
1420	20.344	7.58	4.333	3.88	2.10	22.83	94.6		
1425	20.364	7.62	4.331	4.91	1.92	22.95	93.0		
1430	20.378	7.64	4.328	2.86	1.80	22.99	92.8		1 gal purged
1435	20.402	7.67	4.326	2.64	1.80	23.02	89.4		
1440	20.381	7.68	4.328	2.51	1.78	23.10	87.2		
1445	20.324	7.71	4.352	0.60	1.74	23.14	83.1		
1450	20.280	7.73	4.382	0.88	1.82	23.23	81.2		
1455	20.242	7.74	4.436	0	1.89	23.37	77.5		
1500	20.212	7.76	4.510	0	2.03	23.24	81.2		
1505	20.175	7.76	4.537	0	2.00	23.17	76.2		
1507	Start sampling								
533	and sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	5
turbidity meter	200701254

NOTES AND OBSERVATIONS:

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

20.2 gal purged

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 50's - sun

PROJECT NO: 01.0017869.91
 DATE: 11/10/08
 SAMPLER(S): HTTB
 PUMP DEPTH: _____ ft

WATER QUALITY: DNV - 8.89'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes	
927	15.200	7.47	4.823	—	0.58	25.83	105.8	1.2		
928	15.200	7.47	4.823	—	0.58	25.83	105.8	1.2		
934	15.200	7.47	4.823	—	0.58	25.83	105.8	1.2		
943	15.185	7.45	5.174	3.33	0.63	26.05	107.2			
947	15.183	7.43	5.254	3.36	0.70	26.13	100.9			
953	15.173	7.45	5.304	5.81	0.62	26.32	85.3			
959	15.163	7.46	5.357	2.03	0.77	26.42	69.8			
1004	15.174	7.47	5.419	0.61	0.74	26.72	61.8			
1009	15.148	7.45	5.423	2.13	0.69	26.33	56.7			
1015	15.167	7.48	5.406	1.68	0.58	26.19	52.9			
1021	15.137	7.49	5.447	2.60	0.42	26.24	48.0			
1027	15.137	7.48	5.445	0	1.09	25.82	41.8			
1032	15.122	7.48	5.451	3.26	0.43	25.99	38.1			
1038	15.125	7.48	5.483	1.31	0.46	26.10	35.7		1.00 Pumped	
1043	15.151	7.48	5.506	0.57	0.33	25.89	29.8			
1052	15.098	7.48	5.508	1.22	0.33	25.47	26.0			
1057	15.111	7.49	5.495	1.17	0.39	25.77	27.3			
1102	15.101	7.48	5.502	1.09	0.43	25.92	26.3			
1107	15.101	7.48	5.516	0.98	0.35	25.83	21.7			
1112	15.093	7.48	5.514	0.89	0.36	25.85	18.7			
1117	15.073	7.48	5.511	0.96	0.36	25.85	19.4			
1121	Start sampling							Equipment Used		Equipment Identification #
1220	SAMPLE COMPLETED							IPEC		
	YSI 556 MPS Reader and 5563 Sonde									1
	flow meter									3
	turbidity meter									20070493

NOTES AND OBSERVATIONS:

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

WELL ID: MW37-22
 SAMPLE ID: 012

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Energy - IPEC
 SITE: Buchanan, NY
 WEATHER: SUN, SW

PROJECT NO: 01.0017869.91
 DATE: 11/06/08
 SAMPLER(S): THP/MS
 PUMP DEPTH: 17 ft

WATER QUALITY:

Time	circle one DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
913	7.02								
913	Pump On								
925	9.10	7.96	4.182	—	2.80	25.34	-67.7	1.0	
932	9.04	7.12	4.531	—	1.65	25.42	-72.7	1.1	
938	9.11	7.06	4.745	0.42	1.43	26.23	-89.5		
944	9.13	7.09	4.853	4.22	1.31	26.28	-95.8		
950	9.02	7.11	4.908	5.50	1.14	26.38	-98.0		
956	9.07	7.14	4.967	1.59	1.11	26.39	-95.0		
1002	9.04	7.13	5.006	1.54	1.03	26.41	-100.4		
1007	9.05	7.14	5.025	2.13	0.97	26.43	-101.4		
1012	9.04	7.15	5.044	2.96	0.96	26.35	-99.7		
1017	9.04	7.16	5.060	3.09	1.10	26.30	-98.6		
1023	9.05	7.17	5.095	2.31	0.95	26.23	-99.3		
1029	9.13	7.17	5.094	2.26	0.96	26.05	-97.1		
1034	9.04	7.17	5.163	3.35	0.92	25.76	-99.0		
1040	9.02	7.17	5.153	3.04	0.92	25.61	-96.4		
1050	9.04	7.17	5.127	1.22	1.06	25.53	-95.4		
1055	9.04	7.18	5.125	1.17	1.10	25.41	-93.5		
1100	9.06	7.18	5.130	1.19	1.11	25.45	-92.1		
1112	Start Pumping								

1210 SAMPLE COMPLETED - 2 L IPEC

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	4
flow meter	5
turbidity meter	2105704023

NOTES AND OBSERVATIONS:

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

no gas observed

WELL ID: MW 37-46

SAMPLE ID: 013

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

2/10/2

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

PROJECT NO: 01.0017869.91
 DATE: 1/10/08
 SAMPLER(S): 27748
 PUMP DEPTH: 39 ft

WATER QUALITY: DTW - 12.24'

Time	circle one: DTW or GW (Elevation)	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
902	32.994								
913	Pump on							21	
921	Pump off								
937	Pump on								
945	31.951	7.80	2.119	—	1.11	21.44	-206.7	21	2
950	32.344	7.77	2.115	11.02	1.04	21.74	-208.6		
956	32.383	7.74	2.103	6.93	0.89	21.06	-215.2		
1003	32.341	7.78	2.104	7.57	0.70	21.76	-218.9		
1008	32.200	7.79	2.104	7.44	0.83	22.08	-216.8		
1013	32.161	7.78	2.106	8.62	0.54	22.13	-227.1		
1019	32.182	7.78	2.108	7.60	0.47	22.19	-225.7		
1024	32.381	7.79	2.111	7.73	0.39	22.23	-229.6		
1030	32.436	7.79	2.107	—	0.26	22.26	-222.2		
1035	32.462	7.80	2.105	8.26	0.51	22.22	-240.7		
1042	32.338	7.80	2.105	12.16	0.21	22.14	-253.0		
1051	32.212	7.79	2.106	10.94	0.21	22.09	-242.4		
1056	32.596	7.77	2.102	10.90	0.35	22.13	-242.5		
1101	32.190	7.81	2.101	16.61	0.36	22.12	-228.6		
1106	32.322	7.80	2.105	19.52	0.40	22.18	-243.5		
1111	32.378	7.83	2.104	18.29	0.36	22.15	-236.4		
1116	32.373	7.78	2.107	9.27	0.33	22.16	-233.5		
1122	32.469	7.79	2.103	18.67	0.28	22.20	-23.2		
Equipment Used								Equipment Identification #	
YSI 556 MPS Reader and 5563 Sonde								5	
flow meter								1	
turbidity meter								200704593	

NOTES AND OBSERVATIONS:

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

1. water level dropped 1.6'
 2. Pumping as slow as possible.

WELL ID: MW 37-57
 SAMPLE ID: 012

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 50's, sun

PROJECT NO: 01.0017869.91
 DATE: 11/15/18
 SAMPLER(S): AAZ-M6
 PUMP DEPTH: 55 ft

WATER QUALITY: DTW = 6.96'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
059	43.404							4.1	
415	43.407							4.1	
026	43.258	7.18	3.002	—	1.86	24.90	249.9		
739	43.257	7.34	3.127	7.20	1.41	25.15	263.4		
946	43.111	7.36	3.181	7.32	1.28	25.48	264.7		
951	43.098	7.38	3.128	7.52	0.93	25.97	264.0		
957	43.123	7.40	3.041	2.23	0.90	26.10	251.5		
1003	43.135	7.41	2.997	0.19	0.85	26.14	243.7		
1008	43.115	7.41	2.967	0.0	0.81	26.17	239.9		
1014	43.025	7.41	2.949	0.28	0.78	26.18	235.7		gas purged
1119	43.047	7.41	2.933	0.51	0.77	26.17	228.9		
1124	43.065	7.40	2.918	1.47	0.78	26.10	224.9		
1031	43.083	7.41	2.905	1.49	0.78	25.94	221.8		
1136	43.035	7.41	2.902		0.75	26.03	219.4		
1139	start sampling								
1141	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	56
flow meter	4
turbidity meter	20510437

NOTES AND OBSERVATIONS:

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

2.10 gal purged

WELL ID: MW 319 87

SAMPLE ID: 005

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Energy IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy sun 41.5 F

PROJECT NO: 15-0017864-91
 DATE: 11/27/08
 SAMPLER(S): MB110

SAMPLING INTERVAL (depth in ft below top of casing)
65.0 to 75.0

TOTAL VOLUME PURGED: 2.7 gal

SAMPLING PORT
67

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)
1114	Random								
1121	0.1	7.26	1.552	17.37	8.41	16.01	134.0	2.5755	110
1126	0.3	7.22	1.743	4.31	6.96	15.65	2.9		
1132	0.7	7.15	1.748	4.59	2.30	15.76	43.6		
1137	1.0	7.13	1.747	2.79	5.09	15.80	61.8		
1142	Random								
1149	Random							2.517	110
1152	1.4	7.71	1.662	7.13	9.43	15.99	69.4		
1158	1.5	7.86	1.664	5.96	8.78	16.74	66.0		
1204	1.8	7.49	1.680	7.60	7.71	16.61	78.5		
1209	2.0	7.33	1.691	5.71	7.30	16.53	81.1		
1215	2.2	7.26	1.685	4.52	6.96	16.57	82.1		
1220	2.35	7.21	1.697	4.18	6.77	16.45	81.6		
1225	2.5	7.19	1.697	5.61	6.55	16.54	80.4		
1228	Start Sampling								
1253	SAMPLE COMPLETED			1/2 gal IPEC					

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5503 Sonde	4
turbidity meter	260701251

NOTES AND OBSERVATIONS:

WELL ID: MW 39.84SAMPLE ID: 005

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

 CLIENT: Energy - IPEC
 SITE: Buchanan, NY
 WEATHER: windy 10-44.5°F

 PROJECT NO: (100178694)
 DATE: 10/23/08
 SAMPLER(S): MPS/SP

SAMPLING INTERVAL (depth in ft below top of casing)

76.5 to 85.0

TOTAL VOLUME PURGED:

2.0 gal

SAMPLING PORT

344PURGE 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)
1118	Pump on							25/5.0	40
1123	0.1	6.66	2.201	5.34	4.40	17.29	-122.7		
1128	0.25	6.68	2.214	2.34	2.42	17.21	-112.8		
1133	0.4	6.72	2.163	4.09	3.23	17.92	-111.8		
1138	0.6	6.76	2.152	5.72	3.30	17.73	-122.2		
1142	Pump off								
1147	Pump on							25/7	40
1152	0.9	6.81	2.176	3.15	2.35	17.70	-124.8		
1157	1.1	6.82	2.153	5.27	1.52	17.91	-144.5		
1204	1.25	6.83	2.176	3.71	3.41	17.27	-125.1		
1210	1.5	6.84	2.185	5.407	3.43	17.77	-144.9		
1216	1.65	6.84	2.184	4.11	2.55	17.65	-154		
1221	1.75	6.85	2.192	4.35	2.48	17.72	-154		
1226	1.9	6.85	2.250	5.79	3.53	17.04	-144.9		
1228	Stop sampling								
1256	SAMPLE COMPLETED			1/2 gal. TP					

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	5
turbidity meter	70020254

NOTES AND OBSERVATIONS:

WELL ID: MW 20 1-9

SAMPLE ID: 01

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Emergy - IPEC
 SITE: Buchanan, NY
 WEATHER: water ends around 50°F

PROJECT NO: 010017860-01
 DATE: 6 22 03
 SAMPLER(S): JA MB

SAMPLING INTERVAL (depth in ft below top of casing)
15.0 to 16.5

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT
12'

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)
1230	0	PUMP ON	0.0						
1236	2.85	7.10	2.252	0.00	2.20	16.41	-28.6	1.0	0.0
1240	1.40	7.06	2.300	0.00	2.21	16.42	-28.6		
1258	2.10	7.02	2.357	0.00	2.21	16.40	-165.4		
1300	2.20	7.07	2.388	0.00	2.23	16.37	-165.4		
1302	2.30	7.09	2.321	0.00	2.21	16.37	-134.9		
1320	2.75	7.08	2.300	0.00	1.9	16.37	-127.4		
1326	2.85	7.08	2.331	0.00	1.8	16.37	-127.4		
1331	4.25	7.09	2.284	0.00	1.6	16.35	-127.4		
1337	PUMP OFF								
1347	PUMP ON								
1350	SAMPLE COMPLETED 12.5-9 1/10								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde turbidity meter	2 010017860-013

NOTES AND OBSERVATIONS:

WELL ID: MW 39-153

SAMPLE ID: 0025

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy IPEC
 SITE: Buchanan NY
 WEATHER: sun - clouds windy 50T

PROJECT NO: 0110017869-01
 DATE: 10/22/09
 SAMPLER(S): A.C.M.E.

SAMPLING INTERVAL (depth in ft below top of casing):
159.5 to 158.0

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
20

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)
12:20	0	7.0 MP	170					5.7/9	6.0
12:25	0.75	7.07	170		0.14	15.57	-107.3	5.7/9	7.2
12:30	0.60	7.04	170		0.14	15.57	-107.3		
12:35	0	7.02	170		0.14	15.57	-107.3		
12:37	0.25	7.02	170		0.14	15.57	-107.3		
12:40	0.30	7.02	170		0.14	15.57	-107.3		
12:45	1.00	7.02	170		0.14	15.57	-107.3		
12:50	1.00	7.02	170		0.14	15.57	-107.3		
12:55	1.00	7.02	170		0.14	15.57	-107.3		
13:00	4.0 MP	7.02	170		0.14	15.57	-107.3		
13:05	0.25	7.02	170		0.14	15.57	-107.3		
13:10	0.25	7.02	170		0.14	15.57	-107.3		
13:15	0.25	7.02	170		0.14	15.57	-107.3		
13:20	0.25	7.02	170		0.14	15.57	-107.3		
13:25	0.25	7.02	170		0.14	15.57	-107.3		
13:30	0.25	7.02	170		0.14	15.57	-107.3		
13:35	0.25	7.02	170		0.14	15.57	-107.3		
13:40	0.25	7.02	170		0.14	15.57	-107.3		
13:45	0.25	7.02	170		0.14	15.57	-107.3		
13:50	0.25	7.02	170		0.14	15.57	-107.3		
13:55	0.25	7.02	170		0.14	15.57	-107.3		
14:00	0.25	7.02	170		0.14	15.57	-107.3		

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
turbidity meter	302704243

NOTES AND OBSERVATIONS:

WELL ID: MW 21-195

SAMPLE ID: 2205

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Energy IPEC
 SITE: Buchanan NY
 WEATHER: sun, windsy, windy 50 F

PROJECT NO: 01001786991
 DATE: 10/12/05
 SAMPLER(S): AA 21 B

SAMPLING INTERVAL (depth in ft below top of casing):
192' 0" to 192' 6"

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
195

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)
12:20	0	6.41	1.915					5.215	6.0
12:37	0.10	6.32	1.915			15.15	-215.6	5.303	7.0
12:42	0.15	6.34	1.915		0.02	15.20	-215.6		
12:56	0.35	6.34	1.760	5.87	0.61	16.24	-215.6		
13:04	0.10	6.32	1.731	3.43	0.13	15.71	-225.4		
13:11	0.00	6.32	1.731	0.00	0.48	16.30	-225.4		
13:17	0.20	6.31	1.707	0.00	0.61	16.08	-225.4		
13:24	0.80	6.30	1.707	0.00	0.29	15.91	-225.4		
13:35	1.77	6.30	1.707	0.00	0.29	15.91	-225.4		
13:47	PUMP	ON: START SAMPLE COLLECTION							
14:22	SAMP	COMPLETED							

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde turbidity meter	4 1453567

NOTES AND OBSERVATIONS:

WELL ID: MW 411

SAMPLE ID 411

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

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

PROJECT NO: 0110117869-01
DATE: 11/11/2011
SAMPLER(S): _____

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

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:

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)
11:00	0.0	7.5	150	0.1	1.0	10	100	10	10
11:05	0.0	7.5	150	0.1	1.0	10	100	10	10
11:10	0.0	7.5	150	0.1	1.0	10	100	10	10
11:15	0.0	7.5	150	0.1	1.0	10	100	10	10
11:20	0.0	7.5	150	0.1	1.0	10	100	10	10
11:25	0.0	7.5	150	0.1	1.0	10	100	10	10
11:30	0.0	7.5	150	0.1	1.0	10	100	10	10
11:35	0.0	7.5	150	0.1	1.0	10	100	10	10
11:40	0.0	7.5	150	0.1	1.0	10	100	10	10
11:45	0.0	7.5	150	0.1	1.0	10	100	10	10
11:50	0.0	7.5	150	0.1	1.0	10	100	10	10
11:55	0.0	7.5	150	0.1	1.0	10	100	10	10
12:00	0.0	7.5	150	0.1	1.0	10	100	10	10
12:05	0.0	7.5	150	0.1	1.0	10	100	10	10
12:10	0.0	7.5	150	0.1	1.0	10	100	10	10
12:15	0.0	7.5	150	0.1	1.0	10	100	10	10
12:20	0.0	7.5	150	0.1	1.0	10	100	10	10
12:25	0.0	7.5	150	0.1	1.0	10	100	10	10
12:30	0.0	7.5	150	0.1	1.0	10	100	10	10
12:35	0.0	7.5	150	0.1	1.0	10	100	10	10
12:40	0.0	7.5	150	0.1	1.0	10	100	10	10
12:45	0.0	7.5	150	0.1	1.0	10	100	10	10
12:50	0.0	7.5	150	0.1	1.0	10	100	10	10
12:55	0.0	7.5	150	0.1	1.0	10	100	10	10
13:00	0.0	7.5	150	0.1	1.0	10	100	10	10
13:05	0.0	7.5	150	0.1	1.0	10	100	10	10
13:10	0.0	7.5	150	0.1	1.0	10	100	10	10
13:15	0.0	7.5	150	0.1	1.0	10	100	10	10
13:20	0.0	7.5	150	0.1	1.0	10	100	10	10
13:25	0.0	7.5	150	0.1	1.0	10	100	10	10
13:30	0.0	7.5	150	0.1	1.0	10	100	10	10
13:35	0.0	7.5	150	0.1	1.0	10	100	10	10
13:40	0.0	7.5	150	0.1	1.0	10	100	10	10
13:45	0.0	7.5	150	0.1	1.0	10	100	10	10
13:50	0.0	7.5	150	0.1	1.0	10	100	10	10
13:55	0.0	7.5	150	0.1	1.0	10	100	10	10
14:00	0.0	7.5	150	0.1	1.0	10	100	10	10
14:05	0.0	7.5	150	0.1	1.0	10	100	10	10
14:10	0.0	7.5	150	0.1	1.0	10	100	10	10
14:15	0.0	7.5	150	0.1	1.0	10	100	10	10
14:20	0.0	7.5	150	0.1	1.0	10	100	10	10
14:25	0.0	7.5	150	0.1	1.0	10	100	10	10
14:30	0.0	7.5	150	0.1	1.0	10	100	10	10
14:35	0.0	7.5	150	0.1	1.0	10	100	10	10
14:40	0.0	7.5	150	0.1	1.0	10	100	10	10
14:45	0.0	7.5	150	0.1	1.0	10	100	10	10
14:50	0.0	7.5	150	0.1	1.0	10	100	10	10
14:55	0.0	7.5	150	0.1	1.0	10	100	10	10
15:00	0.0	7.5	150	0.1	1.0	10	100	10	10

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

NOTES AND OBSERVATIONS:

WELL ID: MW 112-112

SAMPLE ID: 112-112

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan NY
WEATHER: Clear, 45-55

PROJECT NO: 01001869-1
DATE: _____
SAMPLER SI: _____

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

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:

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)
07:40	5	7.5	120	0.1	0.5	15	150	10	10
07:45	5	7.5	120	0.1	0.5	15	150	10	10
07:50	5	7.5	120	0.1	0.5	15	150	10	10
07:55	5	7.5	120	0.1	0.5	15	150	10	10
08:00	5	7.5	120	0.1	0.5	15	150	10	10
08:05	5	7.5	120	0.1	0.5	15	150	10	10
08:10	5	7.5	120	0.1	0.5	15	150	10	10
08:15	5	7.5	120	0.1	0.5	15	150	10	10
08:20	5	7.5	120	0.1	0.5	15	150	10	10
08:25	5	7.5	120	0.1	0.5	15	150	10	10
08:30	5	7.5	120	0.1	0.5	15	150	10	10
08:35	5	7.5	120	0.1	0.5	15	150	10	10
08:40	5	7.5	120	0.1	0.5	15	150	10	10
08:45	5	7.5	120	0.1	0.5	15	150	10	10
08:50	5	7.5	120	0.1	0.5	15	150	10	10
08:55	5	7.5	120	0.1	0.5	15	150	10	10
09:00	5	7.5	120	0.1	0.5	15	150	10	10
09:05	5	7.5	120	0.1	0.5	15	150	10	10
09:10	5	7.5	120	0.1	0.5	15	150	10	10
09:15	5	7.5	120	0.1	0.5	15	150	10	10
09:20	5	7.5	120	0.1	0.5	15	150	10	10
09:25	5	7.5	120	0.1	0.5	15	150	10	10
09:30	5	7.5	120	0.1	0.5	15	150	10	10
09:35	5	7.5	120	0.1	0.5	15	150	10	10
09:40	5	7.5	120	0.1	0.5	15	150	10	10
09:45	5	7.5	120	0.1	0.5	15	150	10	10
09:50	5	7.5	120	0.1	0.5	15	150	10	10
09:55	5	7.5	120	0.1	0.5	15	150	10	10
10:00	5	7.5	120	0.1	0.5	15	150	10	10

Equipment Used	Equipment Identification #
YSI 550 MPS Reader and 5503 Sonde turbidity meter	112-112

NOTES AND OBSERVATIONS:

WELL ID: MW 33-117

SAMPLE ID: 01-11-11

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan NY
WEATHER: Partly Cloudy

PROJECT NO: 01-001769-ME
DATE: 11/11/11
SAMPLER(S): 2

SAMPLING INTERVAL (depth in ft below top of casing):
10.0 to 10.0

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT: _____

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	150	0.1	1.0	10.0	100	10	100
10:05	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:10	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:15	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:20	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:25	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:30	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:35	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:40	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:45	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:50	0.0	7.5	150	0.1	1.0	10.0	100	10	100
10:55	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:00	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:05	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:10	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:15	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:20	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:25	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:30	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:35	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:40	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:45	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:50	0.0	7.5	150	0.1	1.0	10.0	100	10	100
11:55	0.0	7.5	150	0.1	1.0	10.0	100	10	100
12:00	0.0	7.5	150	0.1	1.0	10.0	100	10	100

Equipment Used	Equipment Identification #
YSI 550 MPS Reader and 5503 Sonde	
turbidity meter	

NOTES AND OBSERVATIONS:

WELL ID: MW 40 152

SAMPLE ID: 202

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy IPEC
SITE: Buchanan, NY
WEATHER: Partly cloudy

PROJECT NO: 01-04-1864-91
DATE: 12/17/02
SAMPLER S: 10

SAMPLING INTERVAL (depth in ft below top of casing):
150 to 150

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
10

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)
08:00	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:05	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:10	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:15	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:20	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:25	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:30	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:35	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:40	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:45	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:50	0.5	7.2	170	0.1	2.0	10.0	150	10	15
08:55	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:00	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:05	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:10	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:15	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:20	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:25	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:30	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:35	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:40	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:45	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:50	0.5	7.2	170	0.1	2.0	10.0	150	10	15
09:55	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:00	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:05	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:10	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:15	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:20	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:25	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:30	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:35	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:40	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:45	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:50	0.5	7.2	170	0.1	2.0	10.0	150	10	15
10:55	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:00	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:05	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:10	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:15	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:20	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:25	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:30	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:35	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:40	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:45	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:50	0.5	7.2	170	0.1	2.0	10.0	150	10	15
11:55	0.5	7.2	170	0.1	2.0	10.0	150	10	15
12:00	0.5	7.2	170	0.1	2.0	10.0	150	10	15

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

NOTES AND OBSERVATIONS:

WELL ID: _____

SAMPLE ID: _____

MW-41-40
(011)

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: mostly cloudy windy 45°F

PROJECT NO: 01.0017869.91
 DATE: 10/22/08
 SAMPLER(S): AA (MB)
 PUMP DEPTH: _____ ft

WATER QUALITY: 24.08 DTW

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1149	11.625								
1153	Prayer								
1158	Disrupt								
1208	Prayer							21	
1227	11.465	7.31	3.095	11.82	8.41	14.95	223.9		
1232	11.478	7.30	3.088	7.85	6.54	15.00	228.0		
1238	11.439	7.29	3.085	5.07	6.11	14.92	235.4		
1244	11.454	7.25	3.078	5.19	6.04	14.78	243.4		
1249	11.468	7.28	3.041	4.24	6.09	14.55	244.9		
1256	11.476	7.26	3.024	3.69	6.01	14.08	248.0		
1301	11.474	7.26	3.002	2.91	5.87	13.87	248.8		
1306	11.476	7.26	3.032	3.62	5.81	13.77	248.9		
1311	start sampling								
1355	and sampling								
1449									

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	1
flow meter	200701354
turbidity meter	5

NOTES AND OBSERVATIONS:

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

~ 1/3 gal purged

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MW-41-63(010)

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Windy (windy, cloudy) 50 F

PROJECT NO: 01-017804.91
 DATE: 10/22/03
 SAMPLER(S): AA/M.B

WATER COLUMN HEIGHT (ft) Well Diameter: _____ inches

$\frac{63}{DTB} - \frac{28.4}{DTW} = \frac{34.6}{\text{Well Column Height}}$ ft

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 34.6 x $\frac{0.041}{\text{Multiplier}}$ = 1.52 gallons
Well Volume

1.52 x 1.5 = 2.28 gallons
Designed Purge Volume

TOTAL VOLUME PURGED: 2.3 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1217	0	DTW							19.5	
1220	0.2	—	7.55	2.061	42.67	0.04	17.82	192.3		
1224	1.2	—	7.32	1.976	32.87	3.80	16.50	155.4		
1226	1.6	—	7.28	1.970	27.93	3.24	16.33	152.0		
1229	2.0	—	7.27	1.991	22.68	2.89	16.00	150.9		
1230										Start sampling
1231										end sampling

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 556J Sonde	6-
turbidity meter	20470/259

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msd

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MW 42-49
(013)

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: sunny 60°F

PROJECT NO: 01-01-06991
DATE: 10/31/08
SAMPLER S: AA/MB

WATER COLUMN HEIGHT (ft) Well Diameter: 2 inches

$\frac{49}{DTB} - \frac{34.73}{DTW} = \frac{14.27}{\text{Well Column Height}}$

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 14.27 x 0.163 Multiplier = _____ gallons

2.33 x 1.5 = 3.49 gallons

TOTAL VOLUME PURGED: 3.55 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1245	0	PLUMPS ON								
1246	0.05	—	7.57	0.693	—	8.16	16.91	182.0		
1247	0.15	—	7.73	0.691	10.90	6.49	17.52	176.8		
1249	0.50	—	7.84	0.694	11.40	6.02	17.86	173.5		
1252	0.90	—	7.99	0.692	7.02	5.63	18.30	170.2		
1255	1.20	—	8.04	0.692	7.21	5.57	18.48	168.0		
1300	1.80	—	8.02	0.728	6.22	5.43	18.42	167.4		
1305	2.20	—	7.96	0.779	2.51	5.16	18.34	161.9		
1310	2.80	—	7.91	0.815	1.70	4.89	18.20	153.4		
1315	3.15	—	7.89	0.833	2.10	4.78	18.13	148.5		
1320	3.45	—	7.87	0.840	0.99	4.71	18.12	145.2		
1320	PUMP STAYS ON									
1320	START SAMPLE COLLECTION									
1327	SAMPLE COMPLETED: 1/2 gal IPEC									

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	1
Turbidity meter	200704293

NOTES AND OBSERVATIONS:

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

*Submersible not working right.
Use bathy probe*

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

MW42-78
(C10)

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

PROJECT NO: 01-001-2694
DATE: 10/31/08
SAMPLER: SP AA / MB

WATER COLUMN HEIGHT (ft) $\frac{79}{DTB} - \frac{33.3}{DTW} = \frac{45.7}{\text{Well Column Height}}$ 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 $\frac{45.7}{\text{Well Column Height}} \times \frac{0.041}{\text{Multiplier}} = \frac{1.87}{\text{Well Volume}}$ gallons

$\frac{1.87}{\text{Well Volume}} \times 1.5 = \frac{2.81}{\text{Designed Purge Volume}}$ gallons

TOTAL VOLUME PURGED: 2.9 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1145	0	PUMP ON							74.0	
1154	0.1	—	6.57	1.617	—	4.67	16.38	230.9		
1158	0.6	—	7.03	1.672	121.4	4.40	16.26	206.4		
1201	0.9	—	7.15	1.691	200.4	4.09	16.20	203.8		
1203	1.3	—	7.18	1.640	269.8	3.80	16.11	202.0		
1205	1.8	—	7.21	1.680	290.1	3.52	16.12	202.2		
1207	2.1	—	7.23	1.675	293.7	3.38	16.08	200.9		
1211	2.8	—	7.2	1.672	329.8	3.24	16.05	200.0		
1211		PUMP OFF								
1330		PUMP ON START SAMPLE COLLECTION								
1334		SAMPLE COMPLETED 1/2 gal. IPEC								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 55h3 Sonde	6
Turbidity meter	200704293

NOTES AND OBSERVATIONS:

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

Use both submersible and peristaltic pumps at the same time
Submersible's connection not working right

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 75°F, Sun

PROJECT NO: 01.0017869.91
 DATE: 10/31/05
 SAMPLER(S): DATHR
 PUMP DEPTH: _____ ft

WATER QUALITY: DTW: 15.73'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
925	10.949								
926	Pump on								
929	Pump off								1
932	Pump on								
938	10.613	6.67	3.875	0.96	5.19	15.53	16.4	<1	
944	10.494	6.60	3.973	1.86	2.23	15.86	9.2		
945	Pump off								2
1014	Pump on								3
1017	10.580	6.60	4.017	1.14	2.59	14.66	36.6		
1022	10.553	6.61	4.079	1.67	2.08	13.33	135.5		
1035	10.569	6.60	3.994	2.59	2.02	13.32	140.4		
1041	10.583	6.60	3.979	0.78	1.85	13.36	144.3		
1046	10.596	6.60	3.976	0.86	2.65	13.40	146.9		
1101	10.605	6.61	3.972	0.52	3.07	13.51	146.9		
1056	10.617	6.62	3.971	0.57	3.12	13.41	148.5		
1101	10.628	6.62	3.973	0.63	3.16	13.40	151.5		
1106	10.637	6.63	3.976	0.59	3.26	13.39	156.3		
1112	Start Sampling								
1417	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	7005701098
turbidity meter	24

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

1. Flow meter replaced
2. Meters need to be rezeroed before use only for the first 2.5 m of the run.
3. Pumping as slow as possible

~ 0.4 gal purged.

WELL ID: MW 43-62
 SAMPLE ID: D10

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

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

PROJECT NO: 01.0017869.91
 DATE: 10/31/08
 SAMPLER(S): M&A
 PUMP DEPTH: _____ ft

WATER QUALITY: DTW = 16.92'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
922	35.441								
939	Pump on								
943	Pump off								1
956	Pump on								
1005	35.071	7.17	2.130	2.56	3.89	12.60	-26.9	<1	2
1018	35.167	6.97	2.311	1.67	3.12	13.79	-41.6		
1023	35.186	6.96	2.403	1.89	3.00	13.68	31.0		
1036	35.304	6.96	2.529	1.28	2.88	13.08	-14.2		
1042	35.308	6.94	2.581	2.54	2.8	12.97	-6.0		
1047	35.287	6.94	2.603	1.83	2.84	12.95	2.4		
1052	35.382	6.94	2.627	1.43	2.93	12.90	12.2		
1057	35.355	6.92	2.638	1.48	2.97	12.86	19.8		
1102	35.375	6.93	2.642	1.51	3.02	12.81	26.7		
1107	35.361	6.92	2.638	1.65	3.01	12.75	31.3		
1115	35.283	6.93	2.672	1.62	3.14	12.86	37.3		
1120	35.277	6.93	2.670	1.80	3.21	13.09	40.9		
1122	Start sampling								
1216	End sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	2
flow meter	20070273
turbidity meter	3

NOTES AND OBSERVATIONS:

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

- 1. Allow well to stabilize
- 2. Sample as soon as possible.
- 3. Well purged

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

ML044-67

(010)

CLIENT: Energy - IPEC
 SITE: Buchanan, NY
 WEATHER: Windy, Sun, 40's F

PROJECT NO.: 01.0017869.01
 DATE: 10/23/08
 SAMPLER S#: M31AD

WATER COLUMN HEIGHT (ft) $\frac{67}{\text{DTB}} - \frac{80.28}{\text{DTW}} = \frac{6.72}{\text{Well Column Height}}$ Well Diameter: 2 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 6.72 x 0.163 Multiplier = 1.09 gallons
 Well Volume

1.09 x 1.5 = 1.55 gallons
 Designed Purge Volume

TOTAL VOLUME PURGED: 1.6 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
7:06	0	1949							6.3	
9:15										
9:20	0.1	1387	6.94	1.768	374.7	5.10	16.50	195.5		
9:23	0.5	1410	7.09	1.755	159.1	4.87	16.97	185.3		
9:26	1.0	1429	7.23	1.754	101.1	5.49	17.08	163.2		
9:27										
1:00										
1:05	1.1		7.20	1.790	57.74	98.5	7.76	172.6		
1:08										
3:09										
13:17										

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	1
turbidity meter	200701354

NOTES AND OBSERVATIONS:

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

1 - 1/4 gal sampled. a no^{ice} water was coming out of the well. collected the rest of the sample from the water inside of the tubing.

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MWH-162
(011)

CLIENT: Emery - IPEC
SITE: Buchanan, NY
WEATHER: Windy, in 40SE

PROJECT NO: 010017809.41
DATE: 10/27/08
SAMPLER: S: MALB

WATER COLUMN HEIGHT (ft) $\frac{102}{DTB} - \frac{69.12}{DTW} = \frac{32.88}{\text{Well Column Height}}$ Well Diameter: 1 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 32.88 x $\frac{0.041}{\text{Multiplier}}$ = 1.35 gallons
Well Volume
1.35 x 1.5 = 2.02 gallons
Designed Purge Volume

TOTAL VOLUME PURGED: 2.1 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
9:15	0	Pump on							5.5	
9:20		Pump off - no water coming out, there is old tubing at check valve								
9:26		Pump on								
9:36		Pump off - no water								
9:40		Pump on								
9:47	0.1	--	7.40	1437	575.7	7.60	7.23	197.6		1
10:23		Pump off								
10:32		Pump on								
10:50		Pump off								
12:01		Start sampling								2
12:48		end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	6
turbidity meter	2005701354

NOTES AND OBSERVATIONS:

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

1. take surface water out of the tubing - purge water is not coming out of the tubing - through YSI. First valve of tubing inspected and are fine
2. sample obtained from taking the water from the tubing (the water was not coming out using the water pump).

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MW45-42
(0141)

CLIENT: Energy - IPEC
 SITE: Buchanan, NY
 WEATHER: Mostly cloudy, wind 7-15 mph

PROJECT NO: 01-8017809-91
 DATE: 10/22/08
 SAMPLERS: A & B

WATER COLUMN HEIGHT (ft) Well Diameter: 2 inches

$\frac{42}{DTB} - \frac{36.54}{DTW} = \frac{15.46}{\text{Well Column Height}}$ ft

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height $\frac{15.46}{\text{Multiplier}}$ = $\frac{2.52}{\text{Well Volume}}$ gallons

$2.52 \times 1.5 = 3.78$ gallons

Designed Purge Volume

TOTAL VOLUME PURGED: 2.8 gal

WATER QUALITY: 14.493 Trans Vol

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
900	0	Pump on							370	
904	0.1	13.185	6.47	1.537	13.95	3.78	17.94	181.4		
912	0.6	11.668	7.91	0.938	30.02	1.17	17.50	51.8		
918	0.05	11.432	8.37	0.596	13.21	1.39	16.99	32.0		
928		Pump off								no water coming out of the well
945		PUMP ON								new 1/4" tubing installed
949	1.1	-	8.60	0.922	270.4	4.91	17.02	27.1		
951	1.25	-	8.63	0.891	369.3	2.7	17.17	12.3		
1000	1.35	Pump off								no water coming out of the well
1010		Pump on								Pump is installed
1014	2.0	-	8.68	0.859	308.5	2.11	18.36	-0.77		
1019	2.4	-	8.72	0.848	418.4	1.47	19.01	-3.8		
1026	2.8	Pump off - well dead								
1356		Stop sampling								
1358		well done								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	1
turbidity meter	2007012511

NOTES AND OBSERVATIONS:

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

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MW45-61
(014)

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

PROJECT NO: 010017869.01
DATE: 10/22/08
SAMPLER(S): AA MB

WATER COLUMN HEIGHT (ft) Well Diameter: 1 inches

$\frac{61.0}{DTB} - \frac{27.75}{DTW} = \frac{33.05}{\text{Well Column Height}}$

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 33.05 x 0.041 Multiplier = 1.36 gallons
Well Volume

1.36 x 1.5 = 2.04 gallons
Designed Purge Volume

TOTAL VOLUME PURGED: 2.0 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
856	0	Pump on								
900	0.1	-	7.40	5.214	86.17	5.01	17.28	184.3	55.0	
905	0.5	-	7.13	5.840	30.75	2.54	17.74	178.0		
911	1.0	-	7.21	6.921	39.65	1.97	17.76	161.3		
916	1.4	-	7.32	6.949	32.58	1.85	17.73	153.6		
932	1.8	-	7.36	6.976	32.56	1.63	17.76	143.7		
936	Stevl sampling									
938	and sampling									

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	6
turbidity meter	700701254

NOTES AND OBSERVATIONS:

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

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

113-46(0.4)

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 2007 50°

PROJECT NO: 01-017x09.01
 DATE: 12/20/07
 SAMPLER: SP

WATER COLUMN HEIGHT (ft) $\frac{30.6}{DTW} - \frac{4.72}{DTW} = \frac{25.88}{\text{Well Column Height}}$ ft Well Diameter: 4 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 25.88 x 0.280 = 7.25 gallons
 Multiplier
1.5 x 1.5 = 2.25 gallons
 Designated Purge Volume

TOTAL VOLUME PURGED: 25 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1240	0									
1255			7.38	0.386	12.45	0.47	20.77	19.6	10.5	
1310	3.0		7.30	0.386	12.45	0.47	20.77	19.6		
1321			7.25	0.477	10.15	1.25	19.79	24.0		
1339	1.9		7.25	0.477	10.15	1.25	19.79	24.0		
1348	6.0		7.25	0.477	10.15	1.25	19.79	24.0	30	
1355	8.0		7.37	0.66	11.25	0.37	20.24	27.2		
1340	10.0		7.36	0.66	11.25	0.37	20.24	27.2		
1351	12.0		7.33	0.528	13.00	0.27	20.24	27.2		
1404	14.0		7.29	0.678	13.30	0.27	20.24	27.2		
14	16.0		7.27	0.678	13.30	0.27	20.24	27.2		
1430	6.0		7.27	0.678	13.30	0.27	20.24	27.2		
1445	20.0		7.30	0.678	13.30	0.27	20.24	27.2		
1457	22.0		7.29	0.678	13.30	0.27	20.24	27.2		
1510	24.0		7.27	0.678	13.30	0.27	20.24	27.2		
1520	25.0		7.27	0.678	13.30	0.27	20.24	27.2		
1521	25.0		7.27	0.678	13.30	0.27	20.24	27.2		

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
turbidity meter	20000254
15	

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet rsl.

WELL ID: MW49-26
 SAMPLE ID: 014

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy 60's

PROJECT NO: 01.0017869.91
 DATE: 11/5/08
 SAMPLER(S): AA/MB
 PUMP DEPTH: 25 ft

WATER QUALITY:

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1146	13.75								
1209	13.5E								
1210	Pump on								
1221	13.13	7.42	2.733	-	3.78	19.70	195.3	1.0	
1230	13.45	7.41	2.754	-	1.47	20.14	163.5	<1	
1237	13.30	7.41	2.763	-	1.35	19.96	140.0		1a
1244	13.40	7.41	2.767	-	1.24	19.80	125.6		
1247	Pump OFF								
1305	Pump on								
1308	13.54	7.45	2.769	7.63	2.46	19.21	121.4		1b
1314	13.22	7.45	2.770	7.14	2.47	19.15	124.4		
1321	13.03	7.44	2.772	6.91	3.19	19.11	125.9		
1327	13.18	7.44	2.773	5.68	3.34	19.00	126.6		
1339	13.12	7.45	2.772	4.95	3.52	19.02	134.7		
1346	11.796	7.47	2.773	5.18	3.61	19.00	138.2		2
1352	11.850	7.49	2.772	5.31	3.90	19.00	143.4		
1357	11.908	7.49	2.772	4.97	3.90	19.00	145.6		
1413	Start sampling								
1554	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	1
turbidity meter	2005701754

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

1. Difficult to pump the well due to production in the well.
 2. Changed from DTW to GW elevation measurements
 1b Pumping as slow as possible, but water level continues to drop
 ~0.6 gal purged.

WELL ID: MW49-42

SAMPLE ID: 014

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy 60's

PROJECT NO: 01.0017869.91
 DATE: 11/5/08
 SAMPLER(S): AA/MB
 PUMP DEPTH: 37.0 ft

WATER QUALITY: DTW - 13.41'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1206	13.389								
1210	<u>Pump on</u>							20	
1220	13.405	7.12	2.545	—	4.01	19.79	199.8		
1230	13.471	7.22	2.569	—	1.21	20.22	163.9		
1240	13.529	7.25	2.593	—	0.98	20.58	162.7	10	
1245	13.564	7.26	2.598	—	0.89	20.55	163.9		
1251	13.608	7.26	2.601	1.68	0.71	20.55	163.6	21	1
1257	13.663	7.27	2.605	4.16	0.66	20.06	160.6		
1309	13.727	7.26	2.602	3.32	0.95	19.75	163.6		
1315	13.770	7.27	2.602	3.97	1.31	19.59	162.0		
1322	13.811	7.27	2.607	3.42	1.32	19.38	159.8		
1328	13.870	7.27	2.613	3.61	1.33	19.14	157.2		
1334	<u>Start sampling</u>								
1431	<u>and sampling</u>								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	6
flow meter	5
turbidity meter	700 701254

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

1. Pumping as slow as possible, but water level continues to drop
2. 8.5 gal purged.

SAMPLE ID: _____

MLW-30-42
(015)

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 6:15 cloudy windy

PROJECT NO: 01.0017869.91
 DATE: 11/6/08
 SAMPLER(S): AA/MS
 PUMP DEPTH: 27.6 ft

WATER QUALITY: DTW - 0.59'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
856	34.437								
900	Pump on							20	
919	34.377	7.70	2.096	4.01	4.68	21.58	205.8		
915	34.406	7.91	2.149	6.51	2.56	22.51	183.5		
928	34.404	7.99	2.184	2.45	2.30	22.67	171.7		
925	34.390	8.05	2.208	2.69	2.06	22.82	156.0		
930	34.396	8.08	2.216	2.38	1.99	23.00	124.5		
935	34.385	8.09	2.213	2.06	1.97	23.31	84.8		
940	34.372	8.09	2.209	1.65	1.90	23.94	43.4		
945	34.372	8.10	2.212	1.50	1.98	23.82	4.2		
950	34.364	8.11	2.211	2.03	1.75	23.58	-23.8		
955	34.373	8.10	2.206	2.21	1.95	23.74	-32.8		
1000	34.356	8.11	2.207	2.21	1.86	24.19	-47.7		
1005	34.361	8.11	2.196	2.28	1.96	24.49	-51.5		
1010	34.348	8.11	2.192	2.39	1.91	24.03	55.5		
012	Start sampling								
1044	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	2
flow meter	3
turbidity meter	200701254

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msl.

2.4 gal purged

WELL ID: MW50-66
 SAMPLE ID: (C15)

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: RTS cloudy windy

PROJECT NO: 01.0017869.91
 DATE: 4/6/08
 SAMPLER(S): AAT-1B
 PUMP DEPTH: 60.0 ft

WATER QUALITY: PTW 10.31'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
852	88.950								
910	Pump on							41	
915	Pump off								1
927	Pump on								
931	88.722	7.20	2.541	5.31	3.12	19.70	223.1		2
936	88.744	7.21	2.541	3.24	3.25	19.60	213.6		
941	88.660	7.22	2.541	3.54	3.43	19.54	214.6		
946	88.646	7.24	2.542	5.49	3.45	19.45	210.5		
951	88.627	7.24	2.543	2.47	2.97	19.34	205.5		
956	88.666	7.24	2.543	2.83	2.18	19.26	206.0		
1001	88.679	7.25	2.545	2.60	2.79	19.23	203.7		
1006	88.701	7.26	2.546	2.38	2.76	19.20	202.0		
1011	88.626	7.27	2.545	1.52	2.73	19.19	199.4		
1018	88.693	7.28	2.542	2.30	2.64	19.25	196.1		
1023	88.577	7.29	2.544	2.15	2.57	19.37	193.6		
1028	88.514	7.31	2.555	1.63	2.71	19.37	193.3		
1037	88.603	7.32	2.570	2.16	3.29	19.40	191.1		
1038	88.671	7.32	2.571	2.26	3.16	19.43	189.5		
1043	88.667	7.32	2.573	2.23	3.16	19.47	188.2		
1045	Start sampling								-3
1038	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	5
turbidity meter	250701254

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

1. Adding well to recharge water level approx 0.75 ft
2. Pumped as slow as possible.
3. Sampling as slow as possible
4. Well cap protected.

WELL ID: MW 51-40

SAMPLE ID 024

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 5/20/04 5:00P

PROJECT NO: 01-0017869-91
 DATE: 5/20/04
 SAMPLER(S): 200

SAMPLING INTERVAL (depth in ft below top of casing)
200 to 210

TOTAL VOLUME PURGED: 4.05 gal

SAMPLING PORT
400

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)
12:00	0	7.0	0.1						
12:05	0.1	7.0	0.1						
12:10	0.2	7.0	0.1						
12:15	0.3	7.0	0.1						
12:20	0.4	7.0	0.1						
12:25	0.5	7.0	0.1						
12:30	0.6	7.0	0.1						
12:35	0.7	7.0	0.1						
12:40	0.8	7.0	0.1						
12:45	0.9	7.0	0.1						
12:50	1.0	7.0	0.1						
12:55	1.1	7.0	0.1						
1:00	1.2	7.0	0.1						
1:05	1.3	7.0	0.1						
1:10	1.4	7.0	0.1						
1:15	1.5	7.0	0.1						
1:20	1.6	7.0	0.1						
1:25	1.7	7.0	0.1						
1:30	1.8	7.0	0.1						
1:35	1.9	7.0	0.1						
1:40	2.0	7.0	0.1						
1:45	2.1	7.0	0.1						
1:50	2.2	7.0	0.1						
1:55	2.3	7.0	0.1						
2:00	2.4	7.0	0.1						
2:05	2.5	7.0	0.1						
2:10	2.6	7.0	0.1						
2:15	2.7	7.0	0.1						
2:20	2.8	7.0	0.1						
2:25	2.9	7.0	0.1						
2:30	3.0	7.0	0.1						
2:35	3.1	7.0	0.1						
2:40	3.2	7.0	0.1						
2:45	3.3	7.0	0.1						
2:50	3.4	7.0	0.1						
2:55	3.5	7.0	0.1						
3:00	3.6	7.0	0.1						
3:05	3.7	7.0	0.1						
3:10	3.8	7.0	0.1						
3:15	3.9	7.0	0.1						
3:20	4.0	7.0	0.1						

Equipment Used	Equipment Identification #
YSI 55c MPS Reader and 55e3 Sonde	
turbidity meter	<u>20014-2103</u>

NOTES AND OBSERVATIONS:

WELL ID: MW 51-34

SAMPLE ID: 1009

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: SUNNY 57°F

PROJECT NO: 01001786891
DATE: 10/1/09
SAMPLER(S): 113

SAMPLING INTERVAL (depth in ft below top of casing):
10.22 to 51.3

TOTAL VOLUME PURGED: 15.5 gal

SAMPLING PORT:
113

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)
11:00	0	7.0	170	0.1	10.0	14.5	210	10	100
11:05	0.5	7.0	170	0.1	10.0	14.5	210	10	100
11:10	1.0	7.0	170	0.1	10.0	14.5	210	10	100
11:15	1.5	7.0	170	0.1	10.0	14.5	210	10	100
11:20	2.0	7.0	170	0.1	10.0	14.5	210	10	100
11:25	2.5	7.0	170	0.1	10.0	14.5	210	10	100
11:30	3.0	7.0	170	0.1	10.0	14.5	210	10	100
11:35	3.5	7.0	170	0.1	10.0	14.5	210	10	100
11:40	4.0	7.0	170	0.1	10.0	14.5	210	10	100
11:45	4.5	7.0	170	0.1	10.0	14.5	210	10	100
11:50	5.0	7.0	170	0.1	10.0	14.5	210	10	100
11:55	5.5	7.0	170	0.1	10.0	14.5	210	10	100
12:00	6.0	7.0	170	0.1	10.0	14.5	210	10	100
12:05	6.5	7.0	170	0.1	10.0	14.5	210	10	100
12:10	7.0	7.0	170	0.1	10.0	14.5	210	10	100
12:15	7.5	7.0	170	0.1	10.0	14.5	210	10	100
12:20	8.0	7.0	170	0.1	10.0	14.5	210	10	100
12:25	8.5	7.0	170	0.1	10.0	14.5	210	10	100
12:30	9.0	7.0	170	0.1	10.0	14.5	210	10	100
12:35	9.5	7.0	170	0.1	10.0	14.5	210	10	100
12:40	10.0	7.0	170	0.1	10.0	14.5	210	10	100
12:45	10.5	7.0	170	0.1	10.0	14.5	210	10	100
12:50	11.0	7.0	170	0.1	10.0	14.5	210	10	100
12:55	11.5	7.0	170	0.1	10.0	14.5	210	10	100
13:00	12.0	7.0	170	0.1	10.0	14.5	210	10	100
13:05	12.5	7.0	170	0.1	10.0	14.5	210	10	100
13:10	13.0	7.0	170	0.1	10.0	14.5	210	10	100
13:15	13.5	7.0	170	0.1	10.0	14.5	210	10	100
13:20	14.0	7.0	170	0.1	10.0	14.5	210	10	100
13:25	14.5	7.0	170	0.1	10.0	14.5	210	10	100
13:30	15.0	7.0	170	0.1	10.0	14.5	210	10	100
13:35	15.5	7.0	170	0.1	10.0	14.5	210	10	100
13:40	16.0	7.0	170	0.1	10.0	14.5	210	10	100
13:45	16.5	7.0	170	0.1	10.0	14.5	210	10	100
13:50	17.0	7.0	170	0.1	10.0	14.5	210	10	100
13:55	17.5	7.0	170	0.1	10.0	14.5	210	10	100
14:00	18.0	7.0	170	0.1	10.0	14.5	210	10	100
14:05	18.5	7.0	170	0.1	10.0	14.5	210	10	100
14:10	19.0	7.0	170	0.1	10.0	14.5	210	10	100
14:15	19.5	7.0	170	0.1	10.0	14.5	210	10	100
14:20	20.0	7.0	170	0.1	10.0	14.5	210	10	100
14:25	20.5	7.0	170	0.1	10.0	14.5	210	10	100
14:30	21.0	7.0	170	0.1	10.0	14.5	210	10	100
14:35	21.5	7.0	170	0.1	10.0	14.5	210	10	100
14:40	22.0	7.0	170	0.1	10.0	14.5	210	10	100
14:45	22.5	7.0	170	0.1	10.0	14.5	210	10	100
14:50	23.0	7.0	170	0.1	10.0	14.5	210	10	100
14:55	23.5	7.0	170	0.1	10.0	14.5	210	10	100
15:00	24.0	7.0	170	0.1	10.0	14.5	210	10	100
15:05	24.5	7.0	170	0.1	10.0	14.5	210	10	100
15:10	25.0	7.0	170	0.1	10.0	14.5	210	10	100
15:15	25.5	7.0	170	0.1	10.0	14.5	210	10	100
15:20	26.0	7.0	170	0.1	10.0	14.5	210	10	100
15:25	26.5	7.0	170	0.1	10.0	14.5	210	10	100
15:30	27.0	7.0	170	0.1	10.0	14.5	210	10	100
15:35	27.5	7.0	170	0.1	10.0	14.5	210	10	100
15:40	28.0	7.0	170	0.1	10.0	14.5	210	10	100
15:45	28.5	7.0	170	0.1	10.0	14.5	210	10	100
15:50	29.0	7.0	170	0.1	10.0	14.5	210	10	100
15:55	29.5	7.0	170	0.1	10.0	14.5	210	10	100
16:00	30.0	7.0	170	0.1	10.0	14.5	210	10	100
16:05	30.5	7.0	170	0.1	10.0	14.5	210	10	100
16:10	31.0	7.0	170	0.1	10.0	14.5	210	10	100
16:15	31.5	7.0	170	0.1	10.0	14.5	210	10	100
16:20	32.0	7.0	170	0.1	10.0	14.5	210	10	100
16:25	32.5	7.0	170	0.1	10.0	14.5	210	10	100
16:30	33.0	7.0	170	0.1	10.0	14.5	210	10	100
16:35	33.5	7.0	170	0.1	10.0	14.5	210	10	100
16:40	34.0	7.0	170	0.1	10.0	14.5	210	10	100
16:45	34.5	7.0	170	0.1	10.0	14.5	210	10	100
16:50	35.0	7.0	170	0.1	10.0	14.5	210	10	100
16:55	35.5	7.0	170	0.1	10.0	14.5	210	10	100
17:00	36.0	7.0	170	0.1	10.0	14.5	210	10	100
17:05	36.5	7.0	170	0.1	10.0	14.5	210	10	100
17:10	37.0	7.0	170	0.1	10.0	14.5	210	10	100
17:15	37.5	7.0	170	0.1	10.0	14.5	210	10	100
17:20	38.0	7.0	170	0.1	10.0	14.5	210	10	100
17:25	38.5	7.0	170	0.1	10.0	14.5	210	10	100
17:30	39.0	7.0	170	0.1	10.0	14.5	210	10	100
17:35	39.5	7.0	170	0.1	10.0	14.5	210	10	100
17:40	40.0	7.0	170	0.1	10.0	14.5	210	10	100
17:45	40.5	7.0	170	0.1	10.0	14.5	210	10	100
17:50	41.0	7.0	170	0.1	10.0	14.5	210	10	100
17:55	41.5	7.0	170	0.1	10.0	14.5	210	10	100
18:00	42.0	7.0	170	0.1	10.0	14.5	210	10	100
18:05	42.5	7.0	170	0.1	10.0	14.5	210	10	100
18:10	43.0	7.0	170	0.1	10.0	14.5	210	10	100
18:15	43.5	7.0	170	0.1	10.0	14.5	210	10	100
18:20	44.0	7.0	170	0.1	10.0	14.5	210	10	100
18:25	44.5	7.0	170	0.1	10.0	14.5	210	10	100
18:30	45.0	7.0	170	0.1	10.0	14.5	210	10	100
18:35	45.5	7.0	170	0.1	10.0	14.5	210	10	100
18:40	46.0	7.0	170	0.1	10.0	14.5	210	10	100
18:45	46.5	7.0	170	0.1	10.0	14.5	210	10	100
18:50	47.0	7.0	170	0.1	10.0	14.5	210	10	100
18:55	47.5	7.0	170	0.1	10.0	14.5	210	10	100
19:00	48.0	7.0	170	0.1	10.0	14.5	210	10	100
19:05	48.5	7.0	170	0.1	10.0	14.5	210	10	100
19:10	49.0	7.0	170	0.1	10.0	14.5	210	10	100
19:15	49.5	7.0	170	0.1	10.0	14.5	210	10	100
19:20	50.0	7.0	170	0.1	10.0	14.5	210	10	100
19:25	50.5	7.0	170	0.1	10.0	14.5	210	10	100
19:30	51.0	7.0	170	0.1	10.0	14.5	210	10	100

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5503 Sonda	
turbidity meter	

NOTES AND OBSERVATIONS:

WELL ID: MW 111 111

SAMPLE ID: _____

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

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

PROJECT NO: 0101786991
 DATE: _____
 SAMPLER S: _____

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

TOTAL VOLUME PURGED: 1.5 gal

SAMPLING PORT:

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)
0853	0	7.0	150	0.1					
0900									
0910									
0920									
0930									
0940									
0950									
1000									
1020	SAMPLE COMPLETED			1.5 gal. IPEC					

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

NOTES AND OBSERVATIONS:

WELL ID: Mw-53-5'2SAMPLE ID: 004

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

pg 1 of 2

CLIENT: Entergy - IPEC

PROJECT NO: 01.0017869.91

SITE: Buchanan, NY

DATE: 10/30/08WEATHER: sunny/windy 40°FSAMPLER(S): AA/M.BPUMP DEPTH: 750 ftWATER QUALITY: 01.0017869.91

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Purged H ₂ O Notes (gals)
1055	23421								
1120	PUMP ON	7.2	1913					1.0	
1136	23425	7.17	1044	6006	14.01	14.01	214.5		
1141	23494	7.17	1004	5650	7.53	12.61	205.7		
1150	23480	7.43	0.908	46.25	8.03	12.62	180.9		0.4
1156	23505	7.50	0.877	36.21	8.60	12.71	187.6		
1201	23420	7.58	0.890	26.79	8.62	13.18	179.6		0.7
1206	23471	7.70	0.883	25.48	9.15	13.29	165.8		0.8
1214	23500	7.81	0.876	16.66	9.33	14.10	150.2		0.9
1220	23533	7.91	0.875	11.42	9.21	13.50	118.4		1.0
1225	23551	7.90	0.872	13.20	9.49	13.29	116.5		
1240	23554	8.05	0.870	9.49	9.64	12.94	72.5		1.5
1250	PUMP OFF								
1300	PUMP ON								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	K1
turbidity meter	200704293

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

NW 53 8.3
0.09
pg 2 of 3

CLIENT: Energy - IPEC
SITE: Buchanan, NY
WEATHER: SUN Windy, 40°F

PROJECT NO: 01.417809.01
DATE: 10/22/08
SAMPLER(S): M01/A01

WATER COLUMN HEIGHT (ft): $\frac{82}{DTB} - \frac{58.08}{DTW} = \frac{24.0}{\text{Well Column Height}}$ ft
Well Diameter: 2 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 24 x $\frac{0.163}{\text{Multiplier}}$ = 3.912 gallons
Well Volume

3.9 x 1.5 = 5.9 gallons
Designed Purge Volume

TOTAL VOLUME PURGED: 6 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (gl)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1312	1.8		8.16	0.365		8.13	17.21	82.14	75.0	9/7
1505	Pl. mport									
1509	2.3	22.413	8.24	0.385	1.14	8.31	17.10	83.1		
1517	3.4	22.671	8.19	0.370	2.4	8.29	17.17	84.2		
1524	4.0	22.378	8.22	0.392	2.44	8.12	17.07	85.4		
1530	4.8	22.351	8.16	0.377	2.10	8.04	17.24	75.8		
1536	5.6	22.400	8.17	0.399	2.00	8.09	17.31	73.8		
1540	5.7									
1541	Shut sampling									
1542	end sampling									

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

NOTES AND OBSERVATIONS:

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

1. Pump repaired. Surge motor pump not working

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MNH-15-100-011

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Sunny, clear, 40° F

PROJECT NO: 01/0017869.91
 DATE: 10/26/08
 SAMPLER S#: 113-113

WATER COLUMN HEIGHT (ft) Well Diameter: _____ inches

$\frac{120}{DTW} - \frac{89.03}{DTW} = \frac{30.97}{\text{Well Column Height}}$ ft

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 30.97 x 0.041 Multiplier = 1.25 gallons
2.5 x 1.5 = 3.75 gallons

Well Volume
Designed Purge Volume

TOTAL VOLUME PURGED: 3.3 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1:15	0	2201	6.9						105.0	
1:27	0.5	-	7.3	1492	492	3.50	16.31	218.5		
1:34	1.0	-	7.40	1575	676.3	3.00	15.81	200.1		
1:40	1.5	-	7.28	1614	214.2	2.97	16.17	201.7		
1:47	2.0	-	7.27	1630	638.4	2.20	16.14	187.2		
	2.5	-	7.27	1637	563.0	1.88	16.42	179.9		
1:59	3.0	-	7.27	1637	549.6	1.40	16.25	173.3		
12:05	3.7	-	7.28	1656	518.4	1.22	16.44	165.8		
12:06		PUMP OFF								
12:49		PUMP ON								
3:00		PUMP OFF								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 556J Sonde	2
turbidity meter	200704293

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing
 Groundwater Elevation measurements are given in feet msd

WELL ID: MW 21 27

SAMPLE ID: 1007

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: Clear 42 S

PROJECT NO: 019-1786-91
DATE: 11/10/07
SAMPLER S): 11 2

SAMPLING INTERVAL (depth in ft below top of casing):
25.0 to 45.0

TOTAL VOLUME PURGED: 2.60 gal

SAMPLING PORT: 5 T

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)
1:22	0.1	6.71	193.7	0.0	0.0	12.2	120		
1:25	0.2	6.69	194.7	0.0	0.0	12.2	120		
1:29	0.30	6.67	192.6	0.0	0.0	12.2	120		
1:32	0.4	6.65	192.8	0.0	0.0	12.2	120		
1:35	0.5	6.63	192.0	0.0	0.0	12.2	120		
1:38	0.6	6.61	191.0	0.0	0.0	12.2	120		
1:41	0.7	6.59	190.0	0.0	0.0	12.2	120		
1:44	0.8	6.57	189.0	0.0	0.0	12.2	120		
1:47	0.9	6.55	188.0	0.0	0.0	12.2	120		
1:50	1.0	6.53	187.0	0.0	0.0	12.2	120		
1:53	1.1	6.51	186.0	0.0	0.0	12.2	120		
1:56	1.2	6.49	185.0	0.0	0.0	12.2	120		
1:59	1.3	6.47	184.0	0.0	0.0	12.2	120		
2:02	1.4	6.45	183.0	0.0	0.0	12.2	120		
2:05	1.5	6.43	182.0	0.0	0.0	12.2	120		
2:08	1.6	6.41	181.0	0.0	0.0	12.2	120		
2:11	1.7	6.39	180.0	0.0	0.0	12.2	120		
2:14	1.8	6.37	179.0	0.0	0.0	12.2	120		
2:17	1.9	6.35	178.0	0.0	0.0	12.2	120		
2:20	2.0	6.33	177.0	0.0	0.0	12.2	120		
2:23	2.1	6.31	176.0	0.0	0.0	12.2	120		
2:26	2.2	6.29	175.0	0.0	0.0	12.2	120		
2:29	2.3	6.27	174.0	0.0	0.0	12.2	120		
2:32	2.4	6.25	173.0	0.0	0.0	12.2	120		
2:35	2.5	6.23	172.0	0.0	0.0	12.2	120		
2:38	2.6	6.21	171.0	0.0	0.0	12.2	120		
2:41	2.7	6.19	170.0	0.0	0.0	12.2	120		
2:44	2.8	6.17	169.0	0.0	0.0	12.2	120		
2:47	2.9	6.15	168.0	0.0	0.0	12.2	120		
2:50	3.0	6.13	167.0	0.0	0.0	12.2	120		
2:53	3.1	6.11	166.0	0.0	0.0	12.2	120		
2:56	3.2	6.09	165.0	0.0	0.0	12.2	120		
2:59	3.3	6.07	164.0	0.0	0.0	12.2	120		
3:02	3.4	6.05	163.0	0.0	0.0	12.2	120		
3:05	3.5	6.03	162.0	0.0	0.0	12.2	120		
3:08	3.6	6.01	161.0	0.0	0.0	12.2	120		
3:11	3.7	5.99	160.0	0.0	0.0	12.2	120		
3:14	3.8	5.97	159.0	0.0	0.0	12.2	120		
3:17	3.9	5.95	158.0	0.0	0.0	12.2	120		
3:20	4.0	5.93	157.0	0.0	0.0	12.2	120		
3:23	4.1	5.91	156.0	0.0	0.0	12.2	120		
3:26	4.2	5.89	155.0	0.0	0.0	12.2	120		
3:29	4.3	5.87	154.0	0.0	0.0	12.2	120		
3:32	4.4	5.85	153.0	0.0	0.0	12.2	120		
3:35	4.5	5.83	152.0	0.0	0.0	12.2	120		

Equipment Used	Equipment Identification #
YSI 556 MFS Reader and 556.3 Sonde	
turbidity meter	200704208

NOTES AND OBSERVATIONS:

WELL ID: MW 12-20

SAMPLE ID: 007

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: 6.0 mm - 70.0

PROJECT NO: 0110017000941
DATE: 11/11/12
SAMPLER(S): 12-20

SAMPLING INTERVAL (depth in ft below top of casing):
51.5 to 24.0

TOTAL VOLUME PURGED: 1.25 gal

SAMPLING PORT:
3?

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)
15:10	0.25	6.32	1720	-	1.20	20.41	-13.4	2.0	-
15:11	2.15	6.70	1750	-	1.70	21.22	-17.4	2.0	-
15:12	5.45	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:13	1.30	7.00	1780	0.20	2.10	22.03	-23.4	2.0	-
15:18	1.20	7.00	1780	0.20	2.10	22.03	-23.4	2.0	-
15:19	1.0	7.04	1780	0.20	2.10	22.03	-23.4	2.0	-
15:20	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:21	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:22	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:23	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:24	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:25	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:26	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:27	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:28	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:29	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:30	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:31	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:32	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:33	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:34	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:35	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:36	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:37	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:38	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:39	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:40	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:41	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:42	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:43	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:44	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:45	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:46	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:47	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:48	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:49	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:50	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:51	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:52	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:53	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:54	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:55	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:56	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:57	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:58	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
15:59	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-
16:00	1.10	7.10	1780	0.20	2.10	22.03	-23.4	2.0	-

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5503 Sonde turbidity meter	6 200704203

NOTES AND OBSERVATIONS:

WELL ID: MW 22 144

SAMPLE ID: 107

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Emergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 7/22/07 42

PROJECT NO: 01 001 7865 01
 DATE: 7/22/07
 SAMPLER(S): 1

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

TOTAL VOLUME PURGED: 3.1 gal

SAMPLING PORT: 1

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)
09:30	0	6.10	150					274	
09:40	0	6.10	150						
09:45	0	6.10	150						
09:50	0.40	6.77	188	0.0	0.3	20.7	227		
10:00	0	6.8	187	0.70	0.38	20.40	229		
10:05	0.15	6.83	187	0.60	0.38	20.30	227		
10:10	0	6.83	187	0.60	0.38	20.50	227		
10:15	0	6.83	187	0.60	0.38	20.50	227		
10:20	0	6.83	187	0.60	0.38	20.50	227		
10:30	0.2	6.83	187	0.60	0.38	20.50	227		
10:35	0	6.83	187	0.60	0.38	20.50	227		
10:40	0.2	6.83	187	0.60	0.38	20.50	227		
10:50	0.2	6.83	187	0.60	0.38	20.50	227		
11:00	0.2	6.83	187	0.60	0.38	20.50	227		

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 556.3 Sonde	
turbidity meter	

NOTES AND OBSERVATIONS:

WELL ID: MW 54-172

SAMPLE ID: 007

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Energy - IPEC
 SITE: Buchanan, NY
 WEATHER: 5/22/14 42°

PROJECT NO: 01.0017869.91
 DATE: 5/22/14
 SAMPLER(S): TC

SAMPLING INTERVAL (depth in ft below top of casing)
70.5 to 132.0

TOTAL VOLUME PURGED: 5.7 gal

SAMPLING PORT
172

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)
0730	0	7.16	2.1					214	42
0810	0.1	7.19	2.13		0.20	22.73	-24.9		
0815	0.2	7.21	2.22		0.20	22.71	-24.9		
0911	0.3	7.22	2.34	2.26	0.20	22.88	-24.9		
1056	0.4	7.23	2.48	2.56	0.20	22.79	-24.9		
1228	0.5	7.25	2.57	2.24	0.20	22.70	-24.9		
1318	0.6	7.29	2.61	2.17	0.20	22.70	-24.9		
1422	0.7	7.30	2.71	2.04	0.20	22.48	-24.9		
1529	0.8	7.35	2.84	2.04	0.20	22.31	-24.9		
1628	0.9	7.45	2.88	2.45	0.20	22.31	-24.9		
1700	PUMP OFF								
1052	PUMP ON								
1127	PUMP OFF								

Equipment Used	Equipment Identification #
YSI 55b MPS Reader and 5563 Sonde	
turbidity meter	

NOTES AND OBSERVATIONS:

WELL ID: MW55-35
 SAMPLE ID: QDR

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 30's sun then clear

PROJECT NO: 01.0017869.91
 DATE: 10/11/09
 SAMPLER(S): M6/AA
 PUMP DEPTH: 32.5 ft

WATER QUALITY:

2343 = mins reading

Time	circle one (DTW or GW Elevation)	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
909	10.26								
920	10.47					9.24			
926	10.47	7.36	0.648	4.82	3.28	16.89	128.3	2	
931	10.46	7.51	0.633	1.42	0.93	17.08	129.9	1.8	
936	10.44	7.61	0.639	1.46	0.65	17.12	154.5	1.2	
942	10.44	7.69	0.640	1.96	0.69	16.85	-161.8	<1	
947	10.45	7.73	0.658	1.98	0.67	16.68	-164.3		
952	10.39	7.75	0.660	1.45	0.62	16.50	-162.4		
957	10.42	7.75	0.704	1.13	0.58	16.42	-157.1		
1002	10.39	7.80	0.659	0.93	0.67	16.43	-155.5		
1008	10.39	7.80	0.653	0.79	0.76	16.26	-148.6		
1013	10.39	7.80	0.653	0.94	0.75	16.23	-148.6		
1018	10.42	7.81	0.645	1.12	0.79	16.12	-145.4		
1023	START sampling								
1028	END sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	6
flow meter	5
turbidity meter	200701354

NOTES AND OBSERVATIONS:

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

0.85 gal per year

WELL ID: 110553 54
 SAMPLE ID: 205

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 7:15 Sun then clear

PROJECT NO: 01.0017869.91
 DATE: 10/23/08
 SAMPLER(S): AA-1 M13
 PUMP DEPTH: 476 ft

WATER QUALITY: DTW = 10.04

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
913	46.739								
916	Flow up on			water	0.25	9.36		2	
925	40.703	7.07	1.649	8.06	3.93	16.11	221.8		
930	40.683	7.17	1.646	3.28	3.17	16.39	237.2		
935	40.683	7.23	1.637	2.74	2.74	17.07	233.5		
940	40.681	7.28	1.635	0.18	2.55	17.34	234.3		
945	40.674	7.31	1.637	1.68	2.50	17.50	224.9		
950	40.666	7.32	1.637	0.13	2.34	17.85	226.8		
955	40.661	7.33	1.634	0	2.38	17.93	219.6		
1000	40.660	7.34	1.633	0	2.36	18.20	217.2		
1005	40.660	7.33	1.634	0	2.31	18.19	215.6		
1006	1 hr sampling								
1021	6nd Pumping								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
flow meter	
turbidity meter	300701254

NOTES AND OBSERVATIONS:

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

41.5 gal purged

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

MW-56-53
005

pg 2 of 2

CLIENT: Emery - IPEC
SITE: Buchanan, NY
WEATHER: SAS, Sun

PROJECT NO: 01-0017-00491
DATE: 10/24/08
SAMPLER S#: MA1MB

WATER COLUMN HEIGHT (ft) 53 DTB = 48.55 DTW = 4.50 ft Well Diameter: 2 inches

Diameter	Multipliers
1	0.041
2	<u>0.163</u>
4	0.653

GALLONS OF WATER PER WELL VOLUME:
Water Column Height 4.50 x 0.163 Multiplier = .7335 Well Volume gallons
.7335 x 1.5 = 1.1 Designed Purge Volume gallons
TOTAL VOLUME PURGED: 1.1 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1211	<u>Pump on</u>									
1212	<u>0.1</u>	<u>37.187</u>	<u>7.25</u>	<u>1620</u>	<u>296.6</u>	<u>5.93</u>	<u>13.55</u>	<u>-12.1</u>		<u>0.1 gal</u>
1213	<u>0.8</u>	<u>37.185</u>	<u>7.24</u>	<u>222</u>	<u>230.7</u>	<u>4.24</u>	<u>17.71</u>	<u>4.2</u>		
1214	<u>1.1</u>	<u>37.155</u>	<u>7.26</u>	<u>2379</u>	<u>3194</u>	<u>3.71</u>	<u>17.71</u>	<u>6.1</u>		
1215	<u>Pump off</u>									
1220	<u>Start sampling</u>									
1231	<u>end sampling</u>									

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	<u>6</u>
turbidity meter	<u>22571054</u>

NOTES AND OBSERVATIONS:
Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
Groundwater Elevation measurements are given in feet msd.

WELL ID: MW 56-83
 SAMPLE ID: _____

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

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

PROJECT NO: 01.0017869.91
 DATE: 10/24/08
 SAMPLER(S): ATTI HUB
 PUMP DEPTH: _____ ft

WATER QUALITY: DTW = 48.50'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
11:33	48.50' DTW			3.8	20.7				purge
11:50	Turn on								
12:08	Pump off								
12:10	Start to purge								
12:12	37.187	7.24	1.620	2.0	5.73	18.53	-12.1		0.1
12:13	37.185	7.24	2.222	2.2	4.24	17.71	4.2		6.8
12:14	37.185	7.26	2.374	3.44	3.71	17.71	6.1		1.1
12:15	Pump off								
12:20	Start sampling								
12:21	end sampling								1.1 gal
	69.307	ref							
	48.76	DTW	12.45						
	55.647	ref							
	50.618	ref							
					35.68				

MW 56-83

TEST 20/10/10 12:47

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	6
flow meter	2070354
turbidity meter	3

NOTES AND OBSERVATIONS:

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

Test and string ends
 Pump to test

well vol = 1.7335
 1.5 = 1.1 gal

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MW56-83
(007)

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

PROJECT NO: 0100786941
DATE: 10/24/08
SAMPLER: 74'

WATER COLUMN HEIGHT (ft) 11:30
 $\frac{82}{DTB} - \frac{48.71}{DTW} = \frac{34.29}{\text{Well Column Height}}$ 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 34.29 x 0.041 Multiplier = 1.41 gallons
 Well Volume

1.41 x 1.5 = 2.11 gallons
 Designed Purge Volume

TOTAL VOLUME PURGED: 2.3 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (ppm)	Temp (°C)	ORP	Pump Depth (ft)	Notes
11:54	0	Pump on								
11:56	0.15	-	7.64	0.192	21.46	5.90	17.11	64.8	74'	
12:03	0.6	-	7.06	1.507	57.39	4.51	17.83	81.1		
12:08	1.2	-	7.10	1.645	53.23	5.31	17.73	71.5		
12:13	1.7	-	7.10	1.709	65.17	5.53	17.56	80.9		
12:15	2.0	-	7.05	1.724	65.46	5.67	17.50	84.0		
12:16	Pump off									
12:18	start									
12:22	end sampling									

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
turbidity meter	2276-281

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing
 Groundwater Elevation measurements are given in feet msd

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

M-57-11(0204)

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Sunny 42°

PROJECT NO: 01-01780991
 DATE: 11-12-03
 SAMPLER S: M.B.

WATER COLUMN HEIGHT (ft) $\frac{11.2}{DTB} - \frac{5.21}{DTW} = \frac{6.79}{\text{Well Column Height}}$ Well Diameter: 1 inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height $\frac{6.79}{\text{Multiplier}}$ = $\frac{6.79}{0.041}$ = 165.6 gallons

$\frac{6.79}{\text{Multiplier}}$ x 1.5 = 101.4 gallons

TOTAL VOLUME PURGED: 165.6 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1015	0	PUMP	8.0						10	
1020	0.0	-	7.29	1.120	-	3.73	13.4	172.1		
1025	0.2	-	7.58	1.420	2.00	2.16	22.8	161.4		
1030	0.75	-	7.61	1.366	2.05	2.04	22.7	161.7		
1037	1.0	-	7.62	1.355	2.11	2.12	22.5	148.2		
1042	1.0	-	7.62	1.344	1.16	2.01	22.0	140.3	✓	
1045	5.0	DTW	7.62	1.344	1.16	2.01	22.0	140.3		
1045	SAMPLE COMPLETE									
1055	PUMP OFF									

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
Turbidity meter	

NOTES AND OBSERVATIONS:

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

Water column height is 6.79 ft

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MW-57-20(001)

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Sunny 43°

PROJECT NO: 01-4017899
 DATE: 10/2/03
 SAMPLER(S): A/B

WATER COLUMN HEIGHT (ft) Well Diameter: _____ inches

$\frac{5.33}{DTW} - \frac{4.33}{DTW} = \frac{1.00}{\text{Well Column Height}}$ ft

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height $\frac{14.78}{\text{Well Column Height}}$ x $\frac{0.041}{\text{Multiplier}}$ = $\frac{0.61}{\text{Well Volume}}$ gallons

$\frac{0.61}{\text{Well Volume}}$ x $\frac{1.5}{\text{Well Volume}}$ = $\frac{0.915}{\text{Well Volume}}$ gallons

TOTAL VOLUME PURGED: 1.20 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
015	0	PUMP	0.4						1.7	
025	0.25	-	7.27	1504	0.72	0.30	21.81	28.2	1.7	
030	0.50	-	7.27	1470	0.69	0.27	21.52	28.0	1.7	
037	0.95	-	7.27	1446	0.70	0.27	21.42	27.4	1.7	
043	1.20	-	7.27	1422	0.69	0.27	21.49	27.4	1.7	
048	1.55	-	7.34	1422	0.8	0.19	21.38	27.1	1.7	
050	1.80	-	7.24	1425	0.0	0.25	21.49	28.5	1.7	
060	2.15	-	7.33	1427	2.10	0.26	21.47	28.7	1.7	
072	2.77	-	7.32	1429	2.39	0.26	21.48	27.5	1.7	
1115	3.0	-	7.33	1431	0.0	0.20	21.51	28.0	1.7	
112	START SAMPLE COLLECTION									
113	SAMPLE FOR GROUNDWATER 2 - FREE									
113	PUMP OFF									

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
turbidity meter	21-100-01-023

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msl.
 See notes on MW-57-45 log

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

MH 87 45 005

CLIENT: Energy - IPEC
 SITE: Buchanan, NY
 WEATHER: 5/10/03

PAGE 1 of 2

PROJECT NO: 01001786991
 DATE: 11/2/02
 SAMPLER: 112

WATER COLUMN HEIGHT (ft) $\frac{45}{DTB} = \frac{5.20}{DTW} = \frac{39.1}{\text{Well Column Height}}$ Well Diameter: _____ inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 39.1 x $\frac{0.041}{\text{Multiplier}}$ = 1.60 gallons
 Well Volume
1.60 x 155 = 248 gallons
 Designed Purge Volume

TOTAL VOLUME PURGED: 8 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
8:15	0	PUMP	6.8						4.0	
8:20	0.1	-	7.1	257						
8:25	0.35	-	7.1	252	0.13	0.9	21.05	172.3		
8:40	1.0	-	7.22	1850	4.23	1.15	20.99	167.7		
8:47	1.8	-	7.29	1850	1.24	1.10	20.97	165.3		
10:34	1.70	-	7.29	1850	0.17	1.04	20.95	161.2		
11:00	2.0	-	7.37	1862	0.23	0.97	20.93	158.0		
11:09	2.5	-	7.30	1852	0.29	0.95	20.92	157.2		
11:15	2.75	-	7.50	1853	0.11	1.0	20.90	152.8		
11:25	3.0	-	7.31	1857	0.0	0.88	21.07	151.9		
11:27	0.2	-	7.31	1857	0.0	0.89	20.99	151.1		
11:36	3.7	-	7.31	1856	0.0	0.87	20.97	147.4		
11:44	3.95	-	7.33	1859	0.0	0.86	21.04	147.7		

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 556j Sunde	
turbidity meter	200714292

NOTES AND OBSERVATIONS:

Depth and Depth to Water (DTW) measurements are given in feet from top of casing
 Groundwater flow rate measurements are given in feet min

From 8:15 to 11:45, a total volume of 3.95 gallons of water was pumped from the well. The data for pH, specific conductance, turbidity, dissolved oxygen, and temperature were recorded at 15-minute intervals. The data for pH, specific conductance, and temperature were recorded at 5-minute intervals. The data for dissolved oxygen and turbidity were recorded at 10-minute intervals. The data for ORP were recorded at 15-minute intervals. The data for DTW were recorded at 15-minute intervals. The data for DTW were recorded at 15-minute intervals. The data for DTW were recorded at 15-minute intervals.

WELL ID: MW 60-35

SAMPLE ID: 1002

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

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

PROJECT NO: 1002
 DATE: 10/1/02
 SAMPLER(S): 1002

SAMPLING INTERVAL (depth in ft below top of casing):
24.9 to 39.4

TOTAL VOLUME PURGED: 1.0 gal

SAMPLING PORT:
35

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	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
10:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
11:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
12:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
13:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
14:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
15:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
16:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
17:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
18:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:05	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:10	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:15	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:20	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:25	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:30	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:35	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:40	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:45	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:50	0.5	7.2	215	0.5	0.5	10.0	150	10	100
19:55	0.5	7.2	215	0.5	0.5	10.0	150	10	100
20:00	0.5	7.2	215	0.5	0.5	10.0	150	10	100

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

NOTES AND OBSERVATIONS:

WELL ID: MW62-19
 SAMPLE ID: 207

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

pg. 1 of 2

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Cloudy 45°F

PROJECT NO: 01.0017869.91
 DATE: 7/27/08
 SAMPLER(S): JH/MLB
 PUMP DEPTH: _____ ft

WATER QUALITY: 1 MW 2 5 3

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
9:30	3.750								
9:37	3.750								
9:52	3.912	7.27	3.11	1.42	1.20	10.77	-79.2	0.6	
9:55	3.974	7.29	1.365	5.31	1.25	10.6	-80.0	2.0	
10:2	3.835	7.32	1.350	4.12	0.97	10.20	-82.0		
10:8	4.124	7.38	1.352	2.52	0.83	10.02	-78.2		
10:13	4.125	7.35	1.344	2.54	0.69	10.57	-94.9		
10:18	4.200	7.45	3.46	1.32	0.55	10.98	-104.4		
10:23	4.251	7.47	3.40	2.21	0.42	13.20	-91.2		
10:30	4.333	7.43	1.340	2.82	0.65	12.49	-107.8		
10:40	4.433	7.42	3.44	3.37	0.14	11.83	-103.2		
10:54	4.541	7.40	1.354	2.21	0.45	10.81	-95.0		
11:03	4.735	7.41	1.347	1.52	0.57	10.22	-42.5		
11:20	4.834	7.41	1.351	2.09	0.58	9.21	-90.3		
11:27	4.882	7.36	1.333	2.53	0.60	9.25	-73.7		
11:32	4.921	7.38	1.338	2.22	0.54	8.60	-71.4	1.0	
11:38	4.979	7.40	1.329	0.87	0.54	10.07	-70.2		
11:44	4.999	7.47	1.323	0.22	0.38	13.15	-163.6		
11:51	5.017	7.49	1.323	0.20	0.30	13.72	-117.3		
11:56	5.057	7.52	1.330	1.11	0.31	12.77	-125.1		

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	5
flow meter	
turbidity meter	24076154

NOTES AND OBSERVATIONS:

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

GZA GeoEnvironmental of New York
Low-Flow Sampling Data Sheet

pg 1 of 2

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

PROJECT NO: 01.0017869.91
 DATE: 11/2/08
 SAMPLER(S): 02148
 PUMP DEPTH: _____ ft

WATER QUALITY: 20 - 21181

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1133	13.110								
1137	13.110								
1157	13.102	7.19	5.562	4.330	0.14	12.13	105.1	1.5	
1158	13.102	7.24	5.202	2.10	0.13	12.60	102.9	1.5	
1159	13.102	7.28	5.507	2.62	0.20	14.24	117.5		
1205	13.102	7.21	5.205	1.77	0.17	15.32	129.1		
1210	13.102	7.12	5.854	1.32	0.25	15.20	122.3		
1213	13.110	7.31	5.254	2.72	0.67	15.17	123.4		
1224	13.456	7.31	5.817	0.56	0.73	13.07	117.1		
1235	13.580	7.29	5.862	0.34	0.72	14.63	120.4		
1240	13.656	7.27	5.875	1.40	0.72	13.24	116.2		
1254	13.710	7.25	5.870	6.27	0.63	12.70	110.7		
1304	13.725	7.22	5.942	8.72	0.51	11.51	97.9		
1323	13.902	7.24	6.008	7.26	1.1	11.36	109.0	1.8	
1339	13.908	7.25	6.004	5.23	2.96	11.73	109.1		
1345	13.972	7.24	5.961	2.71	2.23	11.77	109.5		
1347	13.990	7.27	5.735	3.32	1.20	13.91	122.1		
1348	13.997	7.31	5.943	2.96	2.41	14.70	126.6		
1351	13.940	7.33	5.732	2.54	0.43	15.27	130.4		
1356	13.943	7.34	5.713	3.50	1.37	16.16	131.2		

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	14
flow meter	3
turbidity meter	131101054

NOTES AND OBSERVATIONS:

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

WELL ID: PLW63 37

SAMPLE ID: 062

pg 2 of 2

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

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

PROJECT NO: 01.0017869.91
 DATE: 10/20/08
 SAMPLER(S): AA / AB
 PUMP DEPTH: _____ ft

WATER QUALITY:

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1222	13.993	7.34	5.590	1.68	0.41	16.85	-97.1	1.0	
1227	14.029	7.33	5.582	2.31	0.45	16.52	-118.8		
1232	14.048	7.33	5.575	3.95	0.54	16.23	-122.0		
1239	14.051	7.30	5.586	2.75	0.36	15.56	-116.3		
1244	14.054								
1246	14.069	7.30	5.579	2.61	0.33	15.95	-93.0		
1251	14.107	7.30	5.579	2.84	0.35	16.00	-98.1		
1256	14.072	7.31	5.560	19.01	0.49	15.09	-110.4		
1243	14.044	7.28	5.574	2.30	0.29	14.95	-100.9		
1249	14.049	7.31	5.574	4.65	0.49	16.18	-103.4		
1254	14.036	7.31	5.532	2.76	0.38	16.55	-97.3		
1259	14.047	7.32	5.535	1.69	0.41	17.16	-112.5		
1304	14.040	7.31	5.512	1.56	0.38	17.42	-102.2		
1307	14.039	7.31	5.504	1.72	0.42	17.60	-76.3		
1311	Start sampling								
1357	End sampling								
			1/2 gal IPEC						
			1/2 gal DE						

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 556.3 Sonde	1
flow meter	2
turbidity meter	JCS10154

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msl.

~4.5 gal purged

WELL ID: MW 62 92

SAMPLE ID: 007

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

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

PROJECT NO: _____
 DATE: 10/29/08
 SAMPLER(S): MC100

SAMPLING INTERVAL (depth in ft below top of casing):
88.6 to 99.1

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
92

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)
07:30	0.15	6.96	1276	0	0.2	15.0	125		
07:45	0.20	7.17	1277	0	0.2	15.0	125		
08:00	0.25	7.17	1277	0.07	0.2	15.0	125		
08:15	0.30	7.15	1276	0.07	0.2	15.0	125		
08:30	0.35	7.15	1277	0.07	0.2	15.0	125		
08:45	0.40	7.15	1277	0.07	0.2	15.0	125		
09:00	0.45	7.15	1277	0.07	0.2	15.0	125		
09:15	0.50	7.15	1277	0.07	0.2	15.0	125		
09:30	0.55	7.15	1277	0.07	0.2	15.0	125		
09:45	0.60	7.15	1277	0.07	0.2	15.0	125		
10:00	0.65	7.15	1277	0.07	0.2	15.0	125		
10:15	0.70	7.15	1277	0.07	0.2	15.0	125		
10:30	0.75	7.15	1277	0.07	0.2	15.0	125		
10:45	0.80	7.15	1277	0.07	0.2	15.0	125		
11:00	0.85	7.15	1277	0.07	0.2	15.0	125		
11:15	0.90	7.15	1277	0.07	0.2	15.0	125		
11:30	0.95	7.15	1277	0.07	0.2	15.0	125		
11:45	1.00	7.15	1277	0.07	0.2	15.0	125		
12:00	SAMPLE COMPLETED			1/2 gal DEC	1/2 gal IPEC				

Equipment Used	Equipment Identification #
YS155h MPS Reader and 5563 Sonde turbidity meter	3 200204293

NOTES AND OBSERVATIONS:

WELL ID: MW 02-182

SAMPLE ID: 007

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Energy - IPFC
 SITE: Buchanan, NY
 WEATHER: Cloudy, 40°F

PROJECT NO: 01001786941
 DATE: 2/15/05
 SAMPLER(S): AA/MB

SAMPLING INTERVAL (depth in ft below top of casing):
177.6 to 198.7

TOTAL VOLUME PURGED: 2.5 gal

SAMPLING PORT:
182

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)
1354	Flump							6/1/3	46
1405	0.15	7.31	1.245	0.09	0.91	16.34	-147.6		
1405	0.15	7.41	1.245	0.38	0.20	16.17	-139.8		
1411	0.6	7.43	1.246	0	0.46	16.25	-158.8		
1416	0.8	7.43	1.248	0	0.38	16.30	-151.4		
1422	1.1	7.44	1.254	0	0.30	16.48	-113.8		
1427	1.35	7.21	1.244	0	0.42	16.50	-127.1		
1432	1.6	7.45	1.255	0	0.40	16.57	-144.6		
1437	1.8	7.44	1.255	0	0.31	16.41	-145.3		
1442	2.0	7.45	1.260	0	0.30	16.41	-145.7		
1447	2.2	7.44	1.260	0	0.28	16.38	-147.2		
1449	2.2	7.44	1.260	0	0.28	16.38	-147.2		
1502	2.7	7.44	1.260	0	0.28	16.38	-147.2		

Equipment Used	Equipment Identification #
YSI 550 MPS Reader and 5503 Sonde	6
turbidity meter	705724893

NOTES AND OBSERVATIONS:

WELL ID: MW-63 18
 SAMPLE ID: 0157

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy, 50°F

PROJECT NO: 01.0017369.91
 DATE: 11/5/05
 SAMPLER(S): AP111A
 PUMP DEPTH: 14.9 ft

WATER QUALITY: DTW = 12.64

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
830	4.851								1
842	Pump on							1.0	
854	4.668	7.07	3.189	4.00	6.80	16.80	-66.9	4.1	
900	4.641	7.08	3.567	1.00	2.74	16.70	-98.2	1.0	
905	4.607	7.19	3.587	0.66	2.30	16.81	-107.5		
910	4.575	7.11	3.532	0.38	1.84	17.09	-105.0		
915	4.559	7.11	3.513	0.35	1.86	17.40	-102.9		2
920	4.556	7.12	3.469	0.39	1.46	17.63	-105.0		
925	4.551	7.12	3.368	0.38	1.13	17.78	-113.1		
930	4.547	7.12	3.321	0.29	1.13	17.79	-106.1		
935	4.531	7.12	3.168	0.26	1.08	17.80	-111.7		
940	4.524	7.13	3.061	0.28	1.04	17.76	-109.0		
946	4.512	7.13	29.46	0.50	1.01	17.66	-115.6		
951	4.524	7.14	2.801	0.63	0.78	17.58	-116.4		
956	4.510	7.14	2.782	0.70	1.01	17.63	-114.6		
1001	4.519	7.15	2.715	0.68	0.95	17.70	-111.7		
1003	Stop sampling								
1053	and Pumping								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	2
flow meter	1
turbidity meter	200704293

NOTES AND OBSERVATIONS:

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

1. Water level decreasing before pump is turned on.
2. Historically this well had a high & more than sampling continued as water level decreasing (down to base).
- ~ 1.3 gal pumped

WELL ID: MLU-63-34
 SAMPLE ID: 007

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Cloudy, 50's F

PROJECT NO: 01.0017869.91
 DATE: 11/5/08
 SAMPLER(S): APP/rb
 PUMP DEPTH: 31.5 ft

WATER QUALITY: 12.6 ft DTW

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
835	13.560								1
842	Pump on							1.0	
855	13.453	7.18	1.431	3.80	3.03	15.89	108.9	<1	
901	13.435	7.18	1.445	9.22	2.75	16.01	-117.0	1.0	
906	13.411	7.21	1.449	3.10	2.62	16.17	-114.1		
911	13.392	7.24	1.450	3.65	2.76	16.30	-113.1		
916	13.373	7.28	1.450	2.03	2.78	16.49	-112.9		2
921	13.369	7.30	1.450	2.30	2.83	16.67	-121.3		
926	13.353	7.34	1.453	1.71	2.82	16.87	-133.0		
931	13.343	7.36	1.454	1.72	2.15	17.02	-124.7		
936	13.331	7.38	1.459	1.97	1.47	17.09	-139.7		
941	13.325	7.41	1.461	3.10	1.13	17.19	-141.1		
947	13.327	7.42	1.463	3.75	1.27	17.13	-136.3		
952	13.325	7.43	1.461	3.48	1.38	17.27	-138.3		
957	13.329	7.43	1.464	3.68	1.52	17.35	-135.6		
1002	13.333	7.44	1.465	3.52	1.53	17.42	-131.9		
1004	start sampling								
118	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	3
turbidity meter	000704 X13

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

1. Water level is decreasing before pump is turned on.
 2. Historically, this well has a high K value. Low flow sampling continued as water level decreasing (due to head).
- 21.1 gal pumped.

WELL ID: MW 63-163

SAMPLE ID: 007

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy IPEC
SITE: Buchanan NY
WEATHER: Overcast

PROJECT NO: 01001785M-01
DATE: 11/10/09
SAMPLER(S): 2" PVC

SAMPLING INTERVAL (depth in ft below top of casing):
150.5 to 165

TOTAL VOLUME PURGED: 4.9 gal

SAMPLING PORT:
163

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 (psf)
11:00	0.5	7.2	150	0.2	8.5	10	150	10	10
11:05	1.0	7.2	150	0.2	8.5	10	150	10	10
11:10	1.5	7.2	150	0.2	8.5	10	150	10	10
11:15	2.0	7.2	150	0.2	8.5	10	150	10	10
11:20	2.5	7.2	150	0.2	8.5	10	150	10	10
11:25	3.0	7.2	150	0.2	8.5	10	150	10	10
11:30	3.5	7.2	150	0.2	8.5	10	150	10	10
11:35	4.0	7.2	150	0.2	8.5	10	150	10	10
11:40	4.5	7.2	150	0.2	8.5	10	150	10	10
11:45	4.9	7.2	150	0.2	8.5	10	150	10	10
11:50									
11:55									
12:00									
12:05									
12:10									
12:15									
12:20									
12:25									
12:30									
12:35									
12:40									
12:45									
12:50									
12:55									
13:00									

Equipment Used	Equipment Identification #
YSI 55A MPS Reader and 55e3 Sonde turbidity meter	

NOTES AND OBSERVATIONS:

WELL ID: MW 63-174

SAMPLE ID: 007

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy IPEC
SITE: Buchanan, NY
WEATHER: Partly cloudy

PROJECT NO: 11-0717859-91
DATE: 11-14-2008
SAMPLER(S): 1

SAMPLING INTERVAL (depth in ft below top of casing):
108.0 to 191.1

TOTAL VOLUME PURGED: 4.9 gal

SAMPLING PORT:
174

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	7.0	100	0.1	0.0	10.0	200	10	100
10:35	0	7.0	100	0.1	0.0	10.0	200	10	100
10:40	0	7.0	100	0.1	0.0	10.0	200	10	100
10:45	0	7.0	100	0.1	0.0	10.0	200	10	100
10:50	0	7.0	100	0.1	0.0	10.0	200	10	100
10:55	0	7.0	100	0.1	0.0	10.0	200	10	100
11:00	0	7.0	100	0.1	0.0	10.0	200	10	100
11:05	0	7.0	100	0.1	0.0	10.0	200	10	100
11:10	0	7.0	100	0.1	0.0	10.0	200	10	100
11:15	0	7.0	100	0.1	0.0	10.0	200	10	100
11:20	0	7.0	100	0.1	0.0	10.0	200	10	100
11:25	0	7.0	100	0.1	0.0	10.0	200	10	100
11:30	0	7.0	100	0.1	0.0	10.0	200	10	100
11:35	0	7.0	100	0.1	0.0	10.0	200	10	100
11:40	0	7.0	100	0.1	0.0	10.0	200	10	100
11:45	0	7.0	100	0.1	0.0	10.0	200	10	100
11:50	0	7.0	100	0.1	0.0	10.0	200	10	100
11:55	0	7.0	100	0.1	0.0	10.0	200	10	100
12:00	0	7.0	100	0.1	0.0	10.0	200	10	100
12:05	0	7.0	100	0.1	0.0	10.0	200	10	100
12:10	0	7.0	100	0.1	0.0	10.0	200	10	100
12:15	0	7.0	100	0.1	0.0	10.0	200	10	100
12:20	0	7.0	100	0.1	0.0	10.0	200	10	100
12:25	0	7.0	100	0.1	0.0	10.0	200	10	100
12:30	0	7.0	100	0.1	0.0	10.0	200	10	100
12:35	0	7.0	100	0.1	0.0	10.0	200	10	100
12:40	0	7.0	100	0.1	0.0	10.0	200	10	100
12:45	0	7.0	100	0.1	0.0	10.0	200	10	100
12:50	0	7.0	100	0.1	0.0	10.0	200	10	100
12:55	0	7.0	100	0.1	0.0	10.0	200	10	100
13:00	0	7.0	100	0.1	0.0	10.0	200	10	100
13:05	0	7.0	100	0.1	0.0	10.0	200	10	100
13:10	0	7.0	100	0.1	0.0	10.0	200	10	100
13:15	0	7.0	100	0.1	0.0	10.0	200	10	100
13:20	0	7.0	100	0.1	0.0	10.0	200	10	100
13:25	0	7.0	100	0.1	0.0	10.0	200	10	100
13:30	0	7.0	100	0.1	0.0	10.0	200	10	100
13:35	0	7.0	100	0.1	0.0	10.0	200	10	100
13:40	0	7.0	100	0.1	0.0	10.0	200	10	100
13:45	0	7.0	100	0.1	0.0	10.0	200	10	100
13:50	0	7.0	100	0.1	0.0	10.0	200	10	100
13:55	0	7.0	100	0.1	0.0	10.0	200	10	100
14:00	0	7.0	100	0.1	0.0	10.0	200	10	100
14:05	0	7.0	100	0.1	0.0	10.0	200	10	100
14:10	0	7.0	100	0.1	0.0	10.0	200	10	100
14:15	0	7.0	100	0.1	0.0	10.0	200	10	100
14:20	0	7.0	100	0.1	0.0	10.0	200	10	100
14:25	0	7.0	100	0.1	0.0	10.0	200	10	100
14:30	0	7.0	100	0.1	0.0	10.0	200	10	100
14:35	0	7.0	100	0.1	0.0	10.0	200	10	100
14:40	0	7.0	100	0.1	0.0	10.0	200	10	100
14:45	0	7.0	100	0.1	0.0	10.0	200	10	100
14:50	0	7.0	100	0.1	0.0	10.0	200	10	100
14:55	0	7.0	100	0.1	0.0	10.0	200	10	100
15:00	0	7.0	100	0.1	0.0	10.0	200	10	100
15:05	0	7.0	100	0.1	0.0	10.0	200	10	100
15:10	0	7.0	100	0.1	0.0	10.0	200	10	100
15:15	0	7.0	100	0.1	0.0	10.0	200	10	100
15:20	0	7.0	100	0.1	0.0	10.0	200	10	100
15:25	0	7.0	100	0.1	0.0	10.0	200	10	100
15:30	0	7.0	100	0.1	0.0	10.0	200	10	100
15:35	0	7.0	100	0.1	0.0	10.0	200	10	100
15:40	0	7.0	100	0.1	0.0	10.0	200	10	100
15:45	0	7.0	100	0.1	0.0	10.0	200	10	100
15:50	0	7.0	100	0.1	0.0	10.0	200	10	100
15:55	0	7.0	100	0.1	0.0	10.0	200	10	100
16:00	0	7.0	100	0.1	0.0	10.0	200	10	100
16:05	0	7.0	100	0.1	0.0	10.0	200	10	100
16:10	0	7.0	100	0.1	0.0	10.0	200	10	100
16:15	0	7.0	100	0.1	0.0	10.0	200	10	100
16:20	0	7.0	100	0.1	0.0	10.0	200	10	100
16:25	0	7.0	100	0.1	0.0	10.0	200	10	100
16:30	0	7.0	100	0.1	0.0	10.0	200	10	100
16:35	0	7.0	100	0.1	0.0	10.0	200	10	100
16:40	0	7.0	100	0.1	0.0	10.0	200	10	100
16:45	0	7.0	100	0.1	0.0	10.0	200	10	100
16:50	0	7.0	100	0.1	0.0	10.0	200	10	100
16:55	0	7.0	100	0.1	0.0	10.0	200	10	100
17:00	0	7.0	100	0.1	0.0	10.0	200	10	100
17:05	0	7.0	100	0.1	0.0	10.0	200	10	100
17:10	0	7.0	100	0.1	0.0	10.0	200	10	100
17:15	0	7.0	100	0.1	0.0	10.0	200	10	100
17:20	0	7.0	100	0.1	0.0	10.0	200	10	100
17:25	0	7.0	100	0.1	0.0	10.0	200	10	100
17:30	0	7.0	100	0.1	0.0	10.0	200	10	100
17:35	0	7.0	100	0.1	0.0	10.0	200	10	100
17:40	0	7.0	100	0.1	0.0	10.0	200	10	100
17:45	0	7.0	100	0.1	0.0	10.0	200	10	100
17:50	0	7.0	100	0.1	0.0	10.0	200	10	100
17:55	0	7.0	100	0.1	0.0	10.0	200	10	100
18:00	0	7.0	100	0.1	0.0	10.0	200	10	100
18:05	0	7.0	100	0.1	0.0	10.0	200	10	100
18:10	0	7.0	100	0.1	0.0	10.0	200	10	100
18:15	0	7.0	100	0.1	0.0	10.0	200	10	100
18:20	0	7.0	100	0.1	0.0	10.0	200	10	100
18:25	0	7.0	100	0.1	0.0	10.0	200	10	100
18:30	0	7.0	100	0.1	0.0	10.0	200	10	100
18:35	0	7.0	100	0.1	0.0	10.0	200	10	100
18:40	0	7.0	100	0.1	0.0	10.0	200	10	100
18:45	0	7.0	100	0.1	0.0	10.0	200	10	100
18:50	0	7.0	100	0.1	0.0	10.0	200	10	100
18:55	0	7.0	100	0.1	0.0	10.0	200	10	100
19:00	0	7.0	100	0.1	0.0	10.0	200	10	100
19:05	0	7.0	100	0.1	0.0	10.0	200	10	100
19:10	0	7.0	100	0.1	0.0	10.0	200	10	100
19:15	0	7.0	100	0.1	0.0	10.0	200	10	100
19:20	0	7.0	100	0.1	0.0	10.0	200	10	100
19:25	0	7.0	100	0.1	0.0	10.0	200	10	100
19:30	0	7.0	100	0.1	0.0	10.0	200	10	100
19:35	0	7.0	100	0.1	0.0	10.0	200	10	100
19:40	0	7.0	100	0.1	0.0	10.0	200	10	100
19:45	0	7.0	100	0.1	0.0	10.0	200	10	100
19:50	0	7.0	100	0.1	0.0	10.0	200	10	100
19:55	0	7.0	100	0.1	0.0	10.0	200	10	100
20:00	0	7.0	100	0.1	0.0	10.0	200	10	100
20:05	0	7.0	100	0.1	0.0	10.0	200	10	100
20:10	0	7.0	100	0.1	0.0	10.0	200	10	100
20:15	0	7.0	100	0.1	0.0	10.0	200	10	100
20:20	0	7.0	100	0.1	0.0	10.0	200	10	100
20:25	0	7.0	100	0.1	0.0	10.0	200	10	100
20:30	0	7.0	100	0.1	0.0	10.0	200	10	100
20:35	0	7.0	100	0.1	0.0	10.0	200	10	100
20:40	0	7.0	100	0.1	0.0	10.0	200	10	100
20:45	0	7.0	100	0.1	0.0	10.0	200	10	100
20:50	0	7.0	100	0.1	0.0	10.0	200	10	100
20:55	0	7.0	100	0.1	0.0	10.0	200	10	100
21:00	0	7.0	100	0.1	0.0	10.0	200	10	100
21:05	0	7.0	100	0.1	0.0	10.0	200	10	100
21:10	0	7.0	100	0.1	0.0	10.0	200	10	100
21:15	0	7.0	100	0.1	0.0	10.0	200	10	100
21:20	0	7.0	100	0.1	0.0	10.0	200	10	100
21:25	0	7.0	100	0.1	0.0	10.0	200	10	100
21:30	0	7.0	100	0.1	0.0	10.0	200	10	100
21:35	0	7.0	100	0.1	0.0	10.0	200	10	100
21:40	0	7.0	100	0.1	0.0	10.0	200	10	100
21:45	0	7.0	100	0.1	0.0	10.0	200	10	100
21:50	0	7.0	100	0.1	0.0	10.0	200	10	100
21:55	0	7.0	100	0.1	0.0	10.0	200	10	100
22:00	0	7.0	100	0.1	0.0	10.0	200	10	100

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

Pg 2 of 2
MW66-21
(006)

CLIENT: Energy - IPEC
SITE: Buchanan, NY
WEATHER: Cloudy 50.5 F

PROJECT NO: 01-01786901
DATE: 1/4/08
SAMPLER S#: 44118

WATER COLUMN HEIGHT (ft) $\frac{21}{DTB} \cdot \frac{13.01}{DTW} = \frac{7.99}{\text{Well Column Height}}$ ft Well Diameter: _____ inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 7.99 x $\frac{0.163}{\text{Multiplier}}$ = 1.30 gallons
Well Volume

1.30 x 1.5 = 1.95 gallons
Designed Purge Volume

TOTAL VOLUME PURGED: 2.1 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
9:35	0.25	7.176	6.77	3.330	5.62	0.56	10.84	-157.3		
9:41	0.65	6.845	6.96	3.371	5.42	0.35	18.41	-210.4		
9:46	1.2	6.701	7.03	3.383	3.47	0.66	19.60	-234.2		
9:51	1.6	6.737	7.10	3.408	1.67	0.22	19.81	-250.0		
9:53	1.8	6.709	7.13	3.414	1.149	0.31	19.85	-257.2		
9:55	Pump off									
10:10	Start sampling									
10:30	end sampling									
				YSI 660 IPEC						
				YSI 660 IPEC						

Equipment Used	Equipment Identification #
YSI 156 MPS Reader and 5563 Sonde	
Turbidity meter	

NOTES AND OBSERVATIONS:

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

WELL ID: MW 61-36
 SAMPLE ID: 006

GZA GeoEnvironmental of New York
Low-Flow Sampling Data Sheet

py 10/2

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy 50°Fs

PROJECT NO: 01 0017869.91
 DATE: 1/14/08
 SAMPLER(S): AD1 MB
 PUMP DEPTH: 33.6 ft

WATER QUALITY: 12 50' DTW

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
813	13.510								1
820	Pump on								
827	Pump off								
841	13.472								
843	Pump on							1.0	
849	13.425	6.96	2.920		1.69	13.63	-82.2	0.8	
854	13.425	6.96	3.040	40.74	1.20	12.79	-75.7	2.1	2
859	13.436	6.97	3.091	39.85	1.07	12.66	-74.5		
904	13.446	6.99	3.163	37.21	1.01	12.40	-65.8		
910	13.426	7.03	3.240	36.49	1.48	11.75	-73.9		
915	13.404	7.02	3.245	31.97	1.82	11.41	-75.7		
920	13.418	7.08	3.227	21.38	1.78	11.49	-74.3		
925	13.421	7.11	3.221	19.80	1.45	11.20	-72.9		3
	<i>changed to turbidity meter</i>								

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

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msl.
1. Pumped out air out of the well first - no gas.
2. Pumping as slow as possible
3. ~4 gal purged

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

pg 2 of 2
HW 06-36
(0006)

CLIENT: Entergy IPEC
SITE: Buchanan, NY
WEATHER: Cloudy 50-55 F

PROJECT NO: 11/01750941
DATE: 11/11/05
SAMPLER(S): KR11-B

WATER COLUMN HEIGHT (ft) $\frac{36}{DTB} \cdot \frac{12.50}{DTW} = \frac{23.2}{\text{Well Column Height}}$ ft Well Diameter: _____ inches

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height $\frac{23.2}{\text{Well Column Height}} \times \frac{0.041}{\text{Multiplier}} = \frac{0.95}{\text{Well Volume}}$ gallons

$\frac{0.95}{1.43} \times 1.5 = \frac{1.43}{\text{Designed Purge Volume}}$ gallons

TOTAL VOLUME PURGED: 1.6 gal

WATER QUALITY:

Time	Volume Purged (gal)	Circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
9:35	0.25	13.307	7.15	3.234	7.52	1.42	11.67	-177.8		
9:40	0.6	13.159	7.22	3.299	4.68	0.79	15.84	-177.9		
9:45	0.8	13.150	7.27	3.359	1.42	0.77	16.53	-113.9		
9:50	1.2	13.100	7.33	3.371	1.52	0.74	16.70	-117.5		
9:55	1.4	13.180	7.34	3.375	0.70	0.54	16.80	-121.0		
9:55	Pump off									
10:12	Start sampling									
10:40	end sampling									
				1/2 gal IPEC						
				1/2 gal IPEC						

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
Turbidity meter	

NOTES AND OBSERVATIONS:

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

WELL ID: MW 07-173

SAMPLE ID: _____

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

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

PROJECT NO: _____
 DATE: _____
 SAMPLER(S): _____

SAMPLING INTERVAL (depth in ft below top of casing):
164.8 to 188.3

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
173

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)
11:24	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:25	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:26	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:27	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:28	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:29	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:30	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:31	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:32	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:33	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:34	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:35	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:36	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:37	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:38	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:39	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:40	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:41	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:42	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:43	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:44	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:45	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:46	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:47	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:48	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:49	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:50	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:51	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:52	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:53	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:54	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:55	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:56	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:57	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:58	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
11:59	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0
12:00	0.0	6.67	1.221	0.0	0.0	12.2	210	10	0

Equipment Used	Equipment Identification #
YSI 55A MPS Reader and 530.7 Sonde	
turbidity meter	

NOTES AND OBSERVATIONS:

WELL ID: MW 67.219

SAMPLE ID: 006

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Cloudy 50's

PROJECT NO: 01-117869-9
 DATE: 1/21/08
 SAMPLER(S): M-3

SAMPLING INTERVAL (depth in ft below top of casing):
209 to 211.8

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
219

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)
0920	0	PUMP ON							
0923	0.54	7.07	1.072	0.0	0.00	16.24	110.3		
0925	0.75	7.10	1.070	0.0	0.00	16.24	110.3		
0927	1.03	7.16	1.073	0.0	0.00	16.24	110.3		
0929	1.31	7.20	1.075	0.0	0.00	16.24	110.3		
0931	1.59	7.24	1.077	0.0	0.00	16.24	110.3		
0933	1.87	7.28	1.079	0.0	0.00	16.24	110.3		
0935	2.15	7.32	1.081	0.0	0.00	16.24	110.3		
0937	2.43	7.36	1.083	0.0	0.00	16.24	110.3		
0939	2.71	7.40	1.085	0.0	0.00	16.24	110.3		
0941	2.99	7.44	1.087	0.0	0.00	16.24	110.3		
0943	3.27	7.48	1.089	0.0	0.00	16.24	110.3		
0945	3.55	7.52	1.091	0.0	0.00	16.24	110.3		
0947	3.83	7.56	1.093	0.0	0.00	16.24	110.3		
0949	4.11	7.60	1.095	0.0	0.00	16.24	110.3		
0951	4.39	7.64	1.097	0.0	0.00	16.24	110.3		
0953	4.67	7.68	1.099	0.0	0.00	16.24	110.3		
0955	4.95	7.72	1.101	0.0	0.00	16.24	110.3		
0957	5.23	7.76	1.103	0.0	0.00	16.24	110.3		
0959	5.51	7.80	1.105	0.0	0.00	16.24	110.3		
1001	5.79	7.84	1.107	0.0	0.00	16.24	110.3		
1003	6.07	7.88	1.109	0.0	0.00	16.24	110.3		
1005	6.35	7.92	1.111	0.0	0.00	16.24	110.3		
1007	6.63	7.96	1.113	0.0	0.00	16.24	110.3		
1009	6.91	8.00	1.115	0.0	0.00	16.24	110.3		
1011	7.19	8.04	1.117	0.0	0.00	16.24	110.3		
1013	7.47	8.08	1.119	0.0	0.00	16.24	110.3		
1015	7.75	8.12	1.121	0.0	0.00	16.24	110.3		
1017	8.03	8.16	1.123	0.0	0.00	16.24	110.3		
1019	8.31	8.20	1.125	0.0	0.00	16.24	110.3		
1021	8.59	8.24	1.127	0.0	0.00	16.24	110.3		
1023	8.87	8.28	1.129	0.0	0.00	16.24	110.3		
1025	9.15	8.32	1.131	0.0	0.00	16.24	110.3		
1027	9.43	8.36	1.133	0.0	0.00	16.24	110.3		
1029	9.71	8.40	1.135	0.0	0.00	16.24	110.3		
1031	9.99	8.44	1.137	0.0	0.00	16.24	110.3		
1033	10.27	8.48	1.139	0.0	0.00	16.24	110.3		
1035	10.55	8.52	1.141	0.0	0.00	16.24	110.3		
1037	10.83	8.56	1.143	0.0	0.00	16.24	110.3		
1039	11.11	8.60	1.145	0.0	0.00	16.24	110.3		
1041	11.39	8.64	1.147	0.0	0.00	16.24	110.3		
1043	11.67	8.68	1.149	0.0	0.00	16.24	110.3		
1045	11.95	8.72	1.151	0.0	0.00	16.24	110.3		
1047	12.23	8.76	1.153	0.0	0.00	16.24	110.3		
1049	12.51	8.80	1.155	0.0	0.00	16.24	110.3		
1051	12.79	8.84	1.157	0.0	0.00	16.24	110.3		
1053	13.07	8.88	1.159	0.0	0.00	16.24	110.3		
1055	13.35	8.92	1.161	0.0	0.00	16.24	110.3		
1057	13.63	8.96	1.163	0.0	0.00	16.24	110.3		
1059	13.91	9.00	1.165	0.0	0.00	16.24	110.3		
1101	14.19	9.04	1.167	0.0	0.00	16.24	110.3		
1103	14.47	9.08	1.169	0.0	0.00	16.24	110.3		
1105	14.75	9.12	1.171	0.0	0.00	16.24	110.3		
1107	15.03	9.16	1.173	0.0	0.00	16.24	110.3		
1109	15.31	9.20	1.175	0.0	0.00	16.24	110.3		
1111	15.59	9.24	1.177	0.0	0.00	16.24	110.3		
1113	15.87	9.28	1.179	0.0	0.00	16.24	110.3		
1115	16.15	9.32	1.181	0.0	0.00	16.24	110.3		
1117	16.43	9.36	1.183	0.0	0.00	16.24	110.3		
1119	16.71	9.40	1.185	0.0	0.00	16.24	110.3		
1121	16.99	9.44	1.187	0.0	0.00	16.24	110.3		
1123	17.27	9.48	1.189	0.0	0.00	16.24	110.3		
1125	17.55	9.52	1.191	0.0	0.00	16.24	110.3		
1127	17.83	9.56	1.193	0.0	0.00	16.24	110.3		
1129	18.11	9.60	1.195	0.0	0.00	16.24	110.3		
1131	18.39	9.64	1.197	0.0	0.00	16.24	110.3		
1133	18.67	9.68	1.199	0.0	0.00	16.24	110.3		
1135	18.95	9.72	1.201	0.0	0.00	16.24	110.3		
1137	19.23	9.76	1.203	0.0	0.00	16.24	110.3		
1139	19.51	9.80	1.205	0.0	0.00	16.24	110.3		
1141	19.79	9.84	1.207	0.0	0.00	16.24	110.3		
1143	20.07	9.88	1.209	0.0	0.00	16.24	110.3		
1145	20.35	9.92	1.211	0.0	0.00	16.24	110.3		
1147	20.63	9.96	1.213	0.0	0.00	16.24	110.3		
1149	20.91	10.00	1.215	0.0	0.00	16.24	110.3		
1151	21.19	10.04	1.217	0.0	0.00	16.24	110.3		
1153	21.47	10.08	1.219	0.0	0.00	16.24	110.3		
1155	21.75	10.12	1.221	0.0	0.00	16.24	110.3		
1157	22.03	10.16	1.223	0.0	0.00	16.24	110.3		
1159	22.31	10.20	1.225	0.0	0.00	16.24	110.3		
1201	22.59	10.24	1.227	0.0	0.00	16.24	110.3		
1203	22.87	10.28	1.229	0.0	0.00	16.24	110.3		
1205	23.15	10.32	1.231	0.0	0.00	16.24	110.3		
1207	23.43	10.36	1.233	0.0	0.00	16.24	110.3		
1209	23.71	10.40	1.235	0.0	0.00	16.24	110.3		
1211	23.99	10.44	1.237	0.0	0.00	16.24	110.3		
1213	24.27	10.48	1.239	0.0	0.00	16.24	110.3		
1215	24.55	10.52	1.241	0.0	0.00	16.24	110.3		
1217	24.83	10.56	1.243	0.0	0.00	16.24	110.3		
1219	25.11	10.60	1.245	0.0	0.00	16.24	110.3		
1221	25.39	10.64	1.247	0.0	0.00	16.24	110.3		
1223	25.67	10.68	1.249	0.0	0.00	16.24	110.3		
1225	25.95	10.72	1.251	0.0	0.00	16.24	110.3		
1227	26.23	10.76	1.253	0.0	0.00	16.24	110.3		
1229	26.51	10.80	1.255	0.0	0.00	16.24	110.3		
1231	26.79	10.84	1.257	0.0	0.00	16.24	110.3		
1233	27.07	10.88	1.259	0.0	0.00	16.24	110.3		
1235	27.35	10.92	1.261	0.0	0.00	16.24	110.3		
1237	27.63	10.96	1.263	0.0	0.00	16.24	110.3		
1239	27.91	11.00	1.265	0.0	0.00	16.24	110.3		
1241	28.19	11.04	1.267	0.0	0.00	16.24	110.3		
1243	28.47	11.08	1.269	0.0	0.00	16.24	110.3		
1245	28.75	11.12	1.271	0.0	0.00	16.24	110.3		
1247	29.03	11.16	1.273	0.0	0.00	16.24	110.3		
1249	29.31	11.20	1.275	0.0	0.00	16.24	110.3		
1251	29.59	11.24	1.277	0.0	0.00	16.24	110.3		
1253	29.87	11.28	1.279	0.0	0.00	16.24	110.3		
1255	30.15	11.32	1.281	0.0	0.00	16.24	110.3		
1257	30.43	11.36	1.283	0.0	0.00	16.24	110.3		
1259	30.71	11.40	1.285	0.0	0.00	16.24	110.3		
1301	30.99	11.44	1.287	0.0	0.00	16.24	110.3		
1303	31.27	11.48	1.289	0.0	0.00	16.24	110.3		
1305	31.55	11.52	1.291	0.0	0.00	16.24	110.3		
1307	31.83	11.56	1.293	0.0	0.00	16.24	110.3		
1309	32.11	11.60	1.295	0.0	0.00	16.24	110.3		
1311	32.39	11.64	1.297	0.0	0.00	16.24	110.3		
1313	32.67	11.68	1.299	0.0	0.00	16.24	110.3		
1315	32.95	11.72	1.301	0.0	0.00	16.24	110.3		
1317	33.23	11.76	1.303	0.0	0.00	16.24	110.3		
1319	33.51	11.80	1.305	0.0	0.00	16.24	110.3		
1321	33.79	11.84	1.307	0.0	0.00	16.24	110.3		
1323	34.07	11.88	1.309	0.0	0.00	16.24	110.3		
1325	34.35	11.92	1.311	0.0	0.00	16.24	110.3		
1327	34.63	11.96	1.313	0.0	0.00	16.24	110.3		
1329	34.91	12.00	1.315	0.0	0.00	16.24	110.3		
1331	35.19	12.04	1.317	0.0	0.00	16.24	110.3		
1333	35.47	12.08	1.319	0.0	0.00	16.24	110.3		
1335	35.75	12.12	1.321	0.0	0.00	16.24	110.3		
1337	36.03	12.16	1.323	0.0	0.00	16.24	110.3		
1339	36.31	12.20	1.325	0.0	0.00	16.24	110.3		
1341	36.59	12.24	1.327	0.0	0.00	16.24	110.3		
1343	36.87	12.28	1.329	0.0	0.00	16.24	110.3		
1345	37.15	12.32	1.331	0.0	0.00				

WELL ID: MW 077-276

SAMPLE ID: 006

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy 50s

PROJECT NO: 010617869-91
 DATE: 11/3/07
 SAMPLER(S): 11 B

SAMPLING INTERVAL (depth in ft below top of casing):
250.8 to 281.3

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
276

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)
0920	0	7.0	0.0						
0929	0.15	7.2	0.3						
0935	0.50	7.1	0.4						
0944	0.15	7.2	0.4	0.08					
0950	1.00	7.2	0.4	0.08					
1000	1.00	7.2	0.4	0.08					
1010	1.00	7.2	0.4	0.08					
1020	1.00	7.2	0.4	0.08					
1030	1.00	7.2	0.4	0.08					
1040	1.00	7.2	0.4	0.08					
1050	1.00	7.2	0.4	0.08					
1100	1.00	7.2	0.4	0.08					
1110	1.00	7.2	0.4	0.08					
1120	1.00	7.2	0.4	0.08					
1130	1.00	7.2	0.4	0.08					
1140	1.00	7.2	0.4	0.08					
1150	1.00	7.2	0.4	0.08					
1200	1.00	7.2	0.4	0.08					
1210	1.00	7.2	0.4	0.08					
1220	1.00	7.2	0.4	0.08					
1230	1.00	7.2	0.4	0.08					
1240	1.00	7.2	0.4	0.08					
1250	1.00	7.2	0.4	0.08					
1300	1.00	7.2	0.4	0.08					
1310	1.00	7.2	0.4	0.08					
1320	1.00	7.2	0.4	0.08					
1330	1.00	7.2	0.4	0.08					
1340	1.00	7.2	0.4	0.08					
1350	1.00	7.2	0.4	0.08					
1400	1.00	7.2	0.4	0.08					
1410	1.00	7.2	0.4	0.08					
1420	1.00	7.2	0.4	0.08					
1430	1.00	7.2	0.4	0.08					
1440	1.00	7.2	0.4	0.08					
1450	1.00	7.2	0.4	0.08					
1500	1.00	7.2	0.4	0.08					
1510	1.00	7.2	0.4	0.08					
1520	1.00	7.2	0.4	0.08					
1530	1.00	7.2	0.4	0.08					
1540	1.00	7.2	0.4	0.08					
1550	1.00	7.2	0.4	0.08					

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde turbidity meter	1000 1254

NOTES AND OBSERVATIONS:

WELL ID: MW 07-333

SAMPLE ID: 006

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy IPEC
SITE: Buchanan, NY
WEATHER: cloudy 55°

PROJECT NO: 0110017869-91
DATE: 11/2/06
SAMPLER(S): M 2

SAMPLING INTERVAL (depth in ft below top of casing):
317.8 to 328.3

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
323

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)
07:20	0	6.47	6.26		0.27	11.24	124	2.75	73
07:22	0.25	6.47	6.26		0.27	11.24	124		
07:24	0.25	6.47	6.26		0.27	11.24	124		
07:26	0.25	6.47	6.26		0.27	11.24	124		
07:28	0.25	6.47	6.26		0.27	11.24	124		
07:30	0.25	6.47	6.26		0.27	11.24	124		
07:32	0.25	6.47	6.26		0.27	11.24	124		
07:34	0.25	6.47	6.26		0.27	11.24	124		
07:36	0.25	6.47	6.26		0.27	11.24	124		
07:38	0.25	6.47	6.26		0.27	11.24	124		
07:40	0.25	6.47	6.26		0.27	11.24	124		
07:42	0.25	6.47	6.26		0.27	11.24	124		
07:44	0.25	6.47	6.26		0.27	11.24	124		
07:46	0.25	6.47	6.26		0.27	11.24	124		
07:48	0.25	6.47	6.26		0.27	11.24	124		
07:50	0.25	6.47	6.26		0.27	11.24	124		
07:52	0.25	6.47	6.26		0.27	11.24	124		
07:54	0.25	6.47	6.26		0.27	11.24	124		
07:56	0.25	6.47	6.26		0.27	11.24	124		
07:58	0.25	6.47	6.26		0.27	11.24	124		
08:00	0.25	6.47	6.26		0.27	11.24	124		
08:02	0.25	6.47	6.26		0.27	11.24	124		
08:04	0.25	6.47	6.26		0.27	11.24	124		
08:06	0.25	6.47	6.26		0.27	11.24	124		
08:08	0.25	6.47	6.26		0.27	11.24	124		
08:10	0.25	6.47	6.26		0.27	11.24	124		
08:12	0.25	6.47	6.26		0.27	11.24	124		
08:14	0.25	6.47	6.26		0.27	11.24	124		
08:16	0.25	6.47	6.26		0.27	11.24	124		
08:18	0.25	6.47	6.26		0.27	11.24	124		
08:20	0.25	6.47	6.26		0.27	11.24	124		
08:22	0.25	6.47	6.26		0.27	11.24	124		
08:24	0.25	6.47	6.26		0.27	11.24	124		
08:26	0.25	6.47	6.26		0.27	11.24	124		
08:28	0.25	6.47	6.26		0.27	11.24	124		
08:30	0.25	6.47	6.26		0.27	11.24	124		
08:32	0.25	6.47	6.26		0.27	11.24	124		
08:34	0.25	6.47	6.26		0.27	11.24	124		
08:36	0.25	6.47	6.26		0.27	11.24	124		
08:38	0.25	6.47	6.26		0.27	11.24	124		
08:40	0.25	6.47	6.26		0.27	11.24	124		
08:42	0.25	6.47	6.26		0.27	11.24	124		
08:44	0.25	6.47	6.26		0.27	11.24	124		
08:46	0.25	6.47	6.26		0.27	11.24	124		
08:48	0.25	6.47	6.26		0.27	11.24	124		
08:50	0.25	6.47	6.26		0.27	11.24	124		
08:52	0.25	6.47	6.26		0.27	11.24	124		
08:54	0.25	6.47	6.26		0.27	11.24	124		
08:56	0.25	6.47	6.26		0.27	11.24	124		
08:58	0.25	6.47	6.26		0.27	11.24	124		
09:00	0.25	6.47	6.26		0.27	11.24	124		

Equipment Used	Equipment Identification #
YSI 55e MPS Reader and 5561 Sonde turbidity meter	<u>SI 115070 014</u>

NOTES AND OBSERVATIONS:

WELL ID: MW 67-340

SAMPLE ID: 006

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy 60°

PROJECT NO: 01-0017865-91
 DATE: 11/2/08
 SAMPLER(S): 100

SAMPLING INTERVAL (depth in ft below top of casing):
335.3 to 347.9

TOTAL VOLUME PURGED: _____ gal

SAMPLING PORT:
340

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)
07:20	10	7.0	250	0.5	0.5	10.0	250	10	40
07:25	10	7.0	250	0.5	0.5	10.0	250	10	40
07:30	10	7.0	250	0.5	0.5	10.0	250	10	40
07:35	10	7.0	250	0.5	0.5	10.0	250	10	40
07:40	10	7.0	250	0.5	0.5	10.0	250	10	40
07:45	10	7.0	250	0.5	0.5	10.0	250	10	40
07:50	10	7.0	250	0.5	0.5	10.0	250	10	40
07:55	10	7.0	250	0.5	0.5	10.0	250	10	40
08:00	10	7.0	250	0.5	0.5	10.0	250	10	40
08:05	10	7.0	250	0.5	0.5	10.0	250	10	40
08:10	10	7.0	250	0.5	0.5	10.0	250	10	40
08:15	10	7.0	250	0.5	0.5	10.0	250	10	40
08:20	10	7.0	250	0.5	0.5	10.0	250	10	40
08:25	10	7.0	250	0.5	0.5	10.0	250	10	40
08:30	10	7.0	250	0.5	0.5	10.0	250	10	40
08:35	10	7.0	250	0.5	0.5	10.0	250	10	40
08:40	10	7.0	250	0.5	0.5	10.0	250	10	40
08:45	10	7.0	250	0.5	0.5	10.0	250	10	40
08:50	10	7.0	250	0.5	0.5	10.0	250	10	40
08:55	10	7.0	250	0.5	0.5	10.0	250	10	40
09:00	10	7.0	250	0.5	0.5	10.0	250	10	40
09:05	10	7.0	250	0.5	0.5	10.0	250	10	40
09:10	10	7.0	250	0.5	0.5	10.0	250	10	40
09:15	10	7.0	250	0.5	0.5	10.0	250	10	40
09:20	10	7.0	250	0.5	0.5	10.0	250	10	40
09:25	10	7.0	250	0.5	0.5	10.0	250	10	40
09:30	10	7.0	250	0.5	0.5	10.0	250	10	40
09:35	10	7.0	250	0.5	0.5	10.0	250	10	40
09:40	10	7.0	250	0.5	0.5	10.0	250	10	40
09:45	10	7.0	250	0.5	0.5	10.0	250	10	40
09:50	10	7.0	250	0.5	0.5	10.0	250	10	40
09:55	10	7.0	250	0.5	0.5	10.0	250	10	40
10:00	10	7.0	250	0.5	0.5	10.0	250	10	40
10:05	10	7.0	250	0.5	0.5	10.0	250	10	40
10:10	10	7.0	250	0.5	0.5	10.0	250	10	40
10:15	10	7.0	250	0.5	0.5	10.0	250	10	40
10:20	10	7.0	250	0.5	0.5	10.0	250	10	40
10:25	10	7.0	250	0.5	0.5	10.0	250	10	40
10:30	10	7.0	250	0.5	0.5	10.0	250	10	40
10:35	10	7.0	250	0.5	0.5	10.0	250	10	40
10:40	10	7.0	250	0.5	0.5	10.0	250	10	40
10:45	10	7.0	250	0.5	0.5	10.0	250	10	40
10:50	10	7.0	250	0.5	0.5	10.0	250	10	40
10:55	10	7.0	250	0.5	0.5	10.0	250	10	40
11:00	10	7.0	250	0.5	0.5	10.0	250	10	40
11:05	10	7.0	250	0.5	0.5	10.0	250	10	40
11:10	10	7.0	250	0.5	0.5	10.0	250	10	40
11:15	10	7.0	250	0.5	0.5	10.0	250	10	40
11:20	10	7.0	250	0.5	0.5	10.0	250	10	40
11:25	10	7.0	250	0.5	0.5	10.0	250	10	40
11:30	10	7.0	250	0.5	0.5	10.0	250	10	40
11:35	10	7.0	250	0.5	0.5	10.0	250	10	40
11:40	10	7.0	250	0.5	0.5	10.0	250	10	40
11:45	10	7.0	250	0.5	0.5	10.0	250	10	40
11:50	10	7.0	250	0.5	0.5	10.0	250	10	40
11:55	10	7.0	250	0.5	0.5	10.0	250	10	40
12:00	10	7.0	250	0.5	0.5	10.0	250	10	40

Equipment Used	Equipment Identification #
YSI 55A MPS Reader and 5563 Sunde turbidity meter	4
	100

NOTES AND OBSERVATIONS:

WELL ID: 10017869.91

SAMPLE ID: 028

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: cloudy 50's

PROJECT NO: 01.0017869.91
 DATE: 10/21/09
 SAMPLER(S): MB1A1
 PUMP DEPTH: _____ ft

WATER QUALITY:

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1:45	9.07	8.11	0.2						
1:47	9.26								
1:48	9.14	8.22	0.2						
1:49	9.32								
1:52	4.29	8.09	0.223		1.0	16.2	247		
1:55	9.24	8.93	0.228	0.1	1.2	16.2	247		
1:56	9.17	8.87	0.228	0.25	1.2	16.2	247		
1:58	9.15	8.82	0.231	0.4	1.2	16.2	247		
1:59	4.27	8.57	0.232	0.34	1.4	16.2	247		
2:02	9.31	8.81	0.233	0.32	1.4	16.2	247		
2:03	9.2	8.5	0.233	0.06		16.2	247		
2:05	9.49			0.022		16.2	247		
2:08	9.35	8.7	0.242	0.05	0.8	16.2	247		
2:10	9.31	8.73	0.242	0.04	0.8	16.2	247		
2:12	9.28	8.54	0.245	0.04	0.8	16.2	247		
2:14	9.25	8.39	0.245	0.04	0.8	16.2	247		
2:16	9.24	8.27	0.246	0.04	0.97	16.2	247		
2:18	9.22	8.25	0.246	0.04	1.0	16.2	247		
2:20	9.21	8.24	0.246	0.04	1.0	16.2	247		
2:22	9.20	8.23	0.246	0.04	1.0	16.2	247		
2:24	9.19	8.22	0.246	0.04	1.0	16.2	247		
2:26	9.18	8.21	0.246	0.04	1.0	16.2	247		
2:28	9.17	8.20	0.246	0.04	1.0	16.2	247		
2:30	9.16	8.19	0.246	0.04	1.0	16.2	247		

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

NOTES AND OBSERVATIONS:

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

SAMPLE ID: DO91

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

U1-CSS

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Rain 6:00

PROJECT NO: 01.0017869.91
 DATE: 11/6/08
 SAMPLER(S): AA1MB
 PUMP DEPTH: 14.0 ft

WATER QUALITY: OTW - 6.67'

Time	circle one: DTW or <u>OTW</u> (Elevation)	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1300	8.211								
1303	<u>Pump on</u>							<1	
1323	7.795	7.84	1.382	527	7.85	21.49	164.1		
1328	7.845	7.88	1.378	265	8.05	21.50	157.1		
1337	7.957	7.96	1.372	220	8.02	21.63	149.1		
1343	7.932	7.98	1.370	2.04	8.13	21.73	146.3		
1349	7.946	8.01	1.368	2.00	7.88	21.78	143.4		
1351	Start sampling								
1444	end sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	6
flow meter	1
turbidity meter	200761254

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msl.
 ~ 0.4 gal per feed

GZA GeoEnvironmental of New York Modified Traditional Purge Sampling Data Sheet

U3-4D
018

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

PROJECT NO: 01.0017609.01
DATE: 10/25/08
SAMPLER(S): AA/MR

WATER COLUMN HEIGHT (ft) 17.30 Well Diameter: 3 inches
 $\frac{DTB}{DTW} = \frac{17.30}{1}$

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 17.30 x $\frac{0.307}{0.653}$ = 6.35 gallons
 Well Volume
6.35 x 1.5 = 9.51 gallons
 Designed Purge Volume

TOTAL VOLUME PURGED: 10.4 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
1216	0	Pump on			11.25				35.6	
1214	0.35		7.87	1.782	5.53	0.52	33.40	26.9		
1219	0.85		9.08	1.734	5.85	1.18	34.95	65.4		
1224	1.5		11.0	1.699	7.44	1.14	34.78	45.7		
1229	2.0		9.86	1.674	4.34	1.11	34.62	71.7		
1235	2.6		8.99	1.646	5.32	1.26	34.57	32.7		
1240	3.0		8.94	1.626	5.76	1.63	34.53	31.9		
1257	4.0		8.87	1.598	6.07	0.95	34.19	20.3		
1307	5.0		8.82	1.599	5.53	0.92	34.18	17.0		
1321	6.0		8.76	1.663	6.13	0.86	33.47	15.0		
1330	6.6		8.79	1.686	5.62	0.86	34.21	12.3		
1346	7.5		8.77	1.643	5.79	0.94	33.51	2.7		
1354	8.5		8.77	1.600	5.08	0.88	32.58	-0.6		
1410	10.3		8.95	1.614	5.54	0.92	34.50	-6.0		

1415 Start sampling

1440 End sampling

Equipment Used	Equipment Identification #
YSI 550 MPS Reader and 5563 Sonde	4
turbidity meter	202704 393

NOTES AND OBSERVATIONS:

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

WELL ID: UGP-21SAMPLE ID: 20

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 50°F sun

PROJECT NO: 01.0017369.91
 DATE: 10/22/08
 SAMPLER(S): AA 1MB
 PUMP DEPTH: _____ ft

WATER QUALITY: DTW = 3.94'

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
9:14	3.142							2.8	
9:18	Pump on							2	
9:22	3.139	7.113	1.412	2.110	3.72	21.84	169.5	1.8	
9:27	3.136	7.52	1.376	1.86	2.74	22.35	175.9	1.6	
9:32	3.138	7.58	1.342	5.21	2.28	22.66	174.8		
9:37	3.122	7.61	1.391	5.04	1.90	22.69	174.2		
9:42	3.116	7.62	1.391	2.55	1.33	22.81	172.7		
9:47	3.111	7.62	1.391	2.60	1.31	22.89	171.6		
9:52	3.111	7.63	1.391	2.47	1.00	22.91	168.6		
9:57	3.100	7.68	1.391	2.66	1.81	22.99	167.0		
10:02	3.094	7.63	1.391	2.64	0.84	23.04	165.3		
10:07	3.092	7.62	1.392	2.41	0.79	23.06	163.6		
10:11	start sampling								
10:19	stop sampling								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	6
flow meter	5
turbidity meter	200704293

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

last gate closed

WELL ID: 12-12
 SAMPLE ID: 12-12

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: 78.3 F / 100%

PROJECT NO: 01.0017869.91
 DATE: 12/12/11
 SAMPLER(S): 12-12
 PUMP DEPTH: _____ ft

WATER QUALITY: 0.4 - 0.5

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
08:20	2.820	7.45	1847	0.77	2.95	19.8	173.0		0.15
08:35	2.792	7.95	1847	0.77	2.95	19.8	173.0		0.35
09:00	2.795	7.3	1802	0.4	4.20	19.82	194.1		
09:45	2.792	8.10	1848	0.50	1.43	19.43	1207.2		0.40
09:50	2.740	8.12	1844	0.04	1.0	19.45	1214.8		2.00
09:55	2.707	8.14	1725	0.0	1.0	19.82	1207.9		2.10
10:00	2.798	8.15	1843	0.25	0.40	19.82	1207.2		2.10
10:05	2.752	8.15	1717	0.25	2.00	19.82	1207.2		2.10
10:12	2.752	8.17	1622	2.80	0.82	20.20	1223.7		2.10
10:15	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
10:20	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
10:30	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
10:40	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
10:50	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
11:00	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
11:10	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
11:20	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
11:30	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
11:40	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
11:50	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10
12:00	2.752	8.17	1627	2.85	0.81	20.20	1223.7		2.10

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

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msl.



APPENDIX E: POST-Q4 2008 MID-QUARTER SAMPLING DATA SHEETS

WELL ID: MW _____

SAMPLE ID: _____

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

MW-31-63 (012)

CLIENT: Entergy - IPEC
SITE: Buchanan, NY
WEATHER: cloudy windy 35°F

PROJECT NO: 010017869.01
DATE: 11/2/08
SAMPLER(S): M.O.

SAMPLING INTERVAL (depth in ft below top of casing)
50.3 to 50.7

TOTAL VOLUME PURGED: 1.1 gal

SAMPLING PORT
23

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)
0940	0								
0945	0.0	5.63	1073	—	4.08	3.23	157.4	6.7	29
0950	0.02	5.28	1071	2.32	3.91	2.48	201.9		
1000	0.15	5.44	1058	0.77	3.20	12.04	267.2		
1013	0.25	5.91	1016	0.00	3.00	12.09	247.2		
1025	0.45	6.32	0.965	3.09	3.07	12.30	204.1		
1037	0.70	6.51	0.958	0.05	3.14	12.27	173.1		
1047	0.85	7.11	0.967	0.10	3.70	12.69	164.8		
1105	0.95	7.18	0.979	0.05	3.67	12.82	160.4		
1111	1.0	7.20	0.989	0.08	3.61	12.69	158.4		
1112	PUMP OFF								
1113	PUMP ON. START SAMPLE COLLECTION								
1138	PUMP OFF. SAMPLE COMPLETED: 2 L IPEC								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
turbidity meter	200704275

NOTES AND OBSERVATIONS:

WELL ID: MW _____

SAMPLE ID: _____

GZA GeoEnvironmental of New York Waterloo Sampling Data Sheet

MW - 21.85 (0.8)

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Clear, 35°F

PROJECT NO: 01.0017859.91
 DATE: 11.18.03
 SAMPLER(S): M.B.

SAMPLING INTERVAL (depth in ft below top of casing)
69.8 to 75.4

TOTAL VOLUME PURGED: 2.3 gal

SAMPLING PORT
3.2

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)
0943	0	6.07	1.44	-	2.00	14.24	55.0	3.17	2.9
0945	0.02	6.27	1.376	1.96	2.40	14.17	44.6		
0955	0.10	6.37	1.376	1.44	2.2	14.22	47.7		
1015	0.50	6.63	1.310	0.71	2.37	14.63	47.7		
1025	0.90	6.45	1.302	2.19	2.37	14.74	53.7		
1035	1.10	7.08	1.308	2.69	2.2	14.82	53.7		
1045	1.15	7.07	1.303	0.76	2.29	14.88	48.4		
1058	1.45	7.10	1.301	0.11	2.27	15.07	57.0		
1105	1.65	7.12	1.300	0.95	2.30	15.14	58.4		
1120	1.95	7.13	1.239	0.88	2.40	15.22	60.0		
1129	2.10	7.13	1.287	0.92	2.35	15.32	65.9		
1134	2.20	7.16	1.286	0.93	2.38	15.46	64.8	↓	↓
1135	PUMP OFF								
1136	PUMP ON START SAMPLE COLLECTION								
1200	PUMP OFF SAMPLE COMPLETED 2 L IPEC								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde turbidity meter	00704213

NOTES AND OBSERVATIONS:

WELL ID: _____

SAMPLE ID: _____

GZA GeoEnvironmental of New York MW-42-49(014) Low-Flow Sampling Data Sheet

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

PROJECT NO: 01.0017869.91
 DATE: 11/17/08
 SAMPLER(S): M B
 PUMP DEPTH: 41 ft

WATER QUALITY: DTW - 34.61

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	DRIVE Rate/ VENT (gal/hr)	pressure Notes (PSI)
1255	13.970	PUMP ON							
1300	13.854	7.81	0.927	—	5.70	11.85	114.1	5/10	24
1305	13.852	7.61	0.912	—	5.82	11.82	122.0		
1310	13.856	7.62	0.904	24.46	6.43	11.84	113.3		
1315	13.856	7.73	0.879	21.36	7.30	11.60	106.2		
1323	13.856	7.77	0.835	17.31	7.87	11.14	104.9		
1333	13.857	7.89	0.767	12.86	8.00	11.37	98.4		
1340	13.857	7.96	0.742	11.02	7.61	11.42	98.3		
1350	13.857	8.00	0.713	8.87	-4.48	11.49	95.6		
1358	13.876	8.00	0.683	7.27	-52.6	11.66	95.9		
1403	13.875	8.01	0.671	7.20	X	11.71	96.1		
1408	13.875	8.02	0.662	7.09	X	11.73	96.3	↓	↓
1408	START SAMPLE COLLECTION								
1456	SAMPLE COMPLETED - 2 L IPEC								
1456	PUMP OFF								

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	3
flow meter	—
turbidity meter	200704293

NOTES AND OBSERVATIONS:

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

Groundwater Elevation measurements are given in feet msl.

DO sensor not working properly.

WELL ID: _____

SAMPLE ID: _____

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

MW150-26(019)

CLIENT: Entergy - IPEC
 SITE: Buchanan, NY
 WEATHER: Cloudy / 20s

PROJECT NO: 01.0017869.91
 DATE: 11/19/08
 SAMPLER(S): 2 B
 PUMP DEPTH: 60 ft

WATER QUALITY: 11.79

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Notes
1130	87.604								
1355	87.762	PUMP ON							0
1401	87.639	7.37	2.550		2.92	13.60	2208	< 0.5	
1405	87.872	7.37	2.594	6.41	1.72	2.01	1988		
1410	87.540	7.37	2.630	5.34	1.69	11.77	1992		0.05
1420	87.639	7.36	2.554	2.56	1.65	11.94	1964		0.0
1427	87.592	7.37	2.524	1.28	1.77	12.41	1977		0.5
1436	87.712	7.34	2.554	1.28	1.22	13.31	1822		0.20
1445	87.750	7.40	2.562	1.31	0.99	13.55	1847		0.35
1453	87.517	7.35	2.572	1.22	0.77	13.59	1822		0.30
5:00	87.862	7.40	2.571	1.48	0.99	13.61	1909	✓	0.37
1501	START	SAMPLE COLLECTION							
1629	SAMPLE	COMPLETION							

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	1
flow meter	151
turbidity meter	200704252

NOTES AND OBSERVATIONS:
 Depth and Depth to Water (DTW) measurements are given in feet from top of casing.
 Groundwater Elevation measurements are given in feet msl.

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

MW-53 120 (012)

CLIENT: Energy - IPEC
SITE: Buchanan, NY
WEATHER: sunny 40°F

PROJECT NO: 01-017809.01
DATE: 11/17/08
SAMPLER S: M. B.

WATER COLUMN HEIGHT (ft) Well Diameter: 1 inches

$$\frac{120}{DTB} - \frac{59.91}{DTW} = \frac{60.09}{\text{Well Column Height}} \text{ ft}$$

Diameter	Multipliers
1	0.041
2	0.163
4	0.653

GALLONS OF WATER PER WELL VOLUME:

Water Column Height 60.09 x 0.041 = 2.47 gallons
Multiplier Well Volume

2.47 x 1.5 = 3.70 gallons
Designed Purge Volume

TOTAL VOLUME PURGED: 3.70 gal

WATER QUALITY:

Time	Volume Purged (gal)	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (mS/m)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Pump Depth (ft)	Notes
0930	0	PUMP ON								
0935	0.01		7.32	1.542	-	15.20	14.10	166.6		
0940	0.05		7.40	1.545	-	10.01	13.92	159.9		
0945	0.10		7.44	1.557	49.14	7.63	13.84	157.8		
0950	0.20		7.42	1.546	77.77	5.92	14.12	155.4		
0955	0.60		7.38	1.556	353.5	4.55	16.38	150.8		
1000	1.10		7.37	1.592	1100.0	3.01	16.48	146.9		
1005	1.75		7.36	1.623	1	2.54	16.54	142.4		
1010	2.15		7.34	1.649	1	2.32	16.55	137.9		
1015	2.60		7.34	1.660	1	2.22	16.60	132.8		
1018	3.0		7.34	1.665	1	2.30	16.71	130.9		
1020	3.20		7.34	1.671	1	2.32	16.71	128.3		
1026	3.70		7.34	1.678	1	2.35	16.63	125.6		
1026		PUMP OFF								

1027	PUMP ON START SAMPLE COLLECTION								
1031	PUMP OFF SAMPLE COMPLETED. 2 L IPEC								
Equipment Used								Equipment Identification #	
YSI 556 MPS Reader and 5563 Sonde								2	
turbidity meter								200704293	

NOTES AND OBSERVATIONS:

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

WELL ID: _____

SAMPLE ID: _____

GZA GeoEnvironmental of New York Low-Flow Sampling Data Sheet

MI-CSS (010)

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

PROJECT NO: 01.0017869.91
 DATE: 11/19/07
 SAMPLER(S): M.P.S.
 PUMP DEPTH: 140 ft

WATER QUALITY: DTW = 5.08

Time	circle one: DTW or GW Elevation	pH (SU)	Specific Conductivity (S/cm)	Turbidity (NTU)	Dissolved Oxygen (g/l)	Temp (°C)	ORP	Rate (gal/hr)	Field Notes
0850	7.762	PUMP OFF							
0900	9.180	PUMP OFF							
0905	8.361								
0915	9.713	PUMP ON							
0920	4.272	7.94	1314		8.27	8.81	95	<0.5	0.01
0930	4.468	7.70	1316	3.80	8.67	16.27			0.05
0940	4.470	7.92	1315	2.68	8.69	7.60	1067		0.01
0950	4.510	7.45	1314	5.24	8.17	17.58			0.10
0955	4.527	8.00	1314	5.42	8.45	17.57	71.0		0.11
1000	4.640	8.01	1313	3.36	8.71	17.67	87.8		0.12
1010	5.077	AMBIENT	1313	1.00	10.10				
1030	5.077	AMBIENT	1313	1.00	10.10				

Equipment Used	Equipment Identification #
YSI 556 MPS Reader and 5563 Sonde	
flow meter	2010
turbidity meter	100704290

NOTES AND OBSERVATIONS:

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



APPENDIX F: DOSE CALCULATIONS



Facility Groundwater Flux Calculation

Site Indian Point
Job No. 17869_10

Prepared By: JAS
Reviewed By: mlb

Parameter Values:

		Totals									
		Total Catchment Zone (ft ²)	Total Improved Zone (ft ²)	Recharge (ft/yr)	Precipitation (ft/yr)						
		3,969,765	1,355,080	0.87	3.02						
Surface Area											
Northern Clean Zone Improved (ft ²)	0	136,704	Unit 1/2 Improved Zone (ft ²)	374,234	Unit 3 North Improved Zone (ft ²)	309,497	Unit 3 South Improved Zone (ft ²)	321,290	Southern Clean Zone Improved Zone (ft ²)	213,354	
	Northern Clean Unimproved Zone (ft ²)	111,863	Unit 2 North Unimproved Zone (ft ²)	217,667	Unit 1/2 Unimproved Zone (ft ²)	438,221	Unit 3 North Unimproved Zone (ft ²)	268,862	Southern Clean Zone Unimproved (ft ²)	585,600	
Discounted Area Within Zone	44,831	Discounted Area Within Zone	0	Discounted Area Within Zone	324,509	Discounted Area Within Zone	137,938	Discounted Area Within Zone	144,347		
	Northern Clean Zone Catchment (ft ²)	156,694	Unit 2 North Catchment Zone (ft ²)	354,371	Unit 1/2 Catchment Zone (ft ²)	1,136,965	Unit 3 North Catchment Zone (ft ²)	770,550	Southern Clean Zone (ft ²)	943,302	
Activity (pCi/L)											
Groundwater											
Upper Zone Before Canal	150	Unit 2 North	546	Unit 1/2	2,959	Unit 3 North	282	Unit 3 South Zone	859	Southern Clean Zone	240
	Lower Zone Before Canal	150	Unit 2 North	151	Unit 1/2	3,023	Unit 3 North	1,216	Unit 3 South Zone	418	Southern Clean Zone
Upper Zone After Canal	150	Unit 2 North	195	Unit 1/2	3,481	Unit 3 North	364	Unit 3 South Zone	859	Southern Clean Zone	240
	Lower Zone After Canal	150	Unit 2 North	574	Unit 1/2	1,149	Unit 3 North	485	Unit 3 South Zone	418	Southern Clean Zone

year
2008



Facility Groundwater Flux Calculation

Site Indian Point
Job No. 17869_10

Prepared By: JAS
Reviewed By: mlb

Stormwater Discharging to Canal (pCi/L)					
Storm Water for Northern Clean Zone	Storm Water for Unit North	Storm Water for Unit 1/2	Storm Water for Unit 3 North	Storm Water for Unit 3 South	Storm Water for Southern Clean Zone
NA	1,100 Avg MH-1 and MH-4a	NA	0 Avg CB-14 and CB-34	0 Avg U3-CB-B8	0 Avg D1, CB3, E6, & E10
Stormwater Discharging to River (pCi/L)					
Storm Water for Northern Clean Zone	Storm Water for Unit North	Storm Water for Unit 1/2	Storm Water for Unit 3 North	Storm Water for Unit 3 South	Storm Water for Southern Clean Zone
NA	0 Avg MH-1 and MH-12	0 Avg MH-14	683 Avg CB-15	NA	598 Avg E13, CB-C2

Potential Water Received by Storm Drain System

= (Improved Area) x Precipitation

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

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

Water Directly Recharged to Aquifer from Precipitation

= Unimproved Area x Recharge

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

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



Facility Groundwater Flux Calculation

Site Indian Point Prepared By: JAS
 Job No. 17869_10 Reviewed By: mjb

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

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

Total Water Discharged to Aquifer

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

Groundwater Discharged to Canal

=Water Recharged to Aquifer x X% flowing to Canal

Upper and Lower Zone	Northern Clean Area Catchment x 0%	Unit 2 North x 34.6%	Unit 1/2 Area Catchment 22.6%	Unit 3 North Area Catchment x 56.3%	Unit 3 South Area x 73.9%	Southern Clean Zone Area x 0%	Units
		0	15,630	44,010	125,273	180,662	0
	0	43	121	343	495	0	ft ³ /day
	0.00	0.22	0.63	1.78	2.57	0.00	GPM
	0	442,591	1,246,220	3,547,339	5,115,782	0	L/Yr



Facility Groundwater Flux Calculation

Site Indian Point Prepared By: JAS
 Job No. 17869_10 Reviewed By: mjb

Groundwater Discharged to River

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

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

Water Remaining in Storm Drains and Discharged to Canal

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

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



Facility Groundwater Flux Calculation

Site Indian Point Prepared By: JAS
 Job No. 17869_10 Reviewed By: mjb

Water Remaining in Storm Drains and Discharged to River

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

Flux Calculations

Conceptual Model: Migration Pathway Summary

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

Flux (pCi/Yr)

	North Clean Area	Unit 2 North	Unit 1/2	Unit 3 North	Unit 3 South	South Clean Zone	Total
GW to River-Upper Zone	1.39E+08	3.54E+07	5.33E+09	2.88E+08	5.34E+08	1.82E+09	8.15E+09
GW to River-Lower Zone	2.76E+08	3.76E+08	3.14E+09	9.52E+08	4.96E+08	1.56E+09	6.80E+09
GW to Canal	0.00E+00	2.42E+08	3.69E+09	9.99E+08	4.39E+09	0.00E+00	9.32E+09
SW to Canal	NA	2.73E+10	0.00E+00	0.00E+00	1.43E+02	0.00E+00	2.73E+10
SW to River	NA	0.00E+00	0.00E+00	1.81E+09	0.00E+00	5.45E+08	2.35E+09

Curies/Yr ==> 0.05

Notes:

The recharge rate used herein, 0.87 t/yr (10 inches/year), is within the range of values discussed in the USGS modelling report¹. The reported recharge ranged from 3.6 inches/year to 7.5 inches/year for a till to 20 inches per year for coarse grained glacially stratified deposits. A precipitation value of 2.92t/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