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August 10, 2009

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

BELL BEND NUCLEAR POWER PLANT
RESPONSE TO RAI SET NO. 17
BNP-2009-220 Docket No. 52-039

References: 1) M. Canova (NRC) to R. Sgarro (PPL Bell Bend, LLC), Bell Bend COLA – Request for Information No. 17 (RAI No. 17) – RHEB -2810, e-mail dated July 10, 2009

The purpose of this letter is to respond to the request for additional information (RAI) identified in the referenced NRC correspondence to PPL Bell Bend, LLC (PPL). This RAI addresses Groundwater, as discussed in Chapter 2 of the Final Safety Analysis Report (FSAR) and submitted in Part 2 of the Bell Bend Nuclear Power Plant Combined License Application (COLA).

The enclosures provide our responses to RAI No. 17, Questions 02.04.12-1 and 02.04.12-2. A Licensing Basis Document Change Request has been initiated to incorporate the necessary COLA changes in a future revision of the COLA. This future revision of the COLA is the only new regulatory commitment.

If you have any questions, please contact the undersigned at 570.802.8102.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 10, 2009

Respectfully,

Rocco R. Sgarro

RRS/kw

Enclosures: As stated

D079
NRO

cc: (w/o Enclosure)

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Enclosure 1

Response to NRC Request for Additional Information Set No. 17 Question 02.04.12-1
Bell Bend Nuclear Power Plant

Question 02.04.12-1

To meet the requirements of 10 CFR 50.55a, 10 CFR 100.20 and 10 CFR 100.23, a complete description is needed of the methods used for determining groundwater elevations for comparison with the plant design bases.

Please describe the process of determining the safety of the pumphouse for the Essential Service Water Emergency Makeup System structure if the groundwater depth is 3.0 feet below grade, versus the 3.3 feet below grade specified in the U.S. EPR design certification. Staff requests the calculation packages for (1) the applicant's determination of the groundwater level and (2) the applicant's determination of the safety impacts to the pump house that would result from the groundwater level being closer to grade than the U.S. EPR design limits.

Response

Groundwater levels were measured for a period of 12 months in 41 monitoring wells installed at the BBNPP site. Many of these wells and well clusters were installed in and immediately adjacent to the power block area. Several well clusters were installed around the perimeter of the BBNPP site. From the measured water levels (see Revised Table 2.4-44), three sets of quarterly potentiometric surface maps were constructed and included in FSAR Section 2.4-12. One set of maps were developed for the Glacial Overburden (sand and gravel) aquifer. The second set was developed for the shallow bedrock aquifer and the third set was developed for the deep bedrock aquifer.

All safety-related structures will be constructed by excavating completely through the Glacial Overburden aquifer. Some safety-related foundations will be seated on competent bedrock, but none will be embedded into the competent bedrock. As a result, the safety-related foundations of the power block area will be in contact with groundwater within the Glacial Overburden aquifer and not the bedrock aquifers.

Measured groundwater elevations for the 12-month period (October 2007 – September 2008) are listed in revised Table 2.4-44. For the Glacial Overburden aquifer, the highest monthly groundwater elevations were measured on March 24, 2008. These high groundwater elevations represent the culmination of excess groundwater recharge during the winter and spring of 2008.

Paul C. Rizzo Associates, Inc. (PCRA) Calculation Package 2.5.4-2 (Rev. 1) was prepared before all of the groundwater data had been collected and analyzed. After the complete set of groundwater data was collected and analyzed, this calculation package was revised (Rev. 2) and is included as Attachment 3 for RAI Set 17, Question 02.04.12-2. The calculation package presents a summary of the groundwater monitoring data that are most directly related to the maximum groundwater elevations expected in the power block area and the Essential Service Water Emergency Makeup System (ESWEMS) Pumphouse area. The groundwater elevation data for four wells ranged from 655.03 to 663.86 feet above mean sea level (ft msl). The highest groundwater elevation measured

in the power block area was 661.09 ft msl. The highest groundwater elevation measured in the vicinity of the ESWEMS Pumphouse was 663.86 ft msl. The potentiometric surface map for the Glacial Overburden aquifer using March 2008 data (Figure 2.4-87) was also used to estimate what the maximum groundwater elevation should be in the immediate vicinity of the ESWEMS Pumphouse. As shown in Rizzo Calculation Package 2.5.4-2 (Rev. 2), the maximum expected groundwater elevation is 667.0 ft msl.

Considering all of the measured data and extrapolated data from potentiometric contour maps, the overall maximum expected groundwater elevation that could exist in the vicinity of a safety-related structure is 667.0 ft msl. This value is 7.0 ft below the designed grade elevation of the power block (674.0 ft msl). Therefore, maximum groundwater elevations in the vicinity of safety-related structures do not challenge the one meter groundwater elevation difference from finished grade criteria of the U.S.EPR FSAR.

As a result of this revised Calculation Package 2.5.4-2 (Rev. 2), a Departure related to maximum groundwater elevation with respect to safety-related structures no longer applies and a request for Exemption is no longer needed. As a result, COLA "Part 7: Departures and Exemption Requests" will also be revised as part of a future COLA Revision.

COLA Impact

Changes have been made to FSAR Sections 2.4.12.5.2, 2.4.14, 2.5.4.5.4, 2.5.4.6, 3.4, 3.4.2, 3.8.5.6.1, List of Departures Table (Chapter 1), and Table 2.0-1 and COLA Part 7, Sections 1.1 and 1.2.
The COLA mark-ups are shown below:

FSAR

2.4.12.5.2 Hydrostatic Loading and Dewatering During Operation

~~The ESWEMS Pumphouse has a maximum groundwater level that is less than 3.3 ft (1.0 m) below grade. This is a departure from U.S. EPR.~~

The U.S. EPR FSAR requires that maximum groundwater elevation be at least 3.3 ft (1.0 m) below surface grade for the nuclear island. As indicated above, existing data indicates that the maximum groundwater elevation (661 ft (202 m) msl) is currently 13 ft (4.0 m) below the proposed grade in the nuclear island area (674 ft (205.4 m) msl), which is within the U.S. EPR FSAR design envelope. Maximum groundwater elevations near the ESWEMS Pumphouse are expected to be at least 7.0 ft (2.1 m) below grade, which is also within the U.S. EPR FSAR design envelope.

2.4.14.1 Need for Technical Specifications and Emergency Operations Requirements

Sections 2.4.1 through 2.4.11 present a comprehensive discussion of the potential for flooding and low water at the site, including details of each potential cause and the resulting effects. These evaluations conclude that flooding in the power block area of safety-related structures, systems, and components due to local intense precipitation, or local Probable Maximum Precipitation (PMP), will be prevented by the site drainage features engineered and constructed for that purpose. The BBNPP design plant grade elevation is located above the design basis flood level and the Probable Maximum Flood (PMF) elevation from local streams. The plant grade elevation will be at elevation 674 ft (205.4 m) msl, which is approximately 161 ft (49 m) above the Susquehanna River 100-yr floodplain of approximately 513 ft (156 m) msl (FEMA, 2008). Additionally, there are no major water bodies (e.g., area greater than 10 acres (4.05 hectares)) directly adjacent to or on the BBNPP site. Near the BBNPP site the evaluations indicate a maximum PMF water surface elevation of 670.96 ft (204.51 m) msl for Walker Run. As a result, the plant site is dry with respect to major flooding on Walker Run. Because the BBNPP site is not located near a coastal region and due to the higher elevation of the plant site relative to the Susquehanna River 100-yr floodplain, tsunami and storm surge and seiche flooding considerations are not applicable for this site. The U.S.EPR FSAR requires that the maximum post-construction groundwater elevation be at least 3.3 ft (1 m) below grade for the nuclear island. Since the final ~~floor~~ surface grade elevation is ~~675.5~~ 674.0 ft (~~206~~ 205.5 m) msl and the maximum ~~observed~~ expected groundwater level for the existing conditions is elevation ~~661~~ 667 ft (~~201~~ 203 m) msl for the saturated Glacial ~~deposit~~ Overburden aquifer, a permanent dewatering system is not needed during operation of BBNPP.

BBNPP is designed such that no actions need be captured in Technical Specifications or Emergency Operating Procedures to protect the facility from flooding or interruption of water supply for shutdown and cooldown purposes.

The U.S.EPR FSAR requires that the maximum post-construction groundwater elevation be at least 3.3 ft (1 m) below grade for the nuclear island. Since the final ~~floor~~ surface grade elevation is ~~675.5~~ 674.0 ft (~~206~~ 205.5 m) msl and the maximum ~~observed~~ expected groundwater level for the existing conditions is elevation ~~661~~ 667 ft (~~201~~ 203 m) msl for the saturated Glacial ~~deposit~~ Overburden aquifer, a permanent dewatering system is not needed during operation of BBNPP.

BBNPP is designed such that no actions need be captured in Technical Specifications or Emergency Operating Procedures to protect the facility from flooding or interruption of water supply for shutdown and cooldown purposes.

2.5.4.5.4 Dewatering and Excavation Methods

Temporary groundwater control will be required during construction. Measurement of the groundwater conditions at the site indicate that the lower portions of the site excavations will be below the groundwater level. Thus site grading and excavation plans will implement measures to divert these groundwater flows away from excavations, such as, runoff prevention measures or trenches. Seismic Category I foundations are planned within the upper water- bearing Mahantango Formation. Groundwater conditions and dewatering are discussed in detail in Section 2.4.12.5 and 2.5.4.16.

~~On dewatered conditions~~ Once the Glacial Overburden materials are dewatered, excavations are expected to be performed using conventional earth- moving equipment. Excavations will not present any major difficulties. Excavations in the top of the Mahantango Formation will not require greater excavating effort, such as ripping tools and explosives. However, excavation into the Mahantango Formation will extend up to about 10 ft (3 m) under the Nuclear Island Facilities. Such excavation will require ripping or minor amounts of explosives. Upon reaching the final excavation levels, all excavations will be cleaned of any loose materials, by either removal or compaction in place. All final subgrades will be inspected and approved prior to being covered by backfill or concrete. The inspection and approval procedure(s) will be addressed in the foundation and earthwork specifications that will be developed during the detailed design stage of the project. These specifications will include measures, such as proof-rolling, excavation and replacement of unsuitable soils, and protection of surfaces from deterioration.

2.5.4.6 Ground Water Conditions

~~The ground water data collection and monitoring program is still in progress subsequent to the final monitoring of wells at the BBNPP site.~~ Details of available ground water conditions at the site are given in Section 2.4.12. At the site, the Glacial Overburden is the aquifer that has a direct influence on the foundation of the proposed facilities. The Glacial Overburden aquifer unit includes all of the glacial outwash, kame, kame terrace, till, colluvium, alluvium, and other unconsolidated surficial deposits that overlie the bedrock, are saturated, and transmit groundwater.

Based on ~~available information through June 2008~~ groundwater elevation data measured between October 2007 and September 2008, the shallow (surficial) groundwater level in the powerblock area ranges from approximately elevation ~~655.7~~ 655 ft (199.~~9~~ 7 m) to elevation ~~659.3~~ 661 ft (~~201.0~~ 202 m), with an average elevation of ~~657.7~~ approximately 658 ft (200.~~5~~ 6 m). The adopted design ground water elevation in the geotechnical calculations is 659.0 ft (200.9 m). This value is bounded by the U.S. EPR FSAR value, since plant grade is placed at elevation 674.0 ft (205.5 m). The shallow groundwater levels have been accounted for in the analyses of the stability of foundations. During construction, dewatering along with site grading and excavation plans will divert flows away from excavations.

Sections 2.5.4.6.1 through 2.5.4.6.4 are added as a supplement to U.S. EPR FSAR.

3.4 WATER LEVEL (FLOOD) DESIGN

This section of the U.S. EPR FSAR is incorporated by reference with the departures and supplements as described in the following sections.

Seismic Category I structures, systems and components (SSCs) can withstand the effects of flooding due to natural phenomena or onsite equipment failures without losing the capability to perform their safety-related functions. The maximum flood and groundwater elevations for the U.S. EPR are shown in U.S. EPR FSAR Table 2.1-1 and Table 2.0-1.

{The U.S. EPR FSAR flood and groundwater design elevations bound the BBNPP site-specific elevations. ~~except for the groundwater elevation in the area of the ESWEMS Pumphouse's pumpwell as described in Section 3.4.2. Calculations demonstrate that these loadings will not adversely affect the ability of safety-related structures to perform their safety functions during or after such events~~ There are no departures.}

3.4.1 INTERNAL FLOOD PROTECTION

No departures or supplements.

3.4.2 EXTERNAL FLOOD PROTECTION

{This section of the U.S. EPR FSAR is incorporated by reference with the departures described below:

The U.S. EPR design requires groundwater to be at least 3.3 ft (1 m) below grade. The groundwater elevations range from approximately 653 to 661 ft (199 to 202 m) in the power block area (Section 2.4.12.5) and approximately 661 ft (202 m) to 667 ft (203 m) in the area of the ESWEMS Pumphouse. Groundwater will be approximately 7 to 13 ft (2 to 4 m) below grade for all safety-related structures after construction. The 5 ft (1.5 m) thick concrete basemat for the ESWEMS Pumphouse provides adequate protection from water in-leakage of floor areas below grade. The concrete backfill also provides adequate protection from water in-leakage for the below grade vertical surface of the pumpwell wall. To reduce groundwater in-leakage or water seepage from the ESWEMS Retention Pond, at least 5 ft (1.5 m) thick of cohesive soil is placed in front of the vertical surface of two side walls on the pumpwell structure.}

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3.8.5.6.1 Materials

The U.S. EPR FSAR includes the following COL Item in Section 3.8.5.6.1:

A COL applicant that references the U.S. EPR design certification will evaluate and identify the need for the use of waterproofing membranes and epoxy coated rebar based on site- specific ground water conditions.

The COL Item is addressed as follows:

{BBNPP water table maximum elevation at the Nuclear Island Common Basemat is approximately ~~664~~ 661 ft (202 m) and the expected final grade elevation is 674.~~5~~ 0 ft (205 m). ~~This~~ Thus, groundwater ~~yields that the water~~ levels ~~is~~ are approximately ~~10~~ 13 ft (~~3~~ 4 m) below the Nuclear Island grade.

The U.S. EPR Nuclear Island Common Basemat Structures foundation is embedded approximately 40 ft (12 m) below site grade as discussed in the U.S. EPR FSAR; therefore, approximately ~~30~~ 27 ft (~~9.1~~ 8.2 m) of the reinforced concrete NI foundation is submerged in water. The ESWB foundation is embedded approximately 22 ft (6.7 m) below site grade and the EPGB foundation is embedded approximately 5 ft (1.5 m) below site grade, as discussed in the U.S. EPR FSAR. Therefore, approximately 12 ft (3.7 m) of the reinforced concrete ESWB foundation is submerged in water, while the reinforced concrete foundation of the EPGB lies above the maximum groundwater level.

The ESWEMS Pumphouse is embedded approximately 5 ft (1.5m) below site grade~~: therefore, approximately 1 ft (0.9 m)~~ Maximum groundwater levels near the ESWEMS Pumphouse are expected to be approximately 7 ft (2 m) below grade. Therefore, none of the reinforced concrete ESWEMS Pumphouse ~~is~~ will be submerged in water.

The maximum chloride content of 2 mg/L (ppm) for BBNPP is within limitations for nonaggressive groundwater because it lies within the range of 0 to 500 ppm (NRC, 2007).

The maximum sulfate content for groundwater tested at the BBNPP site is 29 mg/L (ppm). Because this falls between 0 and 1500 ppm, the sulfate exposure in the groundwater is considered to be nonaggressive (NRC, 2007).

The pH range for the groundwater at the BBNPP site is between 5.7 and 5.81, which is considered to be neutral and nonaggressive. A site which has a groundwater pH value > 5.5 has nonaggressive groundwater (NRC, 2007).

Based on these findings, there is no concern for an aggressive chemical attack due to groundwater at BBNPP. Therefore, the use of epoxy coated rebar and waterproofing membranes for the resistance of corrosive materials is not required for the BBNPP site. Additional information regarding the ESWEMS Pumphouse is provided in Section 3.8.4.6.1.}

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{The list of departures from the U.S. EPR FSAR is as follows:

~~Maximum groundwater is approximately 10 ft (3 m) below grade for all safety related structures except for the ESWEMS Pumphouse where it is approximately 3 ft (0.9 m) below grade~~	~~FSAR 2.4.12, 3.8.4, 3.8.5.5.2, and 3.8.5.5.3~~
Exclusion Area Boundary is 0.43 mi versus EPR EAB of 0.50 mi	FSAR 2.1 and 15.0.3
Maximum Annual Average Atmpospheric Dispersion Factor	FSAR 2.3.5
Accident Atmospheric Dispersion Factors for 0 - 2, 2 - 8, and 8 - 24 Hours for the Low Population Zone Accident Atmospheric Dispersion Factor for 0 - 2 Hours for the Exclusion Area Boundary	FSAR 2.3.4 and 15.0.3
Estimated Annual Radioactive Liquid and Gaseous Releases ♦ Changes to the input parameters for the GALE code for shim bleed flow rate, process time, and recycle of water ♦ An updated estimate of the Carbon-14 release in gaseous effluents than is given by the GALE code based on larger plant size and the relationship of power level and the production of Carbon-14.	FSAR 11.2.3.2 and 11.3.3.2
Safe Shutdown Earthquake - SSE acceleration are the CSDRS shapes anchored to a peak ground acceleration of 0.3g In some cases, the BBNPP ISRS developed from the BBNPP GMRS exceeds the ISRS for the U.S. EPR.. Steps 8 and 9 of the reconcilliation process described in FSAR Section 2.5.2.6 was used to confirm the SSCs are not affected	2.5.2.6, 3.7.1, 3.10, App 3C & 3D
In- Structure Response Spectra (ISRS) Horizontal and vertical acceleration in the peak CSDRS shapes exceed 0.3 g primarily in the high frequency region	FSAR 2.5.2.6 and 3.7.2
Idealized Soil Profiles	FSAR 2.5.2.6 and 3.7.1

Justification for these departures is presented in Part 7 of the COL application.}

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Table 2.0-1 {U.S. EPR Site Design Envelope Comparison}

(Page 1 of 4)

	U.S. EPR FSAR Design Parameter Value/Characteristic	BBNPP Design Parameter Value/Characteristic
Precipitation		
Rainfall	<19.4 in/hr	17.5 in/hr (44.5 cm/hr) (See Section 2.4.3)
Snow (design: extreme live load, including 48-hour probable maximum winter precipitation)	<100 psf	45 psf (95 kg/m2) (See section 2.3.1)
Seismology		
Horizontal SSE Acceleration	0.3g Peak (CSDRS shapes – See Section 3.7.)	Exceeds 0.3 g primarily in the high frequency region (note a) (See Sections 2.5.2 and 3.7)
Vertical SSE Acceleration	0.3g Peak (CSDRS shapes – See Section 3.7.)	Exceeds 0.3 g primarily in the high frequency region (note a) (See Sections 2.5.2 and 3.7)
Fault Displacement Potential	No fault displacement is considered for safety-related SSCs in U.S. EPR design certification.	No fault displacement potential (See Section 2.5.3)
Soil		
Minimum Bearing Capacity (Static)	22 ksf in localized areas at the bottom of the Nuclear Island basemat and 15 ksf on average across the total area of the bottom of the Nuclear Island basemat.	22 ksf in localized areas of the NI Basemat and 15 ksf on the average across the total area of the bottom of the NI basemat (See section 2.5.4.10)
Minimum Shear Wave Velocity (Low strain best estimate average value at bottom of basemat)	1000 fps	>1000 fps (See Section 2.5.4)
Liquefaction	None	None (See section 2.5.4)
Slope Failure Potential	No slope failure potential is considered in the design of safety-related SSCs for U.S. EPR design certification.	No slope failure potential that would adversely affect the safety of the proposed BBNPP (See Section 2.5.5)
Maximum Differential Settlement (across the basemat)	1/2 inch in 50 feet in any direction	< 0.1 in 50 ft for common Basemat in any direction (See Section 2.5.4) <0.1 inch in 50 ft in any direction for both EPGB and ESWB (See Section 2.5.4)
Maximum Ground Water	3.3 ft below grade	~~Ranges between 3.0 ft (0.9 m) and 10 ft (3.0 m) below grade for all safety-related structures except ESWEMS Pumphouse where it is 3 ft (0.9 m) below grade (note a) (See Sections 3.8.4, 3.8.5.5.2, and 3.8.5.5.3))~~ Groundwater ranges between 12.9 and 19.0 ft (3.9-5.8 m) below grade for all safety-related structures in the power block area. Groundwater ranges between 7.0 and 18.0 ft (2.1-5.5 m) below grade near the ESWEMS Pumphouse. These values are all within design parameters.

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1.0 DEPARTURES AND EXEMPTION REQUESTS

1.1 DEPARTURES

This Departure Report includes deviations in the BBNPP COL application FSAR from the information in the U.S. EPR FSAR, pursuant to 10 CFR Part 52. The U.S. EPR Design Certification Application is currently under review with the NRC. However, for the purposes of evaluating these deviations from the information in the U.S. FSAR, the guidance provided in Regulatory Guide 1.206, Section C.IV.3.3, has been utilized.

The following Departures are described and evaluated in detail in this report:

1. ~~Maximum Ground Water Level~~
2. Exclusion Area Boundary
3. Maximum Annual Average Atmospheric Dispers niting Sector)
4. Accident Atmospheric Dispersion Factor (0-2 Ho our Low Population Zone, 1.5 Miles, and 0-2 Hour Exclusion Area Boundary, 0.5 Miles)
5. Estimated Annual Radioactive Liquid and Gaseous Releases
6. Response to Safe Shutdown Earthquake (SSE)
7. In-structure Response Spectra (ISRS)
8. Idealized Site Soil Profiles

Renumber list and all of Part 7, after deleting Section 1.1.1

~~1.1.1 MAXIMUM GROUND WATER LEVEL~~

~~1.1.1.1 Affected U.S. EPR FSAR Sections: Tier 1 Table 5.0-1, Tier 2 Table 2.1-1, Tier 2 Section 3.8.4.3.1~~

~~1.1.1.2 Summary of Departure:~~

~~The U.S. EPR FSAR identifies a maximum groundwater level of 3.3 ft (1.0 m) below grade. The Essential Service Water Emergency Makeup System Pumphouse has a maximum groundwater level that is less than 3.3 ft (1.0 m) below grade.~~

~~1.1.1.3 Scope/Extent of Departure:~~

~~This Departure is identified in BBNPP FSAR Table 2.0-1, Section 2.4.12.5, Section 3.4.2 and Section 3.4.3.~~

~~1.1.1.4 Departure Justification:~~

~~The post-construction groundwater level for the Esssential Service Water Emergency Makeup System Pumphouse is calculated to be 3.0 ft (0.9 m) below finished grade, or 0.3 ft (0.09 m) above the U.S. EPR FSAR site parameter value of 3.3 ft (1.0 m) below grade.~~

~~For the Esssential Service Water Emergency Makeup System Pumphouse, separate foundation design calculations were performed for both the U.S. EPR FSAR and BBNPP specific groundwater levels, as discussed in BBNPP FSAR Section 3.8.5.5.4. The results show the Esssential Service Water Emergency Makeup System Pumphouse soil bearing pressures and basemat design moments remain within allowable values for both groundwater levels.~~

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~~1.1.1.5 Departure Evaluation:~~

~~This Departure, associated with the maximum groundwater level for the Esssential Service Water Emergency Makeup System Pumphouse has been evaluated and determined to not adversely affect the safety function of these structures. Accordingly, this Departure does not:~~

1. ~~Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific FSAR;~~
2. ~~Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety and previously evaluated in the plant-specific FSAR;~~
3. ~~Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific FSAR;~~
4. ~~Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific FSAR;~~
5. ~~Create a possibility for an accident of a different type than any evaluated previously in the plant-specific FSAR;~~
6. ~~Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific FSAR;~~
7. ~~Result in a design basis limit for a fission product barrier as described in the plant-specific FSAR being exceeded or altered; or~~
8. ~~Result in a departure from a method of evaluation described in the plant-specific FSAR used in establishing the design bases or in the safety analyses.~~

~~This Departure does not affect resolution of a severe accident issue identified in the plant-specific FSAR.~~

~~Therefore, this Departure has no safety significance.~~

1.1.2 EXCLUSION AREA BOUNDARY

1.1.2.1 Affected U.S. EPR FSAR Sections: Tier 1 Table 5.0-1, Tier 2 Table 2.1-1, Tier 2 Sections 2.1 and 15.0.3

1.1.2.2 Summary of Departure:

The U.S. EPR FSAR identifies the Exclusion Area Boundary (EAB) is 0.50 mi (0.8 km). The BBNPP identifies a site-specific EAB as 0.43 mi (0.69 km) which is less than the U.S. EPR FSAR value.

1.1.2.3 Extent/Scope of Departure:

This Departure is identified in BBNPP FSAR Table 2.0-1 and Sections 2.1 and 15.0.3.

1.1.2.4 Departure Justification:

This departure is justified by using the site specific Accident Atmospheric Dispersion Factors listed in Table 15.0-1 to calculate BBNPP doses at the EAB resulting from the design basis accident scenarios specified in U.S. EPR FSAR Section 15.0.3. In each case, the resulting EAB doses were determined to be below the regulatory limits, thus justifying the departure.

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1.2 EXEMPTION REQUESTS

These exemption requests have been developed assuming approval and issuance of a design certification for the U.S. EPR and are based on the current version of the U.S. EPR FSAR.

PPL Bell Bend, LLC requests the following exemptions related to:

Renumber the list and the remainder of 1.2 after deleting section 1.2.1

1. ~~MaximumGround Water Level,~~
2. Exclusion Area Boundary,
3. Maximum Annual Average Atmospheric Dispersion Factor (0.5 Mile – Limiting Sector),
4. Accident Atmospheric Dispersion Factor (0-2 Hour, 2-8 Hour, And 8-24 Hour Low Population Zone, 1.5 Miles, and 0-2 Hour Exclusion Area Boundary, 0.5 Miles)
5. Safe Shutdown Earthquake (SSE),
6. Fitness For Duty Program,
7. Use of M5™ Advanced Zirconium Alloy Fuel Rod Cladding,
8. Dedicated Containment Penetrations
9. Use of 2004 Edition of the ASME Code

The exemption requests associated with Use of M5™ Advanced Zirconium Alloy Fuel Rod Cladding, Dedicated Containment Penetrations, and Use of 2004 Edition of the ASME Code are the same as those previously requested by AREVA in support of the U.S. EPR Design Certification Application.

Discussion and justification for each of the above exemption requests are provided in the following pages.

~~1.2.1 MAXIMUM GROUND WATER LEVEL~~

~~1.2.1.1 Applicable Regulation: 10 CFR Part 52~~

~~The U.S. EPR FSAR Tier 1 Table 5.0-1, Tier 2 Table 2.1-1, and Tier 2 Section 3.8.4.3.1 identify a maximum groundwater level of 3.3 ft (1.0 m) below grade. The Essential Service Water Emergency Makeup System Pumphouse has a maximum groundwater level that is less than 3.3 ft (1.0 m) below grade.~~

~~Pursuant to 10 CFR 52.7 and 10 CFR 52.93, PPL Bell Bend, LLC requests an exemption from compliance with the U.S. EPR FSAR Tier 1 and 2 requirements associated with the maximum ground water level.~~

~~1.2.1.2 Discussion:~~

~~The post construction groundwater level for the Esssential Service Water Emergency Makeup System (ESWEMS) Pumphouse is calculated to be 3.0 ft (0.9 m) below finished grade, or 0.3 ft (0.09 m) above the U.S. EPR FSAR site parameter value of 3.3 ft (1.0 m) below grade.~~

~~For the Esssential Service Water Emergency Makeup System Pumphouse, separate foundation design calculations were performed for both the U.S. EPR FSAR and BBNPP specific groundwater levels, as discussed in BBNPP FSAR Section 3.8.5.5.3. The results show the Esssential Service Water Emergency Makeup System Pumphouse soil bearing pressures and basemat design moments remain within allowable values for both groundwater levels.~~

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~~The change associated with the maximum groundwater level for the ESWEMS Pumphouse has been evaluated and determined to not adversely affect the safety function of these structures. Therefore, this change will not result in a significant decrease in the level of safety otherwise provided by the design described in the U.S. EPR FSAR.~~

~~The exemption is not inconsistent with the Atomic Energy Act or any other statute. As such, the requested exemption is authorized by law.~~

~~This change does not result in a departure from the design and does not require a change in the design described in the U.S. EPR FSAR. In addition, the change has been evaluated and determined to not adversely affect the safety function of the associated structures. Therefore, the requested exemption will not present an undue risk to the public health and safety.~~

~~The change does not relate to security and does not otherwise pertain to the common defense and security. Therefore, the requested exemption will not endanger the common defense and security.~~

~~The special circumstance necessitating the request for exemption is that the BBNPP ESWEMS Pumphouse has groundwater levels that exceed the U.S. EPR FSAR value. However, the BBNPP ground water levels have been evaluated and determined to not adversely affect the safety function of the ESWEMS Pumphouse. As such, application of the regulation for this particular circumstance would not serve the underlying purpose of the rule and is not required to achieve the underlying purpose of the rule.~~

~~This requested exemption does not require a change in the design described in the U.S. EPR FSAR. Therefore, this exemption will not result in any loss of standardization.~~

~~For these reasons, PPL Bell Bend, LLC requests approval of the requested exemption from compliance with the U.S. EPR FSAR Tier 1 and 2 requirements associated with the maximum ground water level.~~

1.2.2 EXCLUSION AREA BOUNDARY

1.2.2.1 Applicable Regulation: 10 CFR Part 52

The U.S. EPR FSAR Tier 1 Table 5.0-1, Tier 2 Table 2.1-1, and Tier 2 Sections 2.1 and 15.0.3 identifies the Exclusion Area Boundary (EAB) is 0.50 mi (0.8 km). The BBNPP identifies a site-specific EAB as 0.43 mi (0.69 km) which is less than the U.S. EPR FSAR value.

Pursuant to 10 CFR 52.7 and 10 CFR 52.93, PPL Bell Bend, LLC requests an exemption from compliance with the U.S. EPR FSAR Tier 1 and 2 requirements associated with the EAB.

1.2.2.2 Discussion:

This EAB is discussed in BBNPP FSAR Table 2.0-1 and Sections 2.1 and 15.0.3.

The site-specific EAB is less than the required 0.5 mi (0.8 km) listed in Table 15.0-1. The site-specific atmospheric dispersion factors were used to calculate BBNPP doses at the EAB resulting from the design basis accident scenarios specified in U.S. EPR FSAR Section 15.0.3. In each case, the resulting EAB doses were determined to be below the regulatory limits.

The BBNPP site-specific atmospheric dispersion factors for the EAB exceeding those in the U.S. EPR FSAR do not result in offsite doses that exceed regulatory limits. In addition, this change

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Enclosure 2

Response to NRC Request for Additional Information Set No. 17 Question 02.04.12-2
Bell Bend Nuclear Power Plant

Question 02.04.12-2

To meet the requirements of 10 CFR 50.55a and 10 CFR 100.20, please provide the following reports and any other information relating to field and laboratory tests for hydrologic properties such as permeability and porosity of on-site materials:

- Data and analyses for pumping tests conducted at the site, including those in Rizzo Project No. 07-3891, File No. F-13, 13i;
- Data and analyses for slug tests conducted at the site, including those in Rizzo Project No. 07-3891, File No. F-13, 13j; and
- A copy of the Ground Water Elevation Calculations 2.5.4-2, Rev 1, Rizzo Project No. 07-3891, File No. F-15.

Response

- Data and analyses for pumping tests conducted at the site, including those in Rizzo Project No. 07-3891, File No. F-13, 13i are included as Attachment 1.
- Data and analyses for slug tests conducted at the site, including those in Rizzo Project No. 07-3891, File No. F-13, 13j are included as Attachment 2.
- A copy of the Ground Water Elevation Calculations 2.5.4-2, Rev 1, Rizzo Project No. 07-3891, File No. F-15 is included as Attachment 3, however, the calculation has been revised and Revision 2 is provided.

Other information relating to field and laboratory tests for hydrologic properties such as permeability and porosity of on-site materials, specifically Laboratory Test Reports for Overburden Materials at the BBNPP site, is included as Attachment 4.

COLA Impact

There is no impact to the COLA as a result of this question.

Attachment 1—RIZZO Project 07-3891 File No. F-13, 13i

F-13 131

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

By DKB Date 10/15/08 Subject Pumping Test Analyses Sheet No. 1 of ____.
Chkd. by AGF Date 10/23/08 Proj. No. 07-3891

DKB = Daniel Bansah
AGF = Anthony Fabina

Purpose:

The purpose is to estimate hydraulic parameters of the aquifers (Glacial Overburden and Bedrock wells) tested at two pumping locations, MW302A1 and MW301B1 respectively.

Methodology:

Pumping wells are screened in both unconfined aquifer at MW302A1 and confined aquifer at MW301B1. For the Glacial Overburden test (unconfined), monitoring wells MW302A2, MW302A3 and MW302A4 were used as observation wells. For bedrock test (confined) monitoring wells MW301B2, MM301B3 and MW301B4 were used as observation wells. The pumping test data for MW301B1 exhibited the characteristics for a leaky, confined aquifer – based on the diagnostic plots (see attached). Hence the Hantush-Jacob method for leaky confined aquifer was utilized to analysis the pumping test data for MW301B1. The Boulton method was used to analyze the pumping test data from the unconfined aquifer at MW302A2. To provide an independent check on the results of the pumping test, Recovery- test measurements from observation wells were analyzed using the Agarwal Recovery analysis.

Assumptions:

The theories are described in the Computer Program Verification and Validation (V&V) reports.

Inputs:

The input processes are described in the V&V reports. The well configuration and water level versus time data input are attached (Appendix C).

Results:

Results for the pumping test analyses are attached.

Conclusions:

The pumping tests were successfully completed and results and estimates of hydraulic parameters are consistent with observed field conditions.

Reference:

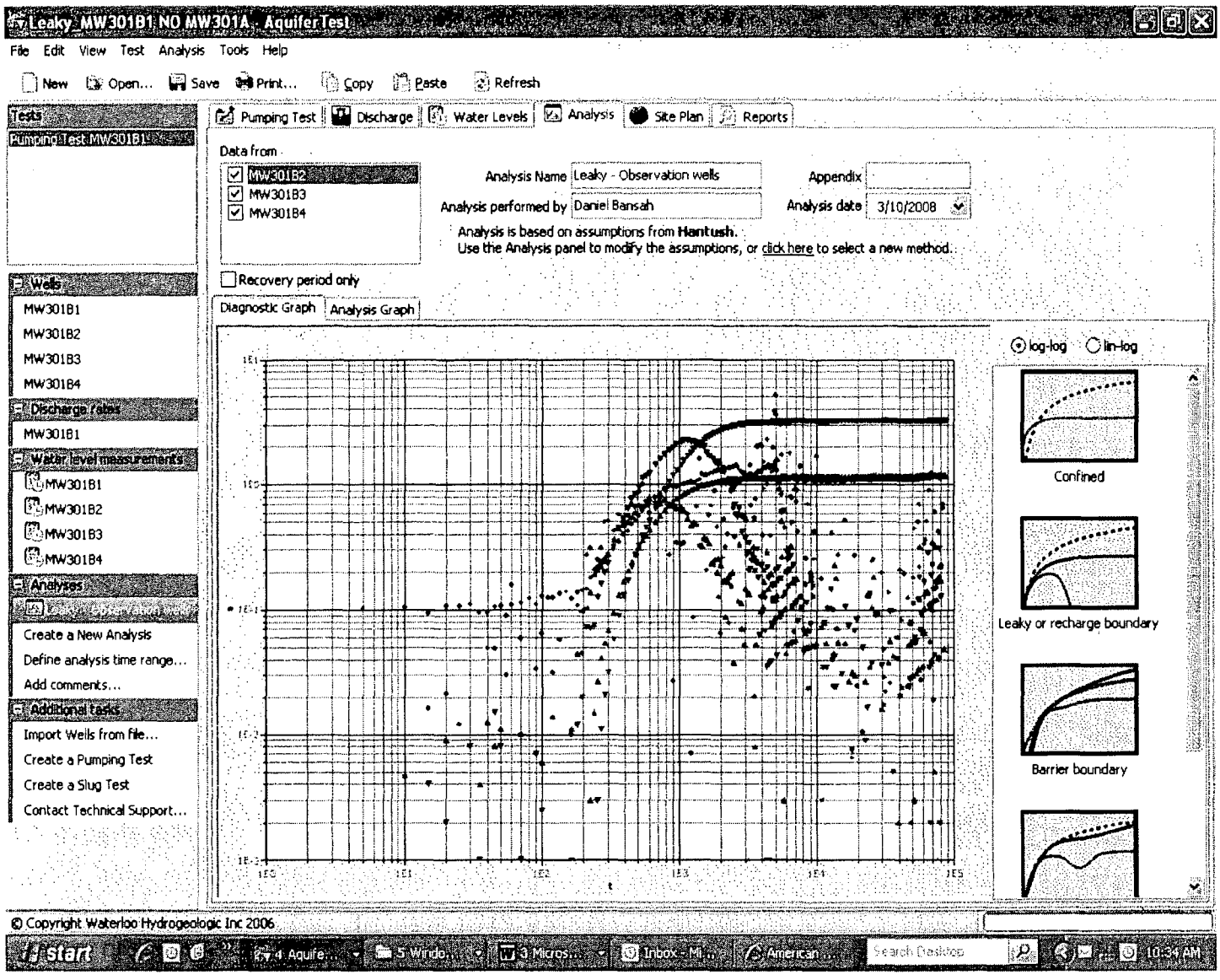
Computer Program Verification and Validation Report for Aquifer Test Pro 4.1 – Pumping Test by Lori J. Gross (2007).

Computer Program Verification and Validation Report for Aquifer Test Pro 4.1 – Pumping Test by Daniel K. Bansah (2008).

By DKB Date 10/15/08
Chkd. By AGF Date 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

By DKB Date 10/15/08 Subject Pumping Test Analyses Sheet No. 2 of ____.
Chkd. by Date 10/22/08. Proj. No. 07-3891



Diagnostic plots for pumping test at MW301B1 that demonstrates the leaky confined assumption is appropriate

By DKB Date 10/15/08
Chkd. By Date 10/22/08

Appendix A:

Input, Plots, and Results for pumping & recovery test MW301B1.

Appendix B:

Input, Plots, and Results for pumping & recovery test MW302A2.

Appendix C:

Data from automatic recording pressure transducers used in the pumping test.

Sheet No. _____ of _____

Paul C. Rizzo Associates, Inc.
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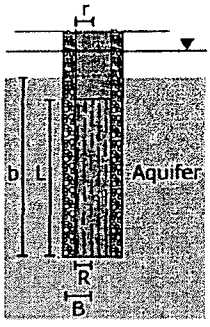
Wells	
Project:	Bell Bend NPP
Number:	07-3891
Client:	UniStar

Location: Berwick, PA



	Name	X [ft]	Y [ft]	Elevation (amsl) [ft]	Penetration	L [ft]	B [ft]
1	MW301B1	2405384.283	339098.941	662.4	Fully	30	0.3333
2	MW301B2	2405338.529	339142.987	664.18	Fully	20	0.3333
3	MW301B3	2405288.632	339069.298	662.41	Fully	20	0.3333
4	MW301B4	2405444.974	338987.788	658.46	Fully	20	0.3333

By DKB Date 10/15/08

Chkd. By DJT Date 10/22/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
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Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 2/12/2008	Discharge: variable, average rate 5.7638 [U.S. gal/min]
Observation well: MW301B2	Static water level [ft]: 8.91	Radial distance to PW [ft]: 63.51

	Time [s]	Water Level [ft]	Drawdown [ft]
1	0	9.001	0.091
2	5	9.013	0.103
3	10	9.015	0.105
4	15	9.003	0.093
5	20	9.017	0.107
6	25	9.017	0.107
7	30	9.021	0.111
8	35	9.005	0.095
9	40	9.005	0.095
10	45	9.016	0.106
11	50	9.017	0.107
12	55	8.999	0.089
13	60	9.019	0.109
14	70	9.024	0.114
15	80	9.035	0.125
16	90	9.021	0.111
17	100	9.039	0.129
18	110	9.036	0.126
19	120	9.037	0.127
20	135	9.044	0.134
21	150	9.05	0.14
22	165	9.034	0.124
23	180	9.049	0.139
24	195	9.053	0.143
25	210	9.056	0.146
26	225	9.09	0.18
27	240	9.099	0.189
28	255	9.116	0.206
29	270	9.129	0.219
30	285	9.15	0.24
31	300	9.181	0.271
32	330	9.213	0.303
33	360	9.257	0.347
34	390	9.308	0.398
35	420	9.336	0.426
36	450	9.387	0.477
37	480	9.429	0.519
38	510	9.47	0.56
39	540	9.531	0.621
40	570	9.583	0.673
41	600	9.61	0.70
42	660	9.679	0.769
43	720	9.755	0.845
44	780	9.816	0.906
45	840	9.871	0.961
46	900	9.86	0.95

By UKB Date 10/15/08

Chkd By DAF Date 12/23/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
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Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
47	960	9.873	0.963
48	1020	9.902	0.992
49	1080	9.913	1.003
50	1140	9.939	1.029
51	1200	9.974	1.064
52	1260	9.943	1.033
53	1320	9.979	1.069
54	1380	10.004	1.094
55	1440	10.115	1.205
56	1500	10.092	1.182
57	1560	10.087	1.177
58	1620	10.107	1.197
59	1680	10.129	1.219
60	1740	10.155	1.245
61	1800	10.19	1.28
62	1860	10.215	1.305
63	1920	10.22	1.31
64	1980	10.223	1.313
65	2040	10.224	1.314
66	2100	10.238	1.328
67	2160	10.254	1.344
68	2220	10.256	1.346
69	2280	10.275	1.365
70	2340	10.261	1.351
71	2400	10.284	1.374
72	2460	10.31	1.40
73	2520	10.316	1.406
74	2580	10.328	1.418
75	2640	10.30	1.39
76	2700	10.221	1.311
77	2760	10.198	1.288
78	2820	10.158	1.248
79	2880	10.148	1.238
80	2940	10.132	1.222
81	3000	10.089	1.179
82	3060	10.096	1.186
83	3120	10.109	1.199
84	3180	10.087	1.177
85	3240	10.116	1.206
86	3300	10.14	1.23
87	3360	10.141	1.231
88	3420	10.09	1.18
89	3480	10.11	1.20
90	3540	10.108	1.198
91	3600	10.128	1.218
92	3660	10.134	1.224
93	3720	10.193	1.283
94	3780	10.20	1.29
95	3840	10.17	1.26
96	3900	10.185	1.275
97	3960	10.233	1.323

By DKB Date 10/15/08

Chk. By AST Date 10/23/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
98	4020	10.247	1.337
99	4080	10.245	1.335
100	4140	10.274	1.364
101	4200	10.289	1.379
102	4260	10.278	1.368
103	4320	10.26	1.35
104	4380	10.305	1.395
105	4440	10.323	1.413
106	4500	10.30	1.39
107	4560	10.279	1.369
108	4620	10.283	1.373
109	4680	10.289	1.379
110	4740	10.315	1.405
111	4800	10.277	1.367
112	4860	10.289	1.379
113	4920	10.325	1.415
114	4980	10.383	1.473
115	5040	10.45	1.54
116	5100	10.47	1.56
117	5160	10.481	1.571
118	5220	10.462	1.552
119	5280	9.979	1.069
120	5340	9.965	1.055
121	5400	9.999	1.089
122	5460	10.032	1.122
123	5520	10.066	1.156
124	5580	10.07	1.16
125	5640	10.084	1.174
126	5700	10.073	1.163
127	5760	10.074	1.164
128	5820	10.067	1.157
129	5880	10.083	1.173
130	5940	10.059	1.149
131	6000	10.071	1.161
132	6060	10.048	1.138
133	6120	10.045	1.135
134	6180	10.051	1.141
135	6240	10.044	1.134
136	6300	10.047	1.137
137	6360	10.024	1.114
138	6420	10.036	1.126
139	6480	10.057	1.147
140	6540	10.051	1.141
141	6600	10.045	1.135
142	6660	10.045	1.135
143	6720	10.059	1.149
144	6780	10.026	1.116
145	6840	10.025	1.115
146	6900	10.017	1.107
147	6960	10.026	1.116
148	7020	10.033	1.123

By DKB Date 10/15/08

Chkd. By ADJ Date 10/23/08

Sheet No. ____ of ____

Paul C. Rizzo Associates, Inc.
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Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
149	7080	10.023	1.113
150	7140	10.025	1.115
151	7200	10.038	1.128
152	7380	9.996	1.086
153	7560	10.056	1.146
154	7740	10.063	1.153
155	7920	10.033	1.123
156	8100	9.989	1.079
157	8280	10.01	1.10
158	8460	9.992	1.082
159	8640	10.02	1.11.
160	8820	10.022	1.112
161	9000	10.028	1.118
162	9180	10.03	1.12
163	9360	9.987	1.077
164	9540	10.002	1.092
165	9720	9.997	1.087
166	9900	10.017	1.107
167	10080	10.036	1.126
168	10260	10.077	1.167
169	10440	10.008	1.098
170	10620	9.995	1.085
171	10800	10.001	1.091
172	11100	9.998	1.088
173	11400	10.001	1.091
174	11700	9.993	1.083
175	12000	9.991	1.081
176	12300	9.998	1.088
177	12600	9.988	1.078
178	12900	9.994	1.084
179	13200	10.007	1.097
180	13500	9.999	1.089
181	13800	10.006	1.096
182	14100	9.986	1.076
183	14400	10.001	1.091
184	15300	9.941	1.031
185	16200	9.982	1.072
186	17100	10.00	1.09
187	18000	9.983	1.073
188	18900	9.999	1.089
189	19800	10.009	1.099
190	20700	10.002	1.092
191	21600	10.004	1.094
192	22500	10.003	1.093
193	23400	10.002	1.092
194	24300	9.996	1.086
195	25200	9.999	1.089
196	26100	10.013	1.103
197	27000	10.017	1.107
198	27900	10.012	1.102
199	28800	10.005	1.095

By DKB Date 10/15/08

Ck'd By AJS Date 10/23/08

Sheet No. ____ of ____

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
200	29700	10.011	1.101
201	30600	10.017	1.107
202	31500	10.013	1.103
203	32400	10.018	1.108
204	33300	10.012	1.102
205	34200	10.025	1.115
206	35100	10.014	1.104
207	36000	10.018	1.108
208	36900	10.019	1.109
209	37800	10.017	1.107
210	38700	10.017	1.107
211	39600	10.017	1.107
212	40500	10.015	1.105
213	41400	10.026	1.116
214	42300	10.019	1.109
215	43200	10.02	1.11
216	44100	10.027	1.117
217	45000	10.017	1.107
218	45900	10.022	1.112
219	46800	10.022	1.112
220	47700	10.022	1.112
221	48600	10.02	1.11
222	49500	10.022	1.112
223	50400	10.009	1.099
224	51300	10.028	1.118
225	52200	10.025	1.115
226	53100	10.012	1.102
227	54000	10.017	1.107
228	54900	10.012	1.102
229	55800	10.033	1.123
230	56700	10.035	1.125
231	57600	10.04	1.13
232	58500	10.036	1.126
233	59400	10.035	1.125
234	60300	10.037	1.127
235	61200	10.045	1.135
236	62100	10.032	1.122
237	63000	10.055	1.145
238	63900	10.047	1.137
239	64800	10.028	1.118
240	65700	10.043	1.133
241	66600	10.053	1.143
242	67500	10.036	1.126
243	68400	10.054	1.144
244	69300	10.069	1.159
245	70200	10.05	1.14
246	71100	10.071	1.161
247	72000	10.051	1.141
248	72900	10.052	1.142
249	73800	10.066	1.156
250	74700	10.056	1.146

DKB Date 10/15/08

AOT Date 10/23/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
251	75600	10.052	1.142
252	76500	10.06	1.15
253	77400	10.062	1.152
254	78300	10.047	1.137
255	79200	10.043	1.133
256	80100	10.051	1.141
257	81000	10.047	1.137
258	81900	10.05	1.14
259	82800	10.052	1.142
260	83700	10.064	1.154
261	84600	10.067	1.157
262	85500	10.062	1.152
263	86400	10.051	1.141
264	86460	10.05	1.14
265	86520	10.048	1.138
266	86580	10.054	1.144
267	86640	10.018	1.108
268	86700	9.992	1.082
269	86760	9.965	1.055
270	86820	9.925	1.015
271	86880	9.882	0.972
272	86940	9.845	0.935
273	87000	9.798	0.888
274	87060	9.754	0.844
275	87120	9.711	0.801
276	87180	9.685	0.775
277	87240	9.629	0.719
278	87300	9.592	0.682
279	87360	9.548	0.638
280	87420	9.516	0.606
281	87480	9.478	0.568
282	87540	9.444	0.534
283	87600	9.412	0.502
284	87660	9.38	0.47
285	87720	9.351	0.441
286	87780	9.326	0.416
287	87840	9.313	0.403
288	87900	9.287	0.377
289	87960	9.25	0.34
290	88020	9.243	0.333
291	88080	9.207	0.297
292	88140	9.202	0.292
293	88200	9.182	0.272
294	88260	9.149	0.239
295	88320	9.149	0.239
296	88380	9.117	0.207
297	88440	9.105	0.195
298	88500	9.106	0.196
299	88560	9.074	0.164
300	88620	9.063	0.153
301	88680	9.066	0.156

Calc. By DKB Date 10/15/08

Rev. By AST Date 11/23/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
302	88740	9.045	0.135
303	88800	9.045	0.135
304	88860	9.024	0.114
305	88920	9.029	0.119
306	88980	9.021	0.111
307	89040	8.996	0.086
308	89100	8.989	0.079
309	89160	8.985	0.075
310	89220	8.992	0.082
311	89280	8.991	0.081
312	89340	8.969	0.059
313	89400	8.976	0.066
314	89460	8.956	0.046
315	89520	8.971	0.061
316	89580	8.947	0.037
317	89640	8.946	0.036
318	89700	8.957	0.047
319	89760	8.954	0.044
320	89820	8.949	0.039
321	89880	8.948	0.038
322	89940	8.928	0.018

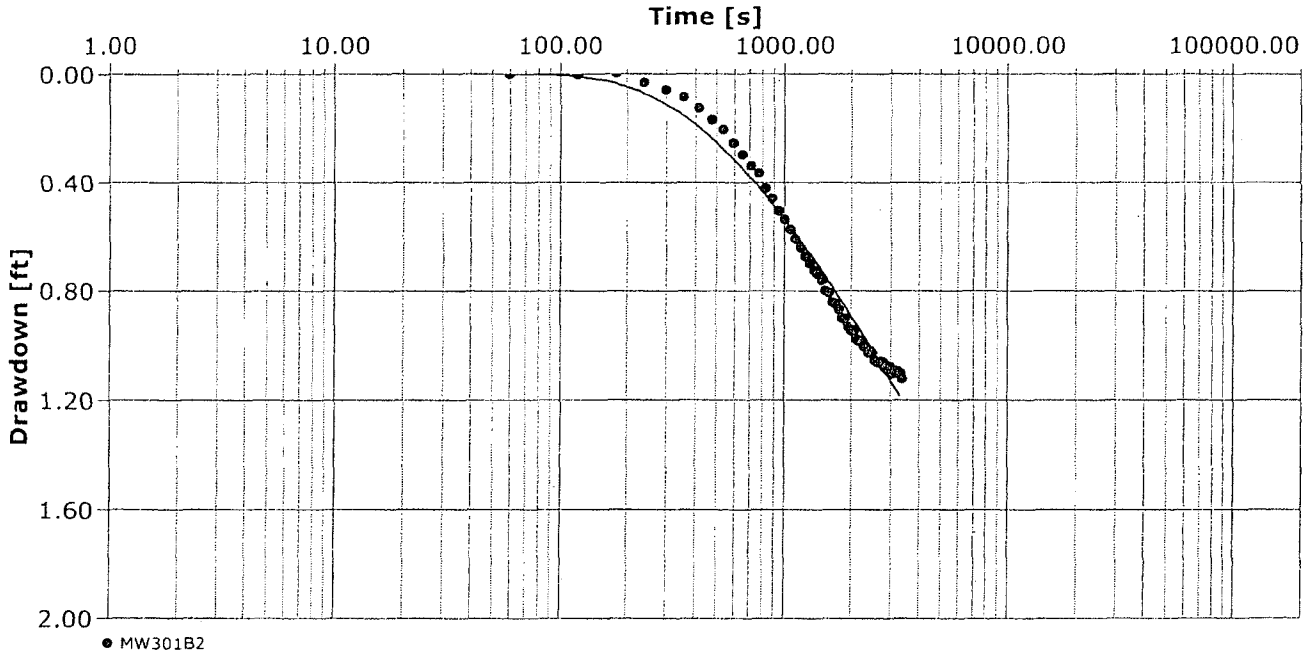
DKB Date 10/15/08

aJT Date 10/23/08

Sheet No. _____ of

Paul C. Rizzo Associates, Inc. ENGINEERS & CONSULTANTS	Pumping Test Analysis Report
	Project: Bell Bend NPP
	Number: 07-3891
	Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Analysis performed by: Daniel Bansah	Recovery	Analysis date: 3/21/2008
Aquifer Thickness: 55.00 ft	Discharge: variable, average rate 5.7638 [U.S. gal/min]	



Calculation after AGARWAL + Theis

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Storage coefficient	Radial distance to PW [ft]	
MW301B2	$1.38 \quad 10^{2}$	$2.51 \quad 10^{0}$	$5.50 \quad 10^{-4}$	63.51	

UKB Date 10/15/08

AJT Date 10/23/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Aquifer Thickness: 55.00 ft	Discharge: variable, average rate 5.7638 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Recovery	Daniel Bansah	3/21/2008	AGARWAL + Theis	$1.38 \quad 10^{2}$	$2.51 \quad 10^{0}$	$5.50 \quad 10^{-4}$

DKB Date 10/15/08

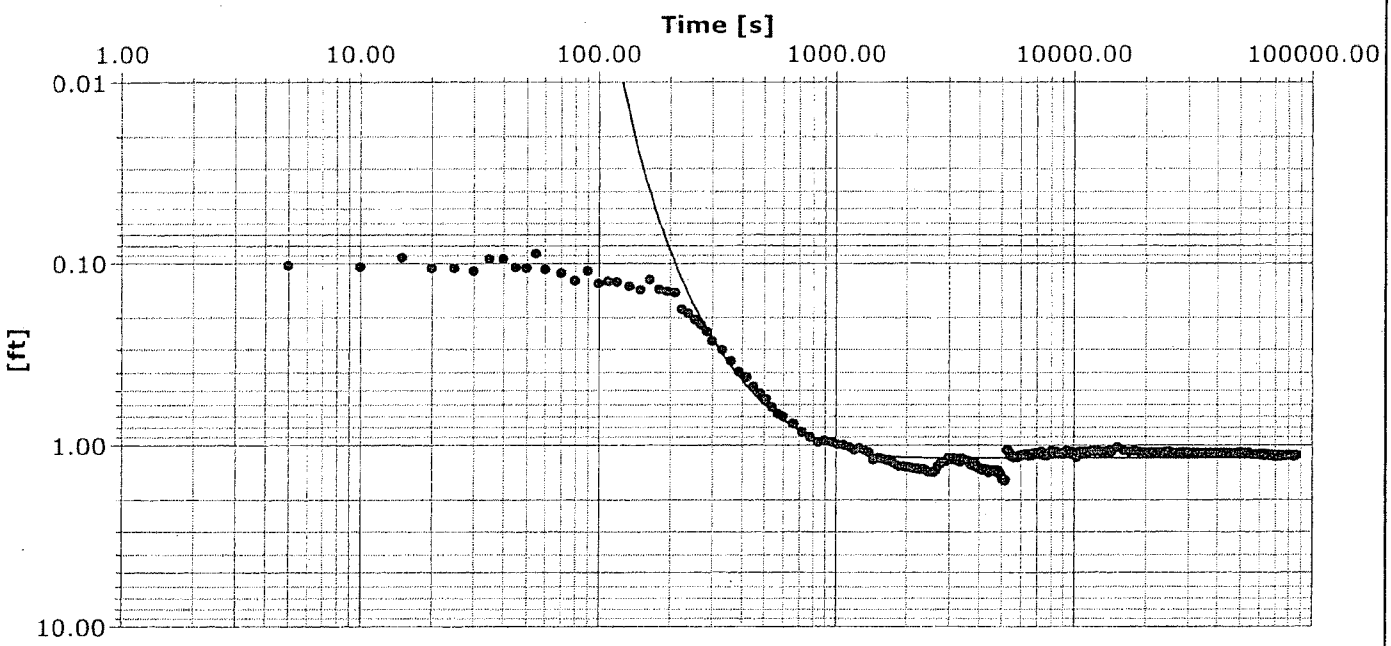
AJJ Date 10/23/08

Sheet No. ____ of ____

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Analysis performed by: Daniel Bansah	Leaky - Observation wells	Analysis date: 3/10/2008
Aquifer Thickness: 55.00 ft	Discharge rate: 6 [U.S. gal/min]	



Calculation after Hantush

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Storage coefficient	Hydr. resistance [s]	Radial distance to PW [ft]
MW301B2	$1.31 \quad 10^{1}$	$2.38 \quad 10^{-1}$	$8.37 \quad 10^{-5}$	$5.25 \quad 10^{6}$	63.51

AKB 10/15/08
QSI 10/23/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Aquifer Thickness: 55.00 ft	Discharge rate: 6 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Leaky - Observation wells	Daniel Bansah	3/10/2008	Hantush	$1.31 \quad 10^{1}$	$2.38 \quad 10^{-1}$	$8.37 \quad 10^{-5}$

By DKB Date 10/15/08
Chkd. By [illegible] Date 10/23/08

Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 2/12/2008	Discharge: variable, average rate 5.2427 [U.S. gal/min]
Observation well: MW301B3	Static water level [ft]: 7.30	Radial distance to PW [ft]: 100.14

	Time [s]	Water Level [ft]	Drawdown [ft]
1	0	7.279	-0.021
2	5	7.28	-0.02
3	10	7.283	-0.017
4	15	7.285	-0.015
5	20	7.281	-0.019
6	25	7.287	-0.013
7	30	7.282	-0.018
8	35	7.282	-0.018
9	40	7.283	-0.017
10	45	7.285	-0.015
11	50	7.285	-0.015
12	55	7.287	-0.013
13	60	7.283	-0.017
14	70	7.285	-0.015
15	80	7.286	-0.014
16	90	7.28	-0.02
17	100	7.285	-0.015
18	110	7.282	-0.018
19	120	7.283	-0.017
20	135	7.285	-0.015
21	150	7.28	-0.02
22	165	7.281	-0.019
23	180	7.282	-0.018
24	195	7.288	-0.012
25	210	7.297	-0.003
26	225	7.303	0.003
27	240	7.315	0.015
28	255	7.327	0.027
29	270	7.341	0.041
30	285	7.354	0.054
31	300	7.368	0.068
32	330	7.396	0.096
33	360	7.433	0.133
34	390	7.471	0.171
35	420	7.507	0.207
36	450	7.543	0.243
37	480	7.58	0.28
38	510	7.618	0.318
39	540	7.661	0.361
40	570	7.693	0.393
41	600	7.733	0.433
42	660	7.808	0.508
43	720	7.866	0.566
44	780	7.927	0.627
45	840	7.982	0.682
46	900	8.028	0.728

DKB Date 10/15/08

AJ7 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
47	960	8.072	0.772
48	1020	8.11	0.81
49	1080	8.149	0.849
50	1140	8.179	0.879
51	1200	8.205	0.905
52	1260	8.226	0.926
53	1320	8.252	0.952
54	1380	8.27	0.97
55	1440	8.281	0.981
56	1500	8.297	0.997
57	1560	8.311	1.011
58	1620	8.325	1.025
59	1680	8.336	1.036
60	1740	8.342	1.042
61	1800	8.352	1.052
62	1860	8.359	1.059
63	1920	8.365	1.065
64	1980	8.375	1.075
65	2040	8.379	1.079
66	2100	8.385	1.085
67	2160	8.389	1.089
68	2220	8.39	1.09
69	2280	8.398	1.098
70	2340	8.40	1.10
71	2400	8.406	1.106
72	2460	8.41	1.11
73	2520	8.408	1.108
74	2580	8.409	1.109
75	2640	8.403	1.103
76	2700	8.414	1.114
77	2760	8.418	1.118
78	2820	8.419	1.119
79	2880	8.421	1.121
80	2940	8.418	1.118
81	3000	8.423	1.123
82	3060	8.424	1.124
83	3120	8.423	1.123
84	3180	8.424	1.124
85	3240	8.428	1.128
86	3300	8.421	1.121
87	3360	8.418	1.118
88	3420	8.42	1.12
89	3480	8.429	1.129
90	3540	8.421	1.121
91	3600	8.429	1.129
92	3660	8.423	1.123
93	3720	8.422	1.122
94	3780	8.422	1.122
95	3840	8.417	1.117
96	3900	8.419	1.119
97	3960	8.42	1.12

By DKB Date 10/15/08

Chkd. By AJT Date 10/25/08

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
98	4020	8.422	1.122
99	4080	8.42	1.12
100	4140	8.425	1.125
101	4200	8.425	1.125
102	4260	8.419	1.119
103	4320	8.421	1.121
104	4380	8.427	1.127
105	4440	8.42	1.12
106	4500	8.424	1.124
107	4560	8.424	1.124
108	4620	8.424	1.124
109	4680	8.429	1.129
110	4740	8.426	1.126
111	4800	8.427	1.127
112	4860	8.43	1.13
113	4920	8.43	1.13
114	4980	8.428	1.128
115	5040	8.432	1.132
116	5100	8.431	1.131
117	5160	8.431	1.131
118	5220	8.434	1.134
119	5280	8.431	1.131
120	5340	8.432	1.132
121	5400	8.433	1.133
122	5460	8.436	1.136
123	5520	8.432	1.132
124	5580	8.447	1.147
125	5640	8.438	1.138
126	5700	8.437	1.137
127	5760	8.434	1.134
128	5820	8.437	1.137
129	5880	8.434	1.134
130	5940	8.439	1.139
131	6000	8.435	1.135
132	6060	8.437	1.137
133	6120	8.441	1.141
134	6180	8.443	1.143
135	6240	8.44	1.14
136	6300	8.442	1.142
137	6360	8.44	1.14
138	6420	8.44	1.14
139	6480	8.441	1.141
140	6540	8.446	1.146
141	6600	8.443	1.143
142	6660	8.445	1.145
143	6720	8.446	1.146
144	6780	8.446	1.146
145	6840	8.449	1.149
146	6900	8.445	1.145
147	6960	8.445	1.145
148	7020	8.447	1.147

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
149	7080	8.446	1.146
150	7140	8.45	1.15
151	7200	8.449	1.149
152	7380	8.447	1.147
153	7560	8.446	1.146
154	7740	8.453	1.153
155	7920	8.451	1.151
156	8100	8.449	1.149
157	8280	8.454	1.154
158	8460	8.452	1.152
159	8640	8.456	1.156
160	8820	8.455	1.155
161	9000	8.458	1.158
162	9180	8.463	1.163
163	9360	8.465	1.165
164	9540	8.468	1.168
165	9720	8.464	1.164
166	9900	8.466	1.166
167	10080	8.466	1.166
168	10260	8.463	1.163
169	10440	8.464	1.164
170	10620	8.461	1.161
171	10800	8.463	1.163
172	11100	8.463	1.163
173	11400	8.461	1.161
174	11700	8.467	1.167
175	12000	8.464	1.164
176	12300	8.459	1.159
177	12600	8.451	1.151
178	12900	8.451	1.151
179	13200	8.451	1.151
180	13500	8.453	1.153
181	13800	8.461	1.161
182	14100	8.461	1.161
183	14400	8.464	1.164
184	15300	8.452	1.152
185	16200	8.455	1.155
186	17100	8.458	1.158
187	18000	8.458	1.158
188	18900	8.461	1.161
189	19800	8.461	1.161
190	20700	8.461	1.161
191	21600	8.461	1.161
192	22500	8.46	1.16
193	23400	8.463	1.163
194	24300	8.47	1.17
195	25200	8.466	1.166
196	26100	8.477	1.177
197	27000	8.479	1.179
198	27900	8.473	1.173
199	28800	8.471	1.171

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
200	29700	8.472	1.172
201	30600	8.472	1.172
202	31500	8.473	1.173
203	32400	8.47	1.17
204	33300	8.47	1.17
205	34200	8.472	1.172
206	35100	8.473	1.173
207	36000	8.471	1.171
208	36900	8.475	1.175
209	37800	8.469	1.169
210	38700	8.474	1.174
211	39600	8.472	1.172
212	40500	8.474	1.174
213	41400	8.473	1.173
214	42300	8.475	1.175
215	43200	8.471	1.171
216	44100	8.472	1.172
217	45000	8.471	1.171
218	45900	8.472	1.172
219	46800	8.472	1.172
220	47700	8.474	1.174
221	48600	8.475	1.175
222	49500	8.473	1.173
223	50400	8.476	1.176
224	51300	8.473	1.173
225	52200	8.476	1.176
226	53100	8.475	1.175
227	54000	8.477	1.177
228	54900	8.474	1.174
229	55800	8.478	1.178
230	56700	8.478	1.178
231	57600	8.488	1.188
232	58500	8.477	1.177
233	59400	8.479	1.179
234	60300	8.479	1.179
235	61200	8.482	1.182
236	62100	8.481	1.181
237	63000	8.48	1.18
238	63900	8.485	1.185
239	64800	8.484	1.184
240	65700	8.482	1.182
241	66600	8.487	1.187
242	67500	8.485	1.185
243	68400	8.484	1.184
244	69300	8.486	1.186
245	70200	8.493	1.193
246	71100	8.49	1.19
247	72000	8.485	1.185
248	72900	8.49	1.19
249	73800	8.493	1.193
250	74700	8.493	1.193

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
251	75600	8.492	1.192
252	76500	8.493	1.193
253	77400	8.493	1.193
254	78300	8.492	1.192
255	79200	8.491	1.191
256	80100	8.497	1.197
257	81000	8.495	1.195
258	81900	8.492	1.192
259	82800	8.493	1.193
260	83700	8.49	1.19
261	84600	8.489	1.189
262	85500	8.488	1.188
263	86400	8.49	1.19
264	86460	8.489	1.189
265	86520	8.487	1.187
266	86580	8.485	1.185
267	86640	8.474	1.174
268	86700	8.454	1.154
269	86760	8.433	1.133
270	86820	8.409	1.109
271	86880	8.373	1.073
272	86940	8.339	1.039
273	87000	8.304	1.004
274	87060	8.27	0.97
275	87120	8.233	0.933
276	87180	8.193	0.893
277	87240	8.154	0.854
278	87300	8.121	0.821
279	87360	8.082	0.782
280	87420	8.046	0.746
281	87480	8.01	0.71
282	87540	7.976	0.676
283	87600	7.945	0.645
284	87660	7.909	0.609
285	87720	7.884	0.584
286	87780	7.851	0.551
287	87840	7.822	0.522
288	87900	7.797	0.497
289	87960	7.771	0.471
290	88020	7.75	0.45
291	88080	7.724	0.424
292	88140	7.70	0.40
293	88200	7.676	0.376
294	88260	7.663	0.363
295	88320	7.634	0.334
296	88380	7.617	0.317
297	88440	7.597	0.297
298	88500	7.585	0.285
299	88560	7.567	0.267
300	88620	7.551	0.251
301	88680	7.536	0.236

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
302	88740	7.523	0.223
303	88800	7.51	0.21
304	88860	7.506	0.206
305	88920	7.488	0.188
306	88980	7.478	0.178
307	89040	7.47	0.17
308	89100	7.457	0.157
309	89160	7.45	0.15
310	89220	7.443	0.143
311	89280	7.437	0.137
312	89340	7.432	0.132
313	89400	7.42	0.12
314	89460	7.415	0.115
315	89520	7.409	0.109
316	89580	7.40	0.10
317	89640	7.388	0.088
318	89700	7.383	0.083
319	89760	7.381	0.081
320	89820	7.373	0.073
321	89880	7.367	0.067
322	89940	7.358	0.058
323	90000	7.345	0.045
324	90060	7.355	0.055
325	90120	7.353	0.053
326	90180	7.351	0.051
327	90240	7.351	0.051
328	90300	7.348	0.048
329	90360	7.347	0.047
330	90420	7.347	0.047
331	90480	7.344	0.044
332	90540	7.344	0.044
333	90600	7.335	0.035
334	90660	7.352	0.052
335	90720	7.356	0.056
336	90780	7.367	0.067
337	90840	7.37	0.07
338	90900	7.368	0.068
339	90960	7.358	0.058
340	91020	7.37	0.07
341	91080	7.368	0.068
342	91140	7.366	0.066
343	91200	7.364	0.064
344	91260	7.364	0.064
345	91320	7.361	0.061
346	91380	7.362	0.062
347	91440	7.362	0.062
348	91500	7.362	0.062
349	91560	7.36	0.06
350	91620	7.36	0.06
351	91680	7.355	0.055
352	91740	7.354	0.054

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
353	91800	7.354	0.054
354	91860	7.354	0.054
355	91920	7.355	0.055
356	91980	7.354	0.054
357	92040	7.351	0.051
358	92100	7.349	0.049
359	92160	7.352	0.052
360	92220	7.349	0.049
361	92280	7.348	0.048
362	92340	7.348	0.048
363	92400	7.349	0.049
364	92460	7.346	0.046
365	92520	7.345	0.045
366	92580	7.351	0.051
367	92640	7.349	0.049
368	92700	7.346	0.046
369	92760	7.345	0.045
370	92820	7.345	0.045
371	92880	7.347	0.047
372	92940	7.348	0.048
373	93000	7.347	0.047
374	93060	7.343	0.043
375	93120	7.344	0.044
376	93180	7.343	0.043
377	93240	7.343	0.043
378	93300	7.346	0.046
379	93360	7.342	0.042
380	93420	7.342	0.042
381	93480	7.343	0.043
382	93540	7.343	0.043
383	93600	7.341	0.041
384	93660	7.343	0.043
385	93720	7.34	0.04
386	93780	7.337	0.037
387	93840	7.341	0.041
388	93900	7.342	0.042
389	93960	7.342	0.042
390	94020	7.34	0.04
391	94080	7.34	0.04
392	94140	7.34	0.04
393	94200	7.34	0.04
394	94260	7.34	0.04
395	94320	7.337	0.037
396	94380	7.341	0.041
397	94440	7.337	0.037
398	94500	7.338	0.038
399	94560	7.338	0.038
400	94620	7.34	0.04
401	94680	7.34	0.04
402	94740	7.338	0.038
403	94800	7.336	0.036

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
404	94860	7.337	0.037
405	94920	7.339	0.039
406	94980	7.338	0.038
407	95040	7.341	0.041
408	95100	7.338	0.038
409	95160	7.335	0.035
410	95220	7.336	0.036
411	95280	7.336	0.036
412	95340	7.336	0.036
413	95400	7.338	0.038
414	95460	7.337	0.037
415	95520	7.335	0.035
416	95580	7.334	0.034
417	95640	7.333	0.033
418	95700	7.337	0.037
419	95760	7.335	0.035
420	95820	7.335	0.035
421	95880	7.333	0.033
422	95940	7.334	0.034
423	96000	7.333	0.033
424	96060	7.333	0.033
425	96120	7.335	0.035
426	96180	7.335	0.035
427	96240	7.336	0.036
428	96300	7.334	0.034
429	96360	7.334	0.034
430	96420	7.336	0.036
431	96480	7.333	0.033
432	96540	7.335	0.035
433	96600	7.335	0.035
434	96660	7.331	0.031
435	96720	7.333	0.033
436	96780	7.336	0.036
437	96840	7.335	0.035
438	96900	7.335	0.035
439	96960	7.333	0.033
440	97020	7.335	0.035
441	97080	7.334	0.034
442	97140	7.332	0.032
443	97200	7.333	0.033
444	97260	7.333	0.033
445	97320	7.332	0.032
446	97380	7.332	0.032
447	97440	7.333	0.033
448	97500	7.331	0.031
449	97560	7.332	0.032
450	97620	7.337	0.037
451	97680	7.333	0.033
452	97740	7.331	0.031
453	97800	7.333	0.033
454	97860	7.332	0.032

By DKB Date 10/15/08

Checked By CAT Date 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
455	97920	7.331	0.031
456	97980	7.333	0.033
457	98040	7.33	0.03
458	98100	7.331	0.031
459	98160	7.331	0.031
460	98220	7.331	0.031
461	98280	7.33	0.03
462	98340	7.335	0.035
463	98400	7.33	0.03
464	98460	7.332	0.032
465	98520	7.335	0.035
466	98580	7.333	0.033
467	98640	7.332	0.032
468	98700	7.332	0.032
469	98760	7.335	0.035
470	98820	7.332	0.032
471	98880	7.331	0.031

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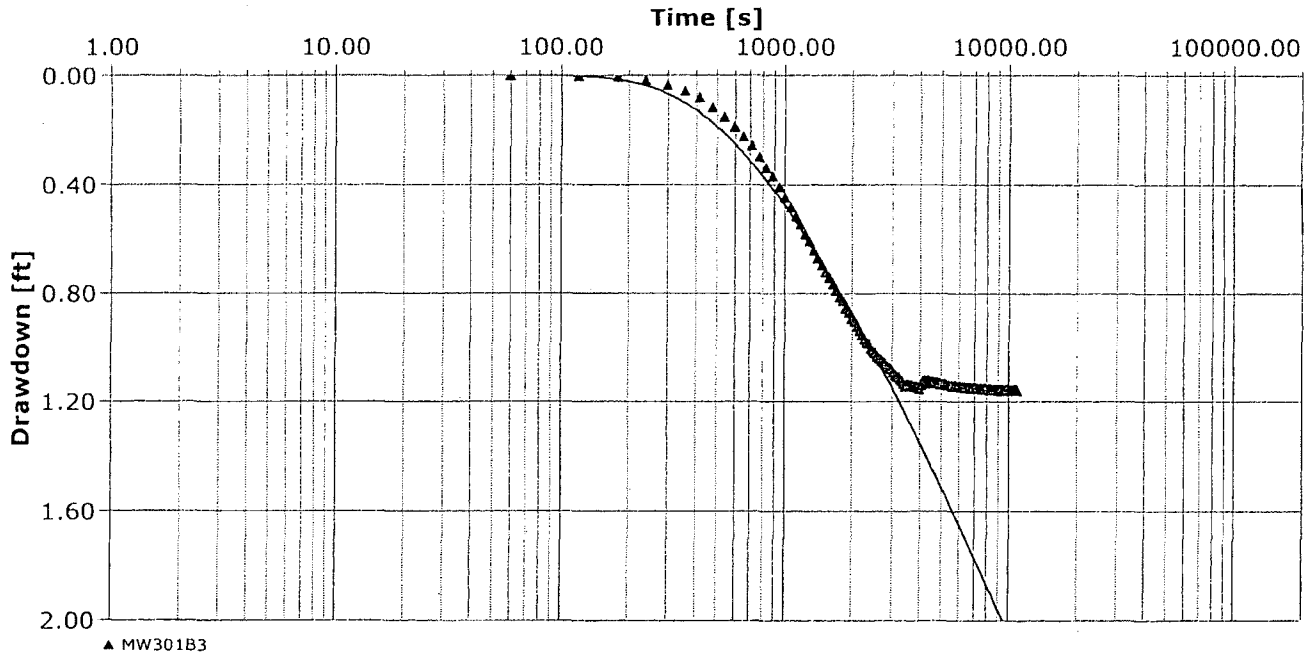
ASF 10/23/08

Sheet No. ____ of ____

Paul C. Rizzo Associates, Inc. ENGINEERS & CONSULTANTS	Pumping Test Analysis Report
	Project: Bell Bend NPP
	Number: 07-3891
	Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Analysis performed by: Daniel Bansah	Recovery	Analysis date: 3/21/2008
Aquifer Thickness: 55.00 ft	Discharge: variable, average rate 5.2427 [U.S. gal/min]	



Calculation after AGARWAL + Theis

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Storage coefficient	Radial distance to PW [ft]	
MW301B3	$1.13 \quad 10^{2}$	$2.05 \quad 10^{0}$	$2.52 \quad 10^{-4}$	100.14	

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Aquifer Thickness: 55.00 ft	Discharge: variable, average rate 5.2427 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Recovery	Daniel Bansah	3/21/2008	AGARWAL + Theis	$1.13 \quad 10^{2}$	$2.05 \quad 10^{0}$	$2.52 \quad 10^{-4}$

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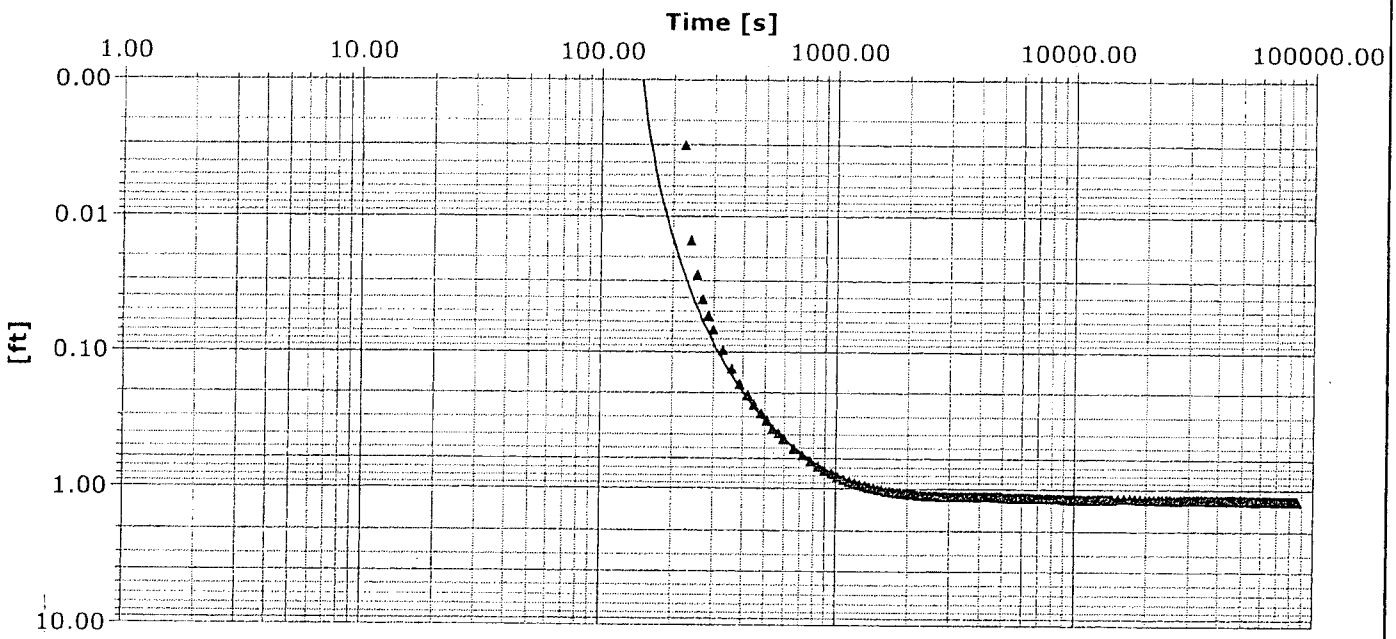
Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Analysis performed by: Daniel Bansah	Leaky - Observation wells	Analysis date: 3/10/2008
Aquifer Thickness: 55.00 ft	Discharge rate: 6 [U.S. gal/min]	



Calculation after Hantush

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Storage coefficient	Hydr. resistance [s]	Radial distance to PW [ft]
MW301B3	$1.42 \quad 10^{1}$	$2.58 \quad 10^{-1}$	$5.37 \quad 10^{-5}$	$1.26 \quad 10^{7}$	100.14

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Paul C. Rizzo Associates, Inc. ENGINEERS & CONSULTANTS	Pumping Test Analysis Report
	Project: Bell Bend NPP
	Number: 07-3891
	Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Aquifer Thickness: 55.00 ft	Discharge rate: 6 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Leaky - Observation wells	Daniel Bansah	3/10/2008	Hantush	$1.42 \quad 10^{1}$	$2.58 \quad 10^{-1}$	$5.37 \quad 10^{-5}$

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 2/12/2008	Discharge: variable, average rate 5.1276 [U.S. gal/min]
Observation well: MW301B4	Static water level [ft]: 2.98	Radial distance to PW [ft]: 126.64

	Time [s]	Water Level [ft]	Drawdown [ft]
1	0	2.964	-0.016
2	5	2.962	-0.018
3	10	2.963	-0.017
4	15	2.961	-0.019
5	20	2.964	-0.016
6	25	2.963	-0.017
7	30	2.962	-0.018
8	35	2.965	-0.015
9	40	2.963	-0.017
10	45	2.963	-0.017
11	50	2.966	-0.014
12	55	2.965	-0.015
13	60	2.963	-0.017
14	70	2.966	-0.014
15	80	2.964	-0.016
16	90	2.962	-0.018
17	100	2.965	-0.015
18	110	2.963	-0.017
19	120	2.964	-0.016
20	135	2.962	-0.018
21	150	2.963	-0.017
22	165	2.962	-0.018
23	180	2.963	-0.017
24	195	2.964	-0.016
25	210	2.966	-0.014
26	225	2.974	-0.006
27	240	2.976	-0.004
28	255	2.983	0.003
29	270	2.991	0.011
30	285	3.001	0.021
31	300	3.012	0.032
32	330	3.038	0.058
33	360	3.07	0.09
34	390	3.112	0.132
35	420	3.153	0.173
36	450	3.204	0.224
37	480	3.257	0.277
38	510	3.309	0.329
39	540	3.371	0.391
40	570	3.435	0.455
41	600	3.496	0.516
42	660	3.623	0.643
43	720	3.76	0.78
44	780	3.893	0.913
45	840	4.029	1.049
46	900	4.162	1.182

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
47	960	4.291	1.311
48	1020	4.424	1.444
49	1080	4.55	1.57
50	1140	4.674	1.694
51	1200	4.787	1.807
52	1260	4.895	1.915
53	1320	4.998	2.018
54	1380	5.091	2.111
55	1440	5.175	2.195
56	1500	5.261	2.281
57	1560	5.337	2.357
58	1620	5.40	2.42
59	1680	5.462	2.482
60	1740	5.518	2.538
61	1800	5.572	2.592
62	1860	5.619	2.639
63	1920	5.67	2.69
64	1980	5.71	2.73
65	2040	5.748	2.768
66	2100	5.79	2.81
67	2160	5.821	2.841
68	2220	5.847	2.867
69	2280	5.879	2.899
70	2340	5.906	2.926
71	2400	5.925	2.945
72	2460	5.953	2.973
73	2520	5.971	2.991
74	2580	5.986	3.006
75	2640	5.998	3.018
76	2700	6.011	3.031
77	2760	6.027	3.047
78	2820	6.036	3.056
79	2880	6.045	3.065
80	2940	6.059	3.079
81	3000	6.067	3.087
82	3060	6.074	3.094
83	3120	6.078	3.098
84	3180	6.085	3.105
85	3240	6.091	3.111
86	3300	6.093	3.113
87	3360	6.10	3.12
88	3420	6.103	3.123
89	3480	6.109	3.129
90	3540	6.112	3.132
91	3600	6.116	3.136
92	3660	6.12	3.14
93	3720	6.126	3.146
94	3780	6.126	3.146
95	3840	6.128	3.148
96	3900	6.13	3.15
97	3960	6.135	3.155

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Paul C. Rizzo Associates, Inc.
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Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
98	4020	6.137	3.157
99	4080	6.138	3.158
100	4140	6.141	3.161
101	4200	6.144	3.164
102	4260	6.143	3.163
103	4320	6.144	3.164
104	4380	6.144	3.164
105	4440	6.15	3.17
106	4500	6.149	3.169
107	4560	6.15	3.17
108	4620	6.15	3.17
109	4680	6.151	3.171
110	4740	6.152	3.172
111	4800	6.155	3.175
112	4860	6.154	3.174
113	4920	6.158	3.178
114	4980	6.158	3.178
115	5040	6.163	3.183
116	5100	6.157	3.177
117	5160	6.157	3.177
118	5220	6.158	3.178
119	5280	6.162	3.182
120	5340	6.162	3.182
121	5400	6.161	3.181
122	5460	6.164	3.184
123	5520	6.165	3.185
124	5580	6.166	3.186
125	5640	6.178	3.198
126	5700	6.165	3.185
127	5760	6.169	3.189
128	5820	6.178	3.198
129	5880	6.172	3.192
130	5940	6.171	3.191
131	6000	6.176	3.196
132	6060	6.175	3.195
133	6120	6.177	3.197
134	6180	6.18	3.20
135	6240	6.18	3.20
136	6300	6.181	3.201
137	6360	6.185	3.205
138	6420	6.185	3.205
139	6480	6.185	3.205
140	6540	6.19	3.21
141	6600	6.194	3.214
142	6660	6.192	3.212
143	6720	6.193	3.213
144	6780	6.193	3.213
145	6840	6.197	3.217
146	6900	6.196	3.216
147	6960	6.20	3.22
148	7020	6.198	3.218

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Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Aquifer Thickness: 55.00 ft	Discharge rate: 6 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Leaky - Observation wells	Daniel Bansah	3/10/2008	Hantush	$3.01 \ 10^{0}$	$5.46 \ 10^{-2}$	$1.25 \ 10^{-5}$

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Paul C. Rizzo Associates, Inc.
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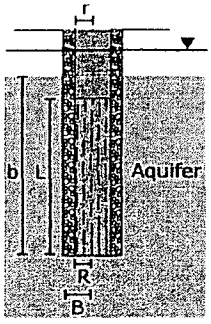
Wells

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA



	Name	X [ft]	Y [ft]	Elevation (amsl)	Penetration	R [ft]	L [ft]	B [ft]
1	MW302A1	2406939.741	339410.169	665.18	Fully	0.1667	15	0.3333
2	MW302A2	2406925.672	339410.073	665.25	Fully	0.1667	15	0.3333
3	MW302A3	2406899.922	339410.156	665.34	Fully	0.1667	15	0.3333
4	MW302A4	2406939.417	339435.305	665.56	Fully	0.1667	15	0.3333

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Paul C. Rizzo Associates, Inc.
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Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
149	7080	6.199	3.219
150	7140	6.20	3.22
151	7200	6.198	3.218
152	7380	6.201	3.221
153	7560	6.202	3.222
154	7740	6.207	3.227
155	7920	6.207	3.227
156	8100	6.206	3.226
157	8280	6.209	3.229
158	8460	6.213	3.233
159	8640	6.214	3.234
160	8820	6.214	3.234
161	9000	6.213	3.233
162	9180	6.217	3.237
163	9360	6.22	3.24
164	9540	6.223	3.243
165	9720	6.222	3.242
166	9900	6.21	3.23
167	10080	6.202	3.222
168	10260	6.19	3.21
169	10440	6.185	3.205
170	10620	6.183	3.203
171	10800	6.181	3.201
172	11100	6.184	3.204
173	11400	6.183	3.203
174	11700	6.188	3.208
175	12000	6.185	3.205
176	12300	6.187	3.207
177	12600	6.19	3.21
178	12900	6.194	3.214
179	13200	6.192	3.212
180	13500	6.195	3.215
181	13800	6.194	3.214
182	14100	6.196	3.216
183	14400	6.194	3.214
184	15300	6.19	3.21
185	16200	6.197	3.217
186	17100	6.202	3.222
187	18000	6.205	3.225
188	18900	6.203	3.223
189	19800	6.211	3.231
190	20700	6.211	3.231
191	21600	6.211	3.231
192	22500	6.215	3.235
193	23400	6.212	3.232
194	24300	6.216	3.236
195	25200	6.222	3.242
196	26100	6.219	3.239
197	27000	6.221	3.241
198	27900	6.225	3.245
199	28800	6.227	3.247

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Paul C. Rizzo Associates, Inc.
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Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
200	29700	6.225	3.245
201	30600	6.229	3.249
202	31500	6.228	3.248
203	32400	6.22	3.24
204	33300	6.22	3.24
205	34200	6.22	3.24
206	35100	6.225	3.245
207	36000	6.22	3.24
208	36900	6.225	3.245
209	37800	6.22	3.24
210	38700	6.223	3.243
211	39600	6.222	3.242
212	40500	6.22	3.24
213	41400	6.219	3.239
214	42300	6.219	3.239
215	43200	6.217	3.237
216	44100	6.212	3.232
217	45000	6.208	3.228
218	45900	6.204	3.224
219	46800	6.206	3.226
220	47700	6.205	3.225
221	48600	6.207	3.227
222	49500	6.208	3.228
223	50400	6.209	3.229
224	51300	6.212	3.232
225	52200	6.211	3.231
226	53100	6.214	3.234
227	54000	6.213	3.233
228	54900	6.213	3.233
229	55800	6.217	3.237
230	56700	6.219	3.239
231	57600	6.215	3.235
232	58500	6.221	3.241
233	59400	6.218	3.238
234	60300	6.218	3.238
235	61200	6.223	3.243
236	62100	6.222	3.242
237	63000	6.218	3.238
238	63900	6.22	3.24
239	64800	6.226	3.246
240	65700	6.228	3.248
241	66600	6.227	3.247
242	67500	6.225	3.245
243	68400	6.227	3.247
244	69300	6.23	3.25
245	70200	6.233	3.253
246	71100	6.233	3.253
247	72000	6.23	3.25
248	72900	6.234	3.254
249	73800	6.233	3.253
250	74700	6.238	3.258

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
251	75600	6.23	3.25
252	76500	6.231	3.251
253	77400	6.234	3.254
254	78300	6.232	3.252
255	79200	6.234	3.254
256	80100	6.239	3.259
257	81000	6.237	3.257
258	81900	6.234	3.254
259	82800	6.232	3.252
260	83700	6.23	3.25
261	84600	6.228	3.248
262	85500	6.227	3.247
263	86400	6.225	3.245
264	86460	6.225	3.245
265	86520	6.225	3.245
266	86580	6.224	3.244
267	86640	6.216	3.236
268	86700	6.202	3.222
269	86760	6.177	3.197
270	86820	6.145	3.165
271	86880	6.106	3.126
272	86940	6.057	3.077
273	87000	6.001	3.021
274	87060	5.933	2.953
275	87120	5.862	2.882
276	87180	5.782	2.802
277	87240	5.702	2.722
278	87300	5.614	2.634
279	87360	5.525	2.545
280	87420	5.432	2.452
281	87480	5.343	2.363
282	87540	5.249	2.269
283	87600	5.157	2.177
284	87660	5.058	2.078
285	87720	4.969	1.989
286	87780	4.874	1.894
287	87840	4.785	1.805
288	87900	4.697	1.717
289	87960	4.611	1.631
290	88020	4.525	1.545
291	88080	4.444	1.464
292	88140	4.367	1.387
293	88200	4.293	1.313
294	88260	4.22	1.24
295	88320	4.151	1.171
296	88380	4.085	1.105
297	88440	4.02	1.04
298	88500	3.962	0.982
299	88560	3.904	0.924
300	88620	3.848	0.868
301	88680	3.796	0.816

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

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Pumping Test - Water Level Data Page 7 of 11

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
302	88740	3.749	0.769
303	88800	3.701	0.721
304	88860	3.66	0.68
305	88920	3.619	0.639
306	88980	3.581	0.601
307	89040	3.544	0.564
308	89100	3.51	0.53
309	89160	3.479	0.499
310	89220	3.45	0.47
311	89280	3.418	0.438
312	89340	3.391	0.411
313	89400	3.37	0.39
314	89460	3.347	0.367
315	89520	3.328	0.348
316	89580	3.307	0.327
317	89640	3.292	0.312
318	89700	3.279	0.299
319	89760	3.259	0.279
320	89820	3.242	0.262
321	89880	3.229	0.249
322	89940	3.215	0.235
323	90000	3.201	0.221
324	90060	3.19	0.21
325	90120	3.179	0.199
326	90180	3.168	0.188
327	90240	3.159	0.179
328	90300	3.152	0.172
329	90360	3.148	0.168
330	90420	3.135	0.155
331	90480	3.13	0.15
332	90540	3.125	0.145
333	90600	3.117	0.137
334	90660	3.112	0.132
335	90720	3.11	0.13
336	90780	3.107	0.127
337	90840	3.11	0.13
338	90900	3.104	0.124
339	90960	3.105	0.125
340	91020	3.105	0.125
341	91080	3.103	0.123
342	91140	3.10	0.12
343	91200	3.098	0.118
344	91260	3.094	0.114
345	91320	3.09	0.11
346	91380	3.088	0.108
347	91440	3.088	0.108
348	91500	3.085	0.105
349	91560	3.083	0.103
350	91620	3.082	0.102
351	91680	3.077	0.097
352	91740	3.075	0.095

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
353	91800	3.075	0.095
354	91860	3.071	0.091
355	91920	3.068	0.088
356	91980	3.068	0.088
357	92040	3.067	0.087
358	92100	3.065	0.085
359	92160	3.064	0.084
360	92220	3.061	0.081
361	92280	3.058	0.078
362	92340	3.059	0.079
363	92400	3.055	0.075
364	92460	3.058	0.078
365	92520	3.056	0.076
366	92580	3.051	0.071
367	92640	3.052	0.072
368	92700	3.049	0.069
369	92760	3.05	0.07
370	92820	3.053	0.073
371	92880	3.048	0.068
372	92940	3.042	0.062
373	93000	3.045	0.065
374	93060	3.042	0.062
375	93120	3.041	0.061
376	93180	3.043	0.063
377	93240	3.039	0.059
378	93300	3.039	0.059
379	93360	3.042	0.062
380	93420	3.044	0.064
381	93480	3.036	0.056
382	93540	3.036	0.056
383	93600	3.038	0.058
384	93660	3.038	0.058
385	93720	3.037	0.057
386	93780	3.032	0.052
387	93840	3.033	0.053
388	93900	3.033	0.053
389	93960	3.033	0.053
390	94020	3.033	0.053
391	94080	3.031	0.051
392	94140	3.032	0.052
393	94200	3.03	0.05
394	94260	3.032	0.052
395	94320	3.029	0.049
396	94380	3.029	0.049
397	94440	3.03	0.05
398	94500	3.03	0.05
399	94560	3.03	0.05
400	94620	3.028	0.048
401	94680	3.026	0.046
402	94740	3.028	0.048
403	94800	3.027	0.047

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
404	94860	3.026	0.046
405	94920	3.029	0.049
406	94980	3.025	0.045
407	95040	3.024	0.044
408	95100	3.025	0.045
409	95160	3.023	0.043
410	95220	3.023	0.043
411	95280	3.024	0.044
412	95340	3.022	0.042
413	95400	3.02	0.04
414	95460	3.023	0.043
415	95520	3.019	0.039
416	95580	3.018	0.038
417	95640	3.021	0.041
418	95700	3.019	0.039
419	95760	3.02	0.04
420	95820	3.021	0.041
421	95880	3.019	0.039
422	95940	3.018	0.038
423	96000	3.018	0.038
424	96060	3.019	0.039
425	96120	3.017	0.037
426	96180	3.018	0.038
427	96240	3.018	0.038
428	96300	3.014	0.034
429	96360	3.012	0.032
430	96420	3.015	0.035
431	96480	3.016	0.036
432	96540	3.016	0.036
433	96600	3.015	0.035
434	96660	3.017	0.037
435	96720	3.015	0.035
436	96780	3.016	0.036
437	96840	3.016	0.036
438	96900	3.015	0.035
439	96960	3.012	0.032
440	97020	3.014	0.034
441	97080	3.015	0.035
442	97140	3.015	0.035
443	97200	3.013	0.033
444	97260	3.014	0.034
445	97320	3.012	0.032
446	97380	3.011	0.031
447	97440	3.014	0.034
448	97500	3.013	0.033
449	97560	3.012	0.032
450	97620	3.01	0.03
451	97680	3.009	0.029
452	97740	3.01	0.03
453	97800	3.01	0.03
454	97860	3.01	0.03

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
455	97920	3.009	0.029
456	97980	3.011	0.031
457	98040	3.01	0.03
458	98100	3.009	0.029
459	98160	3.009	0.029
460	98220	3.011	0.031
461	98280	3.01	0.03
462	98340	3.014	0.034
463	98400	3.011	0.031
464	98460	3.009	0.029
465	98520	3.01	0.03
466	98580	3.007	0.027
467	98640	3.009	0.029
468	98700	3.008	0.028
469	98760	3.009	0.029
470	98820	3.009	0.029
471	98880	3.009	0.029
472	98940	3.009	0.029
473	99000	3.009	0.029
474	99060	3.007	0.027
475	99120	3.008	0.028
476	99180	3.01	0.03
477	99240	3.008	0.028
478	99300	3.007	0.027
479	99360	3.008	0.028
480	99420	3.008	0.028
481	99480	3.007	0.027
482	99540	3.009	0.029
483	99600	3.008	0.028
484	99660	3.007	0.027
485	99720	3.006	0.026
486	99780	3.005	0.025
487	99840	3.005	0.025
488	99900	3.005	0.025
489	99960	3.005	0.025
490	100020	3.004	0.024
491	100080	3.005	0.025
492	100140	3.006	0.026
493	100200	3.003	0.023
494	100260	3.003	0.023
495	100320	3.003	0.023
496	100380	3.002	0.022
497	100440	3.002	0.022
498	100500	3.003	0.023
499	100560	3.004	0.024
500	100620	3.007	0.027
501	100680	3.002	0.022
502	100740	3.002	0.022
503	100800	3.002	0.022
504	100860	3.002	0.022
505	100920	3.002	0.022

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
506	100980	3.001	0.021
507	101040	3.001	0.021
508	101100	3.00	0.02

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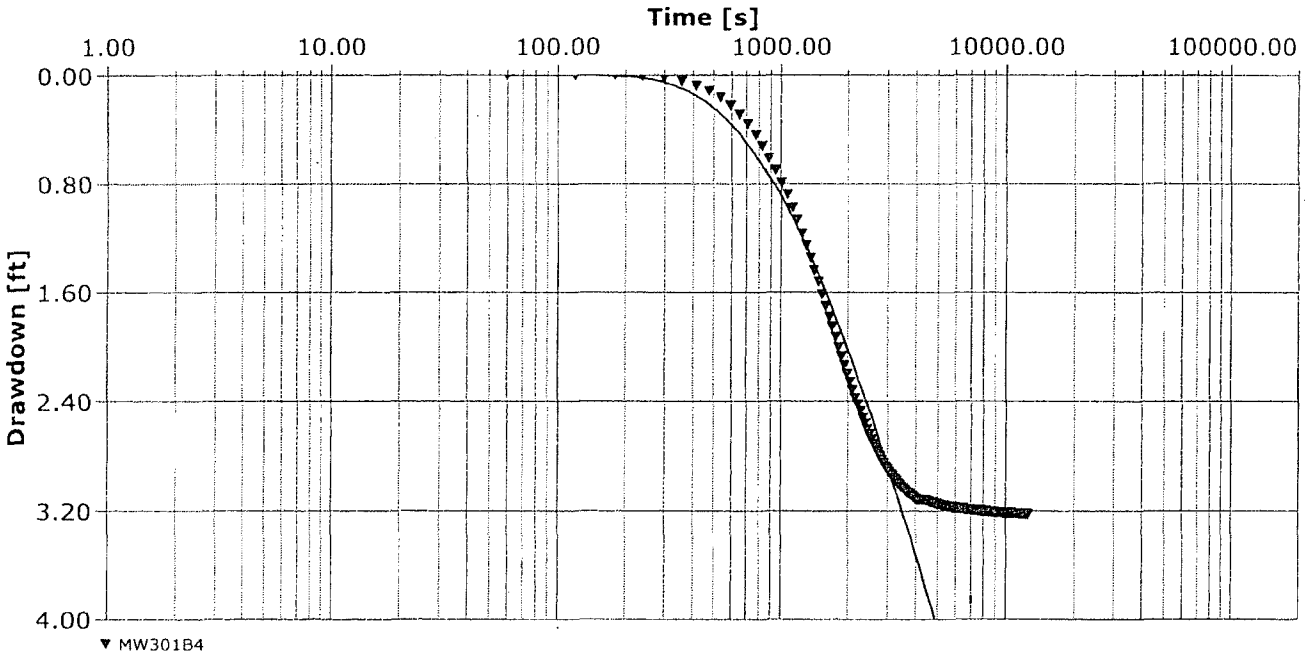
Paul C. Rizzo Associates, Inc. ENGINEERS & CONSULTANTS	Pumping Test Analysis Report
	Project: Bell Bend NPP
	Number: 07-3891
	Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Analysis performed by: Daniel Bansah	Recovery	Analysis date: 3/21/2008
Aquifer Thickness: 55.00 ft	Discharge: variable, average rate 5.1276 [U.S. gal/min]	



Calculation after AGARWAL + Theis

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Storage coefficient	Radial distance to PW [ft]	
MW301B4	$3.17 \quad 10^{1}$	$5.77 \quad 10^{-1}$	$7.41 \quad 10^{-5}$	126.64	

DKB Date 10/15/08

ADF Date 10/23/08

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Aquifer Thickness: 55.00 ft	Discharge: variable, average rate 5.1276 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Recovery	Daniel Bansah	3/21/2008	AGARWAL + Theis	$3.17 \quad 10^{1}$	$5.77 \quad 10^{-1}$	$7.41 \quad 10^{-5}$

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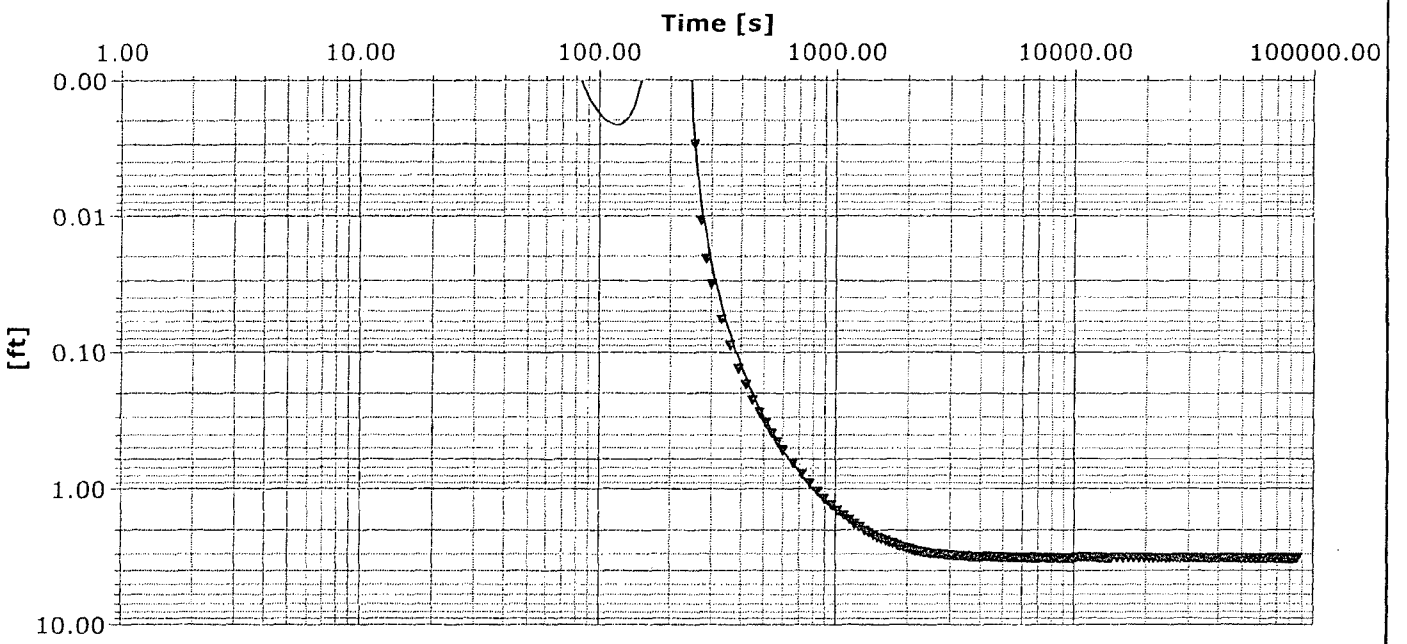
Paul C. Rizzo Associates, Inc. ENGINEERS & CONSULTANTS	Pumping Test Analysis Report
	Project: Bell Bend NPP
	Number: 07-3891
	Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW301B1	Pumping well: MW301B1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 2/12/2008
Analysis performed by: Daniel Bansah	Leaky - Observation wells	Analysis date: 3/10/2008
Aquifer Thickness: 55.00 ft	Discharge rate: 6 [U.S. gal/min]	



Calculation after Hantush

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Storage coefficient	Hydr. resistance [s]	Radial distance to PW [ft]
MW301B4	$3.01 \quad 10^{0}$	$5.46 \quad 10^{-2}$	$1.25 \quad 10^{-5}$	$6.60 \quad 10^{7}$	126.64

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee Test date: 3/13/2008		Discharge rate: 60 [U.S. gal/min]
Observation well: MW302A2	Static water level [ft]: 6.62	Radial distance to PW [ft]: 14.07

	Time [s]	Water Level [ft]	Drawdown [ft]
1	0	6.517	-0.103
2	5	6.521	-0.099
3	10	6.525	-0.095
4	15	6.521	-0.099
5	20	6.523	-0.097
6	25	6.523	-0.097
7	30	6.523	-0.097
8	35	6.522	-0.098
9	40	6.525	-0.095
10	45	6.523	-0.097
11	50	6.526	-0.094
12	55	6.527	-0.093
13	60	6.527	-0.093
14	70	6.531	-0.089
15	80	6.53	-0.09
16	90	6.526	-0.094
17	100	6.526	-0.094
18	110	6.523	-0.097
19	120	6.528	-0.092
20	135	6.525	-0.095
21	150	6.526	-0.094
22	165	6.522	-0.098
23	180	6.519	-0.101
24	195	6.524	-0.096
25	210	6.524	-0.096
26	225	6.525	-0.095
27	240	6.527	-0.093
28	255	6.539	-0.081
29	270	6.541	-0.079
30	285	6.592	-0.028
31	300	6.778	0.158
32	330	6.919	0.299
33	360	6.981	0.361
34	390	7.018	0.398
35	420	7.053	0.433
36	450	7.075	0.455
37	480	7.101	0.481
38	510	7.115	0.495
39	540	7.131	0.511
40	570	7.152	0.532
41	600	7.167	0.547
42	660	7.192	0.572
43	720	7.202	0.582
44	780	7.225	0.605
45	840	7.237	0.617
46	900	7.25	0.63

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
47	960	7.269	0.649
48	1020	7.279	0.659
49	1080	7.283	0.663
50	1140	7.284	0.664
51	1200	7.285	0.665
52	1260	7.281	0.661
53	1320	7.293	0.673
54	1380	7.293	0.673
55	1440	7.358	0.738
56	1500	7.396	0.776
57	1560	7.412	0.792
58	1620	7.426	0.806
59	1680	7.432	0.812
60	1740	7.438	0.818
61	1800	7.448	0.828
62	1860	7.447	0.827
63	1920	7.455	0.835
64	1980	7.46	0.84
65	2040	7.468	0.848
66	2100	7.456	0.836
67	2160	7.449	0.829
68	2220	7.446	0.826
69	2280	7.448	0.828
70	2340	7.448	0.828
71	2400	7.454	0.834
72	2460	7.46	0.84
73	2520	7.468	0.848
74	2580	7.471	0.851
75	2640	7.473	0.853
76	2700	7.481	0.861
77	2760	7.479	0.859
78	2820	7.465	0.845
79	2880	7.478	0.858
80	2940	7.486	0.866
81	3000	7.474	0.854
82	3060	7.466	0.846
83	3120	7.473	0.853
84	3180	7.479	0.859
85	3240	7.487	0.867
86	3300	7.475	0.855
87	3360	7.465	0.845
88	3420	7.463	0.843
89	3480	7.465	0.845
90	3540	7.466	0.846
91	3600	7.456	0.836
92	3660	7.456	0.836
93	3720	7.469	0.849
94	3780	7.474	0.854
95	3840	7.491	0.871
96	3900	7.501	0.881
97	3960	7.493	0.873

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
98	4020	7.496	0.876
99	4080	7.507	0.887
100	4140	7.515	0.895
101	4200	7.534	0.914
102	4260	7.531	0.911
103	4320	7.523	0.903
104	4380	7.523	0.903
105	4440	7.534	0.914
106	4500	7.544	0.924
107	4560	7.539	0.919
108	4620	7.532	0.912
109	4680	7.529	0.909
110	4740	7.526	0.906
111	4800	7.525	0.905
112	4860	7.526	0.906
113	4920	7.525	0.905
114	4980	7.531	0.911
115	5040	7.527	0.907
116	5100	7.52	0.90
117	5160	7.517	0.897
118	5220	7.509	0.889
119	5280	7.505	0.885
120	5340	7.492	0.872
121	5400	7.488	0.868
122	5460	7.488	0.868
123	5520	7.491	0.871
124	5580	7.491	0.871
125	5640	7.488	0.868
126	5700	7.485	0.865
127	5760	7.477	0.857
128	5820	7.475	0.855
129	5880	7.477	0.857
130	5940	7.477	0.857
131	6000	7.474	0.854
132	6060	7.469	0.849
133	6120	7.465	0.845
134	6180	7.459	0.839
135	6240	7.46	0.84
136	6300	7.461	0.841
137	6360	7.455	0.835
138	6420	7.456	0.836
139	6480	7.446	0.826
140	6540	7.449	0.829
141	6600	7.444	0.824
142	6660	7.441	0.821
143	6720	7.449	0.829
144	6780	7.453	0.833
145	6840	7.459	0.839
146	6900	7.454	0.834
147	6960	7.457	0.837
148	7020	7.452	0.832

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
149	7080	7.452	0.832
150	7140	7.451	0.831
151	7200	7.442	0.822
152	7380	7.435	0.815
153	7560	7.432	0.812
154	7740	7.436	0.816
155	7920	7.426	0.806
156	8100	7.417	0.797
157	8280	7.417	0.797
158	8460	7.419	0.799
159	8640	7.414	0.794
160	8820	7.432	0.812
161	9000	7.453	0.833
162	9180	7.45	0.83
163	9360	7.569	0.949
164	9540	7.563	0.943
165	9720	7.584	0.964
166	9900	7.565	0.945
167	10080	7.531	0.911
168	10260	7.502	0.882
169	10440	7.485	0.865
170	10620	7.469	0.849
171	10800	7.454	0.834
172	11100	7.449	0.829
173	11400	7.477	0.857
174	11700	7.692	1.072
175	12000	7.73	1.11
176	12300	7.66	1.04
177	12600	7.585	0.965
178	12900	7.448	0.828
179	13200	7.398	0.778
180	13500	7.371	0.751
181	13800	7.353	0.733
182	14100	7.328	0.708
183	14400	7.31	0.69
184	15300	7.293	0.673
185	16200	7.244	0.624
186	17100	7.16	0.54
187	18000	7.131	0.511
188	18900	7.104	0.484
189	19800	7.097	0.477
190	20700	7.061	0.441
191	21600	7.091	0.471
192	22500	7.08	0.46
193	23400	6.983	0.363
194	24300	7.032	0.412
195	25200	7.004	0.384
196	26100	6.928	0.308
197	27000	7.01	0.39
198	27900	6.999	0.379
199	28800	7.00	0.38

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
200	29700	7.063	0.443
201	30600	7.102	0.482
202	31500	7.073	0.453
203	32400	7.067	0.447
204	33300	7.078	0.458
205	34200	7.032	0.412
206	35100	7.003	0.383
207	36000	6.965	0.345
208	36900	6.957	0.337
209	37800	6.418	-0.202
210	38700	5.876	-0.744
211	39600	5.785	-0.835
212	40500	5.77	-0.85
213	41400	6.562	-0.058
214	42300	6.86	0.24
215	43200	6.908	0.288
216	44100	6.949	0.329
217	45000	6.983	0.363
218	45900	5.977	-0.643
219	46800	5.916	-0.704
220	47700	6.786	0.166
221	48600	6.90	0.28
222	49500	6.941	0.321
223	50400	6.946	0.326
224	51300	6.95	0.33
225	52200	6.951	0.331
226	53100	6.97	0.35
227	54000	6.725	0.105
228	54900	6.897	0.277
229	55800	6.92	0.30
230	56700	6.938	0.318
231	57600	6.939	0.319
232	58500	6.946	0.326
233	59400	6.967	0.347
234	60300	6.98	0.36
235	61200	6.974	0.354
236	62100	6.996	0.376
237	63000	7.017	0.397
238	63900	7.02	0.40
239	64800	7.042	0.422
240	65700	7.055	0.435
241	66600	7.049	0.429
242	67500	7.074	0.454
243	68400	7.046	0.426
244	69300	7.048	0.428
245	70200	7.037	0.417
246	71100	7.057	0.437
247	72000	7.052	0.432
248	72900	7.056	0.436
249	73800	7.064	0.444
250	74700	7.118	0.498

BY DKB DATE 10/15/08
CHK'D 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
251	75600	7.141	0.521
252	76500	7.136	0.516
253	77400	7.121	0.501
254	78300	7.095	0.475
255	79200	7.099	0.479
256	80100	7.101	0.481
257	81000	7.108	0.488
258	81900	7.135	0.515
259	82800	7.163	0.543
260	83700	7.186	0.566
261	84600	7.201	0.581
262	85500	7.231	0.611
263	86400	7.276	0.656
264	86460	7.274	0.654
265	86520	7.289	0.669
266	86580	7.286	0.666
267	86640	7.29	0.67
268	86700	7.287	0.667
269	86760	6.834	0.214
270	86820	6.71	0.09
271	86880	6.626	0.006

DKB Date 10/15/08

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee Test date: 3/13/2008		Discharge rate: 60 [U.S. gal/min]
Observation well: MW302A3	Static water level [ft]: 6.90	Radial distance to PW [ft]: 39.82

	Time [s]	Water Level [ft]	Drawdown [ft]
1	0	6.818	-0.082
2	5	6.818	-0.082
3	10	6.819	-0.081
4	15	6.819	-0.081
5	20	6.823	-0.077
6	25	6.825	-0.075
7	30	6.817	-0.083
8	35	6.821	-0.079
9	40	6.822	-0.078
10	45	6.822	-0.078
11	50	6.819	-0.081
12	55	6.824	-0.076
13	60	6.822	-0.078
14	70	6.823	-0.077
15	80	6.823	-0.077
16	90	6.857	-0.043
17	100	6.899	-0.001
18	110	6.94	0.04
19	120	6.974	0.074
20	135	7.014	0.114
21	150	7.044	0.144
22	165	7.068	0.168
23	180	7.09	0.19
24	195	7.107	0.207
25	210	7.126	0.226
26	225	7.14	0.24
27	240	7.152	0.252
28	255	7.167	0.267
29	270	7.176	0.276
30	285	7.179	0.279
31	300	7.19	0.29
32	330	7.204	0.304
33	360	7.22	0.32
34	390	7.236	0.336
35	420	7.247	0.347
36	450	7.257	0.357
37	480	7.273	0.373
38	510	7.281	0.381
39	540	7.282	0.382
40	570	7.29	0.39
41	600	7.297	0.397
42	660	7.309	0.409
43	720	7.325	0.425
44	780	7.331	0.431
45	840	7.336	0.436
46	900	7.347	0.447

DKB 10/15/08

AJF 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
47	960	7.348	0.448
48	1020	7.354	0.454
49	1080	7.355	0.455
50	1140	7.367	0.467
51	1200	7.367	0.467
52	1260	7.405	0.505
53	1320	7.42	0.52
54	1380	7.431	0.531
55	1440	7.446	0.546
56	1500	7.455	0.555
57	1560	7.46	0.56
58	1620	7.467	0.567
59	1680	7.474	0.574
60	1740	7.478	0.578
61	1800	7.485	0.585
62	1860	7.484	0.584
63	1920	7.489	0.589
64	1980	7.49	0.59
65	2040	7.489	0.589
66	2100	7.494	0.594
67	2160	7.491	0.591
68	2220	7.492	0.592
69	2280	7.496	0.596
70	2340	7.498	0.598
71	2400	7.507	0.607
72	2460	7.506	0.606
73	2520	7.513	0.613
74	2580	7.512	0.612
75	2640	7.515	0.615
76	2700	7.513	0.613
77	2760	7.515	0.615
78	2820	7.516	0.616
79	2880	7.521	0.621
80	2940	7.522	0.622
81	3000	7.522	0.622
82	3060	7.521	0.621
83	3120	7.524	0.624
84	3180	7.524	0.624
85	3240	7.527	0.627
86	3300	7.528	0.628
87	3360	7.533	0.633
88	3420	7.528	0.628
89	3480	7.535	0.635
90	3540	7.534	0.634
91	3600	7.531	0.631
92	3660	7.53	0.63
93	3720	7.532	0.632
94	3780	7.531	0.631
95	3840	7.536	0.636
96	3900	7.536	0.636
97	3960	7.538	0.638

DKB Date 10/15/18

DAJ Date 10/23/08

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
98	4020	7.54	0.64
99	4080	7.539	0.639
100	4140	7.536	0.636
101	4200	7.539	0.639
102	4260	7.54	0.64
103	4320	7.543	0.643
104	4380	7.544	0.644
105	4440	7.544	0.644
106	4500	7.545	0.645
107	4560	7.544	0.644
108	4620	7.544	0.644
109	4680	7.544	0.644
110	4740	7.543	0.643
111	4800	7.544	0.644
112	4860	7.544	0.644
113	4920	7.55	0.65
114	4980	7.544	0.644
115	5040	7.55	0.65
116	5100	7.549	0.649
117	5160	7.548	0.648
118	5220	7.549	0.649
119	5280	7.551	0.651
120	5340	7.552	0.652
121	5400	7.548	0.648
122	5460	7.55	0.65
123	5520	7.553	0.653
124	5580	7.552	0.652
125	5640	7.553	0.653
126	5700	7.555	0.655
127	5760	7.553	0.653
128	5820	7.555	0.655
129	5880	7.556	0.656
130	5940	7.555	0.655
131	6000	7.555	0.655
132	6060	7.557	0.657
133	6120	7.556	0.656
134	6180	7.555	0.655
135	6240	7.557	0.657
136	6300	7.558	0.658
137	6360	7.555	0.655
138	6420	7.556	0.656
139	6480	7.559	0.659
140	6540	7.559	0.659
141	6600	7.561	0.661
142	6660	7.557	0.657
143	6720	7.555	0.655
144	6780	7.553	0.653
145	6840	7.557	0.657
146	6900	7.557	0.657
147	6960	7.561	0.661
148	7020	7.559	0.659

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ASS 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
149	7080	7.559	0.659
150	7140	7.561	0.661
151	7200	7.567	0.667
152	7380	7.56	0.66
153	7560	7.561	0.661
154	7740	7.561	0.661
155	7920	7.564	0.664
156	8100	7.564	0.664
157	8280	7.56	0.66
158	8460	7.563	0.663
159	8640	7.572	0.672
160	8820	7.565	0.665
161	9000	7.578	0.678
162	9180	7.597	0.697
163	9360	7.61	0.71
164	9540	7.617	0.717
165	9720	7.62	0.72
166	9900	7.622	0.722
167	10080	7.626	0.726
168	10260	7.628	0.728
169	10440	7.633	0.733
170	10620	7.633	0.733
171	10800	7.634	0.734
172	11100	7.634	0.734
173	11400	7.643	0.743
174	11700	7.637	0.737
175	12000	7.64	0.74
176	12300	7.647	0.747
177	12600	7.644	0.744
178	12900	7.644	0.744
179	13200	7.645	0.745
180	13500	7.648	0.748
181	13800	7.653	0.753
182	14100	7.653	0.753
183	14400	7.651	0.751
184	15300	7.653	0.753
185	16200	7.651	0.751
186	17100	7.661	0.761
187	18000	7.672	0.772
188	18900	7.672	0.772
189	19800	7.672	0.772
190	20700	7.682	0.782
191	21600	7.682	0.782
192	22500	7.686	0.786
193	23400	7.685	0.785
194	24300	7.693	0.793
195	25200	7.697	0.797
196	26100	7.702	0.802
197	27000	7.704	0.804
198	27900	7.70	0.80
199	28800	7.701	0.801

DKB Date 10/15/08

Chk By ASF Date 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
200	29700	7.783	0.883
201	30600	7.808	0.908
202	31500	7.818	0.918
203	32400	7.821	0.921
204	33300	7.394	0.494
205	34200	7.81	0.91
206	35100	7.827	0.927
207	36000	7.831	0.931
208	36900	7.845	0.945
209	37800	7.298	0.398
210	38700	7.07	0.17
211	39600	7.019	0.119
212	40500	6.995	0.095
213	41400	7.623	0.723
214	42300	7.764	0.864
215	43200	7.797	0.897
216	44100	7.807	0.907
217	45000	7.785	0.885
218	45900	7.072	0.172
219	46800	7.011	0.111
220	47700	7.644	0.744
221	48600	7.722	0.822
222	49500	7.747	0.847
223	50400	7.763	0.863
224	51300	7.777	0.877
225	52200	7.777	0.877
226	53100	7.786	0.886
227	54000	7.657	0.757
228	54900	7.729	0.829
229	55800	7.739	0.839
230	56700	7.746	0.846
231	57600	7.75	0.85
232	58500	7.759	0.859
233	59400	7.742	0.842
234	60300	7.755	0.855
235	61200	7.767	0.867
236	62100	7.753	0.853
237	63000	7.761	0.861
238	63900	7.759	0.859
239	64800	7.771	0.871
240	65700	7.77	0.87
241	66600	7.762	0.862
242	67500	7.77	0.87
243	68400	7.777	0.877
244	69300	7.783	0.883
245	70200	7.775	0.875
246	71100	7.777	0.877
247	72000	7.783	0.883
248	72900	7.779	0.879
249	73800	7.775	0.875
250	74700	7.767	0.867

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
251	75600	7.78	0.88
252	76500	7.794	0.894
253	77400	7.801	0.901
254	78300	7.798	0.898
255	79200	7.797	0.897
256	80100	7.796	0.896
257	81000	7.787	0.887
258	81900	7.792	0.892
259	82800	7.799	0.899
260	83700	7.79	0.89
261	84600	7.79	0.89
262	85500	7.787	0.887
263	86400	7.791	0.891
264	86460	7.796	0.896
265	86520	7.724	0.824
266	86580	7.537	0.637
267	86640	7.427	0.527
268	86700	7.363	0.463
269	86760	7.311	0.411
270	86820	7.269	0.369
271	86880	7.245	0.345
272	86940	7.217	0.317
273	87000	7.203	0.303
274	87060	7.176	0.276
275	87120	7.164	0.264
276	87180	7.154	0.254
277	87240	7.145	0.245
278	87300	7.142	0.242
279	87360	7.126	0.226
280	87420	7.121	0.221
281	87480	7.115	0.215
282	87540	7.114	0.214
283	87600	7.105	0.205
284	87660	7.101	0.201
285	87720	7.095	0.195
286	87780	7.091	0.191
287	87840	7.094	0.194
288	87900	7.081	0.181
289	87960	7.081	0.181
290	88020	7.077	0.177
291	88080	7.074	0.174
292	88140	7.072	0.172
293	88200	7.066	0.166
294	88260	7.063	0.163
295	88320	7.06	0.16
296	88380	7.056	0.156
297	88440	7.052	0.152
298	88500	7.047	0.147
299	88560	7.048	0.148
300	88620	7.05	0.15
301	88680	7.052	0.152

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Checked by AJT Date 10/23/08

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
302	88740	7.054	0.154
303	88800	7.049	0.149
304	88860	7.049	0.149
305	88920	7.045	0.145
306	88980	7.047	0.147
307	89040	7.043	0.143
308	89100	7.04	0.14
309	89160	7.04	0.14
310	89220	7.038	0.138
311	89280	7.035	0.135
312	89340	7.038	0.138
313	89400	7.038	0.138
314	89460	7.039	0.139
315	89520	7.038	0.138
316	89580	7.038	0.138
317	89640	7.039	0.139
318	89700	7.04	0.14
319	89760	7.043	0.143
320	89820	7.036	0.136
321	89880	7.033	0.133
322	89940	7.031	0.131
323	90000	7.031	0.131
324	90900	7.019	0.119
325	91800	6.995	0.095
326	92700	6.992	0.092
327	93600	6.986	0.086
328	94500	6.988	0.088
329	95400	6.981	0.081
330	96300	6.971	0.071
331	97200	6.969	0.069
332	98100	6.967	0.067
333	99000	6.958	0.058
334	99900	6.958	0.058
335	100800	6.952	0.052
336	101700	6.953	0.053
337	102600	6.957	0.057
338	103500	6.949	0.049
339	104400	6.945	0.045
340	105300	6.94	0.04
341	106200	6.937	0.037
342	107100	6.931	0.031
343	108000	6.935	0.035
344	108900	6.926	0.026
345	109800	6.929	0.029
346	110700	6.932	0.032
347	111600	6.931	0.031
348	112500	6.923	0.023
349	113400	6.92	0.02
350	114300	6.917	0.017
351	115200	6.912	0.012
352	116100	6.913	0.013

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
353	117000	6.912	0.012
354	117900	6.911	0.011
355	118800	6.912	0.012
356	119700	6.908	0.008
357	120600	6.908	0.008
358	121500	6.907	0.007
359	122400	6.905	0.005
360	123300	6.907	0.007
361	124200	6.903	0.003
362	125100	6.903	0.003
363	126000	6.904	0.004
364	126900	6.901	0.001

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data Page 1 of 8

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee Test date: 3/13/2008		Discharge rate: 60 [U.S. gal/min]
Observation well: MW302A4	Static water level [ft]: 6.86	Radial distance to PW [ft]: 25.14

	Time [s]	Water Level [ft]	Drawdown [ft]
1	0	6.773	-0.087
2	5	6.787	-0.073
3	10	6.779	-0.081
4	15	6.768	-0.092
5	20	6.784	-0.076
6	25	6.766	-0.094
7	30	6.78	-0.08
8	35	6.782	-0.078
9	40	6.777	-0.083
10	45	6.781	-0.079
11	50	6.775	-0.085
12	55	6.784	-0.076
13	60	6.789	-0.071
14	70	6.786	-0.074
15	80	6.775	-0.085
16	90	6.797	-0.063
17	100	6.787	-0.073
18	110	6.775	-0.085
19	120	6.788	-0.072
20	135	6.782	-0.078
21	150	6.783	-0.077
22	165	6.771	-0.089
23	180	6.777	-0.083
24	195	6.784	-0.076
25	210	6.783	-0.077
26	225	6.784	-0.076
27	240	6.782	-0.078
28	255	6.787	-0.073
29	270	6.835	-0.025
30	285	6.879	0.019
31	300	6.932	0.072
32	330	6.982	0.122
33	360	7.031	0.171
34	390	7.075	0.215
35	420	7.099	0.239
36	450	7.113	0.253
37	480	7.121	0.261
38	510	7.141	0.281
39	540	7.153	0.293
40	570	7.178	0.318
41	600	7.17	0.31
42	660	7.221	0.361
43	720	7.223	0.363
44	780	7.224	0.364
45	840	7.24	0.38
46	900	7.252	0.392

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
47	960	7.263	0.403
48	1020	7.272	0.412
49	1080	7.275	0.415
50	1140	7.278	0.418
51	1200	7.293	0.433
52	1260	7.275	0.415
53	1320	7.294	0.434
54	1380	7.295	0.435
55	1440	7.328	0.468
56	1500	7.353	0.493
57	1560	7.357	0.497
58	1620	7.363	0.503
59	1680	7.379	0.519
60	1740	7.39	0.53
61	1800	7.388	0.528
62	1860	7.397	0.537
63	1920	7.399	0.539
64	1980	7.422	0.562
65	2040	7.424	0.564
66	2100	7.417	0.557
67	2160	7.411	0.551
68	2220	7.415	0.555
69	2280	7.409	0.549
70	2340	7.413	0.553
71	2400	7.421	0.561
72	2460	7.416	0.556
73	2520	7.428	0.568
74	2580	7.436	0.576
75	2640	7.433	0.573
76	2700	7.44	0.58
77	2760	7.451	0.591
78	2820	7.431	0.571
79	2880	7.422	0.562
80	2940	7.448	0.588
81	3000	7.44	0.58
82	3060	7.436	0.576
83	3120	7.44	0.58
84	3180	7.44	0.58
85	3240	7.451	0.591
86	3300	7.441	0.581
87	3360	7.457	0.597
88	3420	7.452	0.592
89	3480	7.454	0.594
90	3540	7.459	0.599
91	3600	7.465	0.605
92	3660	7.468	0.608
93	3720	7.457	0.597
94	3780	7.456	0.596
95	3840	7.447	0.587
96	3900	7.462	0.602
97	3960	7.458	0.598

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Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
98	4020	7.469	0.609
99	4080	7.45	0.59
100	4140	7.467	0.607
101	4200	7.464	0.604
102	4260	7.469	0.609
103	4320	7.472	0.612
104	4380	7.464	0.604
105	4440	7.466	0.606
106	4500	7.467	0.607
107	4560	7.466	0.606
108	4620	7.468	0.608
109	4680	7.475	0.615
110	4740	7.468	0.608
111	4800	7.473	0.613
112	4860	7.474	0.614
113	4920	7.471	0.611
114	4980	7.468	0.608
115	5040	7.47	0.61
116	5100	7.468	0.608
117	5160	7.472	0.612
118	5220	7.474	0.614
119	5280	7.472	0.612
120	5340	7.474	0.614
121	5400	7.482	0.622
122	5460	7.47	0.61
123	5520	7.475	0.615
124	5580	7.473	0.613
125	5640	7.476	0.616
126	5700	7.472	0.612
127	5760	7.472	0.612
128	5820	7.47	0.61
129	5880	7.467	0.607
130	5940	7.478	0.618
131	6000	7.472	0.612
132	6060	7.489	0.629
133	6120	7.486	0.626
134	6180	7.482	0.622
135	6240	7.478	0.618
136	6300	7.484	0.624
137	6360	7.475	0.615
138	6420	7.472	0.612
139	6480	7.478	0.618
140	6540	7.469	0.609
141	6600	7.484	0.624
142	6660	7.481	0.621
143	6720	7.489	0.629
144	6780	7.486	0.626
145	6840	7.486	0.626
146	6900	7.491	0.631
147	6960	7.489	0.629
148	7020	7.472	0.612

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Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
149	7080	7.483	0.623
150	7140	7.50	0.64
151	7200	7.492	0.632
152	7380	7.481	0.621
153	7560	7.489	0.629
154	7740	7.481	0.621
155	7920	7.493	0.633
156	8100	7.497	0.637
157	8280	7.492	0.632
158	8460	7.487	0.627
159	8640	7.488	0.628
160	8820	7.501	0.641
161	9000	7.494	0.634
162	9180	7.491	0.631
163	9360	7.521	0.661
164	9540	7.539	0.679
165	9720	7.537	0.677
166	9900	7.551	0.691
167	10080	7.549	0.689
168	10260	7.541	0.681
169	10440	7.546	0.686
170	10620	7.554	0.694
171	10800	7.566	0.706
172	11100	7.551	0.691
173	11400	7.568	0.708
174	11700	7.561	0.701
175	12000	7.563	0.703
176	12300	7.573	0.713
177	12600	7.563	0.703
178	12900	7.572	0.712
179	13200	7.558	0.698
180	13500	7.566	0.706
181	13800	7.567	0.707
182	14100	7.586	0.726
183	14400	7.581	0.721
184	15300	7.577	0.717
185	16200	7.585	0.725
186	17100	7.581	0.721
187	18000	7.59	0.73
188	18900	7.592	0.732
189	19800	7.596	0.736
190	20700	7.597	0.737
191	21600	7.602	0.742
192	22500	7.596	0.736
193	23400	7.605	0.745
194	24300	7.611	0.751
195	25200	7.616	0.756
196	26100	7.627	0.767
197	27000	7.633	0.773
198	27900	7.622	0.762
199	28800	7.632	0.772

DKB 10/15/08

GJS 10/23/08

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
200	29700	7.703	0.843
201	30600	7.739	0.879
202	31500	7.745	0.885
203	32400	7.745	0.885
204	33300	7.743	0.883
205	34200	7.733	0.873
206	35100	7.743	0.883
207	36000	7.753	0.893
208	36900	7.765	0.905
209	37800	7.484	0.624
210	38700	7.026	0.166
211	39600	6.98	0.12
212	40500	6.953	0.093
213	41400	7.453	0.593
214	42300	7.682	0.822
215	43200	7.727	0.867
216	44100	7.731	0.871
217	45000	7.74	0.88
218	45900	7.062	0.202
219	46800	6.982	0.122
220	47700	7.533	0.673
221	48600	7.643	0.783
222	49500	7.684	0.824
223	50400	7.69	0.83
224	51300	7.719	0.859
225	52200	7.70	0.84
226	53100	7.72	0.86
227	54000	7.517	0.657
228	54900	7.658	0.798
229	55800	7.667	0.807
230	56700	7.677	0.817
231	57600	7.686	0.826
232	58500	7.685	0.825
233	59400	7.682	0.822
234	60300	7.677	0.817
235	61200	7.695	0.835
236	62100	7.684	0.824
237	63000	7.683	0.823
238	63900	7.702	0.842
239	64800	7.688	0.828
240	65700	7.705	0.845
241	66600	7.691	0.831
242	67500	7.694	0.834
243	68400	7.713	0.853
244	69300	7.698	0.838
245	70200	7.711	0.851
246	71100	7.712	0.852
247	72000	7.728	0.868
248	72900	7.731	0.871
249	73800	7.714	0.854
250	74700	7.707	0.847

Prepared By: DKB Date: 10/15/08

Checked By: AJT Date: 11/22/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
251	75600	7.719	0.859
252	76500	7.728	0.868
253	77400	7.728	0.868
254	78300	7.729	0.869
255	79200	7.723	0.863
256	80100	7.732	0.872
257	81000	7.723	0.863
258	81900	7.745	0.885
259	82800	7.735	0.875
260	83700	7.74	0.88
261	84600	7.733	0.873
262	85500	7.718	0.858
263	86400	7.732	0.872
264	86460	7.723	0.863
265	86520	7.732	0.872
266	86580	7.731	0.871
267	86640	7.728	0.868
268	86700	7.657	0.797
269	86760	7.487	0.627
270	86820	7.38	0.52
271	86880	7.322	0.462
272	86940	7.272	0.412
273	87000	7.244	0.384
274	87060	7.214	0.354
275	87120	7.182	0.322
276	87180	7.181	0.321
277	87240	7.159	0.299
278	87300	7.139	0.279
279	87360	7.127	0.267
280	87420	7.122	0.262
281	87480	7.11	0.25
282	87540	7.099	0.239
283	87600	7.097	0.237
284	87660	7.106	0.246
285	87720	7.088	0.228
286	87780	7.086	0.226
287	87840	7.083	0.223
288	87900	7.067	0.207
289	87960	7.074	0.214
290	88020	7.068	0.208
291	88080	7.061	0.201
292	88140	7.062	0.202
293	88200	7.061	0.201
294	88260	7.061	0.201
295	88320	7.063	0.203
296	88380	7.047	0.187
297	88440	7.045	0.185
298	88500	7.047	0.187
299	88560	7.04	0.18
300	88620	7.045	0.185
301	88680	7.035	0.175

DKB 10/15/08
RAJ 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
302	88740	7.039	0.179
303	88800	7.033	0.173
304	88860	7.024	0.164
305	88920	7.039	0.179
306	88980	7.032	0.172
307	89040	7.017	0.157
308	89100	7.014	0.154
309	89160	7.02	0.16
310	89220	7.028	0.168
311	89280	7.02	0.16
312	89340	7.014	0.154
313	89400	7.007	0.147
314	89460	7.019	0.159
315	89520	7.017	0.157
316	89580	7.025	0.165
317	89640	7.022	0.162
318	89700	7.024	0.164
319	89760	7.021	0.161
320	89820	7.018	0.158
321	89880	7.03	0.17
322	89940	7.018	0.158
323	90000	7.01	0.15
324	90900	6.991	0.131
325	91800	6.968	0.108
326	92700	6.963	0.103
327	93600	6.964	0.104
328	94500	6.964	0.104
329	95400	6.96	0.10
330	96300	6.949	0.089
331	97200	6.945	0.085
332	98100	6.933	0.073
333	99000	6.934	0.074
334	99900	6.931	0.071
335	100800	6.924	0.064
336	101700	6.916	0.056
337	102600	6.93	0.07
338	103500	6.911	0.051
339	104400	6.903	0.043
340	105300	6.92	0.06
341	106200	6.92	0.06
342	107100	6.898	0.038
343	108000	6.912	0.052
344	108900	6.914	0.054
345	109800	6.905	0.045
346	110700	6.896	0.036
347	111600	6.909	0.049
348	112500	6.903	0.043
349	113400	6.886	0.026
350	114300	6.897	0.037
351	115200	6.893	0.033
352	116100	6.882	0.022

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R.J.F 10/23/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	Drawdown [ft]
353	117000	6.889	0.029
354	117900	6.886	0.026
355	118800	6.88	0.02
356	119700	6.882	0.022
357	120600	6.885	0.025
358	121500	6.878	0.018
359	122400	6.888	0.028
360	123300	6.887	0.027
361	124200	6.873	0.013
362	125100	6.88	0.02
363	126000	6.877	0.017
364	126900	6.89	0.03
365	127800	6.881	0.021
366	128700	6.875	0.015
367	129600	6.887	0.027

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AS 10/23/08

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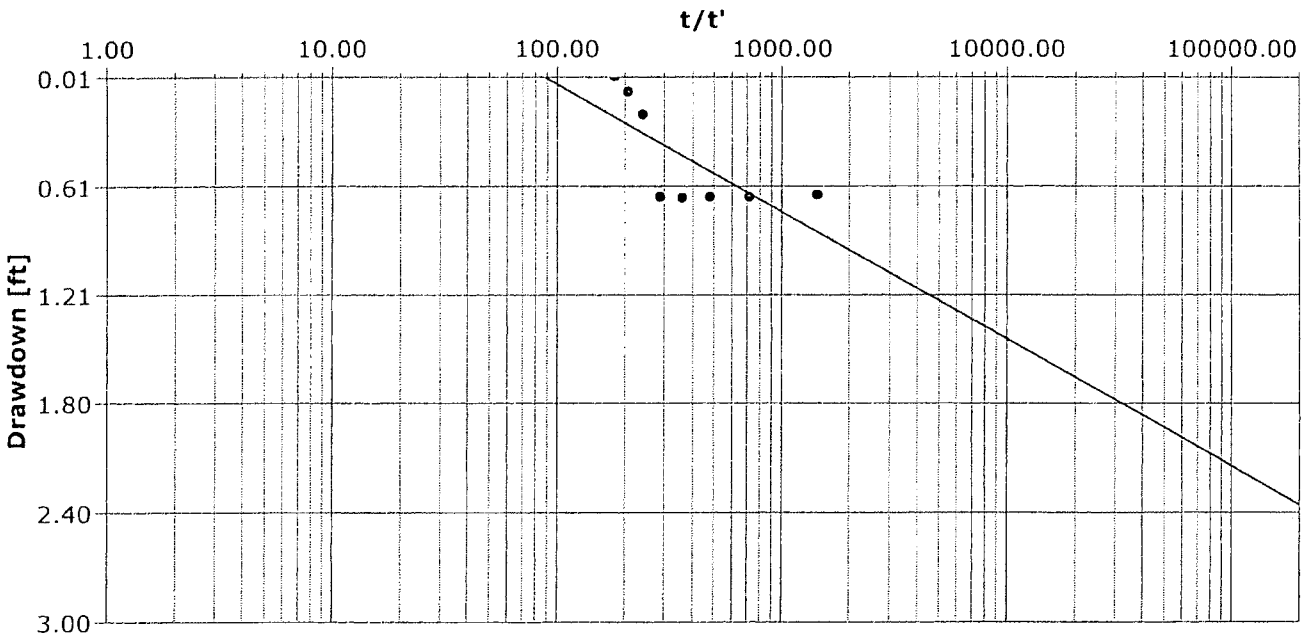
Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Analysis performed by: Daniel Bansah	Theis Recovery	Analysis date: 4/1/2008
Aquifer Thickness: 18.00 ft	Discharge: variable, average rate 59.669 [U.S. gal/min]	



Calculation after Theis & Jacob

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Radial distance to PW [ft]	
MW302A2	$3.00 \quad 10^{3}$	$1.67 \quad 10^{2}$	10.0	

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AJT 10/23/08

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Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Aquifer Thickness: 18.00 ft	Discharge: variable, average rate 59.669 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Theis Recovery	Daniel Bansah	4/1/2008	Theis Recovery	$3.00 \quad 10^{3}$	$1.67 \quad 10^{2}$	$8.60 \quad 10^{1}$

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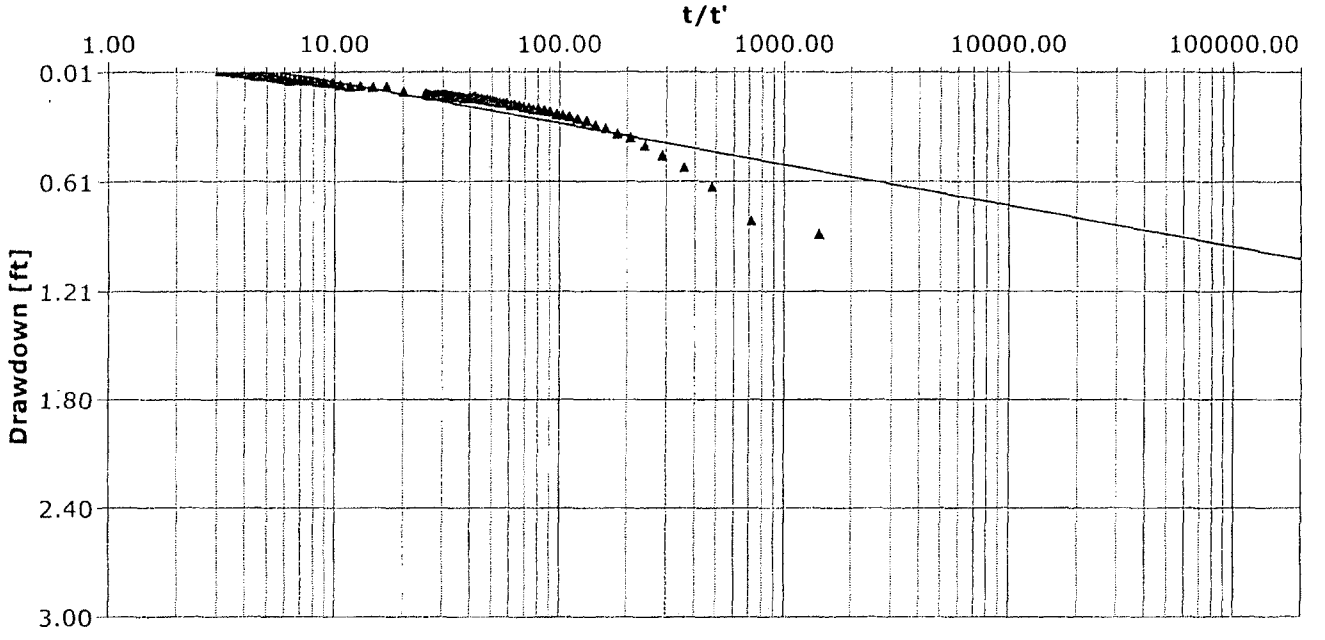
~~10/23/08~~ 10/23/08
ASY.

Sheet No. _____ of

Paul C. Rizzo Associates, Inc. ENGINEERS & CONSULTANTS	Pumping Test Analysis Report
	Project: Bell Bend NPP
	Number: 07-3891
	Client: UniStar

Location: Berwick, PA	Pumping Test: MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Analysis performed by: Daniel Bansah	Theis Recovery	Analysis date: 4/1/2008
Aquifer Thickness: 18.00 ft	Discharge: variable, average rate 40.851 [U.S. gal/min]	



Calculation after Theis & Jacob

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Radial distance to PW [ft]	
MW302A3	6.43 10^3	3.57 10^2	20.0	

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Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Aquifer Thickness: 18.00 ft	Discharge: variable, average rate 40.851 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Theis Recovery	Daniel Bansah	4/1/2008	Theis Recovery	$6.43 \quad 10^{3}$	$3.57 \quad 10^{2}$	$5.04 \quad 10^{0}$

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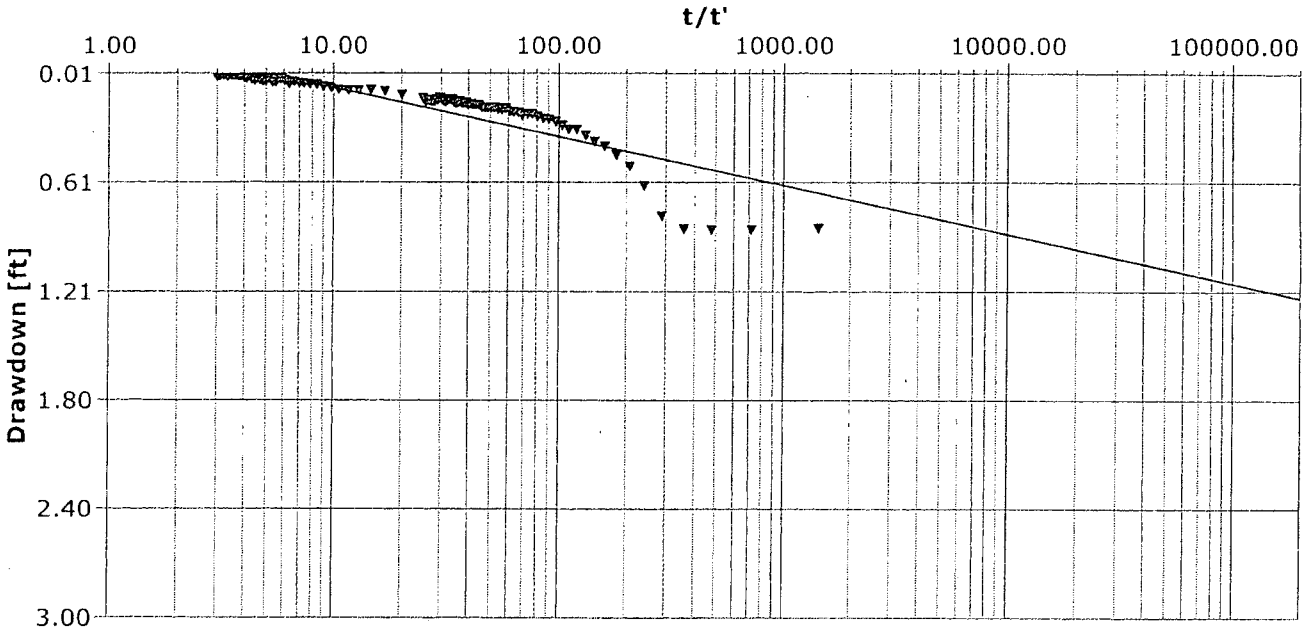
Sheet No. of

Paul C. Rizzo Associates, Inc. ENGINEERS & CONSULTANTS	Pumping Test Analysis Report
	Project: Bell Bend NPP
	Number: 07-3891
	Client: UniStar

Location: Berwick, PA	Pumping Test: MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Analysis performed by: Daniel Bansah	Theis Recovery	Analysis date: 4/1/2008
Aquifer Thickness: 18.00 ft	Discharge: variable, average rate 40 [U.S. gal/min]	



Calculation after Theis & Jacob

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Radial distance to PW [ft]	
MW302A4	5.26 10^3	2.92 10^2	10.0	

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Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Aquifer Thickness: 18.00 ft	Discharge: variable, average rate 40 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	T [ft²/d]	K [ft/d]	S
1	Theis Recovery	Daniel Bansah	4/1/2008	Theis Recovery	$5.26 \quad 10^{3}$	$2.92 \quad 10^{2}$	$4.65 \quad 10^{0}$

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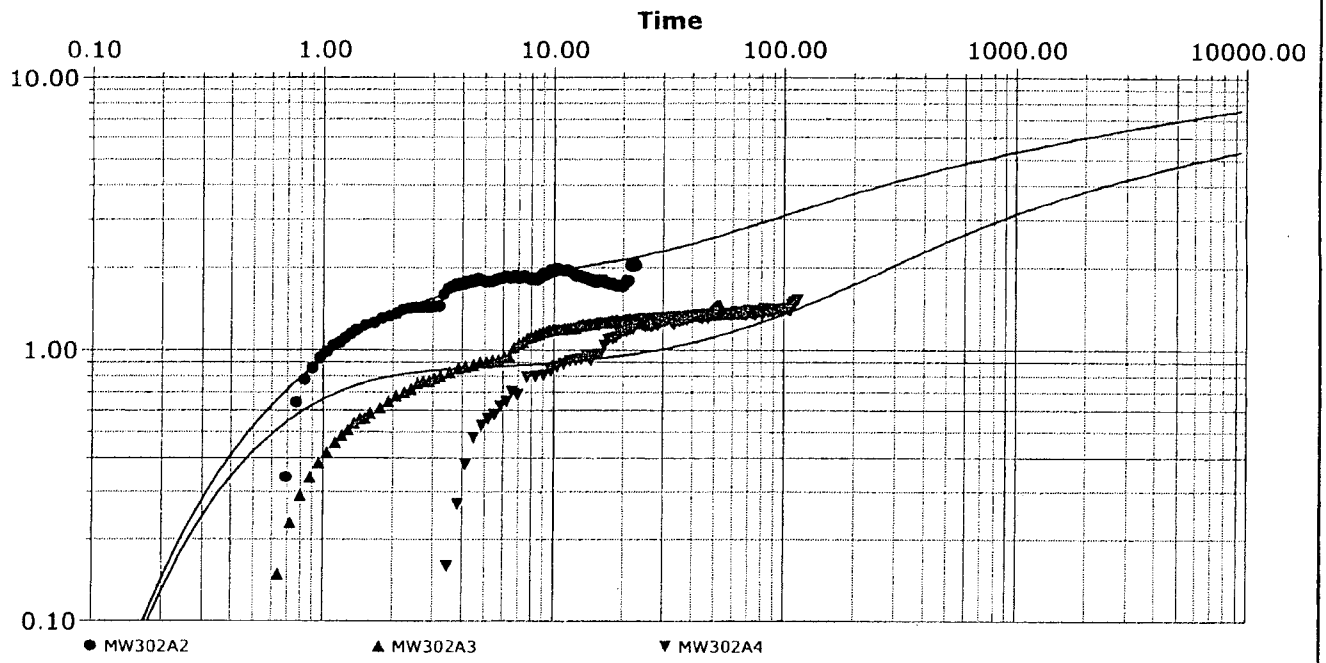
Sheet No. of

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Pumping Test: Pumping Test MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Analysis performed by: Daniel Bnasah	Boulton	Analysis date: 3/14/2008
Aquifer Thickness: 18.00 ft	Discharge rate: 60 [U.S. gal/min]	



Calculation after Boulton

Observation well	Transmissivity [ft²/d]	Hydraulic Conductivity [ft/d]	Specific Yield	Drainage factor	Ratio Sy/S	Radial distance to PW [ft]
MW302A2	$1.98 \; 10^{3}$	$1.10 \; 10^{2}$	$5.00 \; 10^{-1}$	$2.46 \; 10^{-2}$	$1.00 \; 10^{1}$	14.07
MW302A3	$1.85 \; 10^{3}$	$1.03 \; 10^{2}$	$2.53 \; 10^{-1}$	$1.00 \; 10^{-2}$	$1.00 \; 10^{2}$	39.82
MW302A4	$2.03 \; 10^{3}$	$1.13 \; 10^{2}$	$3.22 \; 10^{-1}$	$1.00 \; 10^{-2}$	$1.00 \; 10^{2}$	25.14
Average	$1.96 \; 10^{3}$	$1.09 \; 10^{2}$	$3.58 \; 10^{-1}$	$1.49 \; 10^{-2}$	$7.00 \; 10^{1}$	

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RJT 10/22/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Pumping Test Analysis Report
Sheet No. _____ of _____

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Pumping Test: Pumping Test MW302A1	Pumping well: MW302A1
Test conducted by: Anthony Fabina/Phillip Vanderlee		Test date: 3/13/2008
Aquifer Thickness: 18.00 ft	Discharge rate: 60 [U.S. gal/min]	

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Boulton	Daniel Bnasah	3/14/2008	Boulton	MW302A2	$1.98 \ 10^{3}$	$1.10 \ 10^{2}$	$5.00 \ 10^{-1}$
2	Boulton	Daniel Bnasah	3/14/2008	Boulton	MW302A3	$1.85 \ 10^{3}$	$1.03 \ 10^{2}$	$2.53 \ 10^{-1}$
3	Boulton	Daniel Bnasah	3/14/2008	Boulton	MW302A4	$2.03 \ 10^{3}$	$1.13 \ 10^{2}$	$3.22 \ 10^{-1}$

DKB 10/15/08
AJS 10/23/08

Report Date: 1/2/2008 14:49
Report User Name Administrator
Report Computer Name:

Log File Properties

File Name	Pump test MW 301B2 2007-12-08 08.07.35.wsl
Create Date	12/8/2007 8:07

Device Properties

Device	Unknown	
Site	Berwick	PA-Unit
Device Name		
Serial Number	106449	
Firmware Version	2.07	

Log Configuration

Log Name	Pump test MW 301B2
Created By	Daniel Bansah
Computer Name	Field PC
Application	WinSituMobile.exe
Application Version	5.4.1.4
Create Date	12/6/2007 11:28
Notes Size(bytes)	4096
Type	Step Linear
Overwrite when full	Disabled
Scheduled Start	12/6/2007 12:00
Scheduled Stop	12/8/2007 0:00

Steps 9

Step: 1
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 05

Step: 2
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 10

Step: 3
Duration: Days: 0 Hours: 00 Mins: 03 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 15

Step: 4
Duration: Days: 0 Hours: 00 Mins: 05 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 30

Step: 5
Duration: Days: 0 Hours: 01 Mins: 50 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00

Step: 6
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 03 Secs: 00

Step: 7
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 05 Secs: 00

Step: 8
Duration: Days: 0 Hours: 20 Mins: 00 Secs: 00

Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00
Step: 9
Duration: Days: 0 Hours: 12 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00

Step	9
Duration	Days: 0 Hours: 12 Mins: 00 Secs: 00
Interval	Days: 0 Hours: 00 Mins: 01 Secs: 00

Level Reference Settings At Log Creation

Level Measureme	Level-DTW
Specific Grav	0.999
Level Reference	Set new reference
Level Reference	8.91 (ft)
Level Reference Hea	32.4171 (PSI)
Temperatu	51.8382 (F)
Depth of Prc	74.8336 (ft)

Log Notes:

Date and Time	Note
12/6/2007 11:29	User Note: "Level reference initialized to: 8.91"
12/6/2007 13:27	User Note: "Downloading log - Used Batt: 14% Memory: 3% User: Unknown"
12/7/2007 8:30	User Note: "Downloading log - Used Batt: 14% Memory: 3% User: Unknown"
12/7/2007 17:16	User Note: "Downloading log - Used Batt: 14% Memory: 3% User: Unknown"

Log Data:

Record Count 983

Date and Time	Elapsed Time Seconds	Sensor: Pres 30G SN#: 106449 Pressure (PSI)	Sensor: Pr Temperatu	Sensor: Pres 30G SN#: 1064 SN#: 106449 Level-DTW (ft)
12/6/2007 12:00	0.00	32.378	51.787	9.001
12/6/2007 12:00	5.00	32.372	51.789	9.013
12/6/2007 12:00	10.00	32.372	51.791	9.015
12/6/2007 12:00	15.00	32.377	51.795	9.003
12/6/2007 12:00	20.00	32.371	51.792	9.017
12/6/2007 12:00	25.00	32.371	51.798	9.017
12/6/2007 12:00	30.00	32.369	51.8	9.021
12/6/2007 12:00	35.00	32.376	51.789	9.005
12/6/2007 12:00	40.00	32.376	51.797	9.005
12/6/2007 12:00	45.00	32.371	51.794	9.016
12/6/2007 12:00	50.00	32.371	51.795	9.017
12/6/2007 12:00	55.00	32.378	51.798	8.999
12/6/2007 12:01	60.00	32.37	51.797	9.019
12/6/2007 12:01	70.00	32.368	51.796	9.024
12/6/2007 12:01	80.00	32.363	51.798	9.035
12/6/2007 12:01	90.00	32.369	51.796	9.021
12/6/2007 12:01	100.00	32.361	51.799	9.039
12/6/2007 12:01	110.00	32.362	51.798	9.036

12/6/2007 12:02	120.00	32.362	51.797	9.037
12/6/2007 12:02	135.00	32.359	51.798	9.044
12/6/2007 12:02	150.00	32.357	51.793	9.05
12/6/2007 12:02	165.00	32.364	51.792	9.034
12/6/2007 12:03	180.00	32.357	51.794	9.049
12/6/2007 12:03	195.00	32.355	51.8	9.053
12/6/2007 12:03	210.00	32.354	51.796	9.056
12/6/2007 12:03	225.00	32.339	51.794	9.09
12/6/2007 12:04	240.00	32.335	51.795	9.099
12/6/2007 12:04	255.00	32.328	51.794	9.116
12/6/2007 12:04	270.00	32.322	51.798	9.129
12/6/2007 12:04	285.00	32.313	51.797	9.15
12/6/2007 12:05	300.00	32.3	51.794	9.181
12/6/2007 12:05	330.00	32.286	51.794	9.213
12/6/2007 12:06	360.00	32.267	51.789	9.257
12/6/2007 12:06	390.00	32.245	51.792	9.308
12/6/2007 12:07	420.00	32.233	51.792	9.336
12/6/2007 12:07	450.00	32.211	51.789	9.387
12/6/2007 12:08	480.00	32.193	51.792	9.429
12/6/2007 12:08	510.00	32.175	51.797	9.47
12/6/2007 12:09	540.00	32.148	51.789	9.531
12/6/2007 12:09	570.00	32.126	51.787	9.583
12/6/2007 12:10	600.00	32.114	51.788	9.61
12/6/2007 12:11	660.00	32.084	51.791	9.679
12/6/2007 12:12	720.00	32.051	51.791	9.755
12/6/2007 12:13	780.00	32.025	51.787	9.816
12/6/2007 12:14	840.00	32.001	51.787	9.871
12/6/2007 12:15	900.00	32.006	51.788	9.86
12/6/2007 12:16	960.00	32	51.784	9.873
12/6/2007 12:17	1020.00	31.988	51.786	9.902
12/6/2007 12:18	1080.00	31.983	51.79	9.913
12/6/2007 12:19	1140.00	31.972	51.783	9.939
12/6/2007 12:20	1200.00	31.956	51.791	9.974
12/6/2007 12:21	1260.00	31.97	51.786	9.943
12/6/2007 12:22	1320.00	31.954	51.785	9.979
12/6/2007 12:23	1380.00	31.943	51.786	10.004
12/6/2007 12:24	1440.00	31.895	51.78	10.115
12/6/2007 12:25	1500.00	31.905	51.783	10.092
12/6/2007 12:26	1560.00	31.907	51.78	10.087
12/6/2007 12:27	1620.00	31.899	51.779	10.107
12/6/2007 12:28	1680.00	31.889	51.784	10.129
12/6/2007 12:29	1740.00	31.878	51.778	10.155
12/6/2007 12:30	1800.00	31.863	51.781	10.19
12/6/2007 12:31	1860.00	31.852	51.783	10.215
12/6/2007 12:32	1920.00	31.85	51.781	10.22
12/6/2007 12:33	1980.00	31.848	51.781	10.223
12/6/2007 12:34	2040.00	31.848	51.783	10.224
12/6/2007 12:35	2100.00	31.842	51.776	10.238
12/6/2007 12:36	2160.00	31.835	51.782	10.254
12/6/2007 12:37	2220.00	31.834	51.78	10.256
12/6/2007 12:38	2280.00	31.826	51.78	10.275
12/6/2007 12:39	2340.00	31.832	51.781	10.261

12/6/2007 12:40	2400.00	31.822	51.776	10.284
12/6/2007 12:41	2460.00	31.811	51.775	10.31
12/6/2007 12:42	2520.00	31.808	51.778	10.316
12/6/2007 12:43	2580.00	31.803	51.776	10.328
12/6/2007 12:44	2640.00	31.815	51.777	10.3
12/6/2007 12:45	2700.00	31.849	51.779	10.221
12/6/2007 12:46	2760.00	31.859	51.769	10.198
12/6/2007 12:47	2820.00	31.876	51.775	10.158
12/6/2007 12:48	2880.00	31.881	51.775	10.148
12/6/2007 12:49	2940.00	31.888	51.77	10.132
12/6/2007 12:50	3000.00	31.906	51.77	10.089
12/6/2007 12:51	3060.00	31.903	51.767	10.096
12/6/2007 12:52	3120.00	31.898	51.765	10.109
12/6/2007 12:53	3180.00	31.907	51.767	10.087
12/6/2007 12:54	3240.00	31.895	51.765	10.116
12/6/2007 12:55	3300.00	31.884	51.76	10.14
12/6/2007 12:56	3360.00	31.884	51.763	10.141
12/6/2007 12:57	3420.00	31.906	51.76	10.09
12/6/2007 12:58	3480.00	31.898	51.763	10.11
12/6/2007 12:59	3540.00	31.898	51.761	10.108
12/6/2007 13:00	3600.00	31.89	51.764	10.128
12/6/2007 13:01	3660.00	31.887	51.763	10.134
12/6/2007 13:02	3720.00	31.862	51.766	10.193
12/6/2007 13:03	3780.00	31.858	51.756	10.2
12/6/2007 13:04	3840.00	31.871	51.768	10.17
12/6/2007 13:05	3900.00	31.865	51.761	10.185
12/6/2007 13:06	3960.00	31.844	51.762	10.233
12/6/2007 13:07	4020.00	31.838	51.76	10.247
12/6/2007 13:08	4080.00	31.839	51.764	10.245
12/6/2007 13:09	4140.00	31.826	51.758	10.274
12/6/2007 13:10	4200.00	31.82	51.76	10.289
12/6/2007 13:11	4260.00	31.825	51.761	10.278
12/6/2007 13:12	4320.00	31.832	51.758	10.26
12/6/2007 13:13	4380.00	31.813	51.765	10.305
12/6/2007 13:14	4440.00	31.805	51.765	10.323
12/6/2007 13:15	4500.00	31.815	51.762	10.3
12/6/2007 13:16	4560.00	31.824	51.765	10.279
12/6/2007 13:17	4620.00	31.822	51.767	10.283
12/6/2007 13:18	4680.00	31.82	51.765	10.289
12/6/2007 13:19	4740.00	31.809	51.765	10.315
12/6/2007 13:20	4800.00	31.825	51.762	10.277
12/6/2007 13:21	4860.00	31.82	51.767	10.289
12/6/2007 13:22	4920.00	31.804	51.769	10.325
12/6/2007 13:23	4980.00	31.779	51.771	10.383
12/6/2007 13:24	5040.00	31.75	51.771	10.45
12/6/2007 13:25	5100.00	31.742	51.773	10.47
12/6/2007 13:26	5160.00	31.737	51.768	10.481
12/6/2007 13:27	5220.00	31.745	51.773	10.462
12/6/2007 13:28	5280.00	31.954	51.781	9.979
12/6/2007 13:29	5340.00	31.96	51.787	9.965
12/6/2007 13:30	5400.00	31.945	51.786	9.999
12/6/2007 13:31	5460.00	31.931	51.779	10.032

12/6/2007 13:32	5520.00	31.916	51.778	10.066
12/6/2007 13:33	5580.00	31.914	51.779	10.07
12/6/2007 13:34	5640.00	31.909	51.781	10.084
12/6/2007 13:35	5700.00	31.913	51.782	10.073
12/6/2007 13:36	5760.00	31.913	51.787	10.074
12/6/2007 13:37	5820.00	31.916	51.783	10.067
12/6/2007 13:38	5880.00	31.909	51.781	10.083
12/6/2007 13:39	5940.00	31.919	51.787	10.059
12/6/2007 13:40	6000.00	31.914	51.784	10.071
12/6/2007 13:41	6060.00	31.924	51.789	10.048
12/6/2007 13:42	6120.00	31.926	51.792	10.045
12/6/2007 13:43	6180.00	31.923	51.792	10.051
12/6/2007 13:44	6240.00	31.926	51.798	10.044
12/6/2007 13:45	6300.00	31.925	51.793	10.047
12/6/2007 13:46	6360.00	31.935	51.8	10.024
12/6/2007 13:47	6420.00	31.93	51.793	10.036
12/6/2007 13:48	6480.00	31.92	51.798	10.057
12/6/2007 13:49	6540.00	31.923	51.8	10.051
12/6/2007 13:50	6600.00	31.926	51.797	10.045
12/6/2007 13:51	6660.00	31.926	51.798	10.045
12/6/2007 13:52	6720.00	31.919	51.804	10.059
12/6/2007 13:53	6780.00	31.934	51.801	10.026
12/6/2007 13:54	6840.00	31.934	51.804	10.025
12/6/2007 13:55	6900.00	31.938	51.803	10.017
12/6/2007 13:56	6960.00	31.934	51.81	10.026
12/6/2007 13:57	7020.00	31.931	51.816	10.033
12/6/2007 13:58	7080.00	31.935	51.81	10.023
12/6/2007 13:59	7140.00	31.934	51.817	10.025
12/6/2007 14:00	7200.00	31.928	51.814	10.038
12/6/2007 14:03	7380.00	31.947	51.81	9.996
12/6/2007 14:06	7560.00	31.921	51.82	10.056
12/6/2007 14:09	7740.00	31.918	51.828	10.063
12/6/2007 14:12	7920.00	31.931	51.828	10.033
12/6/2007 14:15	8100.00	31.95	51.826	9.989
12/6/2007 14:18	8280.00	31.941	51.836	10.01
12/6/2007 14:21	8460.00	31.948	51.842	9.992
12/6/2007 14:24	8640.00	31.937	51.842	10.02
12/6/2007 14:27	8820.00	31.935	51.842	10.022
12/6/2007 14:30	9000.00	31.933	51.845	10.028
12/6/2007 14:33	9180.00	31.932	51.85	10.03
12/6/2007 14:36	9360.00	31.951	51.846	9.987
12/6/2007 14:39	9540.00	31.944	51.859	10.002
12/6/2007 14:42	9720.00	31.946	51.855	9.997
12/6/2007 14:45	9900.00	31.938	51.862	10.017
12/6/2007 14:48	10080.00	31.93	51.855	10.036
12/6/2007 14:51	10260.00	31.912	51.857	10.077
12/6/2007 14:54	10440.00	31.942	51.864	10.008
12/6/2007 14:57	10620.00	31.947	51.867	9.995
12/6/2007 15:00	10800.00	31.944	51.873	10.001
12/6/2007 15:05	11100.00	31.946	51.878	9.998
12/6/2007 15:10	11400.00	31.945	51.878	10.001
12/6/2007 15:15	11700.00	31.948	51.884	9.993

12/6/2007 15:20	12000.00	31.949	51.888	9.991
12/6/2007 15:25	12300.00	31.946	51.898	9.998
12/6/2007 15:30	12600.00	31.95	51.899	9.988
12/6/2007 15:35	12900.00	31.947	51.897	9.994
12/6/2007 15:40	13200.00	31.942	51.903	10.007
12/6/2007 15:45	13500.00	31.946	51.907	9.999
12/6/2007 15:50	13800.00	31.942	51.914	10.006
12/6/2007 15:55	14100.00	31.951	51.908	9.986
12/6/2007 16:00	14400.00	31.945	51.915	10.001
12/6/2007 16:15	15300.00	31.97	51.914	9.941
12/6/2007 16:30	16200.00	31.953	51.926	9.982
12/6/2007 16:45	17100.00	31.945	51.926	10
12/6/2007 17:00	18000.00	31.952	51.93	9.983
12/6/2007 17:15	18900.00	31.945	51.936	9.999
12/6/2007 17:30	19800.00	31.941	51.946	10.009
12/6/2007 17:45	20700.00	31.944	51.944	10.002
12/6/2007 18:00	21600.00	31.943	51.946	10.004
12/6/2007 18:15	22500.00	31.944	51.949	10.003
12/6/2007 18:30	23400.00	31.944	51.948	10.002
12/6/2007 18:45	24300.00	31.947	51.95	9.996
12/6/2007 19:00	25200.00	31.946	51.959	9.999
12/6/2007 19:15	26100.00	31.939	51.96	10.013
12/6/2007 19:30	27000.00	31.938	51.961	10.017
12/6/2007 19:45	27900.00	31.94	51.971	10.012
12/6/2007 20:00	28800.00	31.943	51.964	10.005
12/6/2007 20:15	29700.00	31.94	51.964	10.011
12/6/2007 20:30	30600.00	31.938	51.965	10.017
12/6/2007 20:45	31500.00	31.939	51.967	10.013
12/6/2007 21:00	32400.00	31.937	51.971	10.018
12/6/2007 21:15	33300.00	31.94	51.972	10.012
12/6/2007 21:30	34200.00	31.934	51.973	10.025
12/6/2007 21:45	35100.00	31.939	51.971	10.014
12/6/2007 22:00	36000.00	31.937	51.969	10.018
12/6/2007 22:15	36900.00	31.937	51.974	10.019
12/6/2007 22:30	37800.00	31.937	51.981	10.017
12/6/2007 22:45	38700.00	31.938	51.98	10.017
12/6/2007 23:00	39600.00	31.938	51.981	10.017
12/6/2007 23:15	40500.00	31.939	51.981	10.015
12/6/2007 23:30	41400.00	31.934	51.985	10.026
12/6/2007 23:45	42300.00	31.937	51.984	10.019
12/7/2007 0:00	43200.00	31.936	51.984	10.02
12/7/2007 0:15	44100.00	31.933	51.986	10.027
12/7/2007 0:30	45000.00	31.937	51.986	10.017
12/7/2007 0:45	45900.00	31.936	51.992	10.022
12/7/2007 1:00	46800.00	31.936	51.993	10.022
12/7/2007 1:15	47700.00	31.936	51.991	10.022
12/7/2007 1:30	48600.00	31.936	51.994	10.02
12/7/2007 1:45	49500.00	31.935	51.992	10.022
12/7/2007 2:00	50400.00	31.941	51.989	10.009
12/7/2007 2:15	51300.00	31.933	51.998	10.028
12/7/2007 2:30	52200.00	31.934	51.995	10.025
12/7/2007 2:45	53100.00	31.94	51.996	10.012

12/7/2007 3:00	54000.00	31.938	51.998	10.01
12/7/2007 3:15	54900.00	31.94	51.996	10.012
12/7/2007 3:30	55800.00	31.931	51.992	10.033
12/7/2007 3:45	56700.00	31.93	52	10.035
12/7/2007 4:00	57600.00	31.928	52	10.04
12/7/2007 4:15	58500.00	31.929	52.002	10.036
12/7/2007 4:30	59400.00	31.93	52.002	10.035
12/7/2007 4:45	60300.00	31.929	52	10.037
12/7/2007 5:00	61200.00	31.926	52.003	10.045
12/7/2007 5:15	62100.00	31.931	52.005	10.032
12/7/2007 5:30	63000.00	31.921	51.998	10.055
12/7/2007 5:45	63900.00	31.925	52.002	10.047
12/7/2007 6:00	64800.00	31.933	52.001	10.028
12/7/2007 6:15	65700.00	31.926	52.008	10.043
12/7/2007 6:30	66600.00	31.922	52.008	10.053
12/7/2007 6:45	67500.00	31.93	52.007	10.036
12/7/2007 7:00	68400.00	31.922	52.001	10.054
12/7/2007 7:15	69300.00	31.915	52.006	10.069
12/7/2007 7:30	70200.00	31.923	52.008	10.05
12/7/2007 7:45	71100.00	31.914	52.008	10.071
12/7/2007 8:00	72000.00	31.923	52.011	10.051
12/7/2007 8:15	72900.00	31.922	52.007	10.052
12/7/2007 8:30	73800.00	31.916	52.012	10.066
12/7/2007 8:45	74700.00	31.921	52.011	10.056
12/7/2007 9:00	75600.00	31.922	52.015	10.052
12/7/2007 9:15	76500.00	31.919	52.009	10.06
12/7/2007 9:30	77400.00	31.918	52.013	10.062
12/7/2007 9:45	78300.00	31.924	52.007	10.047
12/7/2007 10:00	79200.00	31.926	52.01	10.043
12/7/2007 10:15	80100.00	31.923	52.01	10.051
12/7/2007 10:30	81000.00	31.924	52.013	10.047
12/7/2007 10:45	81900.00	31.923	52.008	10.05
12/7/2007 11:00	82800.00	31.923	52.008	10.052
12/7/2007 11:15	83700.00	31.917	52.012	10.064
12/7/2007 11:30	84600.00	31.916	52.019	10.067
12/7/2007 11:45	85500.00	31.918	52.012	10.062
12/7/2007 12:00	86400.00	31.923	52.015	10.051
12/7/2007 12:01	86460.00	31.923	52.014	10.05
12/7/2007 12:02	86520.00	31.924	52.019	10.048
12/7/2007 12:03	86580.00	31.921	52.021	10.054
12/7/2007 12:04	86640.00	31.937	52.016	10.018
12/7/2007 12:05	86700.00	31.948	52.015	9.992
12/7/2007 12:06	86760.00	31.96	52.016	9.965
12/7/2007 12:07	86820.00	31.978	52.013	9.925
12/7/2007 12:08	86880.00	31.996	52.02	9.882
12/7/2007 12:09	86940.00	32.012	52.023	9.845
12/7/2007 12:10	87000.00	32.032	52.024	9.798
12/7/2007 12:11	87060.00	32.052	52.025	9.754
12/7/2007 12:12	87120.00	32.07	52.023	9.711
12/7/2007 12:13	87180.00	32.081	52.024	9.685
12/7/2007 12:14	87240.00	32.106	52.031	9.629
12/7/2007 12:15	87300.00	32.122	52.031	9.592

12/7/2007 12:16	87360.00	32.141	52.021	9.548
12/7/2007 12:17	87420.00	32.155	52.035	9.516
12/7/2007 12:18	87480.00	32.171	52.028	9.478
12/7/2007 12:19	87540.00	32.186	52.025	9.444
12/7/2007 12:20	87600.00	32.2	52.031	9.412
12/7/2007 12:21	87660.00	32.213	52.026	9.38
12/7/2007 12:22	87720.00	32.226	52.03	9.351
12/7/2007 12:23	87780.00	32.237	52.026	9.326
12/7/2007 12:24	87840.00	32.243	52.026	9.313
12/7/2007 12:25	87900.00	32.254	52.03	9.287
12/7/2007 12:26	87960.00	32.27	52.028	9.25
12/7/2007 12:27	88020.00	32.273	52.026	9.243
12/7/2007 12:28	88080.00	32.288	52.026	9.207
12/7/2007 12:29	88140.00	32.291	52.027	9.202
12/7/2007 12:30	88200.00	32.299	52.019	9.182
12/7/2007 12:31	88260.00	32.313	52.024	9.149
12/7/2007 12:32	88320.00	32.313	52.027	9.149
12/7/2007 12:33	88380.00	32.328	52.02	9.117
12/7/2007 12:34	88440.00	32.333	52.018	9.105
12/7/2007 12:35	88500.00	32.332	52.012	9.106
12/7/2007 12:36	88560.00	32.346	52.013	9.074
12/7/2007 12:37	88620.00	32.351	52.01	9.063
12/7/2007 12:38	88680.00	32.35	52.006	9.066
12/7/2007 12:39	88740.00	32.358	52.01	9.045
12/7/2007 12:40	88800.00	32.358	52.01	9.045
12/7/2007 12:41	88860.00	32.368	52.015	9.024
12/7/2007 12:42	88920.00	32.366	52.008	9.029
12/7/2007 12:43	88980.00	32.369	52.008	9.021
12/7/2007 12:44	89040.00	32.38	52.002	8.996
12/7/2007 12:45	89100.00	32.383	52.004	8.989
12/7/2007 12:46	89160.00	32.385	52.001	8.985
12/7/2007 12:47	89220.00	32.382	51.998	8.992
12/7/2007 12:48	89280.00	32.382	52	8.991
12/7/2007 12:49	89340.00	32.391	51.995	8.969
12/7/2007 12:50	89400.00	32.388	51.998	8.976
12/7/2007 12:51	89460.00	32.397	51.991	8.956
12/7/2007 12:52	89520.00	32.391	51.994	8.971
12/7/2007 12:53	89580.00	32.401	51.985	8.947
12/7/2007 12:54	89640.00	32.401	51.991	8.946
12/7/2007 12:55	89700.00	32.397	51.981	8.957
12/7/2007 12:56	89760.00	32.398	51.981	8.954
12/7/2007 12:57	89820.00	32.4	51.981	8.949
12/7/2007 12:58	89880.00	32.401	51.98	8.948
12/7/2007 12:59	89940.00	32.41	51.978	8.928
12/7/2007 13:00	90000.00	32.402	51.971	8.945
12/7/2007 13:01	90060.00	32.403	51.98	8.942
12/7/2007 13:02	90120.00	32.406	51.974	8.936
12/7/2007 13:03	90180.00	32.405	51.97	8.939
12/7/2007 13:04	90240.00	32.405	51.974	8.938
12/7/2007 13:05	90300.00	32.406	51.97	8.936
12/7/2007 13:06	90360.00	32.407	51.969	8.934
12/7/2007 13:07	90420.00	32.406	51.968	8.936

12/7/2007 13:08	90480.00	32.415	51.97	8.916
12/7/2007 13:09	90540.00	32.409	51.965	8.929
12/7/2007 13:10	90600.00	32.409	51.962	8.93
12/7/2007 13:11	90660.00	32.408	51.96	8.931
12/7/2007 13:12	90720.00	32.407	51.964	8.932
12/7/2007 13:13	90780.00	32.414	51.957	8.916
12/7/2007 13:14	90840.00	32.416	51.956	8.913
12/7/2007 13:15	90900.00	32.409	51.959	8.928
12/7/2007 13:16	90960.00	32.411	51.955	8.924
12/7/2007 13:17	91020.00	32.411	51.953	8.925
12/7/2007 13:18	91080.00	32.412	51.954	8.922
12/7/2007 13:19	91140.00	32.413	51.952	8.92
12/7/2007 13:20	91200.00	32.412	51.953	8.923
12/7/2007 13:21	91260.00	32.415	51.948	8.915
12/7/2007 13:22	91320.00	32.414	51.94	8.918
12/7/2007 13:23	91380.00	32.412	51.95	8.921
12/7/2007 13:24	91440.00	32.421	51.942	8.902
12/7/2007 13:25	91500.00	32.415	51.947	8.914
12/7/2007 13:26	91560.00	32.415	51.942	8.915
12/7/2007 13:27	91620.00	32.416	51.941	8.912
12/7/2007 13:28	91680.00	32.416	51.938	8.911
12/7/2007 13:29	91740.00	32.417	51.936	8.91
12/7/2007 13:30	91800.00	32.417	51.936	8.91
12/7/2007 13:31	91860.00	32.417	51.937	8.911
12/7/2007 13:32	91920.00	32.418	51.935	8.908
12/7/2007 13:33	91980.00	32.417	51.931	8.909
12/7/2007 13:34	92040.00	32.419	51.936	8.906
12/7/2007 13:35	92100.00	32.419	51.928	8.907
12/7/2007 13:36	92160.00	32.42	51.935	8.902
12/7/2007 13:37	92220.00	32.419	51.93	8.906
12/7/2007 13:38	92280.00	32.419	51.933	8.905
12/7/2007 13:39	92340.00	32.42	51.928	8.903
12/7/2007 13:40	92400.00	32.42	51.93	8.904
12/7/2007 13:41	92460.00	32.42	51.93	8.904
12/7/2007 13:42	92520.00	32.419	51.927	8.906
12/7/2007 13:43	92580.00	32.419	51.924	8.904
12/7/2007 13:44	92640.00	32.42	51.924	8.904
12/7/2007 13:45	92700.00	32.42	51.919	8.902
12/7/2007 13:46	92760.00	32.419	51.921	8.907
12/7/2007 13:47	92820.00	32.419	51.923	8.907
12/7/2007 13:48	92880.00	32.42	51.924	8.902
12/7/2007 13:49	92940.00	32.421	51.919	8.901
12/7/2007 13:50	93000.00	32.421	51.918	8.901
12/7/2007 13:51	93060.00	32.42	51.919	8.902
12/7/2007 13:52	93120.00	32.42	51.915	8.902
12/7/2007 13:53	93180.00	32.422	51.919	8.898
12/7/2007 13:54	93240.00	32.422	51.918	8.898
12/7/2007 13:55	93300.00	32.421	51.916	8.902
12/7/2007 13:56	93360.00	32.42	51.909	8.902
12/7/2007 13:57	93420.00	32.421	51.914	8.901
12/7/2007 13:58	93480.00	32.423	51.911	8.897
12/7/2007 13:59	93540.00	32.424	51.915	8.895

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12/7/2007 14:00	93600.00	32.422	51.909	8.898
12/7/2007 14:01	93660.00	32.422	51.913	8.898
12/7/2007 14:02	93720.00	32.424	51.911	8.894
12/7/2007 14:03	93780.00	32.424	51.911	8.895
12/7/2007 14:04	93840.00	32.423	51.914	8.896
12/7/2007 14:05	93900.00	32.423	51.906	8.897
12/7/2007 14:06	93960.00	32.423	51.907	8.898
12/7/2007 14:07	94020.00	32.423	51.904	8.896
12/7/2007 14:08	94080.00	32.423	51.903	8.897
12/7/2007 14:09	94140.00	32.422	51.903	8.898
12/7/2007 14:10	94200.00	32.424	51.906	8.893
12/7/2007 14:11	94260.00	32.424	51.903	8.895
12/7/2007 14:12	94320.00	32.424	51.904	8.894
12/7/2007 14:13	94380.00	32.423	51.9	8.896
12/7/2007 14:14	94440.00	32.423	51.904	8.896
12/7/2007 14:15	94500.00	32.424	51.9	8.894
12/7/2007 14:16	94560.00	32.424	51.899	8.894
12/7/2007 14:17	94620.00	32.424	51.898	8.895
12/7/2007 14:18	94680.00	32.425	51.898	8.892
12/7/2007 14:19	94740.00	32.423	51.893	8.896
12/7/2007 14:20	94800.00	32.418	51.894	8.909
12/7/2007 14:21	94860.00	32.425	51.897	8.892
12/7/2007 14:22	94920.00	32.425	51.892	8.892
12/7/2007 14:23	94980.00	32.424	51.892	8.894
12/7/2007 14:24	95040.00	32.424	51.893	8.894
12/7/2007 14:25	95100.00	32.424	51.891	8.895
12/7/2007 14:26	95160.00	32.419	51.894	8.906
12/7/2007 14:27	95220.00	32.418	51.894	8.908
12/7/2007 14:28	95280.00	32.426	51.896	8.889
12/7/2007 14:29	95340.00	32.425	51.891	8.892
12/7/2007 14:30	95400.00	32.419	51.892	8.906
12/7/2007 14:31	95460.00	32.425	51.897	8.891
12/7/2007 14:32	95520.00	32.426	51.888	8.889
12/7/2007 14:33	95580.00	32.427	51.894	8.888
12/7/2007 14:34	95640.00	32.425	51.89	8.891
12/7/2007 14:35	95700.00	32.427	51.894	8.888
12/7/2007 14:36	95760.00	32.425	51.888	8.891
12/7/2007 14:37	95820.00	32.425	51.886	8.891
12/7/2007 14:38	95880.00	32.427	51.886	8.888
12/7/2007 14:39	95940.00	32.418	51.888	8.908
12/7/2007 14:40	96000.00	32.426	51.89	8.889
12/7/2007 14:41	96060.00	32.426	51.882	8.89
12/7/2007 14:42	96120.00	32.425	51.888	8.893
12/7/2007 14:43	96180.00	32.425	51.882	8.891
12/7/2007 14:44	96240.00	32.427	51.888	8.888
12/7/2007 14:45	96300.00	32.426	51.881	8.89
12/7/2007 14:46	96360.00	32.426	51.886	8.889
12/7/2007 14:47	96420.00	32.426	51.882	8.888
12/7/2007 14:48	96480.00	32.426	51.894	8.889
12/7/2007 14:49	96540.00	32.425	51.883	8.891
12/7/2007 14:50	96600.00	32.427	51.883	8.888
12/7/2007 14:51	96660.00	32.426	51.885	8.89

12/7/2007 14:52	96720.00	32.426	51.88	8.888
12/7/2007 14:53	96780.00	32.425	51.886	8.891
12/7/2007 14:54	96840.00	32.427	51.881	8.888
12/7/2007 14:55	96900.00	32.426	51.875	8.889
12/7/2007 14:56	96960.00	32.427	51.881	8.887
12/7/2007 14:57	97020.00	32.421	51.881	8.902
12/7/2007 14:58	97080.00	32.425	51.876	8.892
12/7/2007 14:59	97140.00	32.421	51.872	8.902
12/7/2007 15:00	97200.00	32.427	51.881	8.887
12/7/2007 15:01	97260.00	32.426	51.88	8.889
12/7/2007 15:02	97320.00	32.42	51.879	8.904
12/7/2007 15:03	97380.00	32.427	51.879	8.888
12/7/2007 15:04	97440.00	32.427	51.878	8.887
12/7/2007 15:05	97500.00	32.427	51.875	8.888
12/7/2007 15:06	97560.00	32.42	51.875	8.903
12/7/2007 15:07	97620.00	32.428	51.875	8.884
12/7/2007 15:08	97680.00	32.427	51.875	8.887
12/7/2007 15:09	97740.00	32.428	51.881	8.885
12/7/2007 15:10	97800.00	32.427	51.877	8.887
12/7/2007 15:11	97860.00	32.427	51.877	8.887
12/7/2007 15:12	97920.00	32.427	51.879	8.888
12/7/2007 15:13	97980.00	32.427	51.878	8.887
12/7/2007 15:14	98040.00	32.428	51.873	8.885
12/7/2007 15:15	98100.00	32.427	51.878	8.888
12/7/2007 15:16	98160.00	32.42	51.869	8.904
12/7/2007 15:17	98220.00	32.428	51.869	8.886
12/7/2007 15:18	98280.00	32.421	51.878	8.901
12/7/2007 15:19	98340.00	32.42	51.875	8.904
12/7/2007 15:20	98400.00	32.427	51.876	8.887
12/7/2007 15:21	98460.00	32.426	51.873	8.89
12/7/2007 15:22	98520.00	32.427	51.877	8.887
12/7/2007 15:23	98580.00	32.428	51.869	8.884
12/7/2007 15:24	98640.00	32.428	51.868	8.885
12/7/2007 15:25	98700.00	32.427	51.872	8.887
12/7/2007 15:26	98760.00	32.427	51.87	8.886
12/7/2007 15:27	98820.00	32.426	51.873	8.889
12/7/2007 15:28	98880.00	32.427	51.873	8.887
12/7/2007 15:29	98940.00	32.427	51.864	8.887
12/7/2007 15:30	99000.00	32.427	51.87	8.887
12/7/2007 15:31	99060.00	32.427	51.87	8.886
12/7/2007 15:32	99120.00	32.428	51.87	8.886
12/7/2007 15:33	99180.00	32.427	51.865	8.886
12/7/2007 15:34	99240.00	32.428	51.866	8.886
12/7/2007 15:35	99300.00	32.427	51.871	8.886
12/7/2007 15:36	99360.00	32.42	51.87	8.904
12/7/2007 15:37	99420.00	32.42	51.873	8.904
12/7/2007 15:38	99480.00	32.427	51.866	8.887
12/7/2007 15:39	99540.00	32.428	51.87	8.886
12/7/2007 15:40	99600.00	32.429	51.868	8.883
12/7/2007 15:41	99660.00	32.42	51.865	8.903
12/7/2007 15:42	99720.00	32.422	51.871	8.899
12/7/2007 15:43	99780.00	32.428	51.865	8.885

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12/7/2007 15:44	99840.00	32.429	51.862	8.883
12/7/2007 15:45	99900.00	32.428	51.865	8.885
12/7/2007 15:46	99960.00	32.422	51.864	8.898
12/7/2007 15:47	100020.00	32.429	51.87	8.883
12/7/2007 15:48	100080.00	32.428	51.872	8.886
12/7/2007 15:49	100140.00	32.422	51.868	8.898
12/7/2007 15:50	100200.00	32.423	51.873	8.897
12/7/2007 15:51	100260.00	32.421	51.866	8.9
12/7/2007 15:52	100320.00	32.429	51.87	8.883
12/7/2007 15:53	100380.00	32.429	51.868	8.883
12/7/2007 15:54	100440.00	32.428	51.863	8.885
12/7/2007 15:55	100500.00	32.428	51.868	8.886
12/7/2007 15:56	100560.00	32.428	51.861	8.884
12/7/2007 15:57	100620.00	32.428	51.866	8.885
12/7/2007 15:58	100680.00	32.429	51.864	8.883
12/7/2007 15:59	100740.00	32.429	51.865	8.884
12/7/2007 16:00	100800.00	32.429	51.867	8.882
12/7/2007 16:01	100860.00	32.428	51.86	8.884
12/7/2007 16:02	100920.00	32.429	51.87	8.883
12/7/2007 16:03	100980.00	32.421	51.862	8.9
12/7/2007 16:04	101040.00	32.429	51.861	8.883
12/7/2007 16:05	101100.00	32.429	51.864	8.882
12/7/2007 16:06	101160.00	32.421	51.864	8.902
12/7/2007 16:07	101220.00	32.421	51.867	8.9
12/7/2007 16:08	101280.00	32.428	51.862	8.886
12/7/2007 16:09	101340.00	32.427	51.863	8.887
12/7/2007 16:10	101400.00	32.428	51.867	8.884
12/7/2007 16:11	101460.00	32.428	51.861	8.885
12/7/2007 16:12	101520.00	32.428	51.862	8.885
12/7/2007 16:13	101580.00	32.428	51.862	8.886
12/7/2007 16:14	101640.00	32.429	51.862	8.882
12/7/2007 16:15	101700.00	32.429	51.862	8.884
12/7/2007 16:16	101760.00	32.429	51.863	8.881
12/7/2007 16:17	101820.00	32.429	51.859	8.881
12/7/2007 16:18	101880.00	32.422	51.86	8.898
12/7/2007 16:19	101940.00	32.43	51.86	8.881
12/7/2007 16:20	102000.00	32.428	51.862	8.884
12/7/2007 16:21	102060.00	32.429	51.856	8.882
12/7/2007 16:22	102120.00	32.423	51.862	8.896
12/7/2007 16:23	102180.00	32.423	51.859	8.895
12/7/2007 16:24	102240.00	32.424	51.863	8.894
12/7/2007 16:25	102300.00	32.431	51.862	8.878
12/7/2007 16:26	102360.00	32.43	51.861	8.881
12/7/2007 16:27	102420.00	32.43	51.855	8.88
12/7/2007 16:28	102480.00	32.43	51.859	8.88
12/7/2007 16:29	102540.00	32.424	51.863	8.895
12/7/2007 16:30	102600.00	32.43	51.857	8.88
12/7/2007 16:31	102660.00	32.429	51.857	8.882
12/7/2007 16:32	102720.00	32.428	51.863	8.885
12/7/2007 16:33	102780.00	32.429	51.864	8.882
12/7/2007 16:34	102840.00	32.428	51.861	8.885
12/7/2007 16:35	102900.00	32.43	51.857	8.879

12/7/2007 16:36	102960.00	32.423	51.856	8.895
12/7/2007 16:37	103020.00	32.429	51.856	8.883
12/7/2007 16:38	103080.00	32.43	51.862	8.881
12/7/2007 16:39	103140.00	32.421	51.859	8.901
12/7/2007 16:40	103200.00	32.422	51.853	8.9
12/7/2007 16:41	103260.00	32.422	51.86	8.899
12/7/2007 16:42	103320.00	32.429	51.859	8.883
12/7/2007 16:43	103380.00	32.424	51.859	8.895
12/7/2007 16:44	103440.00	32.432	51.86	8.877
12/7/2007 16:45	103500.00	32.429	51.857	8.882
12/7/2007 16:46	103560.00	32.43	51.857	8.88
12/7/2007 16:47	103620.00	32.431	51.857	8.878
12/7/2007 16:48	103680.00	32.424	51.857	8.894
12/7/2007 16:49	103740.00	32.429	51.856	8.882
12/7/2007 16:50	103800.00	32.431	51.859	8.878
12/7/2007 16:51	103860.00	32.424	51.859	8.894
12/7/2007 16:52	103920.00	32.431	51.854	8.877
12/7/2007 16:53	103980.00	32.424	51.856	8.894
12/7/2007 16:54	104040.00	32.424	51.86	8.894
12/7/2007 16:55	104100.00	32.429	51.853	8.883
12/7/2007 16:56	104160.00	32.424	51.857	8.894
12/7/2007 16:57	104220.00	32.43	51.861	8.879
12/7/2007 16:58	104280.00	32.431	51.854	8.877
12/7/2007 16:59	104340.00	32.424	51.858	8.894
12/7/2007 17:00	104400.00	32.432	51.854	8.876
12/7/2007 17:01	104460.00	32.431	51.855	8.877
12/7/2007 17:02	104520.00	32.431	51.853	8.877
12/7/2007 17:03	104580.00	32.43	51.856	8.879
12/7/2007 17:04	104640.00	32.431	51.853	8.879
12/7/2007 17:05	104700.00	32.431	51.856	8.878
12/7/2007 17:06	104760.00	32.432	51.85	8.875
12/7/2007 17:07	104820.00	32.432	51.859	8.876
12/7/2007 17:08	104880.00	32.432	51.854	8.875
12/7/2007 17:09	104940.00	32.424	51.853	8.894
12/7/2007 17:10	105000.00	32.43	51.856	8.88
12/7/2007 17:11	105060.00	32.431	51.852	8.877
12/7/2007 17:12	105120.00	32.43	51.854	8.88
12/7/2007 17:13	105180.00	32.43	51.854	8.879
12/7/2007 17:14	105240.00	32.423	51.854	8.895
12/7/2007 17:15	105300.00	32.431	51.855	8.879
12/7/2007 17:16	105360.00	32.429	51.864	8.882
12/7/2007 17:17	105420.00	32.432	51.867	8.875
12/7/2007 17:18	105480.00	32.431	51.857	8.878
12/7/2007 17:19	105540.00	32.432	51.858	8.876
12/7/2007 17:20	105600.00	32.431	51.852	8.877
12/7/2007 17:21	105660.00	32.432	51.857	8.874
12/7/2007 17:22	105720.00	32.431	51.855	8.877
12/7/2007 17:23	105780.00	32.431	51.853	8.877
12/7/2007 17:24	105840.00	32.432	51.854	8.875
12/7/2007 17:25	105900.00	32.425	51.854	8.891
12/7/2007 17:26	105960.00	32.425	51.851	8.892
12/7/2007 17:27	106020.00	32.425	51.852	8.891

12/7/2007 17:28	106080.00	32.425	51.853	8.892
12/7/2007 17:29	106140.00	32.433	51.852	8.874
12/7/2007 17:30	106200.00	32.426	51.852	8.89
12/7/2007 17:31	106260.00	32.426	51.855	8.89
12/7/2007 17:32	106320.00	32.424	51.854	8.894
12/7/2007 17:33	106380.00	32.433	51.852	8.874
12/7/2007 17:34	106440.00	32.431	51.853	8.878
12/7/2007 17:35	106500.00	32.433	51.851	8.874
12/7/2007 17:36	106560.00	32.431	51.851	8.877
12/7/2007 17:37	106620.00	32.431	51.854	8.878
12/7/2007 17:38	106680.00	32.432	51.847	8.876
12/7/2007 17:39	106740.00	32.426	51.85	8.89
12/7/2007 17:40	106800.00	32.426	51.849	8.889
12/7/2007 17:41	106860.00	32.431	51.852	8.879
12/7/2007 17:42	106920.00	32.432	51.856	8.877
12/7/2007 17:43	106980.00	32.432	51.85	8.875
12/7/2007 17:44	107040.00	32.432	51.848	8.874
12/7/2007 17:45	107100.00	32.432	51.848	8.876
12/7/2007 17:46	107160.00	32.432	51.848	8.877
12/7/2007 17:47	107220.00	32.426	51.847	8.891
12/7/2007 17:48	107280.00	32.431	51.848	8.878
12/7/2007 17:49	107340.00	32.43	51.851	8.88
12/7/2007 17:50	107400.00	32.43	51.848	8.88
12/7/2007 17:51	107460.00	32.426	51.858	8.89
12/7/2007 17:52	107520.00	32.432	51.849	8.876
12/7/2007 17:53	107580.00	32.432	51.848	8.875
12/7/2007 17:54	107640.00	32.432	51.846	8.875
12/7/2007 17:55	107700.00	32.432	51.851	8.876
12/7/2007 17:56	107760.00	32.432	51.85	8.875
12/7/2007 17:57	107820.00	32.431	51.851	8.877
12/7/2007 17:58	107880.00	32.425	51.851	8.891
12/7/2007 17:59	107940.00	32.43	51.842	8.88
12/7/2007 18:00	108000.00	32.433	51.852	8.873
12/7/2007 18:01	108060.00	32.433	51.848	8.872
12/7/2007 18:02	108120.00	32.433	51.853	8.874
12/7/2007 18:03	108180.00	32.431	51.853	8.878
12/7/2007 18:04	108240.00	32.432	51.854	8.876
12/7/2007 18:05	108300.00	32.426	51.847	8.889
12/7/2007 18:06	108360.00	32.426	51.853	8.89
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12/7/2007 18:08	108480.00	32.432	51.848	8.875
12/7/2007 18:09	108540.00	32.432	51.853	8.875
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12/7/2007 18:11	108660.00	32.432	51.848	8.876
12/7/2007 18:12	108720.00	32.432	51.849	8.877
12/7/2007 18:13	108780.00	32.433	51.847	8.874
12/7/2007 18:14	108840.00	32.432	51.845	8.876
12/7/2007 18:15	108900.00	32.432	51.847	8.875
12/7/2007 18:16	108960.00	32.432	51.85	8.876
12/7/2007 18:17	109020.00	32.431	51.849	8.877
12/7/2007 18:18	109080.00	32.426	51.845	8.89
12/7/2007 18:19	109140.00	32.433	51.847	8.874

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12/7/2007 18:21	109260.00	32.431	51.85	8.878
12/7/2007 18:22	109320.00	32.426	51.843	8.89
12/7/2007 18:23	109380.00	32.433	51.842	8.874
12/7/2007 18:24	109440.00	32.425	51.849	8.891
12/7/2007 18:25	109500.00	32.426	51.85	8.891
12/7/2007 18:26	109560.00	32.432	51.846	8.875
12/7/2007 18:27	109620.00	32.431	51.849	8.877
12/7/2007 18:28	109680.00	32.432	51.843	8.876
12/7/2007 18:29	109740.00	32.425	51.848	8.892
12/7/2007 18:30	109800.00	32.431	51.844	8.877
12/7/2007 18:31	109860.00	32.425	51.843	8.892
12/7/2007 18:32	109920.00	32.426	51.845	8.89
12/7/2007 18:33	109980.00	32.426	51.842	8.891
12/7/2007 18:34	110040.00	32.432	51.844	8.875
12/7/2007 18:35	110100.00	32.431	51.847	8.879
12/7/2007 18:36	110160.00	32.432	51.848	8.876
12/7/2007 18:37	110220.00	32.433	51.846	8.874
12/7/2007 18:38	110280.00	32.432	51.842	8.875
12/7/2007 18:39	110340.00	32.425	51.844	8.891
12/7/2007 18:40	110400.00	32.432	51.843	8.876
12/7/2007 18:41	110460.00	32.432	51.849	8.876
12/7/2007 18:42	110520.00	32.432	51.846	8.875
12/7/2007 18:43	110580.00	32.433	51.849	8.874
12/7/2007 18:44	110640.00	32.425	51.841	8.891
12/7/2007 18:45	110700.00	32.432	51.846	8.875
12/7/2007 18:46	110760.00	32.427	51.846	8.888
12/7/2007 18:47	110820.00	32.433	51.846	8.872
12/7/2007 18:48	110880.00	32.432	51.844	8.875
12/7/2007 18:49	110940.00	32.433	51.846	8.874
12/7/2007 18:50	111000.00	32.432	51.841	8.875
12/7/2007 18:51	111060.00	32.426	51.841	8.89
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12/7/2007 18:53	111180.00	32.432	51.846	8.875
12/7/2007 18:54	111240.00	32.432	51.845	8.875
12/7/2007 18:55	111300.00	32.432	51.845	8.875
12/7/2007 18:56	111360.00	32.434	51.842	8.871
12/7/2007 18:57	111420.00	32.426	51.846	8.89
12/7/2007 18:58	111480.00	32.428	51.843	8.885
12/7/2007 18:59	111540.00	32.432	51.841	8.875
12/7/2007 19:00	111600.00	32.433	51.84	8.874
12/7/2007 19:01	111660.00	32.434	51.846	8.87
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12/7/2007 19:03	111780.00	32.432	51.846	8.875
12/7/2007 19:04	111840.00	32.432	51.849	8.876
12/7/2007 19:05	111900.00	32.432	51.847	8.875
12/7/2007 19:06	111960.00	32.426	51.845	8.889
12/7/2007 19:07	112020.00	32.426	51.849	8.889
12/7/2007 19:08	112080.00	32.433	51.843	8.874
12/7/2007 19:09	112140.00	32.426	51.845	8.888
12/7/2007 19:10	112200.00	32.427	51.845	8.887
12/7/2007 19:11	112260.00	32.432	51.845	8.877

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12/7/2007 19:13	112380.00	32.433	51.837	8.874
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12/7/2007 19:15	112500.00	32.432	51.842	8.875
12/7/2007 19:16	112560.00	32.431	51.842	8.878
12/7/2007 19:17	112620.00	32.433	51.84	8.873
12/7/2007 19:18	112680.00	32.432	51.842	8.875
12/7/2007 19:19	112740.00	32.434	51.848	8.872
12/7/2007 19:20	112800.00	32.426	51.845	8.889
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12/7/2007 19:22	112920.00	32.426	51.84	8.889
12/7/2007 19:23	112980.00	32.432	51.842	8.876
12/7/2007 19:24	113040.00	32.433	51.842	8.874
12/7/2007 19:25	113100.00	32.432	51.843	8.876
12/7/2007 19:26	113160.00	32.432	51.846	8.875
12/7/2007 19:27	113220.00	32.427	51.844	8.887
12/7/2007 19:28	113280.00	32.432	51.841	8.875
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12/7/2007 19:45	114300.00	32.434	51.848	8.87
12/7/2007 19:46	114360.00	32.433	51.842	8.873
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12/7/2007 19:51	114660.00	32.435	51.842	8.869
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12/7/2007 19:55	114900.00	32.427	51.842	8.887
12/7/2007 19:56	114960.00	32.434	51.832	8.87
12/7/2007 19:57	115020.00	32.434	51.836	8.87
12/7/2007 19:58	115080.00	32.433	51.842	8.874
12/7/2007 19:59	115140.00	32.433	51.84	8.873
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12/7/2007 20:03	115380.00	32.433	51.839	8.873

12/7/2007 20:04	115440.00	32.433	51.842	8.872
12/7/2007 20:05	115500.00	32.434	51.839	8.871
12/7/2007 20:06	115560.00	32.434	51.846	8.871
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12/7/2007 20:08	115680.00	32.427	51.836	8.887
12/7/2007 20:09	115740.00	32.427	51.836	8.887
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12/7/2007 20:11	115860.00	32.433	51.841	8.872
12/7/2007 20:12	115920.00	32.434	51.837	8.871
12/7/2007 20:13	115980.00	32.428	51.839	8.884
12/7/2007 20:14	116040.00	32.432	51.838	8.874
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12/7/2007 20:16	116160.00	32.434	51.832	8.872
12/7/2007 20:17	116220.00	32.429	51.839	8.883
12/7/2007 20:18	116280.00	32.427	51.84	8.887
12/7/2007 20:19	116340.00	32.435	51.842	8.869
12/7/2007 20:20	116400.00	32.435	51.842	8.869
12/7/2007 20:21	116460.00	32.429	51.845	8.884
12/7/2007 20:22	116520.00	32.435	51.838	8.869
12/7/2007 20:23	116580.00	32.436	51.842	8.867
12/7/2007 20:24	116640.00	32.427	51.842	8.886
12/7/2007 20:25	116700.00	32.433	51.84	8.874
12/7/2007 20:26	116760.00	32.434	51.837	8.871
12/7/2007 20:27	116820.00	32.428	51.841	8.886
12/7/2007 20:28	116880.00	32.434	51.833	8.872
12/7/2007 20:29	116940.00	32.427	51.837	8.888
12/7/2007 20:30	117000.00	32.427	51.836	8.888
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12/7/2007 20:33	117180.00	32.428	51.844	8.884
12/7/2007 20:34	117240.00	32.434	51.831	8.872
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12/7/2007 20:36	117360.00	32.434	51.836	8.872
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12/7/2007 20:41	117660.00	32.435	51.837	8.869
12/7/2007 20:42	117720.00	32.428	51.841	8.886
12/7/2007 20:43	117780.00	32.435	51.838	8.87
12/7/2007 20:44	117840.00	32.433	51.841	8.872
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12/7/2007 20:47	118020.00	32.435	51.835	8.869
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12/7/2007 20:51	118260.00	32.428	51.84	8.886
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12/7/2007 20:53	118380.00	32.428	51.835	8.884
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12/7/2007 20:55	118500.00	32.434	51.833	8.87

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12/7/2007 20:57	118620.00	32.428	51.84	8.885
12/7/2007 20:58	118680.00	32.429	51.832	8.882
12/7/2007 20:59	118740.00	32.434	51.841	8.871
12/7/2007 21:00	118800.00	32.436	51.837	8.867
12/7/2007 21:01	118860.00	32.429	51.838	8.882
12/7/2007 21:02	118920.00	32.435	51.839	8.868
12/7/2007 21:03	118980.00	32.437	51.837	8.865
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12/7/2007 21:05	119100.00	32.436	51.837	8.866
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12/7/2007 21:13	119580.00	32.434	51.841	8.872
12/7/2007 21:14	119640.00	32.428	51.834	8.884
12/7/2007 21:15	119700.00	32.436	51.842	8.867
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12/7/2007 21:17	119820.00	32.436	51.84	8.867
12/7/2007 21:18	119880.00	32.437	51.834	8.864
12/7/2007 21:19	119940.00	32.428	51.841	8.886
12/7/2007 21:20	120000.00	32.429	51.834	8.883
12/7/2007 21:21	120060.00	32.436	51.835	8.867
12/7/2007 21:22	120120.00	32.429	51.835	8.882
12/7/2007 21:23	120180.00	32.429	51.834	8.882
12/7/2007 21:24	120240.00	32.437	51.836	8.864
12/7/2007 21:25	120300.00	32.437	51.835	8.865
12/7/2007 21:26	120360.00	32.43	51.837	8.881
12/7/2007 21:27	120420.00	32.437	51.838	8.865
12/7/2007 21:28	120480.00	32.436	51.835	8.866
12/7/2007 21:29	120540.00	32.437	51.839	8.864
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12/7/2007 21:31	120660.00	32.436	51.838	8.866
12/7/2007 21:32	120720.00	32.437	51.837	8.865
12/7/2007 21:33	120780.00	32.429	51.833	8.882
12/7/2007 21:34	120840.00	32.429	51.833	8.882
12/7/2007 21:35	120900.00	32.434	51.834	8.871
12/7/2007 21:36	120960.00	32.435	51.831	8.869
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12/7/2007 21:40	121200.00	32.43	51.837	8.88
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12/7/2007 21:42	121320.00	32.43	51.838	8.88
12/7/2007 21:43	121380.00	32.43	51.833	8.88
12/7/2007 21:44	121440.00	32.436	51.837	8.865
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12/7/2007 21:46	121560.00	32.43	51.833	8.88
12/7/2007 21:47	121620.00	32.434	51.839	8.871

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12/7/2007 21:49	121740.00	32.436	51.837	8.866
12/7/2007 21:50	121800.00	32.435	51.839	8.869
12/7/2007 21:51	121860.00	32.436	51.836	8.867
12/7/2007 21:52	121920.00	32.437	51.837	8.864
12/7/2007 21:53	121980.00	32.431	51.835	8.879
12/7/2007 21:54	122040.00	32.43	51.843	8.881
12/7/2007 21:55	122100.00	32.429	51.84	8.882
12/7/2007 21:56	122160.00	32.429	51.839	8.883
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12/7/2007 21:58	122280.00	32.43	51.84	8.88
12/7/2007 21:59	122340.00	32.435	51.836	8.868
12/7/2007 22:00	122400.00	32.429	51.83	8.882
12/7/2007 22:01	122460.00	32.429	51.84	8.883
12/7/2007 22:02	122520.00	32.435	51.832	8.869
12/7/2007 22:03	122580.00	32.436	51.84	8.867
12/7/2007 22:04	122640.00	32.43	51.835	8.88
12/7/2007 22:05	122700.00	32.429	51.842	8.882
12/7/2007 22:06	122760.00	32.43	51.836	8.881
12/7/2007 22:07	122820.00	32.43	51.839	8.88
12/7/2007 22:08	122880.00	32.435	51.837	8.869
12/7/2007 22:09	122940.00	32.437	51.84	8.865
12/7/2007 22:10	123000.00	32.436	51.837	8.866
12/7/2007 22:11	123060.00	32.436	51.841	8.866
12/7/2007 22:12	123120.00	32.429	51.834	8.882
12/7/2007 22:13	123180.00	32.436	51.831	8.867
12/7/2007 22:14	123240.00	32.428	51.837	8.885
12/7/2007 22:15	123300.00	32.436	51.836	8.866
12/7/2007 22:16	123360.00	32.435	51.839	8.868
12/7/2007 22:17	123420.00	32.429	51.831	8.882
12/7/2007 22:18	123480.00	32.437	51.832	8.864
12/7/2007 22:19	123540.00	32.429	51.83	8.882
12/7/2007 22:20	123600.00	32.437	51.836	8.864
12/7/2007 22:21	123660.00	32.429	51.831	8.882
12/7/2007 22:22	123720.00	32.43	51.84	8.881
12/7/2007 22:23	123780.00	32.43	51.832	8.881
12/7/2007 22:24	123840.00	32.435	51.837	8.868
12/7/2007 22:25	123900.00	32.435	51.839	8.868
12/7/2007 22:26	123960.00	32.435	51.841	8.868
12/7/2007 22:27	124020.00	32.436	51.837	8.867
12/7/2007 22:28	124080.00	32.429	51.837	8.882
12/7/2007 22:29	124140.00	32.436	51.837	8.867
12/7/2007 22:30	124200.00	32.43	51.836	8.881
12/7/2007 22:31	124260.00	32.436	51.831	8.866
12/7/2007 22:32	124320.00	32.437	51.837	8.864
12/7/2007 22:33	124380.00	32.436	51.837	8.865
12/7/2007 22:34	124440.00	32.437	51.831	8.864
12/7/2007 22:35	124500.00	32.436	51.837	8.867
12/7/2007 22:36	124560.00	32.429	51.838	8.882
12/7/2007 22:37	124620.00	32.436	51.833	8.866
12/7/2007 22:38	124680.00	32.43	51.836	8.88
12/7/2007 22:39	124740.00	32.431	51.837	8.879

12/7/2007 22:40	124800.00	32.436	51.831	8.866
12/7/2007 22:41	124860.00	32.437	51.833	8.864
12/7/2007 22:42	124920.00	32.436	51.835	8.865
12/7/2007 22:43	124980.00	32.437	51.834	8.865
12/7/2007 22:44	125040.00	32.43	51.834	8.881
12/7/2007 22:45	125100.00	32.428	51.837	8.885
12/7/2007 22:46	125160.00	32.435	51.834	8.87
12/7/2007 22:47	125220.00	32.435	51.832	8.869
12/7/2007 22:48	125280.00	32.43	51.835	8.881
12/7/2007 22:49	125340.00	32.43	51.829	8.879
12/7/2007 22:50	125400.00	32.431	51.831	8.878
12/7/2007 22:51	125460.00	32.428	51.834	8.885
12/7/2007 22:52	125520.00	32.437	51.833	8.864
12/7/2007 22:53	125580.00	32.436	51.835	8.867
12/7/2007 22:54	125640.00	32.436	51.839	8.865
12/7/2007 22:55	125700.00	32.436	51.834	8.866
12/7/2007 22:56	125760.00	32.427	51.836	8.886
12/7/2007 22:57	125820.00	32.435	51.831	8.868
12/7/2007 22:58	125880.00	32.428	51.832	8.884
12/7/2007 22:59	125940.00	32.429	51.832	8.884
12/7/2007 23:00	126000.00	32.435	51.832	8.869
12/7/2007 23:01	126060.00	32.436	51.838	8.867
12/7/2007 23:02	126120.00	32.437	51.832	8.864
12/7/2007 23:03	126180.00	32.429	51.834	8.882
12/7/2007 23:04	126240.00	32.431	51.83	8.878
12/7/2007 23:05	126300.00	32.428	51.839	8.885
12/7/2007 23:06	126360.00	32.435	51.836	8.869
12/7/2007 23:07	126420.00	32.436	51.83	8.867
12/7/2007 23:08	126480.00	32.435	51.837	8.869
12/7/2007 23:09	126540.00	32.429	51.831	8.883
12/7/2007 23:10	126600.00	32.436	51.839	8.866
12/7/2007 23:11	126660.00	32.435	51.832	8.868
12/7/2007 23:12	126720.00	32.428	51.835	8.884
12/7/2007 23:13	126780.00	32.428	51.831	8.884
12/7/2007 23:14	126840.00	32.437	51.837	8.864
12/7/2007 23:15	126900.00	32.43	51.832	8.88
12/7/2007 23:16	126960.00	32.436	51.832	8.866
12/7/2007 23:17	127020.00	32.436	51.836	8.866
12/7/2007 23:18	127080.00	32.432	51.836	8.877
12/7/2007 23:19	127140.00	32.436	51.829	8.865
12/7/2007 23:20	127200.00	32.43	51.83	8.88
12/7/2007 23:21	127260.00	32.431	51.837	8.877
12/7/2007 23:22	127320.00	32.43	51.832	8.881
12/7/2007 23:23	127380.00	32.431	51.833	8.878
12/7/2007 23:24	127440.00	32.438	51.832	8.862
12/7/2007 23:25	127500.00	32.439	51.836	8.861
12/7/2007 23:26	127560.00	32.438	51.831	8.861
12/7/2007 23:27	127620.00	32.431	51.835	8.878
12/7/2007 23:28	127680.00	32.43	51.831	8.88
12/7/2007 23:29	127740.00	32.433	51.832	8.874
12/7/2007 23:30	127800.00	32.432	51.837	8.876
12/7/2007 23:31	127860.00	32.43	51.836	8.881

12/7/2007 23:32	127920.00	32.438	51.835	8.862
12/7/2007 23:33	127980.00	32.438	51.83	8.861
12/7/2007 23:34	128040.00	32.43	51.829	8.88
12/7/2007 23:35	128100.00	32.431	51.83	8.878
12/7/2007 23:36	128160.00	32.439	51.835	8.858
12/7/2007 23:37	128220.00	32.431	51.825	8.877
12/7/2007 23:38	128280.00	32.431	51.83	8.878
12/7/2007 23:39	128340.00	32.431	51.83	8.877
12/7/2007 23:40	128400.00	32.437	51.837	8.864
12/7/2007 23:41	128460.00	32.431	51.835	8.878
12/7/2007 23:42	128520.00	32.436	51.834	8.866
12/7/2007 23:43	128580.00	32.438	51.826	8.862
12/7/2007 23:44	128640.00	32.431	51.837	8.877
12/7/2007 23:45	128700.00	32.438	51.831	8.861
12/7/2007 23:46	128760.00	32.431	51.835	8.877
12/7/2007 23:47	128820.00	32.438	51.837	8.861
12/7/2007 23:48	128880.00	32.436	51.825	8.867
12/7/2007 23:49	128940.00	32.437	51.836	8.864
12/7/2007 23:50	129000.00	32.432	51.831	8.875
12/7/2007 23:51	129060.00	32.437	51.834	8.863
12/7/2007 23:52	129120.00	32.431	51.836	8.877
12/7/2007 23:53	129180.00	32.431	51.837	8.877
12/7/2007 23:54	129240.00	32.432	51.833	8.876
12/7/2007 23:55	129300.00	32.438	51.835	8.862
12/7/2007 23:56	129360.00	32.439	51.827	8.86
12/7/2007 23:57	129420.00	32.438	51.836	8.861
12/7/2007 23:58	129480.00	32.438	51.834	8.862
12/7/2007 23:59	129540.00	32.432	51.833	8.876
12/8/2007 0:00	129600.00	32.431	51.836	8.878

Report Date: 1/2/2008 14:55
Report User Name Administrator
Report Computer Name:

Log File Properties
File Name Pump test MW301B3 2007-12-08 08.05.26.wsl
Create Date 12/8/2007 8:05

Device Properties
Device Unknown
Site Berwick PA-Unit
Device Name
Serial Number 123991
Firmware Version 2.07

Log Configuration
Log Name Pump test MW301B3
Created By Daniel Bansah
Computer Name Field PC
Application WinSituMobile.exe
Application Version 5.4.1.4
Create Date 12/6/2007 11:31
Notes Size(bytes) 4096
Type Step Linear
Overwrite when full Disabled
Scheduled Start 12/6/2007 12:00
Scheduled Stop 12/8/2007 0:00

Steps 9

Step: 1
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 05

Step: 2
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 10

Step: 3
Duration: Days: 0 Hours: 00 Mins: 03 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 15

Step: 4
Duration: Days: 0 Hours: 00 Mins: 05 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 30

Step: 5
Duration: Days: 0 Hours: 01 Mins: 50 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00

Step: 6
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 03 Secs: 00

Step: 7
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 05 Secs: 00

Step: 8
Duration: Days: 0 Hours: 20 Mins: 00 Secs: 00

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Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00
Step: 9
Duration: Days: 0 Hours: 12 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00

Step	9
Duration	Days: 0 Hours: 12 Mins: 00 Secs: 00
Interval	Days: 0 Hours: 00 Mins: 01 Secs: 00

Level Reference Settings At Log Creation

Level Measure	Level-DTW
Specific G	0.999
Level Refere	Set new reference
Level Referer	7.3 (ft)
Level Reference H	17.7104 (PSI)
Tempe	51.6171 (F)
Depth of	40.8959 (ft)

Log Notes:

Date and Time	Note
12/6/2007 11:32	User Note: "Level reference initialized to: 7.3"
12/6/2007 13:31	User Note: "Downloading log - Used Batt: 0% Memory: 7% User: Unknown"
12/7/2007 8:33	User Note: "Downloading log - Used Batt: 0% Memory: 7% User: Unknown"
12/7/2007 17:18	User Note: "Downloading log - Used Batt: 0% Memory: 7% User: Unknown"

Log Data:

Record Count 983

Date and Time	Elapsed Time Seconds	Sensor: Pres 30G SN#: 123991 Pressure (PSI)	Sensor: Pr SN#: 1239 Temperatu	Sensor: Pres 30G SN#: 123991 Level-DTW (ft)
12/6/2007 12:00	0.00	17.72	51.593	7.279
12/6/2007 12:00	5.00	17.719	51.592	7.28
12/6/2007 12:00	10.00	17.718	51.596	7.283
12/6/2007 12:00	15.00	17.717	51.598	7.285
12/6/2007 12:00	20.00	17.718	51.6	7.281
12/6/2007 12:00	25.00	17.716	51.6	7.287
12/6/2007 12:00	30.00	17.718	51.598	7.282
12/6/2007 12:00	35.00	17.718	51.604	7.282
12/6/2007 12:00	40.00	17.718	51.609	7.283
12/6/2007 12:00	45.00	17.717	51.6	7.285
12/6/2007 12:00	50.00	17.717	51.604	7.285
12/6/2007 12:00	55.00	17.716	51.605	7.287
12/6/2007 12:01	60.00	17.718	51.603	7.283
12/6/2007 12:01	70.00	17.717	51.603	7.285
12/6/2007 12:01	80.00	17.716	51.6	7.286
12/6/2007 12:01	90.00	17.719	51.604	7.28
12/6/2007 12:01	100.00	17.717	51.604	7.285
12/6/2007 12:01	110.00	17.718	51.6	7.282

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12/6/2007 12:02	120.00	17.718	51.6	7.283
12/6/2007 12:02	135.00	17.717	51.597	7.285
12/6/2007 12:02	150.00	17.719	51.598	7.28
12/6/2007 12:02	165.00	17.719	51.604	7.281
12/6/2007 12:03	180.00	17.718	51.6	7.282
12/6/2007 12:03	195.00	17.716	51.604	7.288
12/6/2007 12:03	210.00	17.712	51.604	7.297
12/6/2007 12:03	225.00	17.709	51.603	7.303
12/6/2007 12:04	240.00	17.704	51.604	7.315
12/6/2007 12:04	255.00	17.699	51.605	7.327
12/6/2007 12:04	270.00	17.693	51.605	7.341
12/6/2007 12:04	285.00	17.687	51.607	7.354
12/6/2007 12:05	300.00	17.681	51.603	7.368
12/6/2007 12:05	330.00	17.669	51.601	7.396
12/6/2007 12:06	360.00	17.653	51.609	7.433
12/6/2007 12:06	390.00	17.637	51.61	7.471
12/6/2007 12:07	420.00	17.621	51.613	7.507
12/6/2007 12:07	450.00	17.605	51.616	7.543
12/6/2007 12:08	480.00	17.589	51.618	7.58
12/6/2007 12:08	510.00	17.573	51.619	7.618
12/6/2007 12:09	540.00	17.554	51.622	7.661
12/6/2007 12:09	570.00	17.54	51.626	7.693
12/6/2007 12:10	600.00	17.523	51.626	7.733
12/6/2007 12:11	660.00	17.49	51.633	7.808
12/6/2007 12:12	720.00	17.465	51.637	7.866
12/6/2007 12:13	780.00	17.439	51.645	7.927
12/6/2007 12:14	840.00	17.415	51.65	7.982
12/6/2007 12:15	900.00	17.395	51.65	8.028
12/6/2007 12:16	960.00	17.376	51.655	8.072
12/6/2007 12:17	1020.00	17.36	51.657	8.11
12/6/2007 12:18	1080.00	17.343	51.659	8.149
12/6/2007 12:19	1140.00	17.33	51.661	8.179
12/6/2007 12:20	1200.00	17.318	51.659	8.205
12/6/2007 12:21	1260.00	17.309	51.661	8.226
12/6/2007 12:22	1320.00	17.298	51.665	8.252
12/6/2007 12:23	1380.00	17.29	51.66	8.27
12/6/2007 12:24	1440.00	17.286	51.663	8.281
12/6/2007 12:25	1500.00	17.278	51.663	8.297
12/6/2007 12:26	1560.00	17.272	51.669	8.311
12/6/2007 12:27	1620.00	17.267	51.667	8.325
12/6/2007 12:28	1680.00	17.262	51.669	8.336
12/6/2007 12:29	1740.00	17.259	51.668	8.342
12/6/2007 12:30	1800.00	17.255	51.668	8.352
12/6/2007 12:31	1860.00	17.252	51.672	8.359
12/6/2007 12:32	1920.00	17.249	51.667	8.365
12/6/2007 12:33	1980.00	17.245	51.668	8.375
12/6/2007 12:34	2040.00	17.243	51.666	8.379
12/6/2007 12:35	2100.00	17.241	51.668	8.385
12/6/2007 12:36	2160.00	17.239	51.668	8.389
12/6/2007 12:37	2220.00	17.238	51.666	8.39
12/6/2007 12:38	2280.00	17.235	51.671	8.398
12/6/2007 12:39	2340.00	17.234	51.672	8.4

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12/6/2007 12:40	2400.00	17.231	51.671	8.406
12/6/2007 12:41	2460.00	17.23	51.673	8.41
12/6/2007 12:42	2520.00	17.23	51.674	8.408
12/6/2007 12:43	2580.00	17.23	51.673	8.409
12/6/2007 12:44	2640.00	17.233	51.674	8.403
12/6/2007 12:45	2700.00	17.228	51.672	8.414
12/6/2007 12:46	2760.00	17.226	51.681	8.418
12/6/2007 12:47	2820.00	17.226	51.678	8.419
12/6/2007 12:48	2880.00	17.225	51.682	8.421
12/6/2007 12:49	2940.00	17.226	51.68	8.418
12/6/2007 12:50	3000.00	17.224	51.685	8.423
12/6/2007 12:51	3060.00	17.224	51.685	8.424
12/6/2007 12:52	3120.00	17.224	51.688	8.423
12/6/2007 12:53	3180.00	17.223	51.684	8.424
12/6/2007 12:54	3240.00	17.222	51.69	8.428
12/6/2007 12:55	3300.00	17.225	51.694	8.421
12/6/2007 12:56	3360.00	17.226	51.691	8.418
12/6/2007 12:57	3420.00	17.225	51.694	8.42
12/6/2007 12:58	3480.00	17.221	51.699	8.429
12/6/2007 12:59	3540.00	17.225	51.696	8.421
12/6/2007 13:00	3600.00	17.222	51.703	8.429
12/6/2007 13:01	3660.00	17.224	51.698	8.423
12/6/2007 13:02	3720.00	17.225	51.704	8.422
12/6/2007 13:03	3780.00	17.225	51.705	8.422
12/6/2007 13:04	3840.00	17.227	51.706	8.417
12/6/2007 13:05	3900.00	17.226	51.708	8.419
12/6/2007 13:06	3960.00	17.226	51.706	8.42
12/6/2007 13:07	4020.00	17.225	51.711	8.422
12/6/2007 13:08	4080.00	17.225	51.708	8.42
12/6/2007 13:09	4140.00	17.223	51.711	8.425
12/6/2007 13:10	4200.00	17.223	51.717	8.425
12/6/2007 13:11	4260.00	17.226	51.716	8.419
12/6/2007 13:12	4320.00	17.225	51.719	8.421
12/6/2007 13:13	4380.00	17.222	51.722	8.427
12/6/2007 13:14	4440.00	17.225	51.72	8.42
12/6/2007 13:15	4500.00	17.224	51.722	8.424
12/6/2007 13:16	4560.00	17.224	51.726	8.424
12/6/2007 13:17	4620.00	17.224	51.723	8.424
12/6/2007 13:18	4680.00	17.221	51.723	8.429
12/6/2007 13:19	4740.00	17.223	51.728	8.426
12/6/2007 13:20	4800.00	17.223	51.73	8.427
12/6/2007 13:21	4860.00	17.221	51.727	8.43
12/6/2007 13:22	4920.00	17.221	51.734	8.43
12/6/2007 13:23	4980.00	17.222	51.729	8.428
12/6/2007 13:24	5040.00	17.22	51.736	8.432
12/6/2007 13:25	5100.00	17.221	51.731	8.431
12/6/2007 13:26	5160.00	17.221	51.737	8.431
12/6/2007 13:27	5220.00	17.219	51.735	8.434
12/6/2007 13:28	5280.00	17.221	51.738	8.431
12/6/2007 13:29	5340.00	17.22	51.736	8.432
12/6/2007 13:30	5400.00	17.22	51.742	8.433
12/6/2007 13:31	5460.00	17.219	51.764	8.436

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12/6/2007 13:32	5520.00	17.22	51.749	8.432
12/6/2007 13:33	5580.00	17.214	51.746	8.447
12/6/2007 13:34	5640.00	17.217	51.747	8.438
12/6/2007 13:35	5700.00	17.218	51.746	8.437
12/6/2007 13:36	5760.00	17.219	51.749	8.434
12/6/2007 13:37	5820.00	17.218	51.747	8.437
12/6/2007 13:38	5880.00	17.219	51.752	8.434
12/6/2007 13:39	5940.00	17.217	51.752	8.439
12/6/2007 13:40	6000.00	17.219	51.749	8.435
12/6/2007 13:41	6060.00	17.218	51.752	8.437
12/6/2007 13:42	6120.00	17.216	51.755	8.441
12/6/2007 13:43	6180.00	17.216	51.753	8.443
12/6/2007 13:44	6240.00	17.217	51.752	8.44
12/6/2007 13:45	6300.00	17.216	51.752	8.442
12/6/2007 13:46	6360.00	17.216	51.76	8.44
12/6/2007 13:47	6420.00	17.217	51.752	8.44
12/6/2007 13:48	6480.00	17.216	51.758	8.441
12/6/2007 13:49	6540.00	17.214	51.758	8.446
12/6/2007 13:50	6600.00	17.215	51.761	8.443
12/6/2007 13:51	6660.00	17.215	51.761	8.445
12/6/2007 13:52	6720.00	17.214	51.763	8.446
12/6/2007 13:53	6780.00	17.214	51.763	8.446
12/6/2007 13:54	6840.00	17.213	51.766	8.449
12/6/2007 13:55	6900.00	17.215	51.769	8.445
12/6/2007 13:56	6960.00	17.215	51.767	8.445
12/6/2007 13:57	7020.00	17.214	51.767	8.447
12/6/2007 13:58	7080.00	17.214	51.774	8.446
12/6/2007 13:59	7140.00	17.212	51.767	8.45
12/6/2007 14:00	7200.00	17.213	51.774	8.449
12/6/2007 14:03	7380.00	17.214	51.773	8.447
12/6/2007 14:06	7560.00	17.214	51.774	8.446
12/6/2007 14:09	7740.00	17.211	51.778	8.453
12/6/2007 14:12	7920.00	17.212	51.78	8.451
12/6/2007 14:15	8100.00	17.213	51.782	8.449
12/6/2007 14:18	8280.00	17.211	51.787	8.454
12/6/2007 14:21	8460.00	17.211	51.79	8.452
12/6/2007 14:24	8640.00	17.21	51.788	8.456
12/6/2007 14:27	8820.00	17.21	51.795	8.455
12/6/2007 14:30	9000.00	17.209	51.791	8.458
12/6/2007 14:33	9180.00	17.207	51.791	8.463
12/6/2007 14:36	9360.00	17.206	51.802	8.465
12/6/2007 14:39	9540.00	17.204	51.797	8.468
12/6/2007 14:42	9720.00	17.206	51.799	8.464
12/6/2007 14:45	9900.00	17.205	51.793	8.466
12/6/2007 14:48	10080.00	17.205	51.806	8.466
12/6/2007 14:51	10260.00	17.207	51.801	8.463
12/6/2007 14:54	10440.00	17.206	51.806	8.464
12/6/2007 14:57	10620.00	17.208	51.802	8.461
12/6/2007 15:00	10800.00	17.207	51.806	8.463
12/6/2007 15:05	11100.00	17.207	51.807	8.463
12/6/2007 15:10	11400.00	17.207	51.806	8.461
12/6/2007 15:15	11700.00	17.205	51.814	8.467

12/6/2007 15:20	12000.00	17.206	51.814	8.464
12/6/2007 15:25	12300.00	17.209	51.821	8.459
12/6/2007 15:30	12600.00	17.212	51.818	8.451
12/6/2007 15:35	12900.00	17.212	51.824	8.451
12/6/2007 15:40	13200.00	17.212	51.823	8.451
12/6/2007 15:45	13500.00	17.211	51.827	8.453
12/6/2007 15:50	13800.00	17.208	51.827	8.461
12/6/2007 15:55	14100.00	17.208	51.826	8.461
12/6/2007 16:00	14400.00	17.206	51.83	8.464
12/6/2007 16:15	15300.00	17.211	51.834	8.452
12/6/2007 16:30	16200.00	17.21	51.843	8.455
12/6/2007 16:45	17100.00	17.209	51.841	8.458
12/6/2007 17:00	18000.00	17.209	51.846	8.458
12/6/2007 17:15	18900.00	17.207	51.846	8.461
12/6/2007 17:30	19800.00	17.207	51.852	8.461
12/6/2007 17:45	20700.00	17.208	51.853	8.461
12/6/2007 18:00	21600.00	17.208	51.855	8.461
12/6/2007 18:15	22500.00	17.208	51.859	8.46
12/6/2007 18:30	23400.00	17.207	51.855	8.463
12/6/2007 18:45	24300.00	17.204	51.856	8.47
12/6/2007 19:00	25200.00	17.206	51.857	8.466
12/6/2007 19:15	26100.00	17.201	51.859	8.477
12/6/2007 19:30	27000.00	17.2	51.864	8.479
12/6/2007 19:45	27900.00	17.202	51.861	8.473
12/6/2007 20:00	28800.00	17.203	51.868	8.471
12/6/2007 20:15	29700.00	17.203	51.866	8.472
12/6/2007 20:30	30600.00	17.203	51.867	8.472
12/6/2007 20:45	31500.00	17.203	51.866	8.473
12/6/2007 21:00	32400.00	17.204	51.865	8.47
12/6/2007 21:15	33300.00	17.204	51.875	8.47
12/6/2007 21:30	34200.00	17.203	51.872	8.472
12/6/2007 21:45	35100.00	17.202	51.877	8.473
12/6/2007 22:00	36000.00	17.203	51.868	8.471
12/6/2007 22:15	36900.00	17.202	51.872	8.475
12/6/2007 22:30	37800.00	17.204	51.878	8.469
12/6/2007 22:45	38700.00	17.202	51.875	8.474
12/6/2007 23:00	39600.00	17.203	51.875	8.472
12/6/2007 23:15	40500.00	17.202	51.878	8.474
12/6/2007 23:30	41400.00	17.202	51.877	8.473
12/6/2007 23:45	42300.00	17.201	51.881	8.475
12/7/2007 0:00	43200.00	17.203	51.881	8.471
12/7/2007 0:15	44100.00	17.203	51.878	8.472
12/7/2007 0:30	45000.00	17.203	51.887	8.471
12/7/2007 0:45	45900.00	17.203	51.886	8.472
12/7/2007 1:00	46800.00	17.203	51.882	8.472
12/7/2007 1:15	47700.00	17.202	51.883	8.474
12/7/2007 1:30	48600.00	17.202	51.882	8.475
12/7/2007 1:45	49500.00	17.202	51.885	8.473
12/7/2007 2:00	50400.00	17.201	51.887	8.476
12/7/2007 2:15	51300.00	17.202	51.888	8.473
12/7/2007 2:30	52200.00	17.201	51.885	8.476
12/7/2007 2:45	53100.00	17.201	51.887	8.475

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12/7/2007 3:00	54000.00	17.201	51.888	8.477
12/7/2007 3:15	54900.00	17.202	51.89	8.474
12/7/2007 3:30	55800.00	17.2	51.89	8.478
12/7/2007 3:45	56700.00	17.2	51.889	8.478
12/7/2007 4:00	57600.00	17.196	51.888	8.488
12/7/2007 4:15	58500.00	17.201	51.89	8.477
12/7/2007 4:30	59400.00	17.2	51.891	8.479
12/7/2007 4:45	60300.00	17.2	51.894	8.479
12/7/2007 5:00	61200.00	17.198	51.892	8.482
12/7/2007 5:15	62100.00	17.199	51.895	8.481
12/7/2007 5:30	63000.00	17.199	51.893	8.48
12/7/2007 5:45	63900.00	17.197	51.896	8.485
12/7/2007 6:00	64800.00	17.198	51.891	8.484
12/7/2007 6:15	65700.00	17.199	51.897	8.482
12/7/2007 6:30	66600.00	17.196	51.893	8.487
12/7/2007 6:45	67500.00	17.197	51.896	8.485
12/7/2007 7:00	68400.00	17.197	51.894	8.484
12/7/2007 7:15	69300.00	17.197	51.895	8.486
12/7/2007 7:30	70200.00	17.194	51.896	8.493
12/7/2007 7:45	71100.00	17.195	51.898	8.49
12/7/2007 8:00	72000.00	17.197	51.897	8.485
12/7/2007 8:15	72900.00	17.195	51.899	8.49
12/7/2007 8:30	73800.00	17.194	51.902	8.493
12/7/2007 8:45	74700.00	17.194	51.901	8.493
12/7/2007 9:00	75600.00	17.194	51.898	8.492
12/7/2007 9:15	76500.00	17.194	51.902	8.493
12/7/2007 9:30	77400.00	17.194	51.897	8.493
12/7/2007 9:45	78300.00	17.194	51.897	8.492
12/7/2007 10:00	79200.00	17.194	51.896	8.491
12/7/2007 10:15	80100.00	17.192	51.903	8.497
12/7/2007 10:30	81000.00	17.193	51.9	8.495
12/7/2007 10:45	81900.00	17.194	51.903	8.492
12/7/2007 11:00	82800.00	17.194	51.9	8.493
12/7/2007 11:15	83700.00	17.195	51.9	8.49
12/7/2007 11:30	84600.00	17.196	51.899	8.489
12/7/2007 11:45	85500.00	17.196	51.904	8.488
12/7/2007 12:00	86400.00	17.195	51.904	8.49
12/7/2007 12:01	86460.00	17.195	51.906	8.489
12/7/2007 12:02	86520.00	17.196	51.901	8.487
12/7/2007 12:03	86580.00	17.197	51.908	8.485
12/7/2007 12:04	86640.00	17.202	51.901	8.474
12/7/2007 12:05	86700.00	17.21	51.906	8.454
12/7/2007 12:06	86760.00	17.22	51.9	8.433
12/7/2007 12:07	86820.00	17.23	51.906	8.409
12/7/2007 12:08	86880.00	17.246	51.902	8.373
12/7/2007 12:09	86940.00	17.261	51.9	8.339
12/7/2007 12:10	87000.00	17.276	51.9	8.304
12/7/2007 12:11	87060.00	17.29	51.896	8.27
12/7/2007 12:12	87120.00	17.306	51.9	8.233
12/7/2007 12:13	87180.00	17.324	51.9	8.193
12/7/2007 12:14	87240.00	17.341	51.896	8.154
12/7/2007 12:15	87300.00	17.355	51.893	8.121

12/7/2007 12:16	87360.00	17.372	51.892	8.082
12/7/2007 12:17	87420.00	17.387	51.894	8.046
12/7/2007 12:18	87480.00	17.403	51.885	8.01
12/7/2007 12:19	87540.00	17.418	51.89	7.976
12/7/2007 12:20	87600.00	17.431	51.891	7.945
12/7/2007 12:21	87660.00	17.446	51.883	7.909
12/7/2007 12:22	87720.00	17.457	51.88	7.884
12/7/2007 12:23	87780.00	17.472	51.884	7.851
12/7/2007 12:24	87840.00	17.484	51.881	7.822
12/7/2007 12:25	87900.00	17.495	51.879	7.797
12/7/2007 12:26	87960.00	17.507	51.881	7.771
12/7/2007 12:27	88020.00	17.516	51.879	7.75
12/7/2007 12:28	88080.00	17.527	51.876	7.724
12/7/2007 12:29	88140.00	17.537	51.877	7.7
12/7/2007 12:30	88200.00	17.548	51.872	7.676
12/7/2007 12:31	88260.00	17.553	51.874	7.663
12/7/2007 12:32	88320.00	17.566	51.873	7.634
12/7/2007 12:33	88380.00	17.573	51.875	7.617
12/7/2007 12:34	88440.00	17.582	51.874	7.597
12/7/2007 12:35	88500.00	17.587	51.868	7.585
12/7/2007 12:36	88560.00	17.595	51.869	7.567
12/7/2007 12:37	88620.00	17.602	51.871	7.551
12/7/2007 12:38	88680.00	17.608	51.866	7.536
12/7/2007 12:39	88740.00	17.614	51.863	7.523
12/7/2007 12:40	88800.00	17.619	51.866	7.51
12/7/2007 12:41	88860.00	17.621	51.863	7.506
12/7/2007 12:42	88920.00	17.629	51.861	7.488
12/7/2007 12:43	88980.00	17.633	51.866	7.478
12/7/2007 12:44	89040.00	17.637	51.86	7.47
12/7/2007 12:45	89100.00	17.642	51.863	7.457
12/7/2007 12:46	89160.00	17.646	51.858	7.45
12/7/2007 12:47	89220.00	17.648	51.862	7.443
12/7/2007 12:48	89280.00	17.651	51.859	7.437
12/7/2007 12:49	89340.00	17.653	51.859	7.432
12/7/2007 12:50	89400.00	17.658	51.856	7.42
12/7/2007 12:51	89460.00	17.661	51.857	7.415
12/7/2007 12:52	89520.00	17.663	51.855	7.409
12/7/2007 12:53	89580.00	17.667	51.849	7.4
12/7/2007 12:54	89640.00	17.672	51.852	7.388
12/7/2007 12:55	89700.00	17.674	51.85	7.383
12/7/2007 12:56	89760.00	17.675	51.846	7.381
12/7/2007 12:57	89820.00	17.679	51.85	7.373
12/7/2007 12:58	89880.00	17.682	51.848	7.367
12/7/2007 12:59	89940.00	17.686	51.847	7.358
12/7/2007 13:00	90000.00	17.691	51.844	7.345
12/7/2007 13:01	90060.00	17.686	51.845	7.355
12/7/2007 13:02	90120.00	17.688	51.847	7.353
12/7/2007 13:03	90180.00	17.689	51.84	7.351
12/7/2007 13:04	90240.00	17.688	51.844	7.351
12/7/2007 13:05	90300.00	17.69	51.845	7.348
12/7/2007 13:06	90360.00	17.69	51.839	7.347
12/7/2007 13:07	90420.00	17.69	51.835	7.347

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12/7/2007 13:08	90480.00	17.691	51.838	7.344
12/7/2007 13:09	90540.00	17.692	51.837	7.344
12/7/2007 13:10	90600.00	17.695	51.839	7.335
12/7/2007 13:11	90660.00	17.688	51.835	7.352
12/7/2007 13:12	90720.00	17.686	51.836	7.356
12/7/2007 13:13	90780.00	17.681	51.836	7.367
12/7/2007 13:14	90840.00	17.68	51.83	7.37
12/7/2007 13:15	90900.00	17.681	51.831	7.368
12/7/2007 13:16	90960.00	17.685	51.831	7.358
12/7/2007 13:17	91020.00	17.68	51.831	7.37
12/7/2007 13:18	91080.00	17.681	51.827	7.368
12/7/2007 13:19	91140.00	17.682	51.823	7.366
12/7/2007 13:20	91200.00	17.683	51.825	7.364
12/7/2007 13:21	91260.00	17.683	51.827	7.364
12/7/2007 13:22	91320.00	17.684	51.824	7.361
12/7/2007 13:23	91380.00	17.684	51.824	7.362
12/7/2007 13:24	91440.00	17.684	51.818	7.362
12/7/2007 13:25	91500.00	17.683	51.826	7.362
12/7/2007 13:26	91560.00	17.685	51.822	7.36
12/7/2007 13:27	91620.00	17.684	51.819	7.36
12/7/2007 13:28	91680.00	17.686	51.817	7.355
12/7/2007 13:29	91740.00	17.687	51.816	7.354
12/7/2007 13:30	91800.00	17.687	51.816	7.354
12/7/2007 13:31	91860.00	17.687	51.815	7.354
12/7/2007 13:32	91920.00	17.687	51.814	7.355
12/7/2007 13:33	91980.00	17.687	51.812	7.354
12/7/2007 13:34	92040.00	17.688	51.81	7.351
12/7/2007 13:35	92100.00	17.689	51.809	7.349
12/7/2007 13:36	92160.00	17.688	51.812	7.352
12/7/2007 13:37	92220.00	17.689	51.81	7.349
12/7/2007 13:38	92280.00	17.69	51.809	7.348
12/7/2007 13:39	92340.00	17.69	51.799	7.348
12/7/2007 13:40	92400.00	17.689	51.802	7.349
12/7/2007 13:41	92460.00	17.691	51.807	7.346
12/7/2007 13:42	92520.00	17.691	51.802	7.345
12/7/2007 13:43	92580.00	17.688	51.803	7.351
12/7/2007 13:44	92640.00	17.689	51.799	7.349
12/7/2007 13:45	92700.00	17.691	51.797	7.346
12/7/2007 13:46	92760.00	17.691	51.797	7.345
12/7/2007 13:47	92820.00	17.691	51.801	7.345
12/7/2007 13:48	92880.00	17.69	51.793	7.347
12/7/2007 13:49	92940.00	17.69	51.795	7.348
12/7/2007 13:50	93000.00	17.69	51.797	7.347
12/7/2007 13:51	93060.00	17.692	51.793	7.343
12/7/2007 13:52	93120.00	17.691	51.794	7.344
12/7/2007 13:53	93180.00	17.692	51.791	7.343
12/7/2007 13:54	93240.00	17.692	51.79	7.343
12/7/2007 13:55	93300.00	17.69	51.788	7.346
12/7/2007 13:56	93360.00	17.692	51.789	7.342
12/7/2007 13:57	93420.00	17.692	51.791	7.342
12/7/2007 13:58	93480.00	17.692	51.789	7.343
12/7/2007 13:59	93540.00	17.692	51.787	7.343

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12/7/2007 14:00	93600.00	17.692	51.785	7.341
12/7/2007 14:01	93660.00	17.692	51.783	7.343
12/7/2007 14:02	93720.00	17.693	51.786	7.34
12/7/2007 14:03	93780.00	17.694	51.78	7.337
12/7/2007 14:04	93840.00	17.693	51.784	7.341
12/7/2007 14:05	93900.00	17.692	51.783	7.342
12/7/2007 14:06	93960.00	17.692	51.782	7.342
12/7/2007 14:07	94020.00	17.693	51.78	7.34
12/7/2007 14:08	94080.00	17.693	51.778	7.34
12/7/2007 14:09	94140.00	17.693	51.776	7.34
12/7/2007 14:10	94200.00	17.693	51.774	7.34
12/7/2007 14:11	94260.00	17.693	51.775	7.34
12/7/2007 14:12	94320.00	17.694	51.773	7.337
12/7/2007 14:13	94380.00	17.693	51.778	7.341
12/7/2007 14:14	94440.00	17.694	51.776	7.337
12/7/2007 14:15	94500.00	17.694	51.777	7.338
12/7/2007 14:16	94560.00	17.694	51.774	7.338
12/7/2007 14:17	94620.00	17.693	51.773	7.34
12/7/2007 14:18	94680.00	17.693	51.774	7.34
12/7/2007 14:19	94740.00	17.694	51.771	7.338
12/7/2007 14:20	94800.00	17.695	51.769	7.336
12/7/2007 14:21	94860.00	17.695	51.769	7.337
12/7/2007 14:22	94920.00	17.694	51.767	7.339
12/7/2007 14:23	94980.00	17.694	51.771	7.338
12/7/2007 14:24	95040.00	17.693	51.767	7.341
12/7/2007 14:25	95100.00	17.694	51.765	7.338
12/7/2007 14:26	95160.00	17.695	51.77	7.335
12/7/2007 14:27	95220.00	17.695	51.769	7.336
12/7/2007 14:28	95280.00	17.695	51.767	7.336
12/7/2007 14:29	95340.00	17.695	51.767	7.336
12/7/2007 14:30	95400.00	17.694	51.763	7.338
12/7/2007 14:31	95460.00	17.695	51.764	7.337
12/7/2007 14:32	95520.00	17.695	51.764	7.335
12/7/2007 14:33	95580.00	17.696	51.767	7.334
12/7/2007 14:34	95640.00	17.696	51.769	7.333
12/7/2007 14:35	95700.00	17.694	51.761	7.337
12/7/2007 14:36	95760.00	17.695	51.76	7.335
12/7/2007 14:37	95820.00	17.695	51.756	7.335
12/7/2007 14:38	95880.00	17.696	51.757	7.333
12/7/2007 14:39	95940.00	17.696	51.761	7.334
12/7/2007 14:40	96000.00	17.696	51.761	7.333
12/7/2007 14:41	96060.00	17.696	51.758	7.333
12/7/2007 14:42	96120.00	17.695	51.755	7.335
12/7/2007 14:43	96180.00	17.695	51.764	7.335
12/7/2007 14:44	96240.00	17.695	51.754	7.336
12/7/2007 14:45	96300.00	17.696	51.761	7.334
12/7/2007 14:46	96360.00	17.695	51.756	7.334
12/7/2007 14:47	96420.00	17.695	51.76	7.336
12/7/2007 14:48	96480.00	17.696	51.756	7.333
12/7/2007 14:49	96540.00	17.695	51.754	7.335
12/7/2007 14:50	96600.00	17.695	51.754	7.335
12/7/2007 14:51	96660.00	17.697	51.758	7.331

12/7/2007 14:52	96720.00	17.696	51.753	7.333
12/7/2007 14:53	96780.00	17.695	51.755	7.336
12/7/2007 14:54	96840.00	17.695	51.75	7.335
12/7/2007 14:55	96900.00	17.695	51.755	7.335
12/7/2007 14:56	96960.00	17.696	51.747	7.333
12/7/2007 14:57	97020.00	17.695	51.752	7.335
12/7/2007 14:58	97080.00	17.696	51.75	7.334
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12/7/2007 16:34	102840.00	17.698	51.723	7.329
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12/7/2007 16:42	103320.00	17.697	51.722	7.331
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12/7/2007 16:56	104160.00	17.699	51.717	7.327
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12/7/2007 17:26	105960.00	17.697	51.708	7.33
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12/7/2007 17:34	106440.00	17.693	51.713	7.341
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12/7/2007 19:26	113160.00	17.695	51.695	7.335
12/7/2007 19:27	113220.00	17.695	51.699	7.336
12/7/2007 19:28	113280.00	17.692	51.7	7.343
12/7/2007 19:29	113340.00	17.692	51.7	7.342
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12/7/2007 19:31	113460.00	17.695	51.696	7.335
12/7/2007 19:32	113520.00	17.693	51.695	7.341
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12/7/2007 19:44	114240.00	17.692	51.695	7.343
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12/7/2007 19:46	114360.00	17.691	51.695	7.345
12/7/2007 19:47	114420.00	17.692	51.699	7.343
12/7/2007 19:48	114480.00	17.696	51.698	7.334
12/7/2007 19:49	114540.00	17.692	51.694	7.343
12/7/2007 19:50	114600.00	17.696	51.699	7.332
12/7/2007 19:51	114660.00	17.697	51.701	7.331
12/7/2007 19:52	114720.00	17.697	51.695	7.331
12/7/2007 19:53	114780.00	17.697	51.695	7.331
12/7/2007 19:54	114840.00	17.697	51.699	7.331
12/7/2007 19:55	114900.00	17.693	51.698	7.34
12/7/2007 19:56	114960.00	17.694	51.7	7.339
12/7/2007 19:57	115020.00	17.692	51.697	7.343
12/7/2007 19:58	115080.00	17.693	51.696	7.341
12/7/2007 19:59	115140.00	17.693	51.695	7.341
12/7/2007 20:00	115200.00	17.696	51.697	7.333
12/7/2007 20:01	115260.00	17.696	51.695	7.333
12/7/2007 20:02	115320.00	17.697	51.696	7.332
12/7/2007 20:03	115380.00	17.697	51.695	7.331

12/7/2007 20:04	115440.00	17.697	51.695	7.332
12/7/2007 20:05	115500.00	17.696	51.696	7.333
12/7/2007 20:06	115560.00	17.697	51.693	7.331
12/7/2007 20:07	115620.00	17.696	51.696	7.333
12/7/2007 20:08	115680.00	17.692	51.695	7.342
12/7/2007 20:09	115740.00	17.692	51.695	7.342
12/7/2007 20:10	115800.00	17.692	51.695	7.343
12/7/2007 20:11	115860.00	17.696	51.695	7.334
12/7/2007 20:12	115920.00	17.697	51.697	7.332
12/7/2007 20:13	115980.00	17.694	51.692	7.337
12/7/2007 20:14	116040.00	17.696	51.691	7.333
12/7/2007 20:15	116100.00	17.697	51.695	7.33
12/7/2007 20:16	116160.00	17.692	51.694	7.342
12/7/2007 20:17	116220.00	17.696	51.692	7.333
12/7/2007 20:18	116280.00	17.697	51.694	7.33
12/7/2007 20:19	116340.00	17.692	51.695	7.342
12/7/2007 20:20	116400.00	17.691	51.694	7.344
12/7/2007 20:21	116460.00	17.693	51.691	7.34
12/7/2007 20:22	116520.00	17.691	51.695	7.344
12/7/2007 20:23	116580.00	17.693	51.693	7.34
12/7/2007 20:24	116640.00	17.696	51.694	7.333
12/7/2007 20:25	116700.00	17.697	51.695	7.331
12/7/2007 20:26	116760.00	17.696	51.695	7.332
12/7/2007 20:27	116820.00	17.695	51.69	7.335
12/7/2007 20:28	116880.00	17.692	51.696	7.343
12/7/2007 20:29	116940.00	17.696	51.696	7.332
12/7/2007 20:30	117000.00	17.695	51.692	7.335
12/7/2007 20:31	117060.00	17.696	51.699	7.334
12/7/2007 20:32	117120.00	17.692	51.693	7.343
12/7/2007 20:33	117180.00	17.692	51.692	7.344
12/7/2007 20:34	117240.00	17.692	51.692	7.344
12/7/2007 20:35	117300.00	17.691	51.694	7.345
12/7/2007 20:36	117360.00	17.695	51.692	7.335
12/7/2007 20:37	117420.00	17.695	51.693	7.336
12/7/2007 20:38	117480.00	17.693	51.697	7.341
12/7/2007 20:39	117540.00	17.692	51.689	7.342
12/7/2007 20:40	117600.00	17.692	51.694	7.342
12/7/2007 20:41	117660.00	17.697	51.69	7.332
12/7/2007 20:42	117720.00	17.691	51.69	7.345
12/7/2007 20:43	117780.00	17.695	51.693	7.335
12/7/2007 20:44	117840.00	17.692	51.695	7.343
12/7/2007 20:45	117900.00	17.692	51.692	7.342
12/7/2007 20:46	117960.00	17.692	51.695	7.342
12/7/2007 20:47	118020.00	17.695	51.695	7.336
12/7/2007 20:48	118080.00	17.692	51.693	7.342
12/7/2007 20:49	118140.00	17.692	51.687	7.342
12/7/2007 20:50	118200.00	17.695	51.691	7.335
12/7/2007 20:51	118260.00	17.691	51.695	7.345
12/7/2007 20:52	118320.00	17.691	51.694	7.345
12/7/2007 20:53	118380.00	17.692	51.69	7.342
12/7/2007 20:54	118440.00	17.69	51.695	7.346
12/7/2007 20:55	118500.00	17.692	51.7	7.342

12/7/2007 20:56	118560.00	17.696	51.689	7.333
12/7/2007 20:57	118620.00	17.692	51.695	7.342
12/7/2007 20:58	118680.00	17.692	51.693	7.343
12/7/2007 20:59	118740.00	17.696	51.693	7.333
12/7/2007 21:00	118800.00	17.692	51.687	7.342
12/7/2007 21:01	118860.00	17.692	51.69	7.343
12/7/2007 21:02	118920.00	17.694	51.693	7.338
12/7/2007 21:03	118980.00	17.697	51.694	7.331
12/7/2007 21:04	119040.00	17.692	51.688	7.343
12/7/2007 21:05	119100.00	17.693	51.695	7.34
12/7/2007 21:06	119160.00	17.692	51.689	7.342
12/7/2007 21:07	119220.00	17.696	51.692	7.332
12/7/2007 21:08	119280.00	17.693	51.688	7.339
12/7/2007 21:09	119340.00	17.697	51.694	7.33
12/7/2007 21:10	119400.00	17.692	51.691	7.343
12/7/2007 21:11	119460.00	17.692	51.689	7.342
12/7/2007 21:12	119520.00	17.693	51.692	7.34
12/7/2007 21:13	119580.00	17.692	51.689	7.342
12/7/2007 21:14	119640.00	17.697	51.688	7.332
12/7/2007 21:15	119700.00	17.692	51.689	7.342
12/7/2007 21:16	119760.00	17.698	51.695	7.329
12/7/2007 21:17	119820.00	17.693	51.689	7.341
12/7/2007 21:18	119880.00	17.697	51.689	7.332
12/7/2007 21:19	119940.00	17.693	51.691	7.341
12/7/2007 21:20	120000.00	17.693	51.686	7.341
12/7/2007 21:21	120060.00	17.697	51.692	7.331
12/7/2007 21:22	120120.00	17.693	51.692	7.341
12/7/2007 21:23	120180.00	17.697	51.687	7.331
12/7/2007 21:24	120240.00	17.693	51.689	7.341
12/7/2007 21:25	120300.00	17.694	51.689	7.337
12/7/2007 21:26	120360.00	17.698	51.692	7.329
12/7/2007 21:27	120420.00	17.694	51.695	7.338
12/7/2007 21:28	120480.00	17.697	51.692	7.332
12/7/2007 21:29	120540.00	17.692	51.691	7.344
12/7/2007 21:30	120600.00	17.693	51.689	7.339
12/7/2007 21:31	120660.00	17.692	51.69	7.341
12/7/2007 21:32	120720.00	17.697	51.691	7.331
12/7/2007 21:33	120780.00	17.693	51.69	7.34
12/7/2007 21:34	120840.00	17.694	51.687	7.339
12/7/2007 21:35	120900.00	17.694	51.69	7.339
12/7/2007 21:36	120960.00	17.693	51.687	7.341
12/7/2007 21:37	121020.00	17.693	51.685	7.34
12/7/2007 21:38	121080.00	17.693	51.688	7.34
12/7/2007 21:39	121140.00	17.693	51.69	7.34
12/7/2007 21:40	121200.00	17.692	51.693	7.343
12/7/2007 21:41	121260.00	17.693	51.687	7.34
12/7/2007 21:42	121320.00	17.693	51.691	7.339
12/7/2007 21:43	121380.00	17.693	51.693	7.341
12/7/2007 21:44	121440.00	17.693	51.683	7.34
12/7/2007 21:45	121500.00	17.691	51.686	7.344
12/7/2007 21:46	121560.00	17.693	51.683	7.341
12/7/2007 21:47	121620.00	17.697	51.688	7.331

12/7/2007 21:48	121680.00	17.692	51.688	7.342
12/7/2007 21:49	121740.00	17.696	51.684	7.333
12/7/2007 21:50	121800.00	17.693	51.689	7.34
12/7/2007 21:51	121860.00	17.693	51.692	7.34
12/7/2007 21:52	121920.00	17.692	51.688	7.342
12/7/2007 21:53	121980.00	17.698	51.689	7.328
12/7/2007 21:54	122040.00	17.692	51.693	7.343
12/7/2007 21:55	122100.00	17.693	51.688	7.341
12/7/2007 21:56	122160.00	17.696	51.687	7.333
12/7/2007 21:57	122220.00	17.697	51.686	7.331
12/7/2007 21:58	122280.00	17.696	51.688	7.332
12/7/2007 21:59	122340.00	17.692	51.691	7.342
12/7/2007 22:00	122400.00	17.692	51.691	7.343
12/7/2007 22:01	122460.00	17.693	51.688	7.34
12/7/2007 22:02	122520.00	17.693	51.689	7.341
12/7/2007 22:03	122580.00	17.693	51.685	7.34
12/7/2007 22:04	122640.00	17.693	51.69	7.34
12/7/2007 22:05	122700.00	17.693	51.686	7.34
12/7/2007 22:06	122760.00	17.693	51.684	7.341
12/7/2007 22:07	122820.00	17.691	51.689	7.345
12/7/2007 22:08	122880.00	17.693	51.687	7.341
12/7/2007 22:09	122940.00	17.693	51.685	7.341
12/7/2007 22:10	123000.00	17.692	51.691	7.342
12/7/2007 22:11	123060.00	17.693	51.686	7.34
12/7/2007 22:12	123120.00	17.693	51.688	7.341
12/7/2007 22:13	123180.00	17.692	51.689	7.344
12/7/2007 22:14	123240.00	17.696	51.687	7.333
12/7/2007 22:15	123300.00	17.693	51.689	7.34
12/7/2007 22:16	123360.00	17.691	51.685	7.344
12/7/2007 22:17	123420.00	17.697	51.685	7.332
12/7/2007 22:18	123480.00	17.693	51.687	7.341
12/7/2007 22:19	123540.00	17.693	51.687	7.34
12/7/2007 22:20	123600.00	17.692	51.69	7.343
12/7/2007 22:21	123660.00	17.693	51.689	7.341
12/7/2007 22:22	123720.00	17.692	51.691	7.342
12/7/2007 22:23	123780.00	17.692	51.69	7.342
12/7/2007 22:24	123840.00	17.693	51.691	7.34
12/7/2007 22:25	123900.00	17.693	51.688	7.341
12/7/2007 22:26	123960.00	17.693	51.687	7.341
12/7/2007 22:27	124020.00	17.693	51.683	7.341
12/7/2007 22:28	124080.00	17.693	51.689	7.341
12/7/2007 22:29	124140.00	17.693	51.691	7.341
12/7/2007 22:30	124200.00	17.692	51.685	7.342
12/7/2007 22:31	124260.00	17.692	51.683	7.342
12/7/2007 22:32	124320.00	17.693	51.684	7.34
12/7/2007 22:33	124380.00	17.692	51.683	7.343
12/7/2007 22:34	124440.00	17.693	51.685	7.34
12/7/2007 22:35	124500.00	17.694	51.689	7.339
12/7/2007 22:36	124560.00	17.692	51.689	7.342
12/7/2007 22:37	124620.00	17.694	51.685	7.339
12/7/2007 22:38	124680.00	17.693	51.689	7.34
12/7/2007 22:39	124740.00	17.694	51.682	7.338

12/7/2007 22:40	124800.00	17.693	51.686	7.34
12/7/2007 22:41	124860.00	17.698	51.688	7.329
12/7/2007 22:42	124920.00	17.692	51.689	7.342
12/7/2007 22:43	124980.00	17.692	51.689	7.343
12/7/2007 22:44	125040.00	17.693	51.684	7.341
12/7/2007 22:45	125100.00	17.692	51.685	7.342
12/7/2007 22:46	125160.00	17.694	51.684	7.338
12/7/2007 22:47	125220.00	17.691	51.683	7.344
12/7/2007 22:48	125280.00	17.692	51.687	7.343
12/7/2007 22:49	125340.00	17.693	51.686	7.34
12/7/2007 22:50	125400.00	17.692	51.686	7.342
12/7/2007 22:51	125460.00	17.692	51.685	7.342
12/7/2007 22:52	125520.00	17.691	51.687	7.344
12/7/2007 22:53	125580.00	17.692	51.689	7.342
12/7/2007 22:54	125640.00	17.693	51.689	7.341
12/7/2007 22:55	125700.00	17.691	51.685	7.345
12/7/2007 22:56	125760.00	17.691	51.687	7.344
12/7/2007 22:57	125820.00	17.693	51.688	7.34
12/7/2007 22:58	125880.00	17.692	51.689	7.342
12/7/2007 22:59	125940.00	17.693	51.688	7.341
12/7/2007 23:00	126000.00	17.697	51.689	7.331
12/7/2007 23:01	126060.00	17.693	51.687	7.341
12/7/2007 23:02	126120.00	17.693	51.686	7.341
12/7/2007 23:03	126180.00	17.691	51.688	7.345
12/7/2007 23:04	126240.00	17.692	51.686	7.343
12/7/2007 23:05	126300.00	17.692	51.683	7.342
12/7/2007 23:06	126360.00	17.692	51.687	7.344
12/7/2007 23:07	126420.00	17.692	51.684	7.342
12/7/2007 23:08	126480.00	17.691	51.689	7.344
12/7/2007 23:09	126540.00	17.692	51.69	7.343
12/7/2007 23:10	126600.00	17.692	51.686	7.343
12/7/2007 23:11	126660.00	17.692	51.686	7.342
12/7/2007 23:12	126720.00	17.693	51.684	7.341
12/7/2007 23:13	126780.00	17.691	51.681	7.345
12/7/2007 23:14	126840.00	17.693	51.686	7.34
12/7/2007 23:15	126900.00	17.693	51.684	7.34
12/7/2007 23:16	126960.00	17.692	51.687	7.342
12/7/2007 23:17	127020.00	17.692	51.687	7.342
12/7/2007 23:18	127080.00	17.693	51.685	7.34
12/7/2007 23:19	127140.00	17.693	51.685	7.339
12/7/2007 23:20	127200.00	17.693	51.689	7.34
12/7/2007 23:21	127260.00	17.694	51.687	7.338
12/7/2007 23:22	127320.00	17.695	51.684	7.337
12/7/2007 23:23	127380.00	17.694	51.688	7.338
12/7/2007 23:24	127440.00	17.694	51.683	7.337
12/7/2007 23:25	127500.00	17.693	51.683	7.34
12/7/2007 23:26	127560.00	17.694	51.684	7.337
12/7/2007 23:27	127620.00	17.695	51.683	7.337
12/7/2007 23:28	127680.00	17.695	51.685	7.336
12/7/2007 23:29	127740.00	17.693	51.685	7.34
12/7/2007 23:30	127800.00	17.694	51.683	7.338
12/7/2007 23:31	127860.00	17.694	51.683	7.337

12/7/2007 23:32	127920.00	17.694	51.685	7.338
12/7/2007 23:33	127980.00	17.694	51.686	7.339
12/7/2007 23:34	128040.00	17.698	51.683	7.329
12/7/2007 23:35	128100.00	17.694	51.685	7.338
12/7/2007 23:36	128160.00	17.694	51.682	7.338
12/7/2007 23:37	128220.00	17.693	51.677	7.339
12/7/2007 23:38	128280.00	17.694	51.687	7.339
12/7/2007 23:39	128340.00	17.693	51.683	7.339
12/7/2007 23:40	128400.00	17.694	51.682	7.339
12/7/2007 23:41	128460.00	17.699	51.681	7.327
12/7/2007 23:42	128520.00	17.694	51.684	7.337
12/7/2007 23:43	128580.00	17.694	51.683	7.337
12/7/2007 23:44	128640.00	17.694	51.683	7.338
12/7/2007 23:45	128700.00	17.697	51.685	7.33
12/7/2007 23:46	128760.00	17.694	51.689	7.339
12/7/2007 23:47	128820.00	17.693	51.682	7.34
12/7/2007 23:48	128880.00	17.693	51.689	7.34
12/7/2007 23:49	128940.00	17.694	51.682	7.337
12/7/2007 23:50	129000.00	17.698	51.683	7.329
12/7/2007 23:51	129060.00	17.694	51.683	7.338
12/7/2007 23:52	129120.00	17.697	51.688	7.33
12/7/2007 23:53	129180.00	17.698	51.682	7.328
12/7/2007 23:54	129240.00	17.693	51.684	7.341
12/7/2007 23:55	129300.00	17.694	51.688	7.337
12/7/2007 23:56	129360.00	17.693	51.684	7.34
12/7/2007 23:57	129420.00	17.693	51.683	7.34
12/7/2007 23:58	129480.00	17.692	51.682	7.342
12/7/2007 23:59	129540.00	17.693	51.686	7.34
12/8/2007 0:00	129600.00	17.693	51.683	7.341

Report Date: 1/2/2008 14:58
Report User Nam Administrator
Report Computer Name:

Log File Properties
File Name Pump test MW301B4 2007-12-08 08.09.17.wsl
Create Date 12/8/2007 8:08

Device Properties
Device Unknown
Site Berwick PA-Unit
Device Name
Serial Number 106428
Firmware Version 2.07

Log Configuration
Log Name Pump test MW301B4
Created By Daniel Bansah
Computer Name Field PC
Application WinSituMobile.exe
Application Version 5.4.1.4
Create Date 12/6/2007 11:34
Notes Size(bytes) 4096
Type Step Linear
Overwrite when full Disabled
Scheduled Start 12/6/2007 12:00
Scheduled Stop 12/8/2007 0:00

Steps 9

Step: 1
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 05

Step: 2
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 10

Step: 3
Duration: Days: 0 Hours: 00 Mins: 03 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 15

Step: 4
Duration: Days: 0 Hours: 00 Mins: 05 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 30

Step: 5
Duration: Days: 0 Hours: 01 Mins: 50 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00

Step: 6
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 03 Secs: 00

Step: 7
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 05 Secs: 00

Step: 8
Duration: Days: 0 Hours: 20 Mins: 00 Secs: 00

Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00
Step: 9
Duration: Days: 0 Hours: 12 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00

Step	9
Duration	Days: 0 Hours: 12 Mins: 00 Secs: 00
Interval	Days: 0 Hours: 00 Mins: 01 Secs: 00

Level Reference Settings At Log Creation

Level Measure	Level-DTW
Specific Gı	0.999
Level Referei	Set new reference
Level Referen	2.98 (ft)
Level Reference H	8.16643 (PSI)
Temper	53.6374 (F)
Depth of I	18.8542 (ft)

Log Notes:

Date and Time	Note
12/6/2007 11:36	User Note: "Level reference initialized to: 2.98"
12/6/2007 13:34	User Note: "Downloading log - Used Batt: 9% Memory: 3% User: Unknown"
12/7/2007 8:39	User Note: "Downloading log - Used Batt: 9% Memory: 3% User: Unknown"
12/7/2007 17:21	User Note: "Downloading log - Used Batt: 9% Memory: 3% User: Unknown"

Log Data:
Record Count 983

Date and Time	Elapsed Time Seconds	Sensor: Pres 30G SN#: 106428 Pressure (PSI)	Sensor: Pr Temperatu	Sensor: Pres 30G SN#: 1064 SN#: 106428 Level-DTW (ft)
12/6/2007 12:00	0.00	8.173	53.559	2.964
12/6/2007 12:00	5.00	8.174	53.561	2.962
12/6/2007 12:00	10.00	8.174	53.565	2.963
12/6/2007 12:00	15.00	8.175	53.561	2.961
12/6/2007 12:00	20.00	8.174	53.564	2.964
12/6/2007 12:00	25.00	8.174	53.567	2.963
12/6/2007 12:00	30.00	8.174	53.573	2.962
12/6/2007 12:00	35.00	8.173	53.569	2.965
12/6/2007 12:00	40.00	8.174	53.571	2.963
12/6/2007 12:00	45.00	8.174	53.567	2.963
12/6/2007 12:00	50.00	8.172	53.575	2.966
12/6/2007 12:00	55.00	8.173	53.573	2.965
12/6/2007 12:01	60.00	8.174	53.574	2.963
12/6/2007 12:01	70.00	8.173	53.573	2.966
12/6/2007 12:01	80.00	8.173	53.569	2.964
12/6/2007 12:01	90.00	8.174	53.572	2.962
12/6/2007 12:01	100.00	8.173	53.568	2.965
12/6/2007 12:01	110.00	8.174	53.578	2.963

12/6/2007 12:02	120.00	8.173	53.571	2.964
12/6/2007 12:02	135.00	8.174	53.571	2.962
12/6/2007 12:02	150.00	8.174	53.566	2.963
12/6/2007 12:02	165.00	8.174	53.573	2.962
12/6/2007 12:03	180.00	8.174	53.567	2.963
12/6/2007 12:03	195.00	8.173	53.562	2.964
12/6/2007 12:03	210.00	8.172	53.567	2.966
12/6/2007 12:03	225.00	8.169	53.567	2.974
12/6/2007 12:04	240.00	8.168	53.567	2.976
12/6/2007 12:04	255.00	8.165	53.573	2.983
12/6/2007 12:04	270.00	8.162	53.566	2.991
12/6/2007 12:04	285.00	8.157	53.569	3.001
12/6/2007 12:05	300.00	8.152	53.568	3.012
12/6/2007 12:05	330.00	8.141	53.573	3.038
12/6/2007 12:06	360.00	8.127	53.574	3.07
12/6/2007 12:06	390.00	8.109	53.575	3.112
12/6/2007 12:07	420.00	8.091	53.585	3.153
12/6/2007 12:07	450.00	8.069	53.59	3.204
12/6/2007 12:08	480.00	8.047	53.596	3.257
12/6/2007 12:08	510.00	8.024	53.611	3.309
12/6/2007 12:09	540.00	7.997	53.618	3.371
12/6/2007 12:09	570.00	7.969	53.625	3.435
12/6/2007 12:10	600.00	7.943	53.637	3.496
12/6/2007 12:11	660.00	7.888	53.66	3.623
12/6/2007 12:12	720.00	7.829	53.661	3.76
12/6/2007 12:13	780.00	7.771	53.66	3.893
12/6/2007 12:14	840.00	7.712	53.648	4.029
12/6/2007 12:15	900.00	7.654	53.622	4.162
12/6/2007 12:16	960.00	7.599	53.586	4.291
12/6/2007 12:17	1020.00	7.541	53.527	4.424
12/6/2007 12:18	1080.00	7.487	53.457	4.55
12/6/2007 12:19	1140.00	7.433	53.39	4.674
12/6/2007 12:20	1200.00	7.384	53.35	4.787
12/6/2007 12:21	1260.00	7.337	53.318	4.895
12/6/2007 12:22	1320.00	7.292	53.284	4.998
12/6/2007 12:23	1380.00	7.252	53.251	5.091
12/6/2007 12:24	1440.00	7.216	53.245	5.175
12/6/2007 12:25	1500.00	7.178	53.234	5.261
12/6/2007 12:26	1560.00	7.146	53.229	5.337
12/6/2007 12:27	1620.00	7.118	53.214	5.4
12/6/2007 12:28	1680.00	7.092	53.199	5.462
12/6/2007 12:29	1740.00	7.067	53.186	5.518
12/6/2007 12:30	1800.00	7.044	53.178	5.572
12/6/2007 12:31	1860.00	7.023	53.166	5.619
12/6/2007 12:32	1920.00	7.001	53.165	5.67
12/6/2007 12:33	1980.00	6.984	53.156	5.71
12/6/2007 12:34	2040.00	6.968	53.144	5.748
12/6/2007 12:35	2100.00	6.95	53.135	5.79
12/6/2007 12:36	2160.00	6.936	53.125	5.821
12/6/2007 12:37	2220.00	6.925	53.129	5.847
12/6/2007 12:38	2280.00	6.911	53.134	5.879
12/6/2007 12:39	2340.00	6.899	53.137	5.906

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12/6/2007 12:40	2400.00	6.891	53.134	5.925	
12/6/2007 12:41	2460.00	6.879	53.127	5.953	
12/6/2007 12:42	2520.00	6.871	53.125	5.971	
12/6/2007 12:43	2580.00	6.864	53.132	5.986	
12/6/2007 12:44	2640.00	6.859	53.135	5.998	
12/6/2007 12:45	2700.00	6.854	53.134	6.011	
12/6/2007 12:46	2760.00	6.847	53.136	6.027	
12/6/2007 12:47	2820.00	6.843	53.144	6.036	
12/6/2007 12:48	2880.00	6.839	53.151	6.045	
12/6/2007 12:49	2940.00	6.833	53.166	6.059	
12/6/2007 12:50	3000.00	6.83	53.176	6.067	1.007 Hydrol
12/6/2007 12:51	3060.00	6.827	53.187	6.074	
12/6/2007 12:52	3120.00	6.825	53.198	6.078	
12/6/2007 12:53	3180.00	6.822	53.21	6.085	
12/6/2007 12:54	3240.00	6.819	53.216	6.091	
12/6/2007 12:55	3300.00	6.818	53.228	6.093	
12/6/2007 12:56	3360.00	6.815	53.239	6.1	
12/6/2007 12:57	3420.00	6.814	53.25	6.103	
12/6/2007 12:58	3480.00	6.811	53.252	6.109	
12/6/2007 12:59	3540.00	6.81	53.27	6.112	
12/6/2007 13:00	3600.00	6.808	53.275	6.116	
12/6/2007 13:01	3660.00	6.806	53.285	6.12	
12/6/2007 13:02	3720.00	6.804	53.295	6.126	
12/6/2007 13:03	3780.00	6.804	53.297	6.126	
12/6/2007 13:04	3840.00	6.803	53.303	6.128	
12/6/2007 13:05	3900.00	6.802	53.31	6.13	
12/6/2007 13:06	3960.00	6.8	53.313	6.135	
12/6/2007 13:07	4020.00	6.799	53.326	6.137	
12/6/2007 13:08	4080.00	6.799	53.33	6.138	
12/6/2007 13:09	4140.00	6.797	53.339	6.141	
12/6/2007 13:10	4200.00	6.796	53.343	6.144	
12/6/2007 13:11	4260.00	6.796	53.35	6.143	
12/6/2007 13:12	4320.00	6.796	53.353	6.144	
12/6/2007 13:13	4380.00	6.796	53.361	6.144	
12/6/2007 13:14	4440.00	6.794	53.365	6.15	
12/6/2007 13:15	4500.00	6.794	53.371	6.149	
12/6/2007 13:16	4560.00	6.794	53.377	6.15	
12/6/2007 13:17	4620.00	6.794	53.381	6.15	
12/6/2007 13:18	4680.00	6.793	53.386	6.151	
12/6/2007 13:19	4740.00	6.793	53.39	6.152	
12/6/2007 13:20	4800.00	6.791	53.397	6.155	
12/6/2007 13:21	4860.00	6.792	53.403	6.154	
12/6/2007 13:22	4920.00	6.79	53.403	6.158	
12/6/2007 13:23	4980.00	6.79	53.406	6.158	
12/6/2007 13:24	5040.00	6.788	53.411	6.163	
12/6/2007 13:25	5100.00	6.79	53.418	6.157	
12/6/2007 13:26	5160.00	6.79	53.418	6.157	
12/6/2007 13:27	5220.00	6.79	53.423	6.158	
12/6/2007 13:28	5280.00	6.788	53.422	6.162	
12/6/2007 13:29	5340.00	6.788	53.428	6.162	
12/6/2007 13:30	5400.00	6.789	53.432	6.161	
12/6/2007 13:31	5460.00	6.788	53.435	6.164	

12/6/2007 13:32	5520.00	6.787	53.437	6.165
12/6/2007 13:33	5580.00	6.787	53.446	6.166
12/6/2007 13:34	5640.00	6.781	53.452	6.178
12/6/2007 13:35	5700.00	6.787	53.457	6.165
12/6/2007 13:36	5760.00	6.785	53.465	6.169
12/6/2007 13:37	5820.00	6.781	53.464	6.178
12/6/2007 13:38	5880.00	6.784	53.464	6.172
12/6/2007 13:39	5940.00	6.784	53.464	6.171
12/6/2007 13:40	6000.00	6.782	53.47	6.176
12/6/2007 13:41	6060.00	6.783	53.472	6.175
12/6/2007 13:42	6120.00	6.782	53.473	6.177
12/6/2007 13:43	6180.00	6.781	53.473	6.18
12/6/2007 13:44	6240.00	6.78	53.484	6.18
12/6/2007 13:45	6300.00	6.78	53.482	6.181
12/6/2007 13:46	6360.00	6.778	53.481	6.185
12/6/2007 13:47	6420.00	6.778	53.487	6.185
12/6/2007 13:48	6480.00	6.779	53.486	6.185
12/6/2007 13:49	6540.00	6.776	53.489	6.19
12/6/2007 13:50	6600.00	6.775	53.492	6.194
12/6/2007 13:51	6660.00	6.775	53.494	6.192
12/6/2007 13:52	6720.00	6.775	53.493	6.193
12/6/2007 13:53	6780.00	6.775	53.495	6.193
12/6/2007 13:54	6840.00	6.773	53.496	6.197
12/6/2007 13:55	6900.00	6.774	53.501	6.196
12/6/2007 13:56	6960.00	6.772	53.503	6.2
12/6/2007 13:57	7020.00	6.773	53.504	6.198
12/6/2007 13:58	7080.00	6.772	53.507	6.199
12/6/2007 13:59	7140.00	6.772	53.504	6.2
12/6/2007 14:00	7200.00	6.773	53.506	6.198
12/6/2007 14:03	7380.00	6.771	53.512	6.201
12/6/2007 14:06	7560.00	6.771	53.513	6.202
12/6/2007 14:09	7740.00	6.769	53.516	6.207
12/6/2007 14:12	7920.00	6.769	53.518	6.207
12/6/2007 14:15	8100.00	6.769	53.526	6.206
12/6/2007 14:18	8280.00	6.768	53.525	6.209
12/6/2007 14:21	8460.00	6.766	53.528	6.213
12/6/2007 14:24	8640.00	6.766	53.527	6.214
12/6/2007 14:27	8820.00	6.766	53.528	6.214
12/6/2007 14:30	9000.00	6.766	53.531	6.213
12/6/2007 14:33	9180.00	6.765	53.535	6.217
12/6/2007 14:36	9360.00	6.763	53.539	6.22
12/6/2007 14:39	9540.00	6.762	53.542	6.223
12/6/2007 14:42	9720.00	6.762	53.543	6.222
12/6/2007 14:45	9900.00	6.767	53.54	6.21
12/6/2007 14:48	10080.00	6.771	53.542	6.202
12/6/2007 14:51	10260.00	6.776	53.535	6.19
12/6/2007 14:54	10440.00	6.778	53.541	6.185
12/6/2007 14:57	10620.00	6.779	53.545	6.183
12/6/2007 15:00	10800.00	6.78	53.544	6.181
12/6/2007 15:05	11100.00	6.779	53.543	6.184
12/6/2007 15:10	11400.00	6.779	53.539	6.183
12/6/2007 15:15	11700.00	6.777	53.549	6.188

12/6/2007 15:20	12000.00	6.779	53.551	6.185
12/6/2007 15:25	12300.00	6.778	53.552	6.187
12/6/2007 15:30	12600.00	6.776	53.556	6.19
12/6/2007 15:35	12900.00	6.774	53.559	6.194
12/6/2007 15:40	13200.00	6.775	53.558	6.192
12/6/2007 15:45	13500.00	6.774	53.555	6.195
12/6/2007 15:50	13800.00	6.775	53.554	6.194
12/6/2007 15:55	14100.00	6.773	53.557	6.196
12/6/2007 16:00	14400.00	6.774	53.556	6.194
12/6/2007 16:15	15300.00	6.776	53.559	6.19
12/6/2007 16:30	16200.00	6.773	53.562	6.197
12/6/2007 16:45	17100.00	6.771	53.569	6.202
12/6/2007 17:00	18000.00	6.77	53.564	6.205
12/6/2007 17:15	18900.00	6.77	53.566	6.203
12/6/2007 17:30	19800.00	6.767	53.568	6.211
12/6/2007 17:45	20700.00	6.767	53.572	6.211
12/6/2007 18:00	21600.00	6.767	53.564	6.211
12/6/2007 18:15	22500.00	6.765	53.566	6.215
12/6/2007 18:30	23400.00	6.767	53.566	6.212
12/6/2007 18:45	24300.00	6.765	53.567	6.216
12/6/2007 19:00	25200.00	6.762	53.568	6.222
12/6/2007 19:15	26100.00	6.764	53.565	6.219
12/6/2007 19:30	27000.00	6.763	53.567	6.221
12/6/2007 19:45	27900.00	6.761	53.567	6.225
12/6/2007 20:00	28800.00	6.76	53.569	6.227
12/6/2007 20:15	29700.00	6.761	53.567	6.225
12/6/2007 20:30	30600.00	6.759	53.568	6.229
12/6/2007 20:45	31500.00	6.76	53.574	6.228
12/6/2007 21:00	32400.00	6.763	53.564	6.22
12/6/2007 21:15	33300.00	6.763	53.572	6.22
12/6/2007 21:30	34200.00	6.763	53.566	6.22
12/6/2007 21:45	35100.00	6.761	53.564	6.225
12/6/2007 22:00	36000.00	6.763	53.568	6.22
12/6/2007 22:15	36900.00	6.761	53.564	6.225
12/6/2007 22:30	37800.00	6.763	53.565	6.22
12/6/2007 22:45	38700.00	6.762	53.57	6.223
12/6/2007 23:00	39600.00	6.763	53.566	6.222
12/6/2007 23:15	40500.00	6.763	53.57	6.22
12/6/2007 23:30	41400.00	6.764	53.569	6.219
12/6/2007 23:45	42300.00	6.764	53.57	6.219
12/7/2007 0:00	43200.00	6.764	53.567	6.217
12/7/2007 0:15	44100.00	6.767	53.566	6.212
12/7/2007 0:30	45000.00	6.768	53.571	6.208
12/7/2007 0:45	45900.00	6.77	53.567	6.204
12/7/2007 1:00	46800.00	6.769	53.57	6.206
12/7/2007 1:15	47700.00	6.769	53.573	6.205
12/7/2007 1:30	48600.00	6.769	53.571	6.207
12/7/2007 1:45	49500.00	6.769	53.568	6.208
12/7/2007 2:00	50400.00	6.768	53.568	6.209
12/7/2007 2:15	51300.00	6.767	53.568	6.212
12/7/2007 2:30	52200.00	6.767	53.567	6.211
12/7/2007 2:45	53100.00	6.766	53.568	6.214

12/7/2007 3:00	54000.00	6.766	53.572	6.213
12/7/2007 3:15	54900.00	6.766	53.568	6.213
12/7/2007 3:30	55800.00	6.765	53.568	6.217
12/7/2007 3:45	56700.00	6.764	53.573	6.219
12/7/2007 4:00	57600.00	6.765	53.573	6.215
12/7/2007 4:15	58500.00	6.763	53.573	6.221
12/7/2007 4:30	59400.00	6.764	53.573	6.218
12/7/2007 4:45	60300.00	6.764	53.568	6.218
12/7/2007 5:00	61200.00	6.762	53.573	6.223
12/7/2007 5:15	62100.00	6.762	53.569	6.222
12/7/2007 5:30	63000.00	6.764	53.569	6.218
12/7/2007 5:45	63900.00	6.763	53.565	6.22
12/7/2007 6:00	64800.00	6.76	53.571	6.226
12/7/2007 6:15	65700.00	6.76	53.573	6.228
12/7/2007 6:30	66600.00	6.76	53.569	6.227
12/7/2007 6:45	67500.00	6.761	53.572	6.225
12/7/2007 7:00	68400.00	6.76	53.568	6.227
12/7/2007 7:15	69300.00	6.759	53.573	6.23
12/7/2007 7:30	70200.00	6.758	53.573	6.233
12/7/2007 7:45	71100.00	6.758	53.567	6.233
12/7/2007 8:00	72000.00	6.759	53.571	6.23
12/7/2007 8:15	72900.00	6.757	53.573	6.234
12/7/2007 8:30	73800.00	6.757	53.575	6.233
12/7/2007 8:45	74700.00	6.755	53.573	6.238
12/7/2007 9:00	75600.00	6.759	53.573	6.23
12/7/2007 9:15	76500.00	6.758	53.575	6.231
12/7/2007 9:30	77400.00	6.757	53.574	6.234
12/7/2007 9:45	78300.00	6.758	53.574	6.232
12/7/2007 10:00	79200.00	6.757	53.57	6.234
12/7/2007 10:15	80100.00	6.755	53.574	6.239
12/7/2007 10:30	81000.00	6.756	53.571	6.237
12/7/2007 10:45	81900.00	6.757	53.573	6.234
12/7/2007 11:00	82800.00	6.758	53.573	6.232
12/7/2007 11:15	83700.00	6.759	53.569	6.23
12/7/2007 11:30	84600.00	6.76	53.567	6.228
12/7/2007 11:45	85500.00	6.76	53.571	6.227
12/7/2007 12:00	86400.00	6.761	53.57	6.225
12/7/2007 12:01	86460.00	6.761	53.57	6.225
12/7/2007 12:02	86520.00	6.761	53.573	6.225
12/7/2007 12:03	86580.00	6.761	53.571	6.224
12/7/2007 12:04	86640.00	6.765	53.568	6.216
12/7/2007 12:05	86700.00	6.771	53.568	6.202
12/7/2007 12:06	86760.00	6.782	53.567	6.177
12/7/2007 12:07	86820.00	6.796	53.561	6.145
12/7/2007 12:08	86880.00	6.813	53.556	6.106
12/7/2007 12:09	86940.00	6.834	53.554	6.057
12/7/2007 12:10	87000.00	6.858	53.544	6.001
12/7/2007 12:11	87060.00	6.887	53.533	5.933
12/7/2007 12:12	87120.00	6.918	53.515	5.862
12/7/2007 12:13	87180.00	6.953	53.512	5.782
12/7/2007 12:14	87240.00	6.988	53.498	5.702
12/7/2007 12:15	87300.00	7.026	53.482	5.614

12/7/2007 12:16	87360.00	7.064	53.47	5.525
12/7/2007 12:17	87420.00	7.105	53.455	5.432
12/7/2007 12:18	87480.00	7.143	53.435	5.343
12/7/2007 12:19	87540.00	7.184	53.427	5.249
12/7/2007 12:20	87600.00	7.224	53.411	5.157
12/7/2007 12:21	87660.00	7.267	53.398	5.058
12/7/2007 12:22	87720.00	7.305	53.385	4.969
12/7/2007 12:23	87780.00	7.346	53.369	4.874
12/7/2007 12:24	87840.00	7.385	53.361	4.785
12/7/2007 12:25	87900.00	7.423	53.349	4.697
12/7/2007 12:26	87960.00	7.46	53.336	4.611
12/7/2007 12:27	88020.00	7.497	53.33	4.525
12/7/2007 12:28	88080.00	7.532	53.314	4.444
12/7/2007 12:29	88140.00	7.566	53.308	4.367
12/7/2007 12:30	88200.00	7.598	53.301	4.293
12/7/2007 12:31	88260.00	7.629	53.292	4.22
12/7/2007 12:32	88320.00	7.659	53.287	4.151
12/7/2007 12:33	88380.00	7.688	53.28	4.085
12/7/2007 12:34	88440.00	7.716	53.276	4.02
12/7/2007 12:35	88500.00	7.741	53.274	3.962
12/7/2007 12:36	88560.00	7.766	53.267	3.904
12/7/2007 12:37	88620.00	7.791	53.268	3.848
12/7/2007 12:38	88680.00	7.813	53.268	3.796
12/7/2007 12:39	88740.00	7.834	53.264	3.749
12/7/2007 12:40	88800.00	7.854	53.263	3.701
12/7/2007 12:41	88860.00	7.872	53.266	3.66
12/7/2007 12:42	88920.00	7.89	53.268	3.619
12/7/2007 12:43	88980.00	7.906	53.262	3.581
12/7/2007 12:44	89040.00	7.922	53.267	3.544
12/7/2007 12:45	89100.00	7.937	53.274	3.51
12/7/2007 12:46	89160.00	7.951	53.278	3.479
12/7/2007 12:47	89220.00	7.963	53.275	3.45
12/7/2007 12:48	89280.00	7.977	53.286	3.418
12/7/2007 12:49	89340.00	7.988	53.287	3.391
12/7/2007 12:50	89400.00	7.998	53.288	3.37
12/7/2007 12:51	89460.00	8.007	53.298	3.347
12/7/2007 12:52	89520.00	8.016	53.303	3.328
12/7/2007 12:53	89580.00	8.025	53.306	3.307
12/7/2007 12:54	89640.00	8.031	53.312	3.292
12/7/2007 12:55	89700.00	8.037	53.318	3.279
12/7/2007 12:56	89760.00	8.046	53.32	3.259
12/7/2007 12:57	89820.00	8.053	53.329	3.242
12/7/2007 12:58	89880.00	8.058	53.33	3.229
12/7/2007 12:59	89940.00	8.064	53.34	3.215
12/7/2007 13:00	90000.00	8.071	53.338	3.201
12/7/2007 13:01	90060.00	8.076	53.347	3.19
12/7/2007 13:02	90120.00	8.08	53.354	3.179
12/7/2007 13:03	90180.00	8.085	53.358	3.168
12/7/2007 13:04	90240.00	8.089	53.362	3.159
12/7/2007 13:05	90300.00	8.092	53.36	3.152
12/7/2007 13:06	90360.00	8.094	53.367	3.148
12/7/2007 13:07	90420.00	8.099	53.372	3.135

12/7/2007 13:08	90480.00	8.101	53.377	3.13
12/7/2007 13:09	90540.00	8.104	53.388	3.125
12/7/2007 13:10	90600.00	8.107	53.392	3.117
12/7/2007 13:11	90660.00	8.109	53.393	3.112
12/7/2007 13:12	90720.00	8.11	53.396	3.11
12/7/2007 13:13	90780.00	8.111	53.406	3.107
12/7/2007 13:14	90840.00	8.11	53.412	3.11
12/7/2007 13:15	90900.00	8.113	53.412	3.104
12/7/2007 13:16	90960.00	8.112	53.417	3.105
12/7/2007 13:17	91020.00	8.112	53.427	3.105
12/7/2007 13:18	91080.00	8.113	53.429	3.103
12/7/2007 13:19	91140.00	8.115	53.434	3.1
12/7/2007 13:20	91200.00	8.116	53.431	3.098
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12/7/2007 13:24	91440.00	8.119	53.446	3.088
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12/7/2007 13:26	91560.00	8.122	53.454	3.083
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12/7/2007 13:31	91860.00	8.127	53.466	3.071
12/7/2007 13:32	91920.00	8.128	53.471	3.068
12/7/2007 13:33	91980.00	8.128	53.471	3.068
12/7/2007 13:34	92040.00	8.129	53.475	3.067
12/7/2007 13:35	92100.00	8.13	53.479	3.065
12/7/2007 13:36	92160.00	8.13	53.484	3.064
12/7/2007 13:37	92220.00	8.131	53.48	3.061
12/7/2007 13:38	92280.00	8.133	53.481	3.058
12/7/2007 13:39	92340.00	8.132	53.484	3.059
12/7/2007 13:40	92400.00	8.134	53.486	3.055
12/7/2007 13:41	92460.00	8.133	53.487	3.058
12/7/2007 13:42	92520.00	8.134	53.494	3.056
12/7/2007 13:43	92580.00	8.136	53.491	3.051
12/7/2007 13:44	92640.00	8.135	53.497	3.052
12/7/2007 13:45	92700.00	8.137	53.495	3.049
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12/7/2007 13:47	92820.00	8.135	53.498	3.053
12/7/2007 13:48	92880.00	8.137	53.503	3.048
12/7/2007 13:49	92940.00	8.14	53.505	3.042
12/7/2007 13:50	93000.00	8.138	53.504	3.045
12/7/2007 13:51	93060.00	8.14	53.504	3.042
12/7/2007 13:52	93120.00	8.14	53.503	3.041
12/7/2007 13:53	93180.00	8.139	53.505	3.043
12/7/2007 13:54	93240.00	8.141	53.508	3.039
12/7/2007 13:55	93300.00	8.141	53.51	3.039
12/7/2007 13:56	93360.00	8.14	53.511	3.042
12/7/2007 13:57	93420.00	8.139	53.509	3.044
12/7/2007 13:58	93480.00	8.142	53.513	3.036
12/7/2007 13:59	93540.00	8.142	53.515	3.036

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12/7/2007 14:03	93780.00	8.144	53.516	3.032
12/7/2007 14:04	93840.00	8.144	53.517	3.033
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12/7/2007 14:06	93960.00	8.143	53.521	3.033
12/7/2007 14:07	94020.00	8.143	53.521	3.033
12/7/2007 14:08	94080.00	8.144	53.523	3.031
12/7/2007 14:09	94140.00	8.144	53.528	3.032
12/7/2007 14:10	94200.00	8.145	53.525	3.03
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12/7/2007 14:12	94320.00	8.145	53.529	3.029
12/7/2007 14:13	94380.00	8.145	53.525	3.029
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12/7/2007 14:17	94620.00	8.145	53.533	3.028
12/7/2007 14:18	94680.00	8.147	53.53	3.026
12/7/2007 14:19	94740.00	8.146	53.532	3.028
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12/7/2007 14:21	94860.00	8.147	53.532	3.026
12/7/2007 14:22	94920.00	8.145	53.529	3.029
12/7/2007 14:23	94980.00	8.147	53.539	3.025
12/7/2007 14:24	95040.00	8.148	53.536	3.024
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12/7/2007 14:33	95580.00	8.15	53.538	3.018
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12/7/2007 14:36	95760.00	8.149	53.539	3.02
12/7/2007 14:37	95820.00	8.149	53.543	3.021
12/7/2007 14:38	95880.00	8.15	53.54	3.019
12/7/2007 14:39	95940.00	8.15	53.544	3.018
12/7/2007 14:40	96000.00	8.15	53.542	3.018
12/7/2007 14:41	96060.00	8.15	53.546	3.019
12/7/2007 14:42	96120.00	8.15	53.544	3.017
12/7/2007 14:43	96180.00	8.15	53.549	3.018
12/7/2007 14:44	96240.00	8.15	53.545	3.018
12/7/2007 14:45	96300.00	8.152	53.548	3.014
12/7/2007 14:46	96360.00	8.152	53.546	3.012
12/7/2007 14:47	96420.00	8.151	53.544	3.015
12/7/2007 14:48	96480.00	8.151	53.544	3.016
12/7/2007 14:49	96540.00	8.151	53.545	3.016
12/7/2007 14:50	96600.00	8.151	53.547	3.015
12/7/2007 14:51	96660.00	8.15	53.547	3.017

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12/7/2007 14:54	96840.00	8.151	53.548	3.016
12/7/2007 14:55	96900.00	8.151	53.546	3.015
12/7/2007 14:56	96960.00	8.152	53.549	3.012
12/7/2007 14:57	97020.00	8.152	53.553	3.014
12/7/2007 14:58	97080.00	8.151	53.547	3.015
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12/7/2007 15:00	97200.00	8.152	53.552	3.013
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12/7/2007 15:03	97380.00	8.153	53.551	3.011
12/7/2007 15:04	97440.00	8.152	53.555	3.014
12/7/2007 15:05	97500.00	8.152	53.55	3.013
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12/7/2007 15:09	97740.00	8.153	53.555	3.01
12/7/2007 15:10	97800.00	8.153	53.559	3.01
12/7/2007 15:11	97860.00	8.153	53.553	3.01
12/7/2007 15:12	97920.00	8.154	53.55	3.009
12/7/2007 15:13	97980.00	8.153	53.549	3.011
12/7/2007 15:14	98040.00	8.153	53.557	3.01
12/7/2007 15:15	98100.00	8.154	53.554	3.009
12/7/2007 15:16	98160.00	8.154	53.55	3.009
12/7/2007 15:17	98220.00	8.153	53.55	3.011
12/7/2007 15:18	98280.00	8.153	53.553	3.01
12/7/2007 15:19	98340.00	8.152	53.551	3.014
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12/7/2007 15:26	98760.00	8.154	53.556	3.009
12/7/2007 15:27	98820.00	8.154	53.556	3.009
12/7/2007 15:28	98880.00	8.154	53.556	3.009
12/7/2007 15:29	98940.00	8.154	53.556	3.009
12/7/2007 15:30	99000.00	8.154	53.554	3.009
12/7/2007 15:31	99060.00	8.155	53.552	3.007
12/7/2007 15:32	99120.00	8.154	53.554	3.008
12/7/2007 15:33	99180.00	8.154	53.555	3.01
12/7/2007 15:34	99240.00	8.154	53.557	3.008
12/7/2007 15:35	99300.00	8.155	53.56	3.007
12/7/2007 15:36	99360.00	8.154	53.562	3.008
12/7/2007 15:37	99420.00	8.154	53.556	3.008
12/7/2007 15:38	99480.00	8.155	53.557	3.007
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12/7/2007 15:40	99600.00	8.154	53.559	3.008
12/7/2007 15:41	99660.00	8.155	53.556	3.007
12/7/2007 15:42	99720.00	8.155	53.553	3.006
12/7/2007 15:43	99780.00	8.156	53.559	3.005

12/7/2007 15:44	99840.00	8.155	53.559	3.005
12/7/2007 15:45	99900.00	8.156	53.558	3.005
12/7/2007 15:46	99960.00	8.156	53.557	3.005
12/7/2007 15:47	100020.00	8.156	53.555	3.004
12/7/2007 15:48	100080.00	8.156	53.56	3.005
12/7/2007 15:49	100140.00	8.155	53.557	3.006
12/7/2007 15:50	100200.00	8.157	53.557	3.003
12/7/2007 15:51	100260.00	8.156	53.561	3.003
12/7/2007 15:52	100320.00	8.156	53.56	3.003
12/7/2007 15:53	100380.00	8.157	53.557	3.002
12/7/2007 15:54	100440.00	8.157	53.561	3.002
12/7/2007 15:55	100500.00	8.156	53.557	3.003
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12/7/2007 15:57	100620.00	8.155	53.558	3.007
12/7/2007 15:58	100680.00	8.157	53.559	3.002
12/7/2007 15:59	100740.00	8.157	53.56	3.002
12/7/2007 16:00	100800.00	8.157	53.556	3.002
12/7/2007 16:01	100860.00	8.157	53.567	3.002
12/7/2007 16:02	100920.00	8.157	53.559	3.002
12/7/2007 16:03	100980.00	8.157	53.563	3.001
12/7/2007 16:04	101040.00	8.157	53.558	3.001
12/7/2007 16:05	101100.00	8.158	53.56	3
12/7/2007 16:06	101160.00	8.158	53.558	3
12/7/2007 16:07	101220.00	8.157	53.56	3.001
12/7/2007 16:08	101280.00	8.157	53.562	3.001
12/7/2007 16:09	101340.00	8.157	53.563	3.001
12/7/2007 16:10	101400.00	8.157	53.563	3.001
12/7/2007 16:11	101460.00	8.157	53.564	3.001
12/7/2007 16:12	101520.00	8.159	53.561	2.998
12/7/2007 16:13	101580.00	8.158	53.56	3
12/7/2007 16:14	101640.00	8.158	53.562	2.999
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12/7/2007 16:17	101820.00	8.158	53.558	3
12/7/2007 16:18	101880.00	8.159	53.559	2.997
12/7/2007 16:19	101940.00	8.159	53.559	2.998
12/7/2007 16:20	102000.00	8.159	53.56	2.997
12/7/2007 16:21	102060.00	8.158	53.56	2.999
12/7/2007 16:22	102120.00	8.159	53.561	2.997
12/7/2007 16:23	102180.00	8.159	53.562	2.996
12/7/2007 16:24	102240.00	8.159	53.559	2.996
12/7/2007 16:25	102300.00	8.159	53.561	2.997
12/7/2007 16:26	102360.00	8.159	53.558	2.996
12/7/2007 16:27	102420.00	8.16	53.558	2.994
12/7/2007 16:28	102480.00	8.16	53.561	2.994
12/7/2007 16:29	102540.00	8.16	53.558	2.995
12/7/2007 16:30	102600.00	8.161	53.562	2.993
12/7/2007 16:31	102660.00	8.16	53.558	2.994
12/7/2007 16:32	102720.00	8.161	53.561	2.993
12/7/2007 16:33	102780.00	8.159	53.561	2.997
12/7/2007 16:34	102840.00	8.161	53.556	2.994
12/7/2007 16:35	102900.00	8.16	53.562	2.994

12/7/2007 16:36	102960.00	8.161	53.562	2.993
12/7/2007 16:37	103020.00	8.161	53.56	2.992
12/7/2007 16:38	103080.00	8.16	53.56	2.994
12/7/2007 16:39	103140.00	8.16	53.558	2.995
12/7/2007 16:40	103200.00	8.16	53.557	2.994
12/7/2007 16:41	103260.00	8.161	53.561	2.993
12/7/2007 16:42	103320.00	8.16	53.56	2.995
12/7/2007 16:43	103380.00	8.161	53.563	2.993
12/7/2007 16:44	103440.00	8.161	53.56	2.992
12/7/2007 16:45	103500.00	8.159	53.561	2.996
12/7/2007 16:46	103560.00	8.161	53.565	2.993
12/7/2007 16:47	103620.00	8.16	53.561	2.995
12/7/2007 16:48	103680.00	8.161	53.564	2.992
12/7/2007 16:49	103740.00	8.161	53.562	2.992
12/7/2007 16:50	103800.00	8.161	53.563	2.993
12/7/2007 16:51	103860.00	8.161	53.562	2.992
12/7/2007 16:52	103920.00	8.161	53.562	2.993
12/7/2007 16:53	103980.00	8.162	53.564	2.991
12/7/2007 16:54	104040.00	8.161	53.562	2.993
12/7/2007 16:55	104100.00	8.161	53.56	2.992
12/7/2007 16:56	104160.00	8.162	53.563	2.99
12/7/2007 16:57	104220.00	8.161	53.562	2.993
12/7/2007 16:58	104280.00	8.161	53.561	2.992
12/7/2007 16:59	104340.00	8.161	53.561	2.993
12/7/2007 17:00	104400.00	8.162	53.563	2.991
12/7/2007 17:01	104460.00	8.162	53.563	2.991
12/7/2007 17:02	104520.00	8.161	53.565	2.992
12/7/2007 17:03	104580.00	8.162	53.561	2.991
12/7/2007 17:04	104640.00	8.163	53.562	2.988
12/7/2007 17:05	104700.00	8.161	53.561	2.992
12/7/2007 17:06	104760.00	8.162	53.557	2.99
12/7/2007 17:07	104820.00	8.163	53.565	2.989
12/7/2007 17:08	104880.00	8.162	53.557	2.99
12/7/2007 17:09	104940.00	8.162	53.563	2.989
12/7/2007 17:10	105000.00	8.161	53.561	2.992
12/7/2007 17:11	105060.00	8.163	53.557	2.989
12/7/2007 17:12	105120.00	8.162	53.557	2.99
12/7/2007 17:13	105180.00	8.162	53.554	2.991
12/7/2007 17:14	105240.00	8.162	53.557	2.99
12/7/2007 17:15	105300.00	8.161	53.55	2.992
12/7/2007 17:16	105360.00	8.163	53.551	2.988
12/7/2007 17:17	105420.00	8.162	53.549	2.99
12/7/2007 17:18	105480.00	8.163	53.548	2.988
12/7/2007 17:19	105540.00	8.162	53.549	2.99
12/7/2007 17:20	105600.00	8.163	53.551	2.988
12/7/2007 17:21	105660.00	8.163	53.555	2.988
12/7/2007 17:22	105720.00	8.167	53.559	2.98
12/7/2007 17:23	105780.00	8.164	53.557	2.985
12/7/2007 17:24	105840.00	8.165	53.557	2.982
12/7/2007 17:25	105900.00	8.165	53.552	2.984
12/7/2007 17:26	105960.00	8.165	53.55	2.984
12/7/2007 17:27	106020.00	8.164	53.548	2.985

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12/7/2007 17:28	106080.00	8.166	53.548	2.982
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12/7/2007 17:31	106260.00	8.165	53.544	2.984
12/7/2007 17:32	106320.00	8.164	53.544	2.985
12/7/2007 17:33	106380.00	8.165	53.536	2.983
12/7/2007 17:34	106440.00	8.166	53.545	2.982
12/7/2007 17:35	106500.00	8.165	53.54	2.984
12/7/2007 17:36	106560.00	8.165	53.539	2.983
12/7/2007 17:37	106620.00	8.165	53.535	2.984
12/7/2007 17:38	106680.00	8.166	53.535	2.982
12/7/2007 17:39	106740.00	8.165	53.539	2.983
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12/7/2007 19:46	114360.00	8.167	53.55	2.979
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12/7/2007 20:03	115380.00	8.168	53.554	2.977

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12/7/2007 21:24	120240.00	8.167	53.561	2.978
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12/7/2007 21:41	121260.00	8.169	53.559	2.975
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12/7/2007 22:22	123720.00	8.168	53.553	2.977
12/7/2007 22:23	123780.00	8.169	53.557	2.974
12/7/2007 22:24	123840.00	8.168	53.555	2.976
12/7/2007 22:25	123900.00	8.169	53.555	2.975
12/7/2007 22:26	123960.00	8.168	53.553	2.977
12/7/2007 22:27	124020.00	8.168	53.556	2.977
12/7/2007 22:28	124080.00	8.169	53.556	2.975
12/7/2007 22:29	124140.00	8.169	53.555	2.974
12/7/2007 22:30	124200.00	8.168	53.561	2.976
12/7/2007 22:31	124260.00	8.168	53.56	2.976
12/7/2007 22:32	124320.00	8.168	53.557	2.977
12/7/2007 22:33	124380.00	8.169	53.555	2.975
12/7/2007 22:34	124440.00	8.169	53.557	2.975
12/7/2007 22:35	124500.00	8.169	53.56	2.975
12/7/2007 22:36	124560.00	8.168	53.555	2.977
12/7/2007 22:37	124620.00	8.168	53.556	2.976
12/7/2007 22:38	124680.00	8.169	53.556	2.975
12/7/2007 22:39	124740.00	8.168	53.558	2.975

12/7/2007 22:40	124800.00	8.168	53.553	2.976
12/7/2007 22:41	124860.00	8.168	53.556	2.976
12/7/2007 22:42	124920.00	8.168	53.558	2.977
12/7/2007 22:43	124980.00	8.168	53.56	2.976
12/7/2007 22:44	125040.00	8.168	53.56	2.976
12/7/2007 22:45	125100.00	8.17	53.558	2.972
12/7/2007 22:46	125160.00	8.17	53.556	2.973
12/7/2007 22:47	125220.00	8.169	53.56	2.973
12/7/2007 22:48	125280.00	8.169	53.559	2.974
12/7/2007 22:49	125340.00	8.169	53.559	2.975
12/7/2007 22:50	125400.00	8.168	53.556	2.975
12/7/2007 22:51	125460.00	8.168	53.557	2.976
12/7/2007 22:52	125520.00	8.168	53.562	2.975
12/7/2007 22:53	125580.00	8.168	53.556	2.976
12/7/2007 22:54	125640.00	8.169	53.556	2.975
12/7/2007 22:55	125700.00	8.167	53.561	2.978
12/7/2007 22:56	125760.00	8.168	53.559	2.977
12/7/2007 22:57	125820.00	8.17	53.557	2.972
12/7/2007 22:58	125880.00	8.169	53.561	2.975
12/7/2007 22:59	125940.00	8.168	53.555	2.977
12/7/2007 23:00	126000.00	8.169	53.557	2.975
12/7/2007 23:01	126060.00	8.169	53.558	2.974
12/7/2007 23:02	126120.00	8.169	53.558	2.975
12/7/2007 23:03	126180.00	8.169	53.554	2.975
12/7/2007 23:04	126240.00	8.168	53.557	2.976
12/7/2007 23:05	126300.00	8.169	53.557	2.974
12/7/2007 23:06	126360.00	8.169	53.555	2.975
12/7/2007 23:07	126420.00	8.169	53.557	2.973
12/7/2007 23:08	126480.00	8.168	53.548	2.977
12/7/2007 23:09	126540.00	8.168	53.554	2.976
12/7/2007 23:10	126600.00	8.169	53.556	2.974
12/7/2007 23:11	126660.00	8.168	53.554	2.976
12/7/2007 23:12	126720.00	8.169	53.555	2.975
12/7/2007 23:13	126780.00	8.168	53.553	2.976
12/7/2007 23:14	126840.00	8.168	53.55	2.976
12/7/2007 23:15	126900.00	8.169	53.55	2.973
12/7/2007 23:16	126960.00	8.168	53.55	2.976
12/7/2007 23:17	127020.00	8.169	53.55	2.975
12/7/2007 23:18	127080.00	8.17	53.549	2.973
12/7/2007 23:19	127140.00	8.168	53.548	2.976
12/7/2007 23:20	127200.00	8.168	53.541	2.975
12/7/2007 23:21	127260.00	8.169	53.542	2.974
12/7/2007 23:22	127320.00	8.17	53.541	2.973
12/7/2007 23:23	127380.00	8.169	53.537	2.974
12/7/2007 23:24	127440.00	8.17	53.544	2.973
12/7/2007 23:25	127500.00	8.17	53.537	2.971
12/7/2007 23:26	127560.00	8.169	53.537	2.973
12/7/2007 23:27	127620.00	8.168	53.536	2.976
12/7/2007 23:28	127680.00	8.17	53.539	2.973
12/7/2007 23:29	127740.00	8.17	53.536	2.971
12/7/2007 23:30	127800.00	8.171	53.538	2.97
12/7/2007 23:31	127860.00	8.169	53.539	2.974

12/7/2007 23:32	127920.00	8.171	53.532	2.97
12/7/2007 23:33	127980.00	8.171	53.542	2.97
12/7/2007 23:34	128040.00	8.17	53.538	2.972
12/7/2007 23:35	128100.00	8.17	53.536	2.971
12/7/2007 23:36	128160.00	8.169	53.537	2.973
12/7/2007 23:37	128220.00	8.171	53.543	2.97
12/7/2007 23:38	128280.00	8.169	53.542	2.973
12/7/2007 23:39	128340.00	8.17	53.539	2.971
12/7/2007 23:40	128400.00	8.17	53.54	2.972
12/7/2007 23:41	128460.00	8.17	53.541	2.972
12/7/2007 23:42	128520.00	8.171	53.535	2.97
12/7/2007 23:43	128580.00	8.17	53.541	2.972
12/7/2007 23:44	128640.00	8.17	53.544	2.972
12/7/2007 23:45	128700.00	8.17	53.541	2.972
12/7/2007 23:46	128760.00	8.169	53.544	2.973
12/7/2007 23:47	128820.00	8.17	53.542	2.971
12/7/2007 23:48	128880.00	8.171	53.55	2.97
12/7/2007 23:49	128940.00	8.171	53.539	2.97
12/7/2007 23:50	129000.00	8.169	53.541	2.974
12/7/2007 23:51	129060.00	8.171	53.545	2.97
12/7/2007 23:52	129120.00	8.17	53.546	2.972
12/7/2007 23:53	129180.00	8.17	53.547	2.971
12/7/2007 23:54	129240.00	8.171	53.542	2.97
12/7/2007 23:55	129300.00	8.171	53.543	2.97
12/7/2007 23:56	129360.00	8.171	53.544	2.97
12/7/2007 23:57	129420.00	8.168	53.544	2.975
12/7/2007 23:58	129480.00	8.17	53.547	2.972
12/7/2007 23:59	129540.00	8.17	53.548	2.971
12/8/2007 0:00	129600.00	8.17	53.55	2.972

Report Date: 1/2/2008 15:43
Report User Name: Administrator
Report Computer Name:

Log File Properties

File Name	PUMP TEST MW302A2 2007-12-14 08.14.51.wsl
Create Date	12/14/2007 8:14

Device Properties

Device	Unknow	
Site	Berwlck	PA-Unit
Device Name		
Serial Number	122567	
Firmware Version	2.07	

Log Configuration

Log Name	PUMP TEST MW302A2
Created By	Daniel Bansah
Computer Name	Field PC
Application	WinSituMobile.exe
Application Version	5.4.1.4
Create Date	12/11/2007 19:05
Notes Size(bytes)	4096
Type	Step Linear
Overwrite when full	Disabled
Scheduled Start	12/12/2007 12:00
Scheduled Stop	12/14/2007 0:00

Steps 10

Step: 1
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 05

Step: 2
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 10

Step: 3
Duration: Days: 0 Hours: 00 Mins: 03 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 15

Step: 4
Duration: Days: 0 Hours: 00 Mins: 05 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 30

Step: 5
Duration: Days: 0 Hours: 01 Mins: 50 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00

Step: 6
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 03 Secs: 00

Step: 7
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 05 Secs: 00

Step: 8
Duration: Days: 0 Hours: 20 Mins: 00 Secs: 00

Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00
Step: 9
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00
Step: 10
Duration: Days: 0 Hours: 11 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00

Step	10
Duration	Days: 0 Hours: 11 Mins: 00 Secs: 00
Interval	Days: 0 Hours: 00 Mins: 15 Secs: 00

Level Reference Settings At Log Creation

Level Measurem	Level-DTW
Specific Gra\	0.999
Level Referenc	Set new reference
Level Reference	6.62 (ft)
Level Reference Hea	10.9864 (PSI)
Temperat	53.1121 (F)
Depth of Pr	25.374 (ft)

Log Notes:

Date and Time	Note
12/11/2007 19:10	User Note: "Level reference initialized to: 6.62"

Log Data:

Record Count 367

Date and Time	Elapsed Time Seconds	Sensor: Pres 30G SN#: 122567 Pressure (PSI)	Sensor: Pr Sensor: Pres 30G SN#: 1225 SN#: 122567 Temperatu Level-DTW (ft)	
12/12/2007 12:00	0	11.031	53.001	6.517
12/12/2007 12:00	5	11.029	53.003	6.521
12/12/2007 12:00	10	11.027	53.01	6.525
12/12/2007 12:00	15	11.029	53.011	6.521
12/12/2007 12:00	20	11.028	53.011	6.523
12/12/2007 12:00	25	11.029	53.012	6.523
12/12/2007 12:00	30	11.029	53.014	6.523
12/12/2007 12:00	35	11.029	53.012	6.522
12/12/2007 12:00	40	11.028	53.014	6.525
12/12/2007 12:00	45	11.028	53.013	6.523
12/12/2007 12:00	50	11.027	53.01	6.526
12/12/2007 12:00	55	11.027	53.013	6.527
12/12/2007 12:01	60	11.027	53.015	6.527
12/12/2007 12:01	70	11.025	53.012	6.531
12/12/2007 12:01	80	11.026	53.011	6.53
12/12/2007 12:01	90	11.027	53.015	6.526
12/12/2007 12:01	100	11.027	53.014	6.526
12/12/2007 12:01	110	11.029	53.015	6.523

12/12/2007 12:02	120	11.026	53.014	6.528
12/12/2007 12:02	135	11.028	53.013	6.525
12/12/2007 12:02	150	11.027	53.013	6.526
12/12/2007 12:02	165	11.029	53.008	6.522
12/12/2007 12:03	180	11.03	53.016	6.519
12/12/2007 12:03	195	11.028	53.011	6.524
12/12/2007 12:03	210	11.028	53.012	6.524
12/12/2007 12:03	225	11.028	53.011	6.525
12/12/2007 12:04	240	11.027	53.009	6.527
12/12/2007 12:04	255	11.022	53.017	6.539
12/12/2007 12:04	270	11.021	53.012	6.541
12/12/2007 12:04	285	10.999	53.01	6.592
12/12/2007 12:05	300	10.918	53.017	6.778 add 10/1/08
12/12/2007 12:05	330	10.857	53.009	6.919
12/12/2007 12:06	360	10.83	53.001	6.981
12/12/2007 12:06	390	10.814	52.996	7.018
12/12/2007 12:07	420	10.799	52.966	7.053
12/12/2007 12:07	450	10.789	52.921	7.075
12/12/2007 12:08	480	10.778	52.873	7.101
12/12/2007 12:08	510	10.772	52.828	7.115
12/12/2007 12:09	540	10.765	52.781	7.131
12/12/2007 12:09	570	10.756	52.745	7.152
12/12/2007 12:10	600	10.749	52.708	7.167
12/12/2007 12:11	660	10.739	52.652	7.192
12/12/2007 12:12	720	10.734	52.609	7.202
12/12/2007 12:13	780	10.725	52.577	7.225
12/12/2007 12:14	840	10.719	52.549	7.237
12/12/2007 12:15	900	10.714	52.524	7.25
12/12/2007 12:16	960	10.705	52.509	7.269
12/12/2007 12:17	1020	10.701	52.491	7.279
12/12/2007 12:18	1080	10.699	52.477	7.283
12/12/2007 12:19	1140	10.699	52.466	7.284
12/12/2007 12:20	1200	10.698	52.457	7.285
12/12/2007 12:21	1260	10.7	52.446	7.281
12/12/2007 12:22	1320	10.695	52.44	7.293
12/12/2007 12:23	1380	10.695	52.428	7.293
12/12/2007 12:24	1440	10.667	52.422	7.358
12/12/2007 12:25	1500	10.651	52.41	7.396
12/12/2007 12:26	1560	10.643	52.405	7.412
12/12/2007 12:27	1620	10.637	52.399	7.426
12/12/2007 12:28	1680	10.635	52.391	7.432
12/12/2007 12:29	1740	10.632	52.384	7.438
12/12/2007 12:30	1800	10.628	52.377	7.448
12/12/2007 12:31	1860	10.628	52.379	7.447
12/12/2007 12:32	1920	10.625	52.363	7.455
12/12/2007 12:33	1980	10.623	52.358	7.46
12/12/2007 12:34	2040	10.619	52.35	7.468
12/12/2007 12:35	2100	10.624	52.344	7.456
12/12/2007 12:36	2160	10.627	52.343	7.449
12/12/2007 12:37	2220	10.629	52.337	7.446
12/12/2007 12:38	2280	10.628	52.334	7.448
12/12/2007 12:39	2340	10.628	52.329	7.448

12/12/2007 12:40	2400	10.625	52.321	7.454	
12/12/2007 12:41	2460	10.622	52.318	7.46	
12/12/2007 12:42	2520	10.619	52.313	7.468	
12/12/2007 12:43	2580	10.618	52.308	7.471	
12/12/2007 12:44	2640	10.617	52.307	7.473	
12/12/2007 12:45	2700	10.614	52.303	7.481	
12/12/2007 12:46	2760	10.614	52.298	7.479	
12/12/2007 12:47	2820	10.62	52.296	7.465	
12/12/2007 12:48	2880	10.615	52.29	7.478	
12/12/2007 12:49	2940	10.611	52.287	7.486	
12/12/2007 12:50	3000	10.617	52.282	7.474	[illegible]
12/12/2007 12:51	3060	10.62	52.282	7.466	
12/12/2007 12:52	3120	10.617	52.277	7.473	
12/12/2007 12:53	3180	10.615	52.28	7.479	
12/12/2007 12:54	3240	10.611	52.273	7.487	
12/12/2007 12:55	3300	10.616	52.27	7.475	
12/12/2007 12:56	3360	10.621	52.266	7.465	
12/12/2007 12:57	3420	10.621	52.263	7.463	
12/12/2007 12:58	3480	10.62	52.262	7.465	
12/12/2007 12:59	3540	10.62	52.257	7.466	
12/12/2007 13:00	3600	10.625	52.255	7.456	
12/12/2007 13:01	3660	10.624	52.252	7.456	
12/12/2007 13:02	3720	10.619	52.249	7.469	
12/12/2007 13:03	3780	10.617	52.246	7.474	
12/12/2007 13:04	3840	10.609	52.251	7.491	
12/12/2007 13:05	3900	10.605	52.24	7.501	
12/12/2007 13:06	3960	10.608	52.241	7.493	
12/12/2007 13:07	4020	10.607	52.242	7.496	
12/12/2007 13:08	4080	10.602	52.235	7.507	
12/12/2007 13:09	4140	10.599	52.24	7.515	
12/12/2007 13:10	4200	10.591	52.23	7.534	
12/12/2007 13:11	4260	10.592	52.232	7.531	
12/12/2007 13:12	4320	10.595	52.225	7.523	
12/12/2007 13:13	4380	10.595	52.231	7.523	
12/12/2007 13:14	4440	10.591	52.227	7.534	
12/12/2007 13:15	4500	10.586	52.225	7.544	
12/12/2007 13:16	4560	10.588	52.217	7.539	
12/12/2007 13:17	4620	10.592	52.221	7.532	
12/12/2007 13:18	4680	10.593	52.218	7.529	
12/12/2007 13:19	4740	10.594	52.211	7.526	
12/12/2007 13:20	4800	10.594	52.216	7.525	
12/12/2007 13:21	4860	10.594	52.217	7.526	
12/12/2007 13:22	4920	10.594	52.212	7.525	
12/12/2007 13:23	4980	10.592	52.209	7.531	
12/12/2007 13:24	5040	10.594	52.206	7.527	
12/12/2007 13:25	5100	10.597	52.207	7.52	
12/12/2007 13:26	5160	10.598	52.204	7.517	
12/12/2007 13:27	5220	10.601	52.205	7.509	
12/12/2007 13:28	5280	10.603	52.206	7.505	
12/12/2007 13:29	5340	10.609	52.2	7.492	
12/12/2007 13:30	5400	10.611	52.2	7.488	
12/12/2007 13:31	5460	10.61	52.197	7.488	

12/12/2007 13:32	5520	10.609	52.196	7.491
12/12/2007 13:33	5580	10.609	52.199	7.491
12/12/2007 13:34	5640	10.61	52.198	7.488
12/12/2007 13:35	5700	10.612	52.197	7.485
12/12/2007 13:36	5760	10.615	52.191	7.477
12/12/2007 13:37	5820	10.616	52.194	7.475
12/12/2007 13:38	5880	10.615	52.194	7.477
12/12/2007 13:39	5940	10.615	52.186	7.477
12/12/2007 13:40	6000	10.616	52.184	7.474
12/12/2007 13:41	6060	10.619	52.185	7.469
12/12/2007 13:42	6120	10.62	52.188	7.465
12/12/2007 13:43	6180	10.623	52.183	7.459
12/12/2007 13:44	6240	10.622	52.176	7.46
12/12/2007 13:45	6300	10.622	52.178	7.461
12/12/2007 13:46	6360	10.625	52.177	7.455
12/12/2007 13:47	6420	10.624	52.178	7.456
12/12/2007 13:48	6480	10.629	52.177	7.446
12/12/2007 13:49	6540	10.627	52.181	7.449
12/12/2007 13:50	6600	10.629	52.177	7.444
12/12/2007 13:51	6660	10.631	52.178	7.441
12/12/2007 13:52	6720	10.628	52.173	7.449
12/12/2007 13:53	6780	10.626	52.174	7.453
12/12/2007 13:54	6840	10.623	52.174	7.459
12/12/2007 13:55	6900	10.625	52.178	7.454
12/12/2007 13:56	6960	10.624	52.176	7.457
12/12/2007 13:57	7020	10.626	52.172	7.452
12/12/2007 13:58	7080	10.626	52.166	7.452
12/12/2007 13:59	7140	10.627	52.171	7.451
12/12/2007 14:00	7200	10.631	52.169	7.442
12/12/2007 14:03	7380	10.634	52.163	7.435
12/12/2007 14:06	7560	10.635	52.16	7.432
12/12/2007 14:09	7740	10.633	52.16	7.436
12/12/2007 14:12	7920	10.637	52.158	7.426
12/12/2007 14:15	8100	10.641	52.155	7.417
12/12/2007 14:18	8280	10.641	52.156	7.417
12/12/2007 14:21	8460	10.64	52.154	7.419
12/12/2007 14:24	8640	10.643	52.154	7.414
12/12/2007 14:27	8820	10.635	52.154	7.432
12/12/2007 14:30	9000	10.626	52.149	7.453
12/12/2007 14:33	9180	10.627	52.145	7.45
12/12/2007 14:36	9360	10.575	52.145	7.569
12/12/2007 14:39	9540	10.578	52.139	7.563
12/12/2007 14:42	9720	10.569	52.142	7.584
12/12/2007 14:45	9900	10.577	52.139	7.565
12/12/2007 14:48	10080	10.592	52.139	7.531
12/12/2007 14:51	10260	10.604	52.136	7.502
12/12/2007 14:54	10440	10.612	52.131	7.485
12/12/2007 14:57	10620	10.619	52.13	7.469
12/12/2007 15:00	10800	10.625	52.133	7.454
12/12/2007 15:05	11100	10.627	52.131	7.449
12/12/2007 15:10	11400	10.615	52.131	7.477
12/12/2007 15:15	11700	10.522	52.126	7.692

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12/12/2007 15:20	12000	10.506	52.123	7.7
12/12/2007 15:25	12300	10.536	52.128	7.66
12/12/2007 15:30	12600	10.569	52.121	7.585
12/12/2007 15:35	12900	10.628	52.126	7.448
12/12/2007 15:40	13200	10.65	52.121	7.398
12/12/2007 15:45	13500	10.661	52.12	7.371
12/12/2007 15:50	13800	10.669	52.118	7.353
12/12/2007 15:55	14100	10.68	52.115	7.328
12/12/2007 16:00	14400	10.688	52.115	7.31
12/12/2007 16:15	15300	10.695	52.112	7.293
12/12/2007 16:30	16200	10.716	52.114	7.244
12/12/2007 16:45	17100	10.753	52.115	7.16
12/12/2007 17:00	18000	10.765	52.109	7.131
12/12/2007 17:15	18900	10.777	52.103	7.104
12/12/2007 17:30	19800	10.78	52.103	7.097
12/12/2007 17:45	20700	10.796	52.098	7.061
12/12/2007 18:00	21600	10.782	52.103	7.091
12/12/2007 18:15	22500	10.787	52.101	7.08
12/12/2007 18:30	23400	10.829	52.103	6.983
12/12/2007 18:45	24300	10.808	52.104	7.032
12/12/2007 19:00	25200	10.82	52.105	7.004
12/12/2007 19:15	26100	10.853	52.107	6.928
12/12/2007 19:30	27000	10.818	52.102	7.01
12/12/2007 19:45	27900	10.822	52.103	6.999
12/12/2007 20:00	28800	10.822	52.104	7
12/12/2007 20:15	29700	10.795	52.103	7.063
12/12/2007 20:30	30600	10.778	52.099	7.102
12/12/2007 20:45	31500	10.79	52.097	7.073
12/12/2007 21:00	32400	10.793	52.105	7.067
12/12/2007 21:15	33300	10.788	52.104	7.078
12/12/2007 21:30	34200	10.808	52.105	7.032
12/12/2007 21:45	35100	10.821	52.106	7.003
12/12/2007 22:00	36000	10.837	52.108	6.965
12/12/2007 22:15	36900	10.84	52.106	6.957
12/12/2007 22:30	37800	11.074	52.107	6.418
12/12/2007 22:45	38700	11.309	52.108	5.876
12/12/2007 23:00	39600	11.348	52.115	5.785
12/12/2007 23:15	40500	11.354	52.293	5.77
12/12/2007 23:30	41400	11.012	52.243	6.562
12/12/2007 23:45	42300	10.883	52.113	6.86
12/13/2007 0:00	43200	10.862	52.107	6.908
12/13/2007 0:15	44100	10.844	52.112	6.949
12/13/2007 0:30	45000	10.829	52.11	6.983
12/13/2007 0:45	45900	11.265	52.11	5.977
12/13/2007 1:00	46800	11.291	52.114	5.916
12/13/2007 1:15	47700	10.914	52.111	6.786
12/13/2007 1:30	48600	10.865	52.105	6.9
12/13/2007 1:45	49500	10.847	52.104	6.941
12/13/2007 2:00	50400	10.845	52.108	6.946
12/13/2007 2:15	51300	10.844	52.107	6.95
12/13/2007 2:30	52200	10.843	52.109	6.951
12/13/2007 2:45	53100	10.835	52.108	6.97

Sheet No. C70 - C90

12/13/2007 3:00	54000	10.941	52.113	6.725
12/13/2007 3:15	54900	10.866	52.109	6.897
12/13/2007 3:30	55800	10.856	52.112	6.92
12/13/2007 3:45	56700	10.849	52.11	6.938
12/13/2007 4:00	57600	10.848	52.113	6.939
12/13/2007 4:15	58500	10.845	52.111	6.946
12/13/2007 4:30	59400	10.836	52.114	6.967
12/13/2007 4:45	60300	10.831	52.112	6.98
12/13/2007 5:00	61200	10.833	52.114	6.974
12/13/2007 5:15	62100	10.824	52.11	6.996
12/13/2007 5:30	63000	10.815	52.112	7.017
12/13/2007 5:45	63900	10.813	52.113	7.02
12/13/2007 6:00	64800	10.804	52.109	7.042
12/13/2007 6:15	65700	10.798	52.108	7.055
12/13/2007 6:30	66600	10.8	52.112	7.049
12/13/2007 6:45	67500	10.79	52.109	7.074
12/13/2007 7:00	68400	10.802	52.114	7.046
12/13/2007 7:15	69300	10.801	52.111	7.048
12/13/2007 7:30	70200	10.806	52.107	7.037
12/13/2007 7:45	71100	10.797	52.115	7.057
12/13/2007 8:00	72000	10.799	52.112	7.052
12/13/2007 8:15	72900	10.798	52.114	7.056
12/13/2007 8:30	73800	10.794	52.113	7.064
12/13/2007 8:45	74700	10.771	52.114	7.118
12/13/2007 9:00	75600	10.761	52.114	7.141
12/13/2007 9:15	76500	10.763	52.108	7.136
12/13/2007 9:30	77400	10.77	52.113	7.121
12/13/2007 9:45	78300	10.781	52.115	7.095
12/13/2007 10:00	79200	10.779	52.11	7.099
12/13/2007 10:15	80100	10.778	52.114	7.101
12/13/2007 10:30	81000	10.775	52.11	7.108
12/13/2007 10:45	81900	10.764	52.114	7.135
12/13/2007 11:00	82800	10.751	52.112	7.163
12/13/2007 11:15	83700	10.741	52.11	7.186
12/13/2007 11:30	84600	10.735	52.111	7.201
12/13/2007 11:45	85500	10.722	52.116	7.231
12/13/2007 12:00	86400	10.702	52.108	7.276
12/13/2007 12:01	86460	10.703	52.113	7.274
12/13/2007 12:02	86520	10.697	52.114	7.289
12/13/2007 12:03	86580	10.698	52.111	7.286
12/13/2007 12:04	86640	10.696	52.115	7.29
12/13/2007 12:05	86700	10.698	52.108	7.287
12/13/2007 12:06	86760	10.894	52.116	6.834
12/13/2007 12:07	86820	10.947	52.109	6.71
12/13/2007 12:08	86880	10.984	52.108	6.626
12/13/2007 12:09	86940	11.006	52.114	6.574
12/13/2007 12:10	87000	11.02	52.114	6.542
12/13/2007 12:11	87060	11.031	52.113	6.516
12/13/2007 12:12	87120	11.039	52.11	6.499
12/13/2007 12:13	87180	11.045	52.114	6.484
12/13/2007 12:14	87240	11.053	52.119	6.466
12/13/2007 12:15	87300	11.057	52.112	6.458

12/13/2007 12:16	87360	11.062	52.113	6.445
12/13/2007 12:17	87420	11.065	52.114	6.439
12/13/2007 12:18	87480	11.068	52.118	6.431
12/13/2007 12:19	87540	11.069	52.116	6.429
12/13/2007 12:20	87600	11.072	52.111	6.423
12/13/2007 12:21	87660	11.074	52.108	6.417
12/13/2007 12:22	87720	11.077	52.115	6.41
12/13/2007 12:23	87780	11.08	52.109	6.403
12/13/2007 12:24	87840	11.08	52.11	6.404
12/13/2007 12:25	87900	11.082	52.112	6.4
12/13/2007 12:26	87960	11.082	52.118	6.4
12/13/2007 12:27	88020	11.084	52.112	6.395
12/13/2007 12:28	88080	11.084	52.115	6.395
12/13/2007 12:29	88140	11.085	52.112	6.392
12/13/2007 12:30	88200	11.085	52.11	6.391
12/13/2007 12:31	88260	11.085	52.109	6.393
12/13/2007 12:32	88320	11.086	52.11	6.39
12/13/2007 12:33	88380	11.085	52.114	6.392
12/13/2007 12:34	88440	11.085	52.115	6.392
12/13/2007 12:35	88500	11.088	52.119	6.386
12/13/2007 12:36	88560	11.087	52.113	6.388
12/13/2007 12:37	88620	11.085	52.121	6.391
12/13/2007 12:38	88680	11.086	52.119	6.39
12/13/2007 12:39	88740	11.086	52.125	6.39
12/13/2007 12:40	88800	11.086	52.125	6.389
12/13/2007 12:41	88860	11.089	52.13	6.383
12/13/2007 12:42	88920	11.089	52.136	6.384
12/13/2007 12:43	88980	11.089	52.143	6.383
12/13/2007 12:44	89040	11.087	52.149	6.388
12/13/2007 12:45	89100	11.09	52.154	6.381
12/13/2007 12:46	89160	11.091	52.172	6.378
12/13/2007 12:47	89220	11.091	52.182	6.378
12/13/2007 12:48	89280	11.092	52.199	6.375
12/13/2007 12:49	89340	11.092	52.217	6.376
12/13/2007 12:50	89400	11.091	52.236	6.378
12/13/2007 12:51	89460	11.091	52.257	6.377
12/13/2007 12:52	89520	11.091	52.283	6.379
12/13/2007 12:53	89580	11.093	52.306	6.375
12/13/2007 12:54	89640	11.093	52.325	6.375
12/13/2007 12:55	89700	11.097	52.345	6.366
12/13/2007 12:56	89760	11.097	52.376	6.364
12/13/2007 12:57	89820	11.096	52.397	6.367
12/13/2007 12:58	89880	11.098	52.417	6.363
12/13/2007 12:59	89940	11.099	52.445	6.359
12/13/2007 13:00	90000	11.1	52.465	6.357
12/13/2007 13:15	90900	11.101	52.76	6.355
12/13/2007 13:30	91800	11.099	52.884	6.359
12/13/2007 13:45	92700	11.094	52.976	6.372
12/13/2007 14:00	93600	11.092	53.002	6.376
12/13/2007 14:15	94500	11.103	53.003	6.351
12/13/2007 14:30	95400	11.101	53.019	6.355
12/13/2007 14:45	96300	11.101	53.032	6.356

12/13/2007 15:00	97200	11.105	53.017	6.346
12/13/2007 15:15	98100	11.105	53.027	6.347
12/13/2007 15:30	99000	11.102	53.035	6.352
12/13/2007 15:45	99900	11.103	53.035	6.35
12/13/2007 16:00	100800	11.102	53.039	6.354
12/13/2007 16:15	101700	11.097	53.037	6.365
12/13/2007 16:30	102600	11.105	53.037	6.347
12/13/2007 16:45	103500	11.11	53.041	6.334
12/13/2007 17:00	104400	11.107	53.025	6.342
12/13/2007 17:15	105300	11.109	53.041	6.336
12/13/2007 17:30	106200	11.109	53.052	6.338
12/13/2007 17:45	107100	11.109	53.014	6.337
12/13/2007 18:00	108000	11.109	53.045	6.337
12/13/2007 18:15	108900	11.111	53.05	6.332
12/13/2007 18:30	109800	11.112	53.051	6.329
12/13/2007 18:45	110700	11.115	53.03	6.323
12/13/2007 19:00	111600	11.116	53.04	6.322
12/13/2007 19:15	112500	11.119	53.048	6.315
12/13/2007 19:30	113400	11.119	53.056	6.313
12/13/2007 19:45	114300	11.121	53.048	6.31
12/13/2007 20:00	115200	11.124	53.043	6.302
12/13/2007 20:15	116100	11.123	53.051	6.304
12/13/2007 20:30	117000	11.121	53.035	6.308
12/13/2007 20:45	117900	11.125	53.031	6.301
12/13/2007 21:00	118800	11.128	53.02	6.292
12/13/2007 21:15	119700	11.13	52.998	6.289
12/13/2007 21:30	120600	11.132	53.006	6.284
12/13/2007 21:45	121500	11.136	52.997	6.275
12/13/2007 22:00	122400	11.136	52.993	6.274
12/13/2007 22:15	123300	11.138	52.976	6.269
12/13/2007 22:30	124200	11.146	52.966	6.252
12/13/2007 22:45	125100	11.145	52.969	6.254
12/13/2007 23:00	126000	11.146	52.966	6.25
12/13/2007 23:15	126900	11.151	52.951	6.241
12/13/2007 23:30	127800	11.151	52.96	6.24
12/13/2007 23:45	128700	11.153	52.954	6.235
12/14/2007 0:00	129600	11.15	52.952	6.242

Report Date: 1/2/2008 15:19
Report User Name: Administrator
Report Computer Name:

Log File Properties
File Name PUMP TEST MW302A3 2007-12-14 08.22.01.wsl
Create Date 12/14/2007 8:21

Device Properties
Device Unknown
Site Berwick PA-Unit
Device Name
Serial Number 123991
Firmware Version 2.07

Log Configuration

Log Name	PUMP TEST MW302A3
Created By	Daniel Bansah
Computer Name	Field PC
Application	WinSituMobile.exe
Application Version	5.4.1.4
Create Date	12/11/2007 19:09
Notes Size(bytes)	4096
Type	Step Linear
Overwrite when full	Disabled
Scheduled Start	12/12/2007 12:00
Scheduled Stop	12/14/2007 0:00

Steps 10

Step: 1
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 05
Step: 2
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 10
Step: 3
Duration: Days: 0 Hours: 00 Mins: 03 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 15
Step: 4
Duration: Days: 0 Hours: 00 Mins: 05 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 30
Step: 5
Duration: Days: 0 Hours: 01 Mins: 50 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00
Step: 6
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 03 Secs: 00
Step: 7
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 05 Secs: 00
Step: 8
Duration: Days: 0 Hours: 20 Mins: 00 Secs: 00

Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00
Step: 9
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00
Step: 10
Duration: Days: 0 Hours: 11 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00

Step	10
Duration	Days: 0 Hours: 11 Mins: 00 Secs: 00
Interval	Days: 0 Hours: 00 Mins: 15 Secs: 00

Level Reference Settings At Log Creation

Level Measurem	Level-DTW
Specific Gra	0.999
Level Referenc	Set new reference
Level Referenc	6.9 (ft)
Level Reference Hea	11.2165 (PSI)
Temperat	53.7084 (F)
Depth of Pr	25.8992 (ft)

Log Notes:

Date and Time	Note
12/11/2007 19:10	User Note: "Level reference initialized to: 6.9"

Log Data:
Record Count 367

Date and Time	Elapsed Time Seconds	Sensor: Pres 30G SN#: 123991 Pressure (PSI)	Sensor: Pr SN#: 1239 Temperatu	Sensor: Pres 30G SN#: 123991 Level-DTW (ft)
12/12/2007 12:00	0.0	11.252	53.656	6.818
12/12/2007 12:00	5.0	11.252	53.655	6.818
12/12/2007 12:00	10.0	11.251	53.656	6.819
12/12/2007 12:00	15.0	11.252	53.656	6.819
12/12/2007 12:00	20.0	11.25	53.664	6.823
12/12/2007 12:00	25.0	11.249	53.665	6.825
12/12/2007 12:00	30.0	11.252	53.666	6.817
12/12/2007 12:00	35.0	11.251	53.662	6.821
12/12/2007 12:00	40.0	11.25	53.667	6.822
12/12/2007 12:00	45.0	11.25	53.662	6.822
12/12/2007 12:00	50.0	11.252	53.667	6.819
12/12/2007 12:00	55.0	11.249	53.668	6.824
12/12/2007 12:01	60.0	11.25	53.669	6.822
12/12/2007 12:01	70.0	11.25	53.661	6.823
12/12/2007 12:01	80.0	11.25	53.668	6.823
12/12/2007 12:01	90.0	11.235	53.668	6.857
12/12/2007 12:01	100.0	11.217	53.664	6.899
12/12/2007 12:01	110.0	11.199	53.666	6.94

12/12/2007 12:02	120.0	11.184	53.667	6.974
12/12/2007 12:02	135.0	11.167	53.661	7.014
12/12/2007 12:02	150.0	11.154	53.66	7.044
12/12/2007 12:02	165.0	11.144	53.665	7.068
12/12/2007 12:03	180.0	11.134	53.661	7.09
12/12/2007 12:03	195.0	11.127	53.661	7.107
12/12/2007 12:03	210.0	11.119	53.658	7.126
12/12/2007 12:03	225.0	11.113	53.662	7.14
12/12/2007 12:04	240.0	11.107	53.657	7.152
12/12/2007 12:04	255.0	11.101	53.659	7.167
12/12/2007 12:04	270.0	11.097	53.656	7.176
12/12/2007 12:04	285.0	11.095	53.65	7.179
12/12/2007 12:05	300.0	11.091	53.656	7.19
12/12/2007 12:05	330.0	11.085	53.645	7.204
12/12/2007 12:06	360.0	11.078	53.637	7.22
12/12/2007 12:06	390.0	11.071	53.623	7.236
12/12/2007 12:07	420.0	11.066	53.609	7.247
12/12/2007 12:07	450.0	11.062	53.586	7.257
12/12/2007 12:08	480.0	11.055	53.571	7.273
12/12/2007 12:08	510.0	11.052	53.55	7.281
12/12/2007 12:09	540.0	11.051	53.522	7.282
12/12/2007 12:09	570.0	11.048	53.492	7.29
12/12/2007 12:10	600.0	11.045	53.451	7.297
12/12/2007 12:11	660.0	11.039	53.368	7.309
12/12/2007 12:12	720.0	11.032	53.264	7.325
12/12/2007 12:13	780.0	11.03	53.153	7.331
12/12/2007 12:14	840.0	11.028	53.037	7.336
12/12/2007 12:15	900.0	11.023	52.938	7.347
12/12/2007 12:16	960.0	11.022	52.862	7.348
12/12/2007 12:17	1020.0	11.02	52.797	7.354
12/12/2007 12:18	1080.0	11.02	52.748	7.355
12/12/2007 12:19	1140.0	11.014	52.71	7.367
12/12/2007 12:20	1200.0	11.014	52.685	7.367
12/12/2007 12:21	1260.0	10.998	52.663	7.405
12/12/2007 12:22	1320.0	10.991	52.646	7.42
12/12/2007 12:23	1380.0	10.987	52.639	7.431
12/12/2007 12:24	1440.0	10.98	52.627	7.446
12/12/2007 12:25	1500.0	10.976	52.617	7.455
12/12/2007 12:26	1560.0	10.974	52.611	7.46
12/12/2007 12:27	1620.0	10.971	52.604	7.467
12/12/2007 12:28	1680.0	10.968	52.599	7.474
12/12/2007 12:29	1740.0	10.966	52.587	7.478
12/12/2007 12:30	1800.0	10.963	52.575	7.485
12/12/2007 12:31	1860.0	10.964	52.574	7.484
12/12/2007 12:32	1920.0	10.962	52.572	7.489
12/12/2007 12:33	1980.0	10.961	52.57	7.49
12/12/2007 12:34	2040.0	10.962	52.572	7.489
12/12/2007 12:35	2100.0	10.959	52.57	7.494
12/12/2007 12:36	2160.0	10.96	52.565	7.491
12/12/2007 12:37	2220.0	10.96	52.564	7.492
12/12/2007 12:38	2280.0	10.958	52.558	7.496
12/12/2007 12:39	2340.0	10.957	52.558	7.498

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12/12/2007 12:40	2400.0	10.954	52.55	7.507	
12/12/2007 12:41	2460.0	10.954	52.547	7.506	
12/12/2007 12:42	2520.0	10.951	52.547	7.513	
12/12/2007 12:43	2580.0	10.951	52.539	7.512	
12/12/2007 12:44	2640.0	10.95	52.538	7.515	
12/12/2007 12:45	2700.0	10.951	52.536	7.513	
12/12/2007 12:46	2760.0	10.95	52.533	7.515	
12/12/2007 12:47	2820.0	10.95	52.53	7.516	
12/12/2007 12:48	2880.0	10.947	52.528	7.521	
12/12/2007 12:49	2940.0	10.947	52.525	7.522	
12/12/2007 12:50	3000.0	10.947	52.521	7.522	ASF standard
12/12/2007 12:51	3060.0	10.948	52.514	7.521	
12/12/2007 12:52	3120.0	10.946	52.511	7.524	
12/12/2007 12:53	3180.0	10.946	52.513	7.524	
12/12/2007 12:54	3240.0	10.945	52.511	7.527	
12/12/2007 12:55	3300.0	10.945	52.515	7.528	
12/12/2007 12:56	3360.0	10.943	52.517	7.533	
12/12/2007 12:57	3420.0	10.944	52.509	7.528	
12/12/2007 12:58	3480.0	10.941	52.513	7.535	
12/12/2007 12:59	3540.0	10.942	52.511	7.534	
12/12/2007 13:00	3600.0	10.943	52.508	7.531	
12/12/2007 13:01	3660.0	10.944	52.505	7.53	
12/12/2007 13:02	3720.0	10.943	52.507	7.532	
12/12/2007 13:03	3780.0	10.943	52.507	7.531	
12/12/2007 13:04	3840.0	10.941	52.507	7.536	
12/12/2007 13:05	3900.0	10.941	52.505	7.536	
12/12/2007 13:06	3960.0	10.94	52.496	7.538	
12/12/2007 13:07	4020.0	10.939	52.498	7.54	
12/12/2007 13:08	4080.0	10.94	52.498	7.539	
12/12/2007 13:09	4140.0	10.941	52.497	7.536	
12/12/2007 13:10	4200.0	10.94	52.49	7.539	
12/12/2007 13:11	4260.0	10.939	52.492	7.54	
12/12/2007 13:12	4320.0	10.938	52.488	7.543	
12/12/2007 13:13	4380.0	10.937	52.488	7.544	
12/12/2007 13:14	4440.0	10.938	52.49	7.544	
12/12/2007 13:15	4500.0	10.937	52.485	7.545	
12/12/2007 13:16	4560.0	10.937	52.488	7.544	
12/12/2007 13:17	4620.0	10.937	52.487	7.544	
12/12/2007 13:18	4680.0	10.938	52.483	7.544	
12/12/2007 13:19	4740.0	10.938	52.479	7.543	
12/12/2007 13:20	4800.0	10.937	52.479	7.544	
12/12/2007 13:21	4860.0	10.937	52.48	7.544	
12/12/2007 13:22	4920.0	10.935	52.475	7.55	
12/12/2007 13:23	4980.0	10.938	52.479	7.544	
12/12/2007 13:24	5040.0	10.935	52.474	7.55	
12/12/2007 13:25	5100.0	10.935	52.472	7.549	
12/12/2007 13:26	5160.0	10.936	52.472	7.548	
12/12/2007 13:27	5220.0	10.935	52.476	7.549	
12/12/2007 13:28	5280.0	10.935	52.468	7.551	
12/12/2007 13:29	5340.0	10.934	52.469	7.552	
12/12/2007 13:30	5400.0	10.936	52.466	7.548	
12/12/2007 13:31	5460.0	10.935	52.46	7.55	

12/12/2007 13:32	5520.0	10.934	52.467	7.553
12/12/2007 13:33	5580.0	10.934	52.461	7.552
12/12/2007 13:34	5640.0	10.934	52.461	7.553
12/12/2007 13:35	5700.0	10.933	52.455	7.555
12/12/2007 13:36	5760.0	10.934	52.452	7.553
12/12/2007 13:37	5820.0	10.933	52.456	7.555
12/12/2007 13:38	5880.0	10.932	52.45	7.556
12/12/2007 13:39	5940.0	10.933	52.451	7.555
12/12/2007 13:40	6000.0	10.933	52.451	7.555
12/12/2007 13:41	6060.0	10.932	52.444	7.557
12/12/2007 13:42	6120.0	10.932	52.45	7.556
12/12/2007 13:43	6180.0	10.933	52.444	7.555
12/12/2007 13:44	6240.0	10.932	52.451	7.557
12/12/2007 13:45	6300.0	10.932	52.445	7.558
12/12/2007 13:46	6360.0	10.933	52.445	7.555
12/12/2007 13:47	6420.0	10.932	52.442	7.556
12/12/2007 13:48	6480.0	10.931	52.439	7.559
12/12/2007 13:49	6540.0	10.931	52.442	7.559
12/12/2007 13:50	6600.0	10.93	52.435	7.561
12/12/2007 13:51	6660.0	10.932	52.439	7.557
12/12/2007 13:52	6720.0	10.933	52.435	7.555
12/12/2007 13:53	6780.0	10.934	52.434	7.553
12/12/2007 13:54	6840.0	10.932	52.433	7.557
12/12/2007 13:55	6900.0	10.932	52.432	7.557
12/12/2007 13:56	6960.0	10.93	52.433	7.561
12/12/2007 13:57	7020.0	10.931	52.435	7.559
12/12/2007 13:58	7080.0	10.931	52.431	7.559
12/12/2007 13:59	7140.0	10.93	52.432	7.561
12/12/2007 14:00	7200.0	10.928	52.43	7.567
12/12/2007 14:03	7380.0	10.931	52.421	7.56
12/12/2007 14:06	7560.0	10.93	52.425	7.561
12/12/2007 14:09	7740.0	10.93	52.42	7.561
12/12/2007 14:12	7920.0	10.929	52.414	7.564
12/12/2007 14:15	8100.0	10.929	52.417	7.564
12/12/2007 14:18	8280.0	10.93	52.413	7.56
12/12/2007 14:21	8460.0	10.929	52.409	7.563
12/12/2007 14:24	8640.0	10.925	52.41	7.572
12/12/2007 14:27	8820.0	10.928	52.412	7.565
12/12/2007 14:30	9000.0	10.923	52.403	7.578
12/12/2007 14:33	9180.0	10.914	52.404	7.597
12/12/2007 14:36	9360.0	10.909	52.401	7.61
12/12/2007 14:39	9540.0	10.906	52.398	7.617
12/12/2007 14:42	9720.0	10.905	52.387	7.62
12/12/2007 14:45	9900.0	10.904	52.385	7.622
12/12/2007 14:48	10080.0	10.902	52.389	7.626
12/12/2007 14:51	10260.0	10.901	52.379	7.628
12/12/2007 14:54	10440.0	10.899	52.387	7.633
12/12/2007 14:57	10620.0	10.899	52.379	7.633
12/12/2007 15:00	10800.0	10.899	52.378	7.634
12/12/2007 15:05	11100.0	10.898	52.373	7.634
12/12/2007 15:10	11400.0	10.895	52.371	7.643
12/12/2007 15:15	11700.0	10.897	52.367	7.637

12/12/2007 15:20	12000.0	10.896	52.365	7.64
12/12/2007 15:25	12300.0	10.893	52.363	7.647
12/12/2007 15:30	12600.0	10.894	52.365	7.644
12/12/2007 15:35	12900.0	10.894	52.36	7.644
12/12/2007 15:40	13200.0	10.894	52.361	7.645
12/12/2007 15:45	13500.0	10.893	52.354	7.648
12/12/2007 15:50	13800.0	10.89	52.355	7.653
12/12/2007 15:55	14100.0	10.89	52.352	7.653
12/12/2007 16:00	14400.0	10.891	52.35	7.651
12/12/2007 16:15	15300.0	10.89	52.347	7.653
12/12/2007 16:30	16200.0	10.891	52.336	7.651
12/12/2007 16:45	17100.0	10.887	52.331	7.661
12/12/2007 17:00	18000.0	10.882	52.335	7.672
12/12/2007 17:15	18900.0	10.882	52.325	7.672
12/12/2007 17:30	19800.0	10.882	52.315	7.672
12/12/2007 17:45	20700.0	10.878	52.312	7.682
12/12/2007 18:00	21600.0	10.878	52.316	7.682
12/12/2007 18:15	22500.0	10.876	52.308	7.686
12/12/2007 18:30	23400.0	10.876	52.31	7.685
12/12/2007 18:45	24300.0	10.873	52.306	7.693
12/12/2007 19:00	25200.0	10.871	52.305	7.697
12/12/2007 19:15	26100.0	10.869	52.304	7.702
12/12/2007 19:30	27000.0	10.868	52.296	7.704
12/12/2007 19:45	27900.0	10.87	52.294	7.7
12/12/2007 20:00	28800.0	10.87	52.291	7.701
12/12/2007 20:15	29700.0	10.834	52.295	7.783
12/12/2007 20:30	30600.0	10.823	52.297	7.808
12/12/2007 20:45	31500.0	10.819	52.292	7.818
12/12/2007 21:00	32400.0	10.818	52.292	7.821
12/12/2007 21:15	33300.0	11.003	52.288	7.394
12/12/2007 21:30	34200.0	10.822	52.287	7.81
12/12/2007 21:45	35100.0	10.815	52.29	7.827
12/12/2007 22:00	36000.0	10.813	52.285	7.831
12/12/2007 22:15	36900.0	10.807	52.285	7.845
12/12/2007 22:30	37800.0	11.044	52.283	7.298
12/12/2007 22:45	38700.0	11.143	52.312	7.07
12/12/2007 23:00	39600.0	11.165	52.329	7.019
12/12/2007 23:15	40500.0	11.175	52.369	6.995
12/12/2007 23:30	41400.0	10.904	52.378	7.623
12/12/2007 23:45	42300.0	10.842	52.277	7.764
12/13/2007 0:00	43200.0	10.828	52.285	7.797
12/13/2007 0:15	44100.0	10.824	52.282	7.807
12/13/2007 0:30	45000.0	10.833	52.28	7.785
12/13/2007 0:45	45900.0	11.142	52.289	7.072
12/13/2007 1:00	46800.0	11.168	52.312	7.011
12/13/2007 1:15	47700.0	10.894	52.28	7.644
12/13/2007 1:30	48600.0	10.861	52.275	7.722
12/13/2007 1:45	49500.0	10.85	52.28	7.747
12/13/2007 2:00	50400.0	10.843	52.278	7.763
12/13/2007 2:15	51300.0	10.837	52.276	7.777
12/13/2007 2:30	52200.0	10.837	52.273	7.777
12/13/2007 2:45	53100.0	10.833	52.279	7.786

12/13/2007 3:00	54000.0	10.889	52.267	7.687
12/13/2007 3:15	54900.0	10.858	52.272	7.729
12/13/2007 3:30	55800.0	10.853	52.269	7.739
12/13/2007 3:45	56700.0	10.85	52.274	7.746
12/13/2007 4:00	57600.0	10.848	52.275	7.75
12/13/2007 4:15	58500.0	10.844	52.271	7.759
12/13/2007 4:30	59400.0	10.852	52.273	7.742
12/13/2007 4:45	60300.0	10.846	52.272	7.755
12/13/2007 5:00	61200.0	10.841	52.272	7.767
12/13/2007 5:15	62100.0	10.847	52.276	7.753
12/13/2007 5:30	63000.0	10.844	52.272	7.761
12/13/2007 5:45	63900.0	10.844	52.274	7.759
12/13/2007 6:00	64800.0	10.839	52.274	7.771
12/13/2007 6:15	65700.0	10.839	52.273	7.77
12/13/2007 6:30	66600.0	10.843	52.27	7.762
12/13/2007 6:45	67500.0	10.84	52.274	7.77
12/13/2007 7:00	68400.0	10.837	52.266	7.777
12/13/2007 7:15	69300.0	10.834	52.269	7.783
12/13/2007 7:30	70200.0	10.837	52.266	7.775
12/13/2007 7:45	71100.0	10.837	52.271	7.777
12/13/2007 8:00	72000.0	10.834	52.273	7.783
12/13/2007 8:15	72900.0	10.836	52.271	7.779
12/13/2007 8:30	73800.0	10.837	52.272	7.775
12/13/2007 8:45	74700.0	10.841	52.267	7.767
12/13/2007 9:00	75600.0	10.835	52.275	7.78
12/13/2007 9:15	76500.0	10.829	52.268	7.794
12/13/2007 9:30	77400.0	10.826	52.267	7.801
12/13/2007 9:45	78300.0	10.827	52.271	7.798
12/13/2007 10:00	79200.0	10.828	52.266	7.797
12/13/2007 10:15	80100.0	10.828	52.269	7.796
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12/13/2007 12:00	86400.0	10.83	52.266	7.791
12/13/2007 12:01	86460.0	10.829	52.271	7.796
12/13/2007 12:02	86520.0	10.86	52.269	7.724
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12/13/2007 12:05	86700.0	11.016	52.27	7.363
12/13/2007 12:06	86760.0	11.038	52.268	7.311
12/13/2007 12:07	86820.0	11.057	52.268	7.269
12/13/2007 12:08	86880.0	11.067	52.27	7.245
12/13/2007 12:09	86940.0	11.079	52.271	7.217
12/13/2007 12:10	87000.0	11.085	52.268	7.203
12/13/2007 12:11	87060.0	11.097	52.273	7.176
12/13/2007 12:12	87120.0	11.102	52.271	7.164
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12/13/2007 12:14	87240.0	11.11	52.275	7.145
12/13/2007 12:15	87300.0	11.112	52.28	7.142

12/13/2007 12:16	87360.0	11.119	52.284	7.126
12/13/2007 12:17	87420.0	11.121	52.284	7.121
12/13/2007 12:18	87480.0	11.123	52.283	7.115
12/13/2007 12:19	87540.0	11.124	52.286	7.114
12/13/2007 12:20	87600.0	11.128	52.288	7.105
12/13/2007 12:21	87660.0	11.13	52.292	7.101
12/13/2007 12:22	87720.0	11.132	52.294	7.095
12/13/2007 12:23	87780.0	11.134	52.293	7.091
12/13/2007 12:24	87840.0	11.132	52.297	7.094
12/13/2007 12:25	87900.0	11.138	52.3	7.081
12/13/2007 12:26	87960.0	11.138	52.299	7.081
12/13/2007 12:27	88020.0	11.14	52.304	7.077
12/13/2007 12:28	88080.0	11.141	52.303	7.074
12/13/2007 12:29	88140.0	11.142	52.312	7.072
12/13/2007 12:30	88200.0	11.145	52.307	7.066
12/13/2007 12:31	88260.0	11.146	52.31	7.063
12/13/2007 12:32	88320.0	11.147	52.311	7.06
12/13/2007 12:33	88380.0	11.149	52.314	7.056
12/13/2007 12:34	88440.0	11.15	52.307	7.052
12/13/2007 12:35	88500.0	11.153	52.314	7.047
12/13/2007 12:36	88560.0	11.152	52.312	7.048
12/13/2007 12:37	88620.0	11.151	52.31	7.05
12/13/2007 12:38	88680.0	11.151	52.312	7.052
12/13/2007 12:39	88740.0	11.15	52.315	7.054
12/13/2007 12:40	88800.0	11.152	52.318	7.049
12/13/2007 12:41	88860.0	11.152	52.318	7.049
12/13/2007 12:42	88920.0	11.154	52.317	7.045
12/13/2007 12:43	88980.0	11.153	52.318	7.047
12/13/2007 12:44	89040.0	11.155	52.321	7.043
12/13/2007 12:45	89100.0	11.156	52.324	7.04
12/13/2007 12:46	89160.0	11.156	52.324	7.04
12/13/2007 12:47	89220.0	11.157	52.323	7.038
12/13/2007 12:48	89280.0	11.158	52.324	7.035
12/13/2007 12:49	89340.0	11.157	52.329	7.038
12/13/2007 12:50	89400.0	11.157	52.331	7.038
12/13/2007 12:51	89460.0	11.156	52.336	7.039
12/13/2007 12:52	89520.0	11.157	52.339	7.038
12/13/2007 12:53	89580.0	11.157	52.338	7.038
12/13/2007 12:54	89640.0	11.156	52.347	7.039
12/13/2007 12:55	89700.0	11.156	52.343	7.04
12/13/2007 12:56	89760.0	11.155	52.345	7.043
12/13/2007 12:57	89820.0	11.157	52.352	7.036
12/13/2007 12:58	89880.0	11.159	52.358	7.033
12/13/2007 12:59	89940.0	11.16	52.365	7.031
12/13/2007 13:00	90000.0	11.16	52.365	7.031
12/13/2007 13:15	90900.0	11.165	52.651	7.019
12/13/2007 13:30	91800.0	11.175	53.007	6.995
12/13/2007 13:45	92700.0	11.177	53.19	6.992
12/13/2007 14:00	93600.0	11.179	53.338	6.986
12/13/2007 14:15	94500.0	11.178	53.411	6.988
12/13/2007 14:30	95400.0	11.181	53.453	6.981
12/13/2007 14:45	96300.0	11.186	53.495	6.971

12/13/2007 15:00	97200.0	11.186	53.525	6.969
12/13/2007 15:15	98100.0	11.188	53.554	6.967
12/13/2007 15:30	99000.0	11.191	53.57	6.958
12/13/2007 15:45	99900.0	11.191	53.591	6.958
12/13/2007 16:00	100800.0	11.194	53.599	6.952
12/13/2007 16:15	101700.0	11.194	53.598	6.953
12/13/2007 16:30	102600.0	11.192	53.614	6.957
12/13/2007 16:45	103500.0	11.195	53.621	6.949
12/13/2007 17:00	104400.0	11.197	53.639	6.945
12/13/2007 17:15	105300.0	11.199	53.612	6.94
12/13/2007 17:30	106200.0	11.201	53.628	6.937
12/13/2007 17:45	107100.0	11.203	53.649	6.931
12/13/2007 18:00	108000.0	11.201	53.646	6.935
12/13/2007 18:15	108900.0	11.205	53.647	6.926
12/13/2007 18:30	109800.0	11.204	53.662	6.929
12/13/2007 18:45	110700.0	11.202	53.647	6.932
12/13/2007 19:00	111600.0	11.203	53.649	6.931
12/13/2007 19:15	112500.0	11.207	53.644	6.923
12/13/2007 19:30	113400.0	11.208	53.639	6.92
12/13/2007 19:45	114300.0	11.209	53.654	6.917
12/13/2007 20:00	115200.0	11.211	53.655	6.912
12/13/2007 20:15	116100.0	11.211	53.66	6.913
12/13/2007 20:30	117000.0	11.211	53.656	6.912
12/13/2007 20:45	117900.0	11.212	53.647	6.911
12/13/2007 21:00	118800.0	11.211	53.633	6.912
12/13/2007 21:15	119700.0	11.213	53.644	6.908
12/13/2007 21:30	120600.0	11.213	53.649	6.908
12/13/2007 21:45	121500.0	11.214	53.642	6.907
12/13/2007 22:00	122400.0	11.214	53.645	6.905
12/13/2007 22:15	123300.0	11.214	53.659	6.907
12/13/2007 22:30	124200.0	11.215	53.644	6.903
12/13/2007 22:45	125100.0	11.215	53.642	6.903
12/13/2007 23:00	126000.0	11.215	53.638	6.904
12/13/2007 23:15	126900.0	11.216	53.653	6.901
12/13/2007 23:30	127800.0	11.218	53.639	6.896
12/13/2007 23:45	128700.0	11.219	53.641	6.893
12/14/2007 0:00	129600.0	11.22	53.64	6.892

Report Date: 1/2/2008 15:15
Report User Name: Administrator
Report Computer Name:

Log File Properties
File Name PUMP TEST MW302A4 2007-12-14 08.20.19.wsl
Create Date 12/14/2007 8:20

Device Properties
Device Unknown
Site Berwick PA-Unit
Device Name
Serial Number 121825
Firmware Version 2.07

Log Configuration
Log Name PUMP TEST MW302A4
Created By Daniel Bansah
Computer Name Field PC
Application WinSituMobile.exe
Application Version 5.4.1.4
Create Date 12/11/2007 19:01
Notes Size(bytes) 4096
Type Step Linear
Overwrite when full Disabled
Scheduled Start 12/12/2007 12:00
Scheduled Stop 12/14/2007 0:00
Steps 10

Step: 1
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 05
Step: 2
Duration: Days: 0 Hours: 00 Mins: 01 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 10
Step: 3
Duration: Days: 0 Hours: 00 Mins: 03 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 15
Step: 4
Duration: Days: 0 Hours: 00 Mins: 05 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 00 Secs: 30
Step: 5
Duration: Days: 0 Hours: 01 Mins: 50 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00
Step: 6
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 03 Secs: 00
Step: 7
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 05 Secs: 00
Step: 8
Duration: Days: 0 Hours: 20 Mins: 00 Secs: 00

Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00
Step: 9
Duration: Days: 0 Hours: 01 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 01 Secs: 00
Step: 10
Duration: Days: 0 Hours: 11 Mins: 00 Secs: 00
Interval: Days: 0 Hours: 00 Mins: 15 Secs: 00

Step	10
Duration	Days: 0 Hours: 11 Mins: 00 Secs: 00
Interval	Days: 0 Hours: 00 Mins: 15 Secs: 00

Level Reference Settings At Log Creation

Level Measurei	Level-DTW
Specific Gr:	0.999
Level Referen	Set new reference
Level Referen(	6.86 (ft)
Level Reference He	13.6703 (PSI)
Temper:	54.0258 (F)
Depth of F	31.591 (ft)

Log Notes:

Date and Time	Note
12/11/2007 19:05	User Note: "Level reference initialized to: 6.86"

Log Data:
Record Count 367

Date and Time	Elapsed Time Seconds	Sensor: Pres 100G SN#: 121825 Pressure (PSI)	Sensor: Pr SN#: 1218 Temperatu	Sensor: Pres 100G SN#: 121825 Level-DTW (ft)
12/12/2007 12:00	0	13.708	53.913	6.773
12/12/2007 12:00	5	13.702	53.913	6.787
12/12/2007 12:00	10	13.705	53.913	6.779
12/12/2007 12:00	15	13.71	53.913	6.768
12/12/2007 12:00	20	13.703	53.914	6.784
12/12/2007 12:00	25	13.711	53.915	6.766
12/12/2007 12:00	30	13.705	53.921	6.78
12/12/2007 12:00	35	13.704	53.918	6.782
12/12/2007 12:00	40	13.706	53.917	6.777
12/12/2007 12:00	45	13.704	53.923	6.781
12/12/2007 12:00	50	13.707	53.918	6.775
12/12/2007 12:00	55	13.703	53.921	6.784
12/12/2007 12:01	60	13.701	53.925	6.789
12/12/2007 12:01	70	13.702	53.923	6.786
12/12/2007 12:01	80	13.707	53.922	6.775
12/12/2007 12:01	90	13.697	53.919	6.797
12/12/2007 12:01	100	13.702	53.919	6.787
12/12/2007 12:01	110	13.707	53.92	6.775

12/12/2007 12:02	120	13.701	53.916	6.788	
12/12/2007 12:02	135	13.704	53.911	6.782	
12/12/2007 12:02	150	13.704	53.915	6.783	
12/12/2007 12:02	165	13.709	53.915	6.771	
12/12/2007 12:03	180	13.706	53.914	6.777	
12/12/2007 12:03	195	13.703	53.917	6.784	
12/12/2007 12:03	210	13.704	53.92	6.783	
12/12/2007 12:03	225	13.703	53.917	6.784	
12/12/2007 12:04	240	13.704	53.915	6.782	
12/12/2007 12:04	255	13.702	53.918	6.787	
12/12/2007 12:04	270	13.681	53.921	6.835	
12/12/2007 12:04	285	13.662	53.916	6.879	
12/12/2007 12:05	300	13.639	53.92	6.932	ASF 12/12/07
12/12/2007 12:05	330	13.617	53.913	6.982	
12/12/2007 12:06	360	13.596	53.91	7.031	
12/12/2007 12:06	390	13.577	53.913	7.075	
12/12/2007 12:07	420	13.567	53.912	7.099	
12/12/2007 12:07	450	13.561	53.905	7.113	
12/12/2007 12:08	480	13.557	53.903	7.121	
12/12/2007 12:08	510	13.549	53.883	7.141	
12/12/2007 12:09	540	13.543	53.86	7.153	
12/12/2007 12:09	570	13.532	53.842	7.178	
12/12/2007 12:10	600	13.536	53.815	7.17	
12/12/2007 12:11	660	13.514	53.752	7.221	
12/12/2007 12:12	720	13.513	53.679	7.223	
12/12/2007 12:13	780	13.513	53.613	7.224	
12/12/2007 12:14	840	13.506	53.554	7.24	
12/12/2007 12:15	900	13.5	53.497	7.252	
12/12/2007 12:16	960	13.496	53.443	7.263	
12/12/2007 12:17	1020	13.492	53.408	7.272	
12/12/2007 12:18	1080	13.491	53.379	7.275	
12/12/2007 12:19	1140	13.489	53.358	7.278	
12/12/2007 12:20	1200	13.483	53.337	7.293	
12/12/2007 12:21	1260	13.491	53.321	7.275	
12/12/2007 12:22	1320	13.482	53.309	7.294	
12/12/2007 12:23	1380	13.482	53.299	7.295	
12/12/2007 12:24	1440	13.468	53.283	7.328	
12/12/2007 12:25	1500	13.457	53.274	7.353	
12/12/2007 12:26	1560	13.455	53.267	7.357	
12/12/2007 12:27	1620	13.452	53.257	7.363	
12/12/2007 12:28	1680	13.445	53.242	7.379	
12/12/2007 12:29	1740	13.441	53.231	7.39	
12/12/2007 12:30	1800	13.442	53.225	7.388	
12/12/2007 12:31	1860	13.438	53.221	7.397	
12/12/2007 12:32	1920	13.437	53.23	7.399	
12/12/2007 12:33	1980	13.427	53.229	7.422	
12/12/2007 12:34	2040	13.426	53.226	7.424	
12/12/2007 12:35	2100	13.429	53.222	7.417	
12/12/2007 12:36	2160	13.432	53.217	7.411	
12/12/2007 12:37	2220	13.43	53.218	7.415	
12/12/2007 12:38	2280	13.432	53.21	7.409	
12/12/2007 12:39	2340	13.431	53.201	7.413	

12/12/2007 12:40	2400	13.427	53.187	7.421
12/12/2007 12:41	2460	13.43	53.175	7.416
12/12/2007 12:42	2520	13.424	53.171	7.428
12/12/2007 12:43	2580	13.421	53.164	7.436
12/12/2007 12:44	2640	13.422	53.161	7.433
12/12/2007 12:45	2700	13.419	53.16	7.44
12/12/2007 12:46	2760	13.414	53.151	7.451
12/12/2007 12:47	2820	13.423	53.144	7.431
12/12/2007 12:48	2880	13.427	53.145	7.422
12/12/2007 12:49	2940	13.416	53.138	7.448
12/12/2007 12:50	3000	13.419	53.137	7.44
12/12/2007 12:51	3060	13.421	53.135	7.436
12/12/2007 12:52	3120	13.419	53.126	7.44
12/12/2007 12:53	3180	13.419	53.12	7.44
12/12/2007 12:54	3240	13.415	53.12	7.451
12/12/2007 12:55	3300	13.419	53.118	7.441
12/12/2007 12:56	3360	13.412	53.115	7.457
12/12/2007 12:57	3420	13.414	53.118	7.452
12/12/2007 12:58	3480	13.413	53.114	7.454
12/12/2007 12:59	3540	13.411	53.11	7.459
12/12/2007 13:00	3600	13.408	53.101	7.465
12/12/2007 13:01	3660	13.407	53.093	7.468
12/12/2007 13:02	3720	13.412	53.095	7.457
12/12/2007 13:03	3780	13.412	53.094	7.456
12/12/2007 13:04	3840	13.416	53.093	7.447
12/12/2007 13:05	3900	13.41	53.09	7.462
12/12/2007 13:06	3960	13.411	53.094	7.458
12/12/2007 13:07	4020	13.407	53.087	7.469
12/12/2007 13:08	4080	13.415	53.084	7.45
12/12/2007 13:09	4140	13.407	53.081	7.467
12/12/2007 13:10	4200	13.409	53.08	7.464
12/12/2007 13:11	4260	13.407	53.077	7.469
12/12/2007 13:12	4320	13.405	53.071	7.472
12/12/2007 13:13	4380	13.409	53.078	7.464
12/12/2007 13:14	4440	13.408	53.067	7.466
12/12/2007 13:15	4500	13.408	53.069	7.467
12/12/2007 13:16	4560	13.408	53.066	7.466
12/12/2007 13:17	4620	13.407	53.06	7.468
12/12/2007 13:18	4680	13.404	53.059	7.475
12/12/2007 13:19	4740	13.407	53.057	7.468
12/12/2007 13:20	4800	13.405	53.053	7.473
12/12/2007 13:21	4860	13.404	53.052	7.474
12/12/2007 13:22	4920	13.406	53.048	7.471
12/12/2007 13:23	4980	13.407	53.047	7.468
12/12/2007 13:24	5040	13.406	53.043	7.47
12/12/2007 13:25	5100	13.407	53.043	7.468
12/12/2007 13:26	5160	13.405	53.037	7.472
12/12/2007 13:27	5220	13.405	53.03	7.474
12/12/2007 13:28	5280	13.405	53.036	7.472
12/12/2007 13:29	5340	13.404	53.03	7.474
12/12/2007 13:30	5400	13.401	53.029	7.482
12/12/2007 13:31	5460	13.406	53.027	7.47

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12/12/2007 13:32	5520	13.404	53.026	7.475
12/12/2007 13:33	5580	13.405	53.022	7.473
12/12/2007 13:34	5640	13.403	53.015	7.476
12/12/2007 13:35	5700	13.405	53.008	7.472
12/12/2007 13:36	5760	13.405	53.009	7.472
12/12/2007 13:37	5820	13.406	53.003	7.47
12/12/2007 13:38	5880	13.407	53.004	7.467
12/12/2007 13:39	5940	13.403	53.012	7.478
12/12/2007 13:40	6000	13.405	53.007	7.472
12/12/2007 13:41	6060	13.398	52.997	7.489
12/12/2007 13:42	6120	13.399	52.996	7.486
12/12/2007 13:43	6180	13.401	52.994	7.482
12/12/2007 13:44	6240	13.403	52.992	7.478
12/12/2007 13:45	6300	13.4	52.993	7.484
12/12/2007 13:46	6360	13.404	52.991	7.475
12/12/2007 13:47	6420	13.405	52.991	7.472
12/12/2007 13:48	6480	13.403	52.983	7.478
12/12/2007 13:49	6540	13.407	52.985	7.469
12/12/2007 13:50	6600	13.4	52.981	7.484
12/12/2007 13:51	6660	13.401	52.977	7.481
12/12/2007 13:52	6720	13.398	52.974	7.489
12/12/2007 13:53	6780	13.399	52.974	7.486
12/12/2007 13:54	6840	13.399	52.977	7.486
12/12/2007 13:55	6900	13.397	52.969	7.491
12/12/2007 13:56	6960	13.398	52.969	7.489
12/12/2007 13:57	7020	13.405	52.963	7.472
12/12/2007 13:58	7080	13.401	52.965	7.483
12/12/2007 13:59	7140	13.393	52.96	7.5
12/12/2007 14:00	7200	13.396	52.961	7.492
12/12/2007 14:03	7380	13.401	52.954	7.481
12/12/2007 14:06	7560	13.398	52.952	7.489
12/12/2007 14:09	7740	13.401	52.945	7.481
12/12/2007 14:12	7920	13.396	52.934	7.493
12/12/2007 14:15	8100	13.394	52.924	7.497
12/12/2007 14:18	8280	13.397	52.928	7.492
12/12/2007 14:21	8460	13.399	52.924	7.487
12/12/2007 14:24	8640	13.398	52.918	7.488
12/12/2007 14:27	8820	13.393	52.908	7.501
12/12/2007 14:30	9000	13.396	52.906	7.494
12/12/2007 14:33	9180	13.397	52.902	7.491
12/12/2007 14:36	9360	13.384	52.901	7.521
12/12/2007 14:39	9540	13.376	52.896	7.539
12/12/2007 14:42	9720	13.377	52.893	7.537
12/12/2007 14:45	9900	13.371	52.886	7.551
12/12/2007 14:48	10080	13.372	52.89	7.549
12/12/2007 14:51	10260	13.375	52.891	7.541
12/12/2007 14:54	10440	13.373	52.88	7.546
12/12/2007 14:57	10620	13.37	52.881	7.554
12/12/2007 15:00	10800	13.365	52.878	7.566
12/12/2007 15:05	11100	13.371	52.87	7.551
12/12/2007 15:10	11400	13.364	52.86	7.568
12/12/2007 15:15	11700	13.367	52.857	7.561

12/12/2007 15:20	12000	13.366	52.852	7.563
12/12/2007 15:25	12300	13.362	52.848	7.573
12/12/2007 15:30	12600	13.366	52.837	7.563
12/12/2007 15:35	12900	13.362	52.824	7.572
12/12/2007 15:40	13200	13.368	52.828	7.558
12/12/2007 15:45	13500	13.365	52.813	7.566
12/12/2007 15:50	13800	13.364	52.811	7.567
12/12/2007 15:55	14100	13.356	52.817	7.586
12/12/2007 16:00	14400	13.358	52.813	7.581
12/12/2007 16:15	15300	13.36	52.802	7.577
12/12/2007 16:30	16200	13.356	52.791	7.585
12/12/2007 16:45	17100	13.358	52.778	7.581
12/12/2007 17:00	18000	13.354	52.765	7.59
12/12/2007 17:15	18900	13.353	52.753	7.592
12/12/2007 17:30	19800	13.352	52.74	7.596
12/12/2007 17:45	20700	13.351	52.73	7.597
12/12/2007 18:00	21600	13.349	52.716	7.602
12/12/2007 18:15	22500	13.351	52.7	7.596
12/12/2007 18:30	23400	13.348	52.686	7.605
12/12/2007 18:45	24300	13.345	52.669	7.611
12/12/2007 19:00	25200	13.343	52.655	7.616
12/12/2007 19:15	26100	13.338	52.64	7.627
12/12/2007 19:30	27000	13.336	52.629	7.633
12/12/2007 19:45	27900	13.34	52.621	7.622
12/12/2007 20:00	28800	13.336	52.614	7.632
12/12/2007 20:15	29700	13.305	52.597	7.703
12/12/2007 20:30	30600	13.29	52.594	7.739
12/12/2007 20:45	31500	13.287	52.576	7.745
12/12/2007 21:00	32400	13.287	52.572	7.745
12/12/2007 21:15	33300	13.288	52.558	7.743
12/12/2007 21:30	34200	13.292	52.549	7.733
12/12/2007 21:45	35100	13.288	52.55	7.743
12/12/2007 22:00	36000	13.284	52.537	7.753
12/12/2007 22:15	36900	13.278	52.533	7.765
12/12/2007 22:30	37800	13.4	52.521	7.484
12/12/2007 22:45	38700	13.598	52.49	7.026
12/12/2007 23:00	39600	13.618	52.537	6.98
12/12/2007 23:15	40500	13.63	52.643	6.953
12/12/2007 23:30	41400	13.414	52.672	7.453
12/12/2007 23:45	42300	13.314	52.49	7.682
12/13/2007 0:00	43200	13.295	52.489	7.727
12/13/2007 0:15	44100	13.293	52.479	7.731
12/13/2007 0:30	45000	13.289	52.47	7.74
12/13/2007 0:45	45900	13.583	52.456	7.062
12/13/2007 1:00	46800	13.617	52.504	6.982
12/13/2007 1:15	47700	13.379	52.483	7.533
12/13/2007 1:30	48600	13.331	52.442	7.643
12/13/2007 1:45	49500	13.314	52.436	7.684
12/13/2007 2:00	50400	13.311	52.428	7.69
12/13/2007 2:15	51300	13.298	52.424	7.719
12/13/2007 2:30	52200	13.307	52.412	7.7
12/13/2007 2:45	53100	13.298	52.404	7.72

12/13/2007 3:00	54000	13.386	52.37	7.517
12/13/2007 3:15	54900	13.325	52.373	7.658
12/13/2007 3:30	55800	13.321	52.365	7.667
12/13/2007 3:45	56700	13.316	52.359	7.677
12/13/2007 4:00	57600	13.313	52.354	7.686
12/13/2007 4:15	58500	13.313	52.346	7.685
12/13/2007 4:30	59400	13.314	52.335	7.682
12/13/2007 4:45	60300	13.316	52.331	7.677
12/13/2007 5:00	61200	13.309	52.323	7.695
12/13/2007 5:15	62100	13.313	52.304	7.684
12/13/2007 5:30	63000	13.314	52.301	7.683
12/13/2007 5:45	63900	13.305	52.295	7.702
12/13/2007 6:00	64800	13.312	52.285	7.688
12/13/2007 6:15	65700	13.304	52.283	7.705
12/13/2007 6:30	66600	13.311	52.275	7.691
12/13/2007 6:45	67500	13.309	52.267	7.694
12/13/2007 7:00	68400	13.301	52.259	7.713
12/13/2007 7:15	69300	13.307	52.251	7.698
12/13/2007 7:30	70200	13.302	52.24	7.711
12/13/2007 7:45	71100	13.301	52.237	7.712
12/13/2007 8:00	72000	13.294	52.228	7.728
12/13/2007 8:15	72900	13.293	52.217	7.731
12/13/2007 8:30	73800	13.301	52.218	7.714
12/13/2007 8:45	74700	13.304	52.205	7.707
12/13/2007 9:00	75600	13.298	52.2	7.719
12/13/2007 9:15	76500	13.294	52.195	7.728
12/13/2007 9:30	77400	13.294	52.193	7.728
12/13/2007 9:45	78300	13.294	52.193	7.729
12/13/2007 10:00	79200	13.297	52.173	7.723
12/13/2007 10:15	80100	13.293	52.173	7.732
12/13/2007 10:30	81000	13.297	52.165	7.723
12/13/2007 10:45	81900	13.287	52.155	7.745
12/13/2007 11:00	82800	13.291	52.152	7.735
12/13/2007 11:15	83700	13.289	52.147	7.74
12/13/2007 11:30	84600	13.292	52.144	7.733
12/13/2007 11:45	85500	13.299	52.136	7.718
12/13/2007 12:00	86400	13.293	52.123	7.732
12/13/2007 12:01	86460	13.297	52.129	7.723
12/13/2007 12:02	86520	13.293	52.127	7.732
12/13/2007 12:03	86580	13.293	52.126	7.731
12/13/2007 12:04	86640	13.295	52.132	7.728
12/13/2007 12:05	86700	13.325	52.128	7.657
12/13/2007 12:06	86760	13.399	52.126	7.487
12/13/2007 12:07	86820	13.445	52.136	7.38
12/13/2007 12:08	86880	13.47	52.128	7.322
12/13/2007 12:09	86940	13.492	52.126	7.272
12/13/2007 12:10	87000	13.504	52.127	7.244
12/13/2007 12:11	87060	13.517	52.122	7.214
12/13/2007 12:12	87120	13.531	52.116	7.182
12/13/2007 12:13	87180	13.531	52.107	7.181
12/13/2007 12:14	87240	13.541	52.108	7.159
12/13/2007 12:15	87300	13.549	52.111	7.139

12/13/2007 12:16	87360	13.555	52.114	7.127
12/13/2007 12:17	87420	13.557	52.119	7.122
12/13/2007 12:18	87480	13.562	52.119	7.11
12/13/2007 12:19	87540	13.567	52.123	7.099
12/13/2007 12:20	87600	13.568	52.123	7.097
12/13/2007 12:21	87660	13.564	52.124	7.106
12/13/2007 12:22	87720	13.571	52.12	7.088
12/13/2007 12:23	87780	13.573	52.127	7.086
12/13/2007 12:24	87840	13.574	52.127	7.083
12/13/2007 12:25	87900	13.581	52.124	7.067
12/13/2007 12:26	87960	13.578	52.127	7.074
12/13/2007 12:27	88020	13.58	52.131	7.068
12/13/2007 12:28	88080	13.583	52.14	7.061
12/13/2007 12:29	88140	13.583	52.136	7.062
12/13/2007 12:30	88200	13.583	52.142	7.061
12/13/2007 12:31	88260	13.583	52.147	7.061
12/13/2007 12:32	88320	13.582	52.144	7.063
12/13/2007 12:33	88380	13.589	52.146	7.047
12/13/2007 12:34	88440	13.59	52.147	7.045
12/13/2007 12:35	88500	13.589	52.142	7.047
12/13/2007 12:36	88560	13.592	52.148	7.04
12/13/2007 12:37	88620	13.59	52.151	7.045
12/13/2007 12:38	88680	13.594	52.149	7.035
12/13/2007 12:39	88740	13.593	52.156	7.039
12/13/2007 12:40	88800	13.595	52.168	7.033
12/13/2007 12:41	88860	13.599	52.167	7.024
12/13/2007 12:42	88920	13.593	52.17	7.039
12/13/2007 12:43	88980	13.596	52.17	7.032
12/13/2007 12:44	89040	13.602	52.175	7.017
12/13/2007 12:45	89100	13.604	52.178	7.014
12/13/2007 12:46	89160	13.601	52.187	7.02
12/13/2007 12:47	89220	13.597	52.19	7.028
12/13/2007 12:48	89280	13.601	52.192	7.02
12/13/2007 12:49	89340	13.604	52.199	7.014
12/13/2007 12:50	89400	13.607	52.209	7.007
12/13/2007 12:51	89460	13.601	52.216	7.019
12/13/2007 12:52	89520	13.602	52.226	7.017
12/13/2007 12:53	89580	13.599	52.23	7.025
12/13/2007 12:54	89640	13.6	52.237	7.022
12/13/2007 12:55	89700	13.599	52.245	7.024
12/13/2007 12:56	89760	13.601	52.249	7.021
12/13/2007 12:57	89820	13.602	52.249	7.018
12/13/2007 12:58	89880	13.597	52.259	7.03
12/13/2007 12:59	89940	13.602	52.251	7.018
12/13/2007 13:00	90000	13.605	52.256	7.01
12/13/2007 13:15	90900	13.614	52.308	6.991
12/13/2007 13:30	91800	13.623	52.388	6.968
12/13/2007 13:45	92700	13.626	52.521	6.963
12/13/2007 14:00	93600	13.625	52.65	6.964
12/13/2007 14:15	94500	13.625	52.761	6.964
12/13/2007 14:30	95400	13.627	52.88	6.96
12/13/2007 14:45	96300	13.632	52.935	6.949

12/13/2007 15:00	97200	13.634	52.991	6.945
12/13/2007 15:15	98100	13.639	53.037	6.933
12/13/2007 15:30	99000	13.638	53.083	6.934
12/13/2007 15:45	99900	13.64	53.117	6.931
12/13/2007 16:00	100800	13.643	53.137	6.924
12/13/2007 16:15	101700	13.646	53.165	6.916
12/13/2007 16:30	102600	13.64	53.196	6.93
12/13/2007 16:45	103500	13.648	53.206	6.911
12/13/2007 17:00	104400	13.652	53.214	6.903
12/13/2007 17:15	105300	13.644	53.229	6.92
12/13/2007 17:30	106200	13.644	53.262	6.92
12/13/2007 17:45	107100	13.654	53.264	6.898
12/13/2007 18:00	108000	13.648	53.282	6.912
12/13/2007 18:15	108900	13.647	53.303	6.914
12/13/2007 18:30	109800	13.651	53.297	6.905
12/13/2007 18:45	110700	13.655	53.314	6.896
12/13/2007 19:00	111600	13.649	53.312	6.909
12/13/2007 19:15	112500	13.652	53.327	6.903
12/13/2007 19:30	113400	13.659	53.334	6.886
12/13/2007 19:45	114300	13.654	53.35	6.897
12/13/2007 20:00	115200	13.656	53.359	6.893
12/13/2007 20:15	116100	13.661	53.369	6.882
12/13/2007 20:30	117000	13.658	53.375	6.889
12/13/2007 20:45	117900	13.659	53.389	6.886
12/13/2007 21:00	118800	13.662	53.401	6.88
12/13/2007 21:15	119700	13.661	53.387	6.882
12/13/2007 21:30	120600	13.66	53.395	6.885
12/13/2007 21:45	121500	13.662	53.407	6.878
12/13/2007 22:00	122400	13.658	53.408	6.888
12/13/2007 22:15	123300	13.659	53.423	6.887
12/13/2007 22:30	124200	13.665	53.413	6.873
12/13/2007 22:45	125100	13.662	53.425	6.88
12/13/2007 23:00	126000	13.663	53.432	6.877
12/13/2007 23:15	126900	13.658	53.428	6.89
12/13/2007 23:30	127800	13.661	53.445	6.881
12/13/2007 23:45	128700	13.664	53.445	6.875
12/14/2007 0:00	129600	13.659	53.46	6.887

Attachment 2—RIZZO Project 07-3891 File No. F-13, 13j

F-13 13J

Paul C. Rizzo Associates, Inc.
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By DKB Date 10/15/08 Subject Slug Test Analyses Sheet No. 1 of 3
Chkd. by AGF Date 10/27/08 Proj. No. 07-3891

DKB = Daniel Bansah
AGF = Anthony Fabina

Purpose:

To estimate hydraulic conductivity from field slug test results obtain from Bell Bend NPP, PA

Methodology:

Slug tests were performed at monitoring wells screened in both overburden and Manhantango shale aquifers. The method of analysis is described in the V&V report for Aquifer Test Pro 4.1. From the field slug test results, the water level recovery versus time data is plotted on a semi-log graph and a best fit line is fit to the data. The time lag number is taken from the straight line fit and utilized to estimate the hydraulic conductivity of the aquifer materials in the vicinity of the well.

Assumptions are described in the V&V report. These assumptions are specific to the Hvorslev method of analysis.

Inputs:

The water level and time data was input by pasting the data file from the field into the software. A table for each test is attached. At the beginning of the test, the slug is dropped into the well and the water level rises to a maximum level (t=0). As the test proceeds, the water level falls back to its steady-state level. A graph of the change in water level versus time is attached for each test. A normalized recovery graph is attached for each test. The user determines the time interval of the test for the software to fit a straight line to the data (see V&V report for more detailed discussion). Also, the well construction details (casing and screen radius, borehole radius, and screen length) are input for each test. A summary of the well construction details is attached.

Calculations:

The software calculates an estimate of hydraulic conductivity, K, based on the Hvorslev equation as described in the V&V report.

By DKB Date 10/24/08
Chkd. By AGF Date 10/27/08

Results:

A summary table of results is attached. Also, water level data plots, and results are attached for each test.

Conclusions:

Slug tests were successfully completed and estimates of hydraulic conductivity are consistent with observed field observations.

Reference:

Computer Program Verification and Validation Report for Aquifer Test Pro 4.1 – Slug Test by Lori J. Gross (2007).

By DKB Date 10/24/08
Chkd. By ADF Date 10/23/08

Appendix A:

Input, Plots, Results for each test.

Appendix B:

Printed version of electronic input data download from automatic pressure transducers.

By DKB Date 10/24/08
Chkd. By ASY Date 10/27/08

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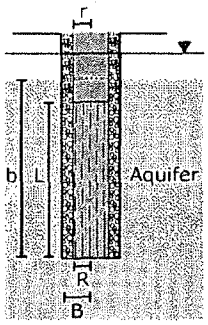
Wells **Sheet No.** 1 **of** 1

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA



	Name	X [ft]	Y [ft]	Elevation (amsl)	Benchmark [ft]	Penetration	L [ft]	B [ft]
1	MW303A					Fully	10	0.3333
2	MW304C					Fully	40	0.25
3	MW309B					Fully	20	0.25
4	MW305A1					Fully	20	0.3333
5	MW301A					Fully	15	0.3333
6	MW302A2					Fully	15	0.3333
7	MW302B					Fully	20	0.25
8	MW301B1					Fully	30	0.3333
9	MW302A1					Fully	15	0.3333
10	MW302A3					Fully	15	0.3333
11	MW302A4					Fully	15	0.3333
12	MW306A					Fully	15	0.3333
13	MW306C					Fully	50	0.25
14	MW308A					Fully	20	0.3333
15	MW308B					Fully	20	0.25
16	MW310B					Fully	20	0.25
17	MW307A					Fully	15	0.3333
18	MW307B					Fully	20	0.25
19	MW304A					Fully	20	0.3333
20	MW304B					Fully	20	0.25
21	MW309A					Fully	10	0.3333
22	MW310A					Fully	10	0.3333
23	MW305A2					Fully	20	0.25
24	MW303C					Fully	20	0.25
25	MW303B					Fully	20	0.25
26	MW305B					Fully	20	0.25

By DKB **Date** 10/24/08

Chkd. By ~~RSH~~ **Date** 10/27/08

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Slug Test - Water Level Data Sheet No. 1 of 7 Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW301A	Test Well: MW301A
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/1/2007	
Water level at t=0 [ft]: 1.26	Static water level [ft]: 6.97	Water level change at t=0 [ft]: 5.71

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	1.262	5.708
2	5	6.812	0.158
3	10	6.92	0.05
4	15	6.938	0.032
5	20	6.941	0.029
6	25	6.941	0.029
7	30	6.943	0.027
8	35	6.944	0.026
9	40	6.932	0.038
10	45	6.945	0.025
11	50	6.945	0.025
12	55	6.947	0.023
13	60	6.949	0.021
14	70	6.948	0.022
15	80	6.949	0.021
16	90	6.95	0.02
17	100	6.951	0.019
18	110	6.952	0.018
19	120	6.953	0.017
20	135	6.953	0.017
21	150	6.957	0.013
22	165	6.955	0.015
23	180	6.953	0.017
24	195	6.957	0.013
25	210	6.952	0.018
26	225	6.953	0.017
27	240	6.954	0.016
28	255	6.957	0.013
29	270	6.954	0.016
30	285	6.953	0.017
31	300	6.953	0.017
32	330	6.953	0.017
33	360	6.957	0.013
34	390	6.951	0.019
35	420	6.953	0.017
36	450	6.952	0.018
37	480	6.953	0.017
38	510	6.952	0.018
39	540	6.953	0.017
40	570	6.956	0.014
41	600	6.955	0.015
42	660	6.957	0.013
43	720	6.957	0.013
44	780	6.955	0.015
45	840	6.954	0.016
46	900	6.958	0.012

By DKB Date 10/24/08

Chkd. By AJF Date 10/27/08

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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960	6.957	0.013
48	1020	6.951	0.019
49	1080	6.955	0.015
50	1140	6.958	0.012
51	1200	6.953	0.017
52	1260	6.955	0.015
53	1320	6.956	0.014
54	1380	6.953	0.017
55	1440	6.954	0.016
56	1500	6.949	0.021
57	1560	6.954	0.016
58	1620	6.955	0.015
59	1680	6.955	0.015
60	1740	6.952	0.018
61	1800	6.957	0.013
62	1860	6.955	0.015
63	1920	6.953	0.017
64	1980	6.958	0.012
65	2040	6.955	0.015
66	2100	6.952	0.018
67	2160	6.955	0.015
68	2220	6.956	0.014
69	2280	6.959	0.011
70	2340	6.956	0.014
71	2400	6.955	0.015
72	2460	6.957	0.013
73	2520	6.954	0.016
74	2580	6.955	0.015
75	2640	6.955	0.015
76	2700	6.956	0.014
77	2760	6.955	0.015
78	2820	6.955	0.015
79	2880	6.957	0.013
80	2940	6.956	0.014
81	3000	6.954	0.016
82	3060	6.955	0.015
83	3120	6.955	0.015
84	3180	6.958	0.012
85	3240	6.958	0.012
86	3300	6.957	0.013
87	3360	6.96	0.01
88	3420	6.958	0.012
89	3480	6.962	0.008
90	3540	6.959	0.011
91	3600	6.957	0.013
92	3660	6.957	0.013
93	3720	6.959	0.011
94	3780	6.958	0.012
95	3840	6.959	0.011
96	3900	6.961	0.009
97	3960	6.96	0.01

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020	6.958	0.012
99	4080	6.956	0.014
100	4140	6.956	0.014
101	4200	6.954	0.016
102	4260	6.961	0.009
103	4320	6.958	0.012
104	4380	6.956	0.014
105	4440	6.959	0.011
106	4500	6.958	0.012
107	4560	6.957	0.013
108	4620	6.96	0.01
109	4680	6.96	0.01
110	4740	6.958	0.012
111	4800	6.959	0.011
112	4860	6.96	0.01
113	4920	6.958	0.012
114	4980	6.961	0.009
115	5040	6.96	0.01
116	5100	6.959	0.011
117	5160	6.961	0.009
118	5220	6.959	0.011
119	5280	6.959	0.011
120	5340	6.959	0.011
121	5400	6.961	0.009
122	5460	6.958	0.012
123	5520	6.958	0.012
124	5580	6.96	0.01
125	5640	6.962	0.008
126	5700	6.96	0.01
127	5760	6.959	0.011
128	5820	6.961	0.009
129	5880	6.964	0.006
130	5940	6.961	0.009
131	6000	6.961	0.009
132	6060	6.963	0.007
133	6120	6.961	0.009
134	6180	6.959	0.011
135	6240	6.96	0.01
136	6300	6.962	0.008
137	6360	6.959	0.011
138	6420	6.962	0.008
139	6480	6.963	0.007
140	6540	6.964	0.006
141	6600	6.962	0.008
142	6660	6.962	0.008
143	6720	6.962	0.008
144	6780	6.96	0.01
145	6840	6.959	0.011
146	6900	6.959	0.011
147	6960	6.964	0.006
148	7020	6.964	0.006

By DKB Date 10/24/08

Chkd. By ASB Date 10/27/08

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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080	6.959	0.011
150	7140	6.962	0.008

By DKB Date 10/24/08

Chkd. By GJT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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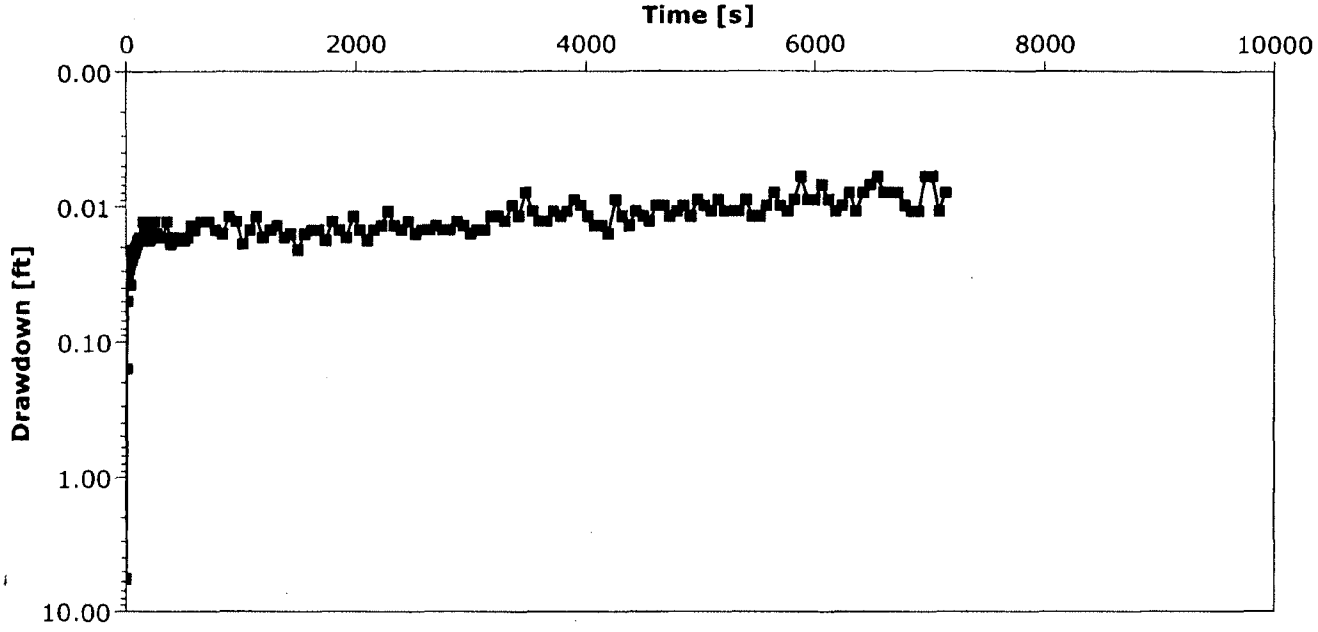
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW301A	Test Well: MW301A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Change in WL Versus Time	Analysis date: 2/6/2008
Aquifer Thickness: 23.50 ft		



By DKB Date 10/24/08
Chkd. By AST Date 10/27/08

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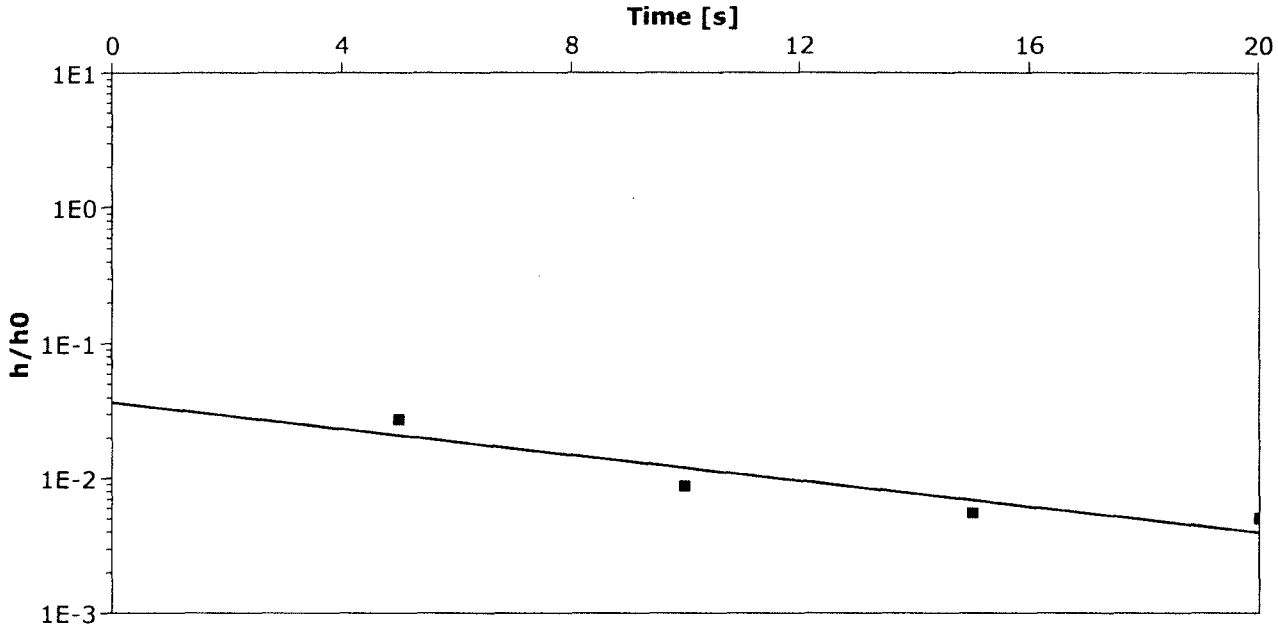
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW301A	Test Well: MW301A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/6/2008
Aquifer Thickness: 23.50 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW301A	3.39×10^{1}	

By DKB Date 10/24/08
Chkd. By AST Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW301A	Test Well: MW301A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Aquifer Thickness: 23.50 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/6/2008	Hvorslev	MW301A		3.39×10^{1}	

By DKB Date 10/24/08

Chkd. By RST Date 10/27/08

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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW301B1	Test Well: MW301B1
Test conducted by: Daniel Bansah	Test date: 12/1/2007	
Water level at t=0 [ft]: 1.11	Static water level [ft]: 4.77	Water level change at t=0 [ft]: 3.66

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	1.113	3.657
2	5	3.476	1.294
3	10	3.567	1.203
4	15.001	3.606	1.164
5	20	3.648	1.122
6	25.001	3.673	1.097
7	30.001	3.696	1.074
8	35	3.723	1.047
9	40	3.747	1.023
10	45	3.763	1.007
11	50	3.797	0.973
12	55.001	3.821	0.949
13	60	3.839	0.931
14	70	3.876	0.894
15	80.001	3.91	0.86
16	90.001	3.939	0.831
17	100.001	3.969	0.801
18	110	3.992	0.778
19	120	4.015	0.755
20	135.001	4.05	0.72
21	150.001	4.079	0.691
22	165.001	4.109	0.661
23	180.001	4.137	0.633
24	195.001	4.16	0.61
25	210.001	4.186	0.584
26	225.001	4.209	0.561
27	240.001	4.227	0.543
28	255.001	4.25	0.52
29	270.001	4.269	0.501
30	285.001	4.288	0.482
31	300.001	4.304	0.466
32	330.001	4.341	0.429
33	360.001	4.367	0.403
34	390.001	4.398	0.372
35	420.001	4.424	0.346
36	450.001	4.447	0.323
37	480.001	4.469	0.301
38	510.001	4.491	0.279
39	540.001	4.505	0.265
40	570.001	4.526	0.244
41	600.001	4.543	0.227
42	660.001	4.573	0.197
43	720.001	4.599	0.171
44	780.001	4.621	0.149
45	840.001	4.64	0.13
46	900.001	4.656	0.114

By DKB Date 10/24/08

Chkd. By ASF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	4.668	0.102
48	1020.001	4.683	0.087
49	1080.001	4.694	0.076
50	1140.001	4.703	0.067
51	1200.001	4.714	0.056
52	1260.001	4.724	0.046
53	1320.001	4.734	0.036
54	1380.001	4.737	0.033
55	1440.001	4.744	0.026
56	1500.001	4.748	0.022
57	1560.001	4.752	0.018
58	1620.001	4.752	0.018
59	1680.001	4.759	0.011
60	1740.001	4.76	0.01
61	1800.001	4.764	0.006
62	1860.001	4.763	0.007
63	1920.001	4.77	0.00
64	1980.001	4.771	0.001
65	2040.001	4.769	0.001
66	2100.001	4.774	0.004
67	2160.001	4.772	0.002
68	2220.001	4.781	0.011
69	2280.001	4.775	0.005
70	2340.001	4.778	0.008
71	2400.001	4.778	0.008
72	2460.001	4.781	0.011
73	2520.001	4.783	0.013
74	2580.001	4.783	0.013
75	2640.001	4.784	0.014
76	2700.001	4.79	0.02
77	2760.001	4.785	0.015
78	2820.001	4.783	0.013
79	2880.001	4.782	0.012
80	2940.001	4.788	0.018
81	3000.001	4.786	0.016
82	3060.001	4.782	0.012
83	3120.001	4.785	0.015
84	3180.001	4.787	0.017
85	3240.001	4.786	0.016
86	3300.001	4.784	0.014
87	3360.001	4.787	0.017
88	3420.001	4.784	0.014
89	3480.001	4.787	0.017
90	3540.001	4.785	0.015
91	3600.001	4.789	0.019
92	3660.001	4.786	0.016
93	3720.001	4.788	0.018
94	3780.001	4.789	0.019
95	3840.001	4.788	0.018
96	3900.001	4.791	0.021
97	3960.001	4.787	0.017

By DKB Date 10/24/08

Chkd. By ASF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	4.792	0.022
99	4080.001	4.788	0.018
100	4140.001	4.789	0.019
101	4200.001	4.788	0.018
102	4260.001	4.79	0.02
103	4320.001	4.788	0.018
104	4380.001	4.788	0.018
105	4440.001	4.792	0.022
106	4500.001	4.79	0.02
107	4560.001	4.792	0.022
108	4620.001	4.791	0.021
109	4680.001	4.793	0.023
110	4740.001	4.792	0.022
111	4800.001	4.789	0.019
112	4860.001	4.793	0.023
113	4920.001	4.79	0.02
114	4980.001	4.793	0.023
115	5040.001	4.792	0.022
116	5100.001	4.792	0.022
117	5160.001	4.792	0.022
118	5220.001	4.796	0.026
119	5280.001	4.794	0.024
120	5340.001	4.794	0.024
121	5400.001	4.792	0.022
122	5460.001	4.793	0.023
123	5520.001	4.796	0.026
124	5580.001	4.795	0.025
125	5640.001	4.795	0.025
126	5700.001	4.796	0.026
127	5760.001	4.794	0.024
128	5820.001	4.793	0.023
129	5880.001	4.794	0.024
130	5940.001	4.792	0.022
131	6000.001	4.795	0.025
132	6060.001	4.795	0.025
133	6120.001	4.80	0.03
134	6180.001	4.798	0.028
135	6240.001	4.799	0.029
136	6300.001	4.795	0.025
137	6360.001	4.795	0.025
138	6420.001	4.792	0.022
139	6480.001	4.793	0.023
140	6540.001	4.794	0.024
141	6600.001	4.796	0.026
142	6660.001	4.801	0.031
143	6720.001	4.795	0.025
144	6780.001	4.797	0.027
145	6840.001	4.797	0.027
146	6900.001	4.797	0.027
147	6960.001	4.795	0.025
148	7020.001	4.798	0.028

By DKB Date 10/24/08

Chkd. By AJT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	4.799	0.029
150	7140.001	4.796	0.026

By DKB Date 10/24/08

Chkd. By ASJ Date 10/27/08

Paul C. Rizzo Associates, Inc.
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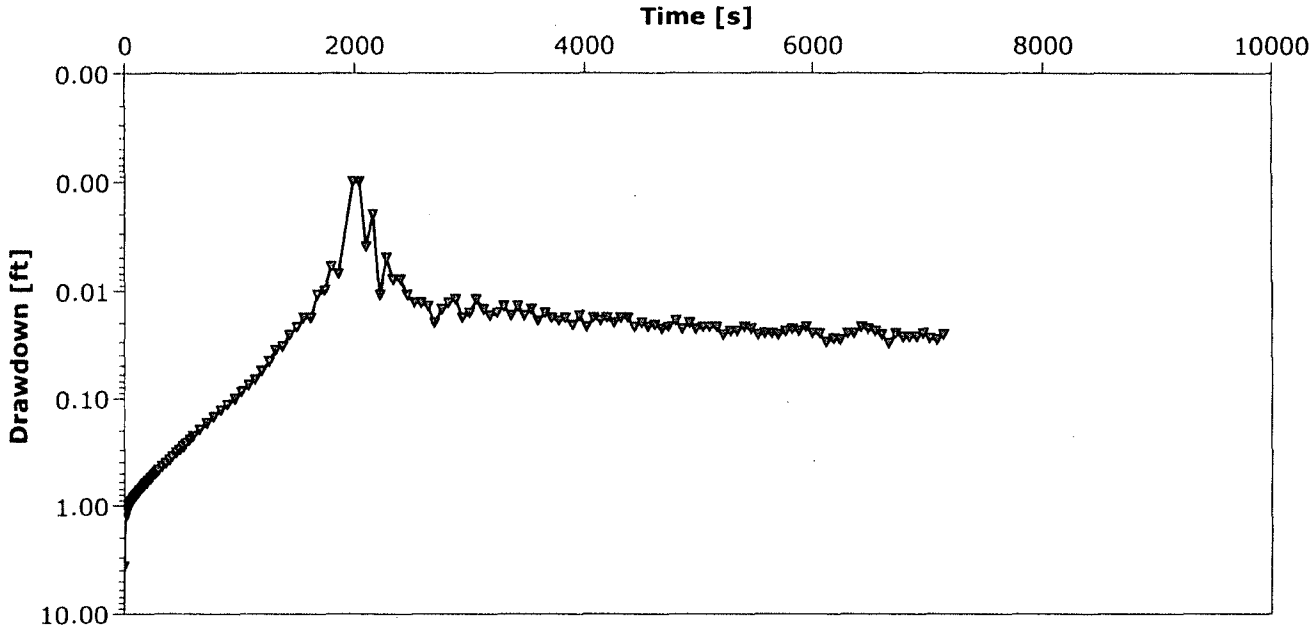
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW301B1	Test Well: MW301B1
Test conducted by: Daniel Bansah		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 55.00 ft		



By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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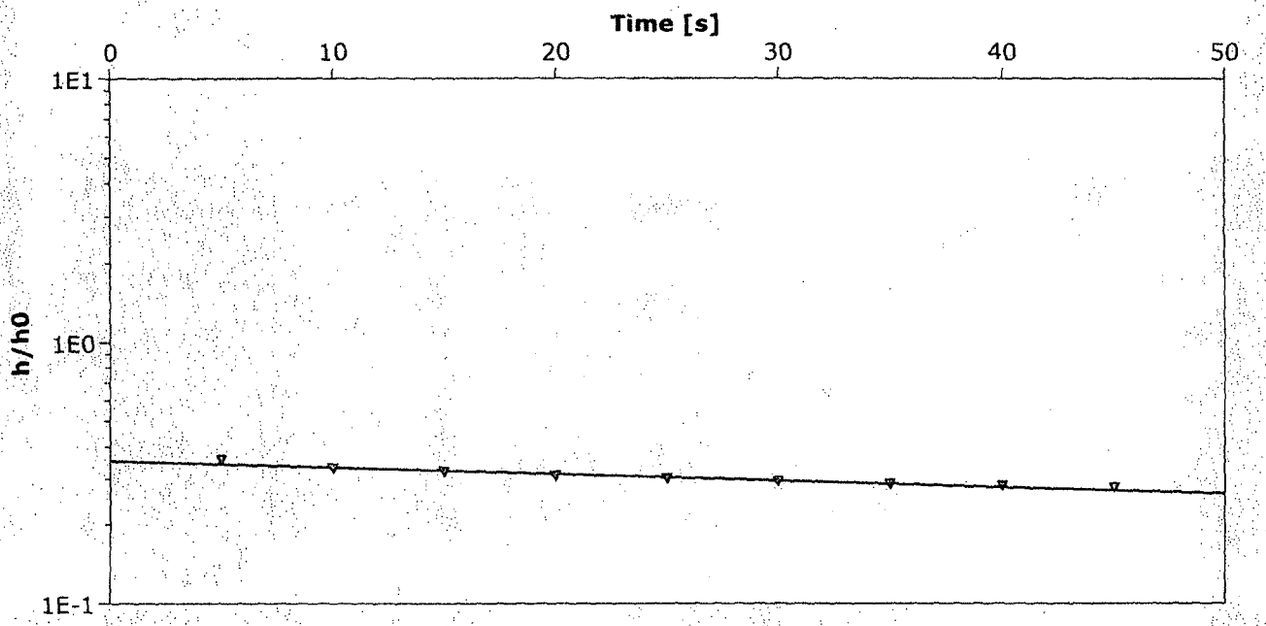
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW301B1	Test Well: MW301B1
Test conducted by: Daniel Bansah		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 55.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW301B1	1.05×10^{0}	

By DKB Date 10/24/08
Chkd. By DJT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW301B1	Test Well: MW301B1
Test conducted by: Daniel Bansah		Test date: 12/1/2007
Aquifer Thickness: 55.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW301B1		1.05×10^0	

By DKB Date 10/24/08

Chkd. By [illegible] Date 12/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: Slug Test MW302A1	Test Well: MW302A1
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 11/30/2007	
Water level at t=0 [ft]: 5.27	Static water level [ft]: 6.61	Water level change at t=0 [ft]: 1.34

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	5.273	1.337
2	5.001	6.507	0.103
3	10.001	6.579	0.031
4	15.001	6.593	0.017
5	20.001	6.596	0.014
6	25.001	6.601	0.009
7	30.001	6.601	0.009
8	35.001	6.593	0.017
9	40.001	6.605	0.005
10	45.001	6.598	0.012
11	50.001	6.604	0.006
12	55.001	6.602	0.008
13	60.001	6.60	0.01
14	70.001	6.598	0.012
15	80.001	6.602	0.008
16	90.001	6.602	0.008
17	100.001	6.603	0.007
18	110.001	6.602	0.008
19	120.001	6.603	0.007
20	135.001	6.604	0.006
21	150.001	6.601	0.009
22	165.001	6.602	0.008
23	180.001	6.604	0.006
24	195.001	6.603	0.007
25	210.001	6.603	0.007
26	225.001	6.602	0.008
27	240.001	6.603	0.007
28	255.001	6.603	0.007
29	270.001	6.603	0.007
30	285.001	6.611	0.001
31	300.001	6.605	0.005
32	330.001	6.603	0.007
33	360.001	6.602	0.008
34	390.001	6.602	0.008
35	420.001	6.604	0.006
36	450.001	6.604	0.006
37	480.001	6.601	0.009
38	510.001	6.60	0.01
39	540.001	6.606	0.004
40	570.001	6.603	0.007
41	600.001	6.603	0.007
42	660.001	6.604	0.006
43	720.001	6.606	0.004
44	780.001	6.602	0.008
45	840.001	6.601	0.009
46	900.001	6.604	0.006

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	6.601	0.009
48	1020.001	6.602	0.008
49	1080.001	6.603	0.007
50	1140.001	6.602	0.008
51	1200.001	6.601	0.009
52	1260.001	6.599	0.011
53	1320.001	6.60	0.01
54	1380.001	6.60	0.01
55	1440.001	6.60	0.01
56	1500.001	6.60	0.01
57	1560.001	6.604	0.006
58	1620.001	6.599	0.011
59	1680.001	6.598	0.012
60	1740.001	6.60	0.01
61	1800.001	6.598	0.012
62	1860.001	6.598	0.012
63	1920.001	6.602	0.008
64	1980.001	6.599	0.011
65	2040.001	6.599	0.011
66	2100.001	6.598	0.012
67	2160.001	6.598	0.012
68	2220.001	6.601	0.009
69	2280.001	6.60	0.01
70	2340.001	6.601	0.009
71	2400.001	6.601	0.009
72	2460.001	6.604	0.006
73	2520.001	6.599	0.011
74	2580.001	6.602	0.008
75	2640.001	6.598	0.012
76	2700.001	6.601	0.009
77	2760.001	6.597	0.013
78	2820.001	6.596	0.014
79	2880.001	6.598	0.012
80	2940.001	6.599	0.011
81	3000.001	6.599	0.011
82	3060.001	6.598	0.012
83	3120.001	6.596	0.014
84	3180.001	6.595	0.015
85	3240.001	6.598	0.012
86	3300.001	6.596	0.014
87	3360.001	6.599	0.011
88	3420.001	6.599	0.011
89	3480.001	6.601	0.009
90	3540.001	6.599	0.011
91	3600.001	6.597	0.013
92	3660.001	6.60	0.01
93	3720.001	6.597	0.013
94	3780.001	6.60	0.01
95	3840.001	6.599	0.011
96	3900.001	6.602	0.008
97	3960.001	6.597	0.013

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	6.598	0.012
99	4080.001	6.597	0.013
100	4140.001	6.602	0.008
101	4200.001	6.597	0.013
102	4260.001	6.60	0.01
103	4320.001	6.596	0.014
104	4380.001	6.593	0.017
105	4440.001	6.594	0.016
106	4500.001	6.594	0.016
107	4560.001	6.598	0.012
108	4620.001	6.599	0.011
109	4680.001	6.595	0.015
110	4740.001	6.594	0.016
111	4800.001	6.595	0.015
112	4860.001	6.596	0.014
113	4920.001	6.595	0.015
114	4980.001	6.594	0.016
115	5040.001	6.595	0.015
116	5100.001	6.591	0.019
117	5160.001	6.596	0.014
118	5220.001	6.597	0.013
119	5280.001	6.598	0.012
120	5340.001	6.596	0.014
121	5400.001	6.594	0.016
122	5460.001	6.598	0.012
123	5520.001	6.594	0.016
124	5580.001	6.595	0.015
125	5640.001	6.597	0.013
126	5700.001	6.596	0.014
127	5760.001	6.595	0.015
128	5820.001	6.593	0.017
129	5880.001	6.593	0.017
130	5940.001	6.593	0.017
131	6000.001	6.594	0.016
132	6060.001	6.594	0.016
133	6120.001	6.595	0.015
134	6180.001	6.598	0.012
135	6240.001	6.595	0.015
136	6300.001	6.594	0.016
137	6360.001	6.593	0.017
138	6420.001	6.592	0.018
139	6480.001	6.595	0.015
140	6540.001	6.591	0.019
141	6600.001	6.591	0.019
142	6660.001	6.594	0.016
143	6720.001	6.589	0.021
144	6780.001	6.595	0.015
145	6840.001	6.588	0.022
146	6900.001	6.589	0.021
147	6960.001	6.594	0.016
148	7020.001	6.595	0.015

By DKR Date 10/24/08

Chkd. By GST Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	6.591	0.019
150	7140.001	6.594	0.016
151	7200.001	6.593	0.017

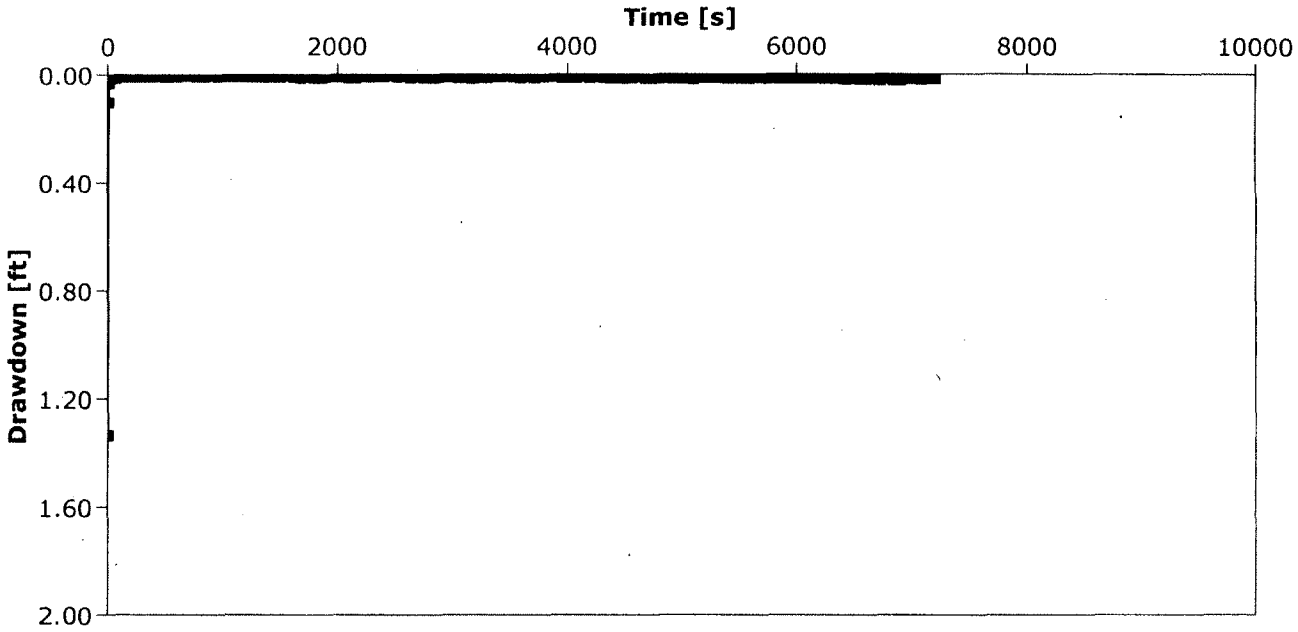
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: Slug Test MW302A1	Test Well: MW302A1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 18.00 ft		

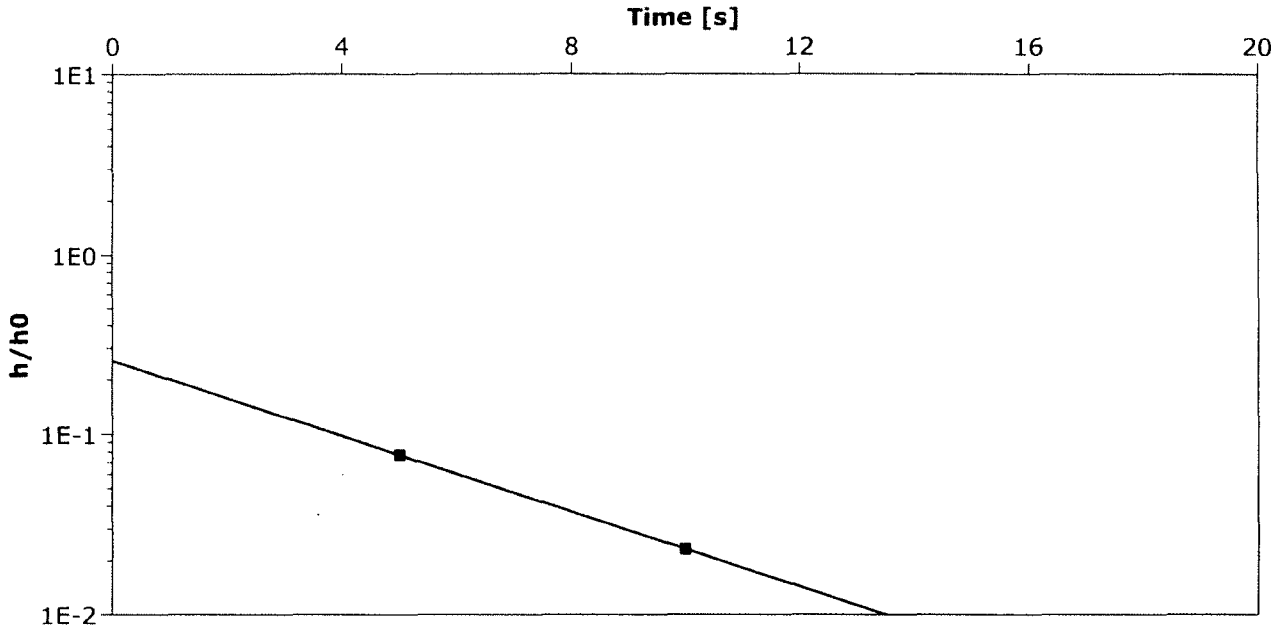


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: Slug Test MW302A1	Test Well: MW302A1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 18.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW302A1	7.36×10^{1}	

By DKB Date 10/24/08
Chkd. By AJF Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: Slug Test MW302A1	Test Well: MW302A1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Aquifer Thickness: 18.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW302A1		7.36×10^{1}	

By DKB Date 10/24/08

Chkd. By AJF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 2

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW302A2	Test Well: MW302A2
Test conducted by: Daniel Bansah/Anthony Fabina Test date: 12/1/2007		
Water level at t=0 [ft]: 4.41	Static water level [ft]: 6.60	Water level change at t=0 [ft]: 2.19

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	4.407	2.193
2	5.001	6.362	0.238
3	10.001	6.506	0.094
4	15.001	6.536	0.064
5	20.001	6.541	0.059
6	25.001	6.539	0.061
7	30.001	6.536	0.064
8	35.001	6.537	0.063
9	40.001	6.537	0.063
10	45.001	6.535	0.065
11	50.001	6.536	0.064
12	55.001	6.538	0.062
13	60.001	6.537	0.063
14	70.001	6.539	0.061
15	80.001	6.541	0.059
16	90.001	6.539	0.061
17	100.001	6.541	0.059
18	110.001	6.541	0.059
19	120.001	6.542	0.058
20	135.001	6.539	0.061
21	150.001	6.545	0.055
22	165.001	6.54	0.06
23	180.001	6.539	0.061
24	195.001	6.539	0.061
25	210.001	6.538	0.062
26	225.001	6.542	0.058
27	240.001	6.54	0.06
28	255.001	6.539	0.061
29	270.001	6.54	0.06
30	285.001	6.538	0.062
31	300.001	6.544	0.056
32	330.001	6.541	0.059
33	360.001	6.542	0.058
34	390.001	6.538	0.062
35	420.001	6.536	0.064
36	450.001	6.541	0.059
37	480.001	6.539	0.061
38	510.001	6.542	0.058
39	540.001	6.54	0.06
40	570.001	6.544	0.056
41	600.001	6.541	0.059
42	660.001	6.542	0.058
43	720.001	6.538	0.062
44	780.001	6.539	0.061
45	840.001	6.54	0.06
46	900.001	6.543	0.057

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 2

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	6.54	0.06
48	1020.001	6.537	0.063
49	1080.001	6.537	0.063
50	1140.001	6.54	0.06
51	1200.001	6.54	0.06
52	1260.001	6.54	0.06
53	1320.001	6.541	0.059
54	1380.001	6.538	0.062
55	1440.001	6.54	0.06
56	1500.001	6.542	0.058
57	1560.001	6.54	0.06
58	1620.001	6.538	0.062
59	1680.001	6.541	0.059
60	1740.001	6.542	0.058
61	1800.001	6.54	0.06
62	1860.001	6.538	0.062
63	1920.001	6.54	0.06
64	1980.001	6.543	0.057
65	2040.001	6.54	0.06
66	2100.001	6.545	0.055
67	2160.001	6.545	0.055
68	2220.001	6.546	0.054
69	2280.001	6.535	0.065
70	2340.001	6.536	0.064
71	2400.001	6.54	0.06
72	2460.001	6.535	0.065
73	2520.001	6.54	0.06
74	2580.001	6.541	0.059
75	2640.001	6.54	0.06
76	2700.001	6.539	0.061
77	2760.001	6.534	0.066
78	2820.001	6.537	0.063
79	2880.001	6.535	0.065
80	2940.001	6.532	0.068
81	3000.001	6.533	0.067
82	3060.001	6.532	0.068
83	3120.001	6.533	0.067
84	3180.001	6.538	0.062
85	3240.001	6.539	0.061
86	3300.001	6.546	0.054
87	3360.001	6.537	0.063
88	3420.001	6.537	0.063
89	3480.001	6.539	0.061
90	3540.001	6.538	0.062
91	3600.001	6.541	0.059

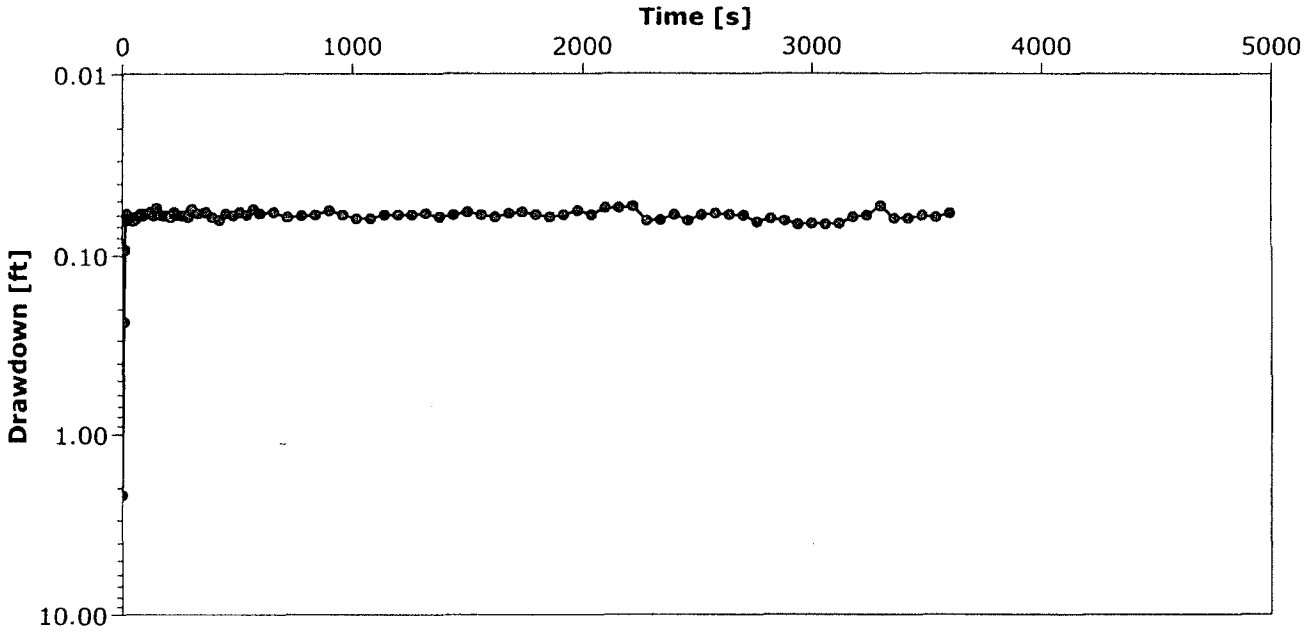
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW302A2	Test Well: MW302A2
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Change in WL Versus Time	Analysis date: 2/6/2008
Aquifer Thickness: 24.00 ft		



By DKB Date 10/24/08
Chkd By ASF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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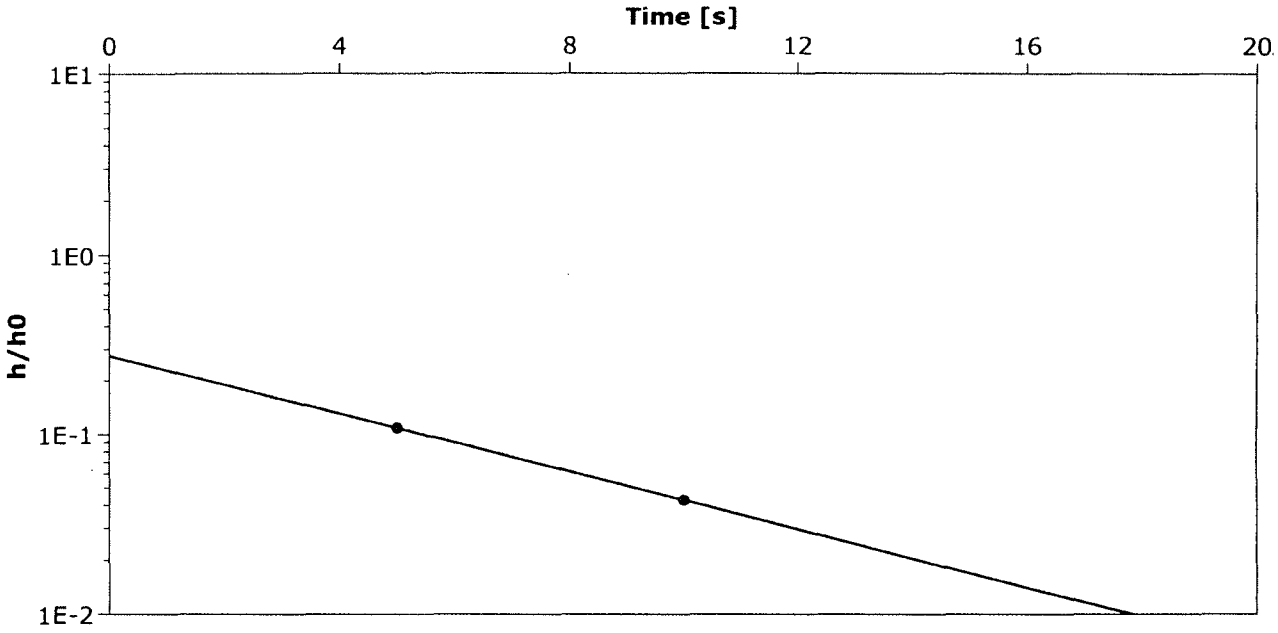
Slug Test Analysis Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW302A2	Test Well: MW302A2
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/6/2008
Aquifer Thickness: 24.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW302A2	5.69×10^{1}	

By DKB Date 10/24/08

Chkd. By AJ Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW302A2	Test Well: MW302A2
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Aquifer Thickness: 24.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/6/2008	Hvorslev	MW302A2		5.69×10^{1}	

By DKB Date 10/24/08

AS Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 3

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: Slug Test MW302A3	Test Well: MW302A3
Test conducted by: Daniel Bansah/Anthony Fabina Test date: 11/30/2007		
Water level at t=0 [ft]: 5.58	Static water level [ft]: 6.88	Water level change at t=0 [ft]: 1.30

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	5.575	1.305
2	5.001	6.72	0.16
3	10.001	6.831	0.049
4	15.001	6.859	0.021
5	20.001	6.858	0.022
6	25.001	6.863	0.017
7	30.001	6.856	0.024
8	35.001	6.857	0.023
9	40.001	6.861	0.019
10	45.001	6.856	0.024
11	45.845	6.859	0.021
12	50.846	6.858	0.022
13	55.846	6.861	0.019
14	60.846	6.856	0.024
15	65.846	6.861	0.019
16	70.846	6.865	0.015
17	75.846	6.859	0.021
18	80.846	6.862	0.018
19	85.846	6.865	0.015
20	90.846	6.865	0.015
21	95.846	6.862	0.018
22	100.846	6.863	0.017
23	105.846	6.859	0.021
24	115.846	6.863	0.017
25	125.846	6.86	0.02
26	135.846	6.864	0.016
27	145.846	6.859	0.021
28	155.846	6.858	0.022
29	165.846	6.86	0.02
30	180.846	6.878	0.002
31	195.846	6.862	0.018
32	210.846	6.862	0.018
33	225.846	6.86	0.02
34	240.846	6.863	0.017
35	255.846	6.863	0.017
36	270.846	6.864	0.016
37	285.846	6.863	0.017
38	300.846	6.864	0.016
39	315.846	6.867	0.013
40	330.846	6.865	0.015
41	345.846	6.863	0.017
42	375.846	6.867	0.013
43	405.846	6.86	0.02
44	435.846	6.861	0.019
45	465.846	6.859	0.021
46	495.846	6.865	0.015

By NKB Date 10/24/08

Chkd. By ASF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 3

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	525.846	6.862	0.018
48	555.846	6.864	0.016
49	585.846	6.865	0.015
50	615.846	6.869	0.011
51	645.846	6.862	0.018
52	705.846	6.864	0.016
53	765.846	6.863	0.017
54	825.846	6.863	0.017
55	885.846	6.862	0.018
56	945.846	6.863	0.017
57	1005.846	6.867	0.013
58	1065.846	6.862	0.018
59	1125.846	6.862	0.018
60	1185.846	6.862	0.018
61	1245.846	6.862	0.018
62	1305.846	6.863	0.017
63	1365.846	6.864	0.016
64	1425.846	6.863	0.017
65	1485.846	6.863	0.017
66	1545.846	6.86	0.02
67	1605.846	6.864	0.016
68	1665.846	6.862	0.018
69	1725.846	6.863	0.017
70	1785.846	6.86	0.02
71	1845.846	6.862	0.018
72	1905.846	6.862	0.018
73	1965.846	6.858	0.022
74	2025.846	6.862	0.018
75	2085.846	6.862	0.018
76	2145.846	6.861	0.019
77	2205.846	6.857	0.023
78	2265.846	6.858	0.022
79	2325.846	6.86	0.02
80	2385.846	6.859	0.021
81	2445.846	6.858	0.022
82	2505.846	6.856	0.024
83	2565.846	6.857	0.023
84	2625.846	6.861	0.019
85	2685.846	6.856	0.024
86	2745.846	6.855	0.025
87	2805.846	6.859	0.021
88	2865.846	6.861	0.019
89	2925.846	6.858	0.022
90	2985.846	6.861	0.019
91	3045.846	6.86	0.02
92	3105.846	6.861	0.019
93	3165.846	6.862	0.018
94	3225.846	6.859	0.021
95	3285.846	6.861	0.019
96	3345.846	6.859	0.021
97	3405.846	6.858	0.022

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 3

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	3465.846	6.859	0.021
99	3525.846	6.858	0.022

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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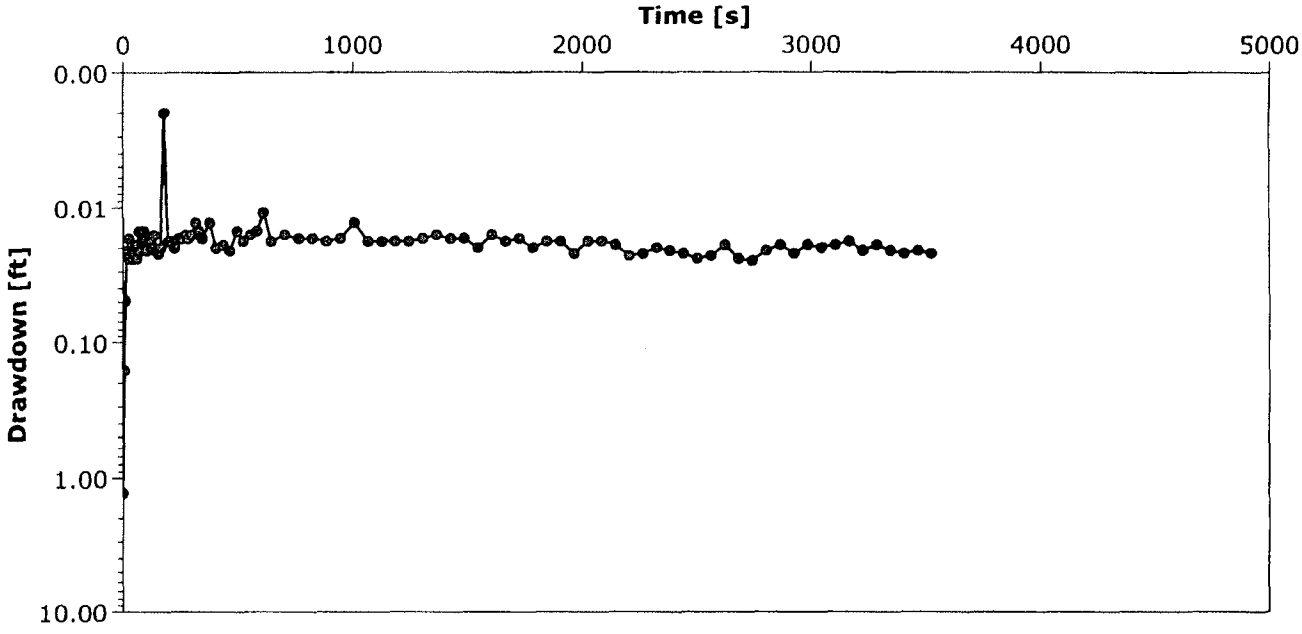
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: Slug Test MW302A3	Test Well: MW302A3
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 24.70 ft		



By DKB Date 10/24/08
Chkd. By RDT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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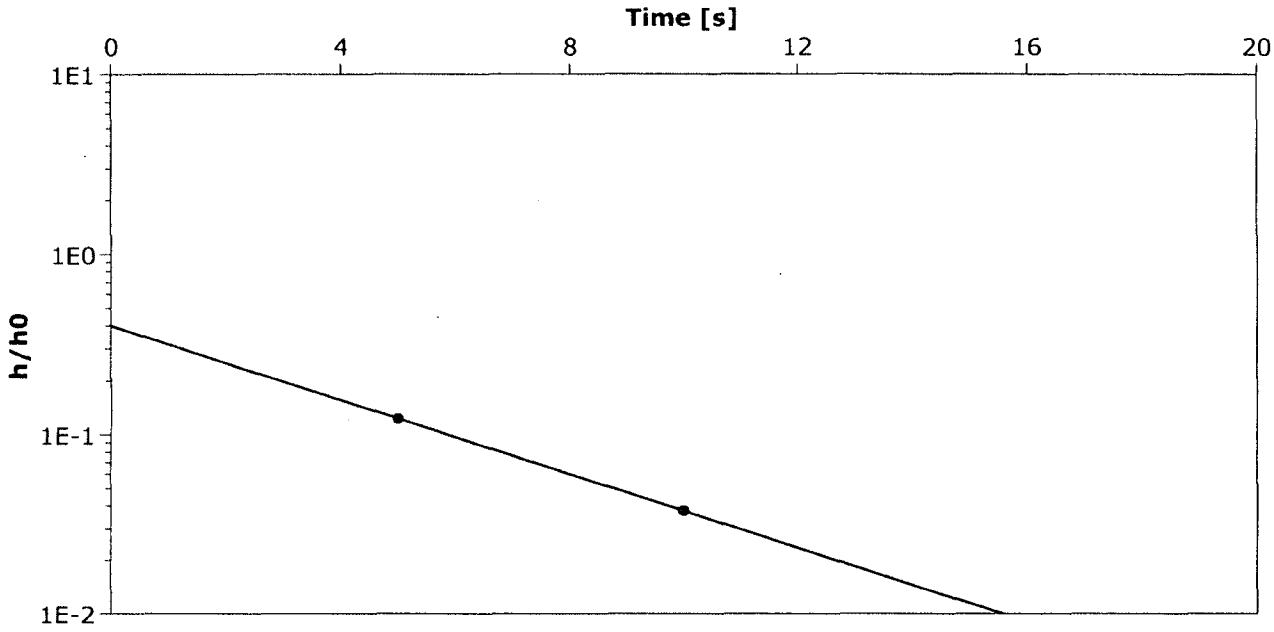
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: Slug Test MW302A3	Test Well: MW302A3
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 24.70 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW302A3	7.25×10^{1}	

By DKB Date 10/24/08
Chkd. By AJF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: Slug Test MW302A3	Test Well: MW302A3
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Aquifer Thickness: 24.70 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW302A3		7.25×10^{1}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

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Slug Test - Water Level Data Page 1 of 2

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: Slug Test MW302A4	Test Well: MW302A4
Test conducted by: Daniel Bansah/Anthony Fabina Test date: 11/30/2007		
Water level at t=0 [ft]: 6.08	Static water level [ft]: 6.87	Water level change at t=0 [ft]: 0.79

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	6.084	0.786
2	5.001	6.615	0.255
3	10.001	6.80	0.07
4	15.001	6.864	0.006
5	20.001	6.861	0.009
6	25.001	6.848	0.022
7	30.001	6.845	0.025
8	35.001	6.841	0.029
9	40.001	6.847	0.023
10	45.001	6.849	0.021
11	50.001	6.845	0.025
12	55.001	6.849	0.021
13	60.001	6.85	0.02
14	70.001	6.848	0.022
15	80.001	6.85	0.02
16	90.001	6.846	0.024
17	100.001	6.85	0.02
18	110.001	6.848	0.022
19	120.001	6.859	0.011
20	135.001	6.849	0.021
21	150.001	6.849	0.021
22	165.001	6.847	0.023
23	180.001	6.845	0.025
24	195.001	6.847	0.023
25	210.001	6.85	0.02
26	225.001	6.851	0.019
27	240.001	6.848	0.022
28	255.001	6.849	0.021
29	270.001	6.849	0.021
30	285.001	6.85	0.02
31	300.001	6.849	0.021
32	330.001	6.85	0.02
33	360.001	6.852	0.018
34	390.001	6.853	0.017
35	420.001	6.852	0.018
36	450.001	6.849	0.021
37	480.001	6.851	0.019
38	510.001	6.85	0.02
39	540.001	6.85	0.02
40	570.001	6.852	0.018
41	600.001	6.85	0.02
42	660.001	6.849	0.021
43	720.001	6.851	0.019
44	780.001	6.849	0.021
45	840.001	6.848	0.022
46	900.001	6.849	0.021

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 2

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	6.849	0.021
48	1020.001	6.852	0.018
49	1080.001	6.851	0.019
50	1140.001	6.849	0.021
51	1200.001	6.851	0.019
52	1260.001	6.85	0.02
53	1320.001	6.855	0.015
54	1380.001	6.851	0.019
55	1440.001	6.854	0.016
56	1500.001	6.852	0.018
57	1560.001	6.847	0.023
58	1620.001	6.85	0.02
59	1680.001	6.855	0.015
60	1740.001	6.851	0.019
61	1800.001	6.852	0.018
62	1860.001	6.849	0.021
63	1920.001	6.854	0.016
64	1980.001	6.85	0.02
65	2040.001	6.855	0.015
66	2100.001	6.848	0.022
67	2160.001	6.85	0.02
68	2220.001	6.85	0.02
69	2280.001	6.849	0.021
70	2340.001	6.851	0.019
71	2400.001	6.85	0.02
72	2460.001	6.849	0.021
73	2520.001	6.848	0.022
74	2580.001	6.85	0.02
75	2640.001	6.848	0.022
76	2700.001	6.849	0.021
77	2760.001	6.85	0.02
78	2820.001	6.85	0.02
79	2880.001	6.852	0.018
80	2940.001	6.848	0.022
81	3000.001	6.85	0.02
82	3060.001	6.85	0.02
83	3120.001	6.854	0.016
84	3180.001	6.851	0.019
85	3240.001	6.852	0.018
86	3300.001	6.851	0.019
87	3360.001	6.851	0.019
88	3420.001	6.852	0.018
89	3480.001	6.85	0.02
90	3540.001	6.845	0.025

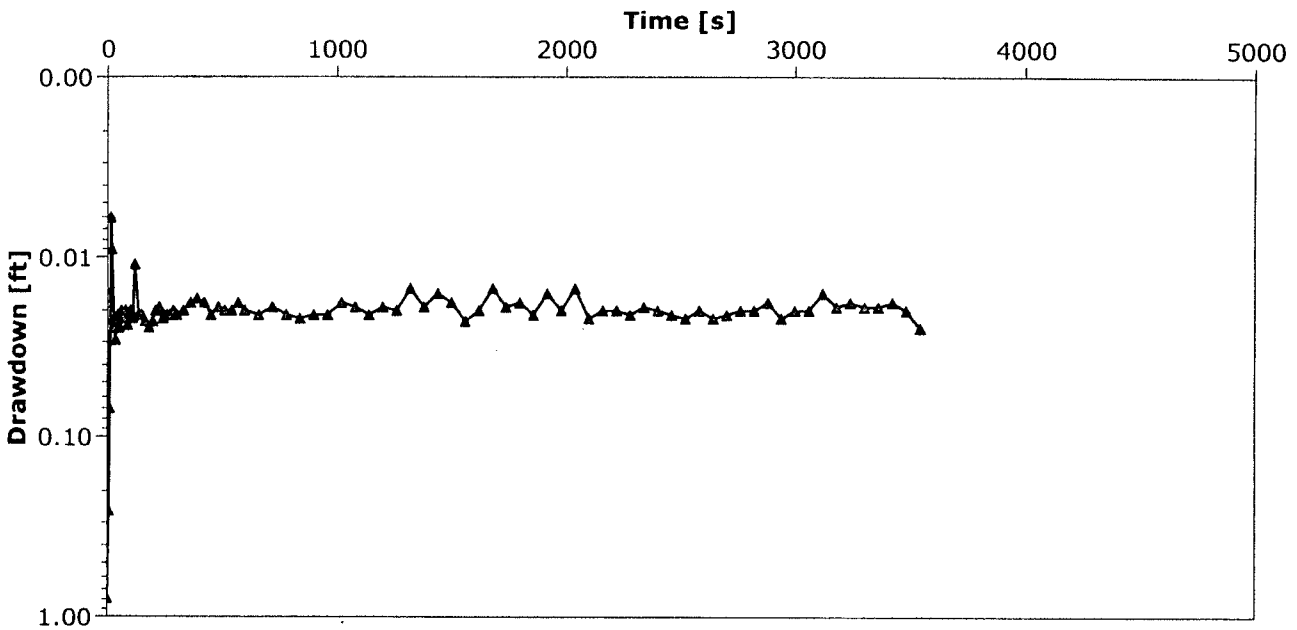
By DKB Date 10/24/08

Chkd. By AAJ Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: Slug Test MW302A4	Test Well: MW302A4
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 25.50 ft		



By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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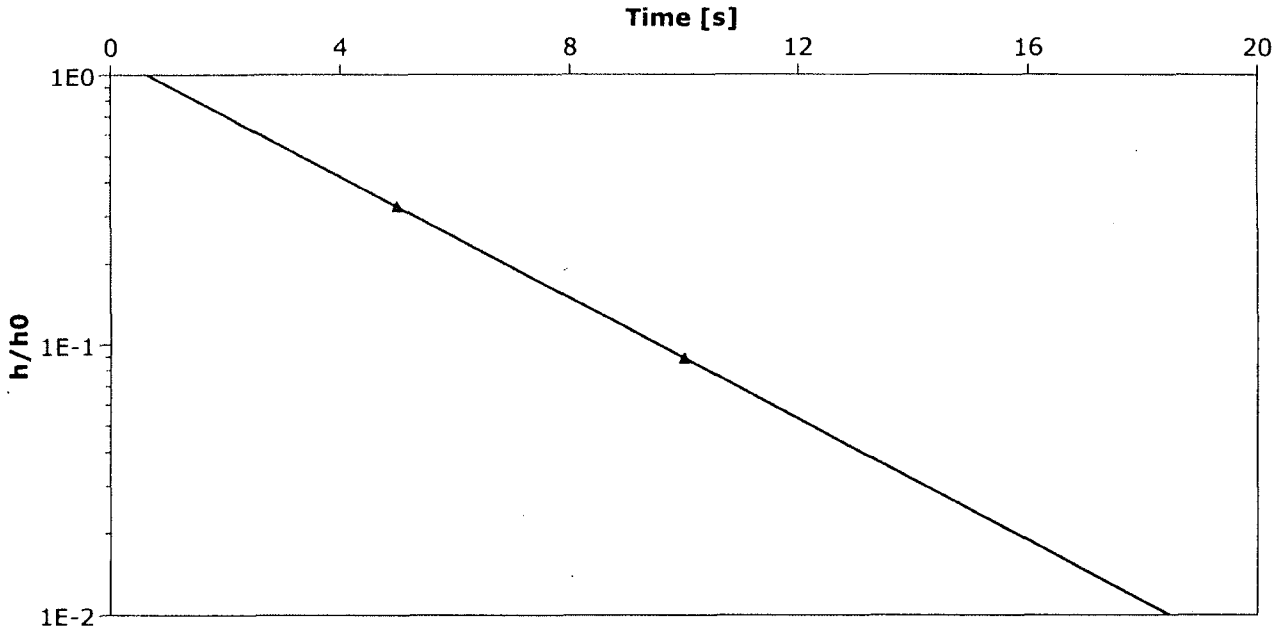
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: Slug Test MW302A4	Test Well: MW302A4
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 25.50 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW302A4	7.92×10^{1}	

By DKB Date 10/24/08
Chkd. By ASF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: Slug Test MW302A4	Test Well: MW302A4
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 11/30/2007
Aquifer Thickness: 25.50 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW302A4		7.92×10^{1}	

By DKB Date 10/24/08

By AAF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 2

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW302B	Test Well: MW302B
Test conducted by: Daniel Bansah/Anthony Fabina Test date: 12/1/2007		
Water level at t=0 [ft]: 3.07	Static water level [ft]: 0.00	Water level change at t=0 [ft]: 3.07

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	3.071	3.071
2	5	2.797	2.797
3	10	2.642	2.642
4	15	2.533	2.533
5	20	2.439	2.439
6	25	2.347	2.347
7	30	2.264	2.264
8	35	2.201	2.201
9	40	2.126	2.126
10	45	2.054	2.054
11	50	1.993	1.993
12	55	1.932	1.932
13	60	1.871	1.871
14	70	1.77	1.77
15	80	1.675	1.675
16	90	1.566	1.566
17	100	1.486	1.486
18	110	1.399	1.399
19	120	1.32	1.32
20	135	1.223	1.223
21	150	1.114	1.114
22	165	1.029	1.029
23	180	0.941	0.941
24	195	0.868	0.868
25	210	0.803	0.803
26	225	0.743	0.743
27	240	0.672	0.672
28	255	0.622	0.622
29	270	0.576	0.576
30	285	0.529	0.529
31	300	0.489	0.489
32	330	0.404	0.404
33	360	0.345	0.345
34	390	0.288	0.288
35	420	0.229	0.229
36	450	0.186	0.186
37	480	0.152	0.152
38	510	0.121	0.121
39	540	0.098	0.098
40	570	0.048	0.048
41	600	0.034	0.034
42	660	-0.003	0.003
43	720	-0.025	0.025
44	780	-0.027	0.027
45	840	-0.035	0.035
46	900	-0.03	0.03

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/01

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 2

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960	-0.028	0.028
48	1020	-0.034	0.034
49	1080	-0.048	0.048
50	1140	-0.033	0.033
51	1200	-0.031	0.031
52	1260	-0.035	0.035
53	1320	-0.035	0.035
54	1380	-0.037	0.037
55	1440	-0.039	0.039
56	1500	-0.022	0.022
57	1560	-0.032	0.032
58	1620	-0.022	0.022
59	1680	-0.022	0.022
60	1740	-0.023	0.023
61	1800	-0.025	0.025
62	1860	-0.036	0.036
63	1920	-0.039	0.039
64	1980	-0.022	0.022
65	2040	-0.033	0.033
66	2100	-0.038	0.038
67	2160	-0.041	0.041
68	2220	-0.03	0.03
69	2280	-0.034	0.034
70	2340	-0.027	0.027
71	2400	-0.033	0.033
72	2460	-0.023	0.023
73	2520	-0.022	0.022
74	2580	-0.037	0.037
75	2640	-0.033	0.033
76	2700	-0.018	0.018
77	2760	-0.03	0.03
78	2820	-0.032	0.032
79	2880	-0.025	0.025
80	2940	-0.035	0.035
81	3000	-0.03	0.03
82	3060	-0.029	0.029
83	3120	-0.019	0.019
84	3180	-0.027	0.027
85	3240	-0.023	0.023
86	3300	-0.028	0.028
87	3360	-0.032	0.032
88	3420	-0.022	0.022
89	3480	-0.037	0.037
90	3540	-0.03	0.03

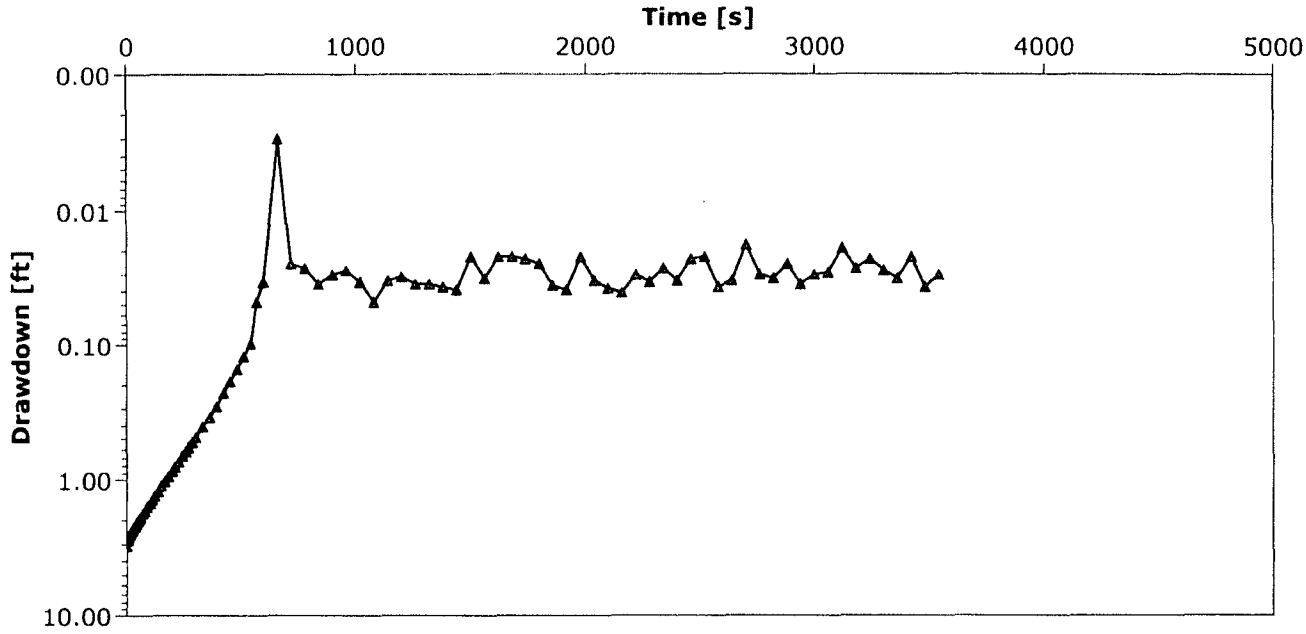
By DKB Date 10/24/08

Chkd. By [illegible] Date 11/3/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW302B	Test Well: MW302B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/6/2008
Aquifer Thickness: 50.00 ft		

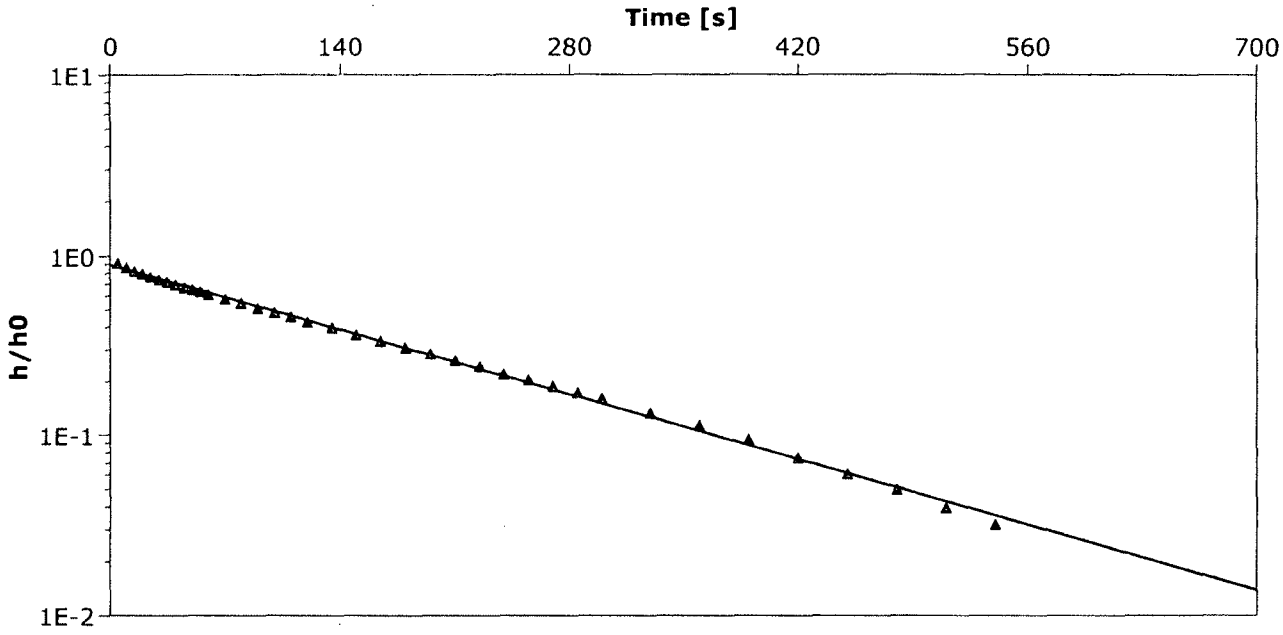


By DKB Date 10/24/08
Chkd. By AAF Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW302B	Test Well: MW302B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 50.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW302B	3.94×10^{-1}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW302B	Test Well: MW302B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/1/2007
Aquifer Thickness: 50.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW302B		3.94×10^{-1}	

By DKB Date 10/24/08

Chkd. By AJF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW303A	Test Well: MW303A
Test conducted by: Daniel Bansah	Test date: 12/13/2007	
Water level at t=0 [ft]: 21.88	Static water level [ft]: 22.02	Water level change at t=0 [ft]: 0.14

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	21.883	0.137
2	5	21.724	0.296
3	10	21.612	0.408
4	15	21.571	0.449
5	20	21.554	0.466
6	25	21.543	0.477
7	30	21.544	0.476
8	35	21.536	0.484
9	40	21.532	0.488
10	45	21.529	0.491
11	50	21.535	0.485
12	55	21.529	0.491
13	60	21.528	0.492
14	70	21.526	0.494
15	80	21.523	0.497
16	90	21.524	0.496
17	100	21.516	0.504
18	110	21.521	0.499
19	120	21.525	0.495
20	135	21.525	0.495
21	150	21.525	0.495
22	165	21.534	0.486
23	180	21.526	0.494
24	195	21.526	0.494
25	210	21.528	0.492
26	225	21.528	0.492
27	240	21.533	0.487
28	255	21.53	0.49
29	270	21.534	0.486
30	285	21.531	0.489
31	300	21.531	0.489
32	330	21.538	0.482
33	360	21.538	0.482
34	390	21.541	0.479
35	420	21.544	0.476
36	450	21.542	0.478
37	480	21.548	0.472
38	510	21.55	0.47
39	540	21.549	0.471
40	570	21.551	0.469
41	600	21.552	0.468
42	660	21.558	0.462
43	720	21.562	0.458
44	780	21.564	0.456
45	840	21.567	0.453
46	900	21.567	0.453

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960	21.573	0.447
48	1020	21.576	0.444
49	1080	21.576	0.444
50	1140	21.581	0.439
51	1200	21.583	0.437
52	1260	21.588	0.432
53	1320	21.59	0.43
54	1380	21.593	0.427
55	1440	21.595	0.425
56	1500	21.60	0.42
57	1560	21.603	0.417
58	1620	21.604	0.416
59	1680	21.608	0.412
60	1740	21.609	0.411
61	1800	21.612	0.408
62	1860	21.618	0.402
63	1920	21.618	0.402
64	1980	21.622	0.398
65	2040	21.627	0.393
66	2100	21.626	0.394
67	2160	21.629	0.391
68	2220	21.634	0.386
69	2280	21.636	0.384
70	2340	21.639	0.381
71	2400	21.641	0.379
72	2460	21.642	0.378
73	2520	21.647	0.373
74	2580	21.648	0.372
75	2640	21.652	0.368
76	2700	21.651	0.369
77	2760	21.656	0.364
78	2820	21.658	0.362
79	2880	21.657	0.363
80	2940	21.658	0.362
81	3000	21.658	0.362
82	3060	21.66	0.36
83	3120	21.666	0.354
84	3180	21.671	0.349
85	3240	21.671	0.349
86	3300	21.674	0.346
87	3360	21.675	0.345
88	3420	21.675	0.345
89	3480	21.679	0.341
90	3540	21.68	0.34
91	3600	21.679	0.341
92	3660	21.684	0.336
93	3720	21.685	0.335
94	3780	21.686	0.334
95	3840	21.687	0.333
96	3900	21.689	0.331
97	3960	21.692	0.328

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020	21.692	0.328
99	4080	21.695	0.325
100	4140	21.697	0.323
101	4200	21.699	0.321
102	4260	21.702	0.318
103	4320	21.704	0.316
104	4380	21.705	0.315
105	4440	21.706	0.314
106	4500	21.708	0.312
107	4560	21.709	0.311
108	4620	21.711	0.309
109	4680	21.715	0.305
110	4740	21.713	0.307
111	4800	21.717	0.303
112	4860	21.72	0.30
113	4920	21.72	0.30
114	4980	21.72	0.30
115	5040	21.723	0.297
116	5100	21.724	0.296
117	5160	21.724	0.296
118	5220	21.726	0.294
119	5280	21.728	0.292
120	5340	21.729	0.291
121	5400	21.733	0.287
122	5460	21.731	0.289
123	5520	21.735	0.285
124	5580	21.735	0.285
125	5640	21.734	0.286
126	5700	21.739	0.281
127	5760	21.738	0.282
128	5820	21.74	0.28
129	5880	21.743	0.277
130	5940	21.745	0.275
131	6000	21.745	0.275
132	6060	21.747	0.273
133	6120	21.748	0.272
134	6180	21.748	0.272
135	6240	21.749	0.271
136	6300	21.752	0.268
137	6360	21.753	0.267
138	6420	21.754	0.266
139	6480	21.756	0.264
140	6540	21.757	0.263
141	6600	21.759	0.261
142	6660	21.759	0.261
143	6720	21.759	0.261
144	6780	21.762	0.258
145	6840	21.761	0.259
146	6900	21.763	0.257
147	6960	21.765	0.255
148	7020	21.765	0.255

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080	21.764	0.256
150	7140	21.768	0.252

By DKB Date 10/24/08

Chkd. By ADF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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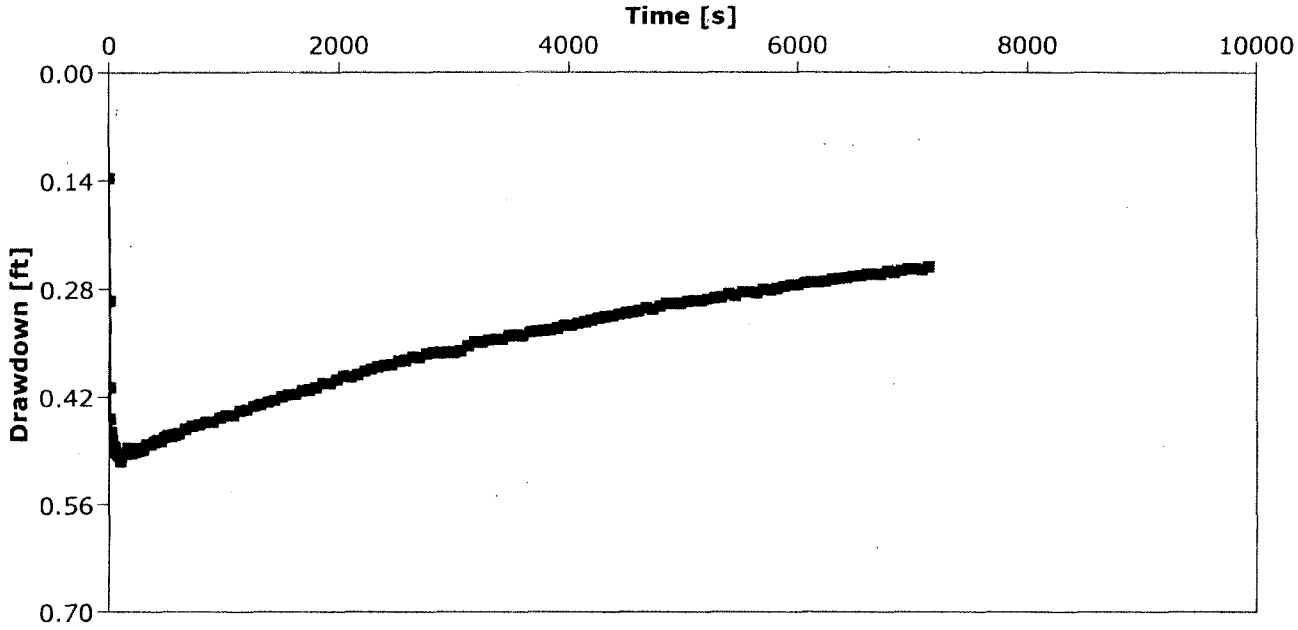
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW303A	Test Well: MW303A
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 16.00 ft		



By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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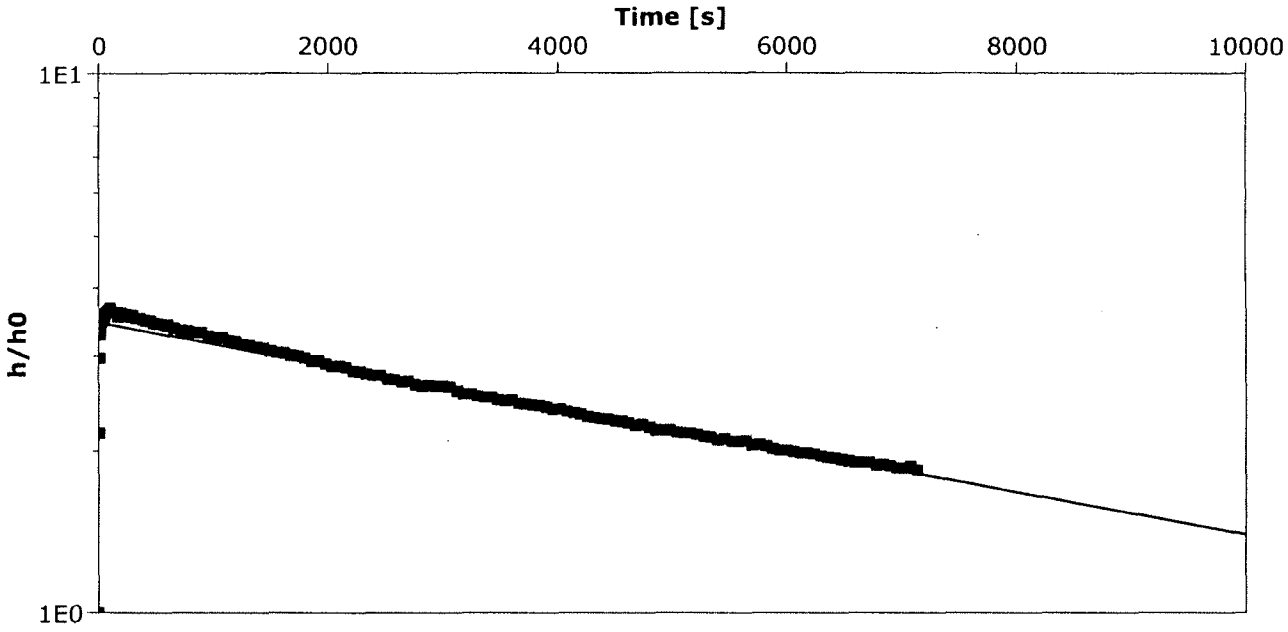
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW303A	Test Well: MW303A
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 16.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW303A	3.70×10^{-2}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW303A	Test Well: MW303A
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Aquifer Thickness: 16.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW303A		3.70×10^{-2}	

By JKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW303B	Test Well: MW303B
Test conducted by: Daniel Bansah	Test date: 12/14/2007	
Water level at t=0 [ft]: -6.01	Static water level [ft]: 16.95	Water level change at t=0 [ft]: 22.96

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	-6.006	22.956
2	5.001	16.133	0.817
3	10.001	16.627	0.323
4	15.001	16.776	0.174
5	20.001	16.83	0.12
6	25.001	16.855	0.095
7	30.001	16.863	0.087
8	35.001	16.873	0.077
9	40.001	16.88	0.07
10	45.001	16.883	0.067
11	50.001	16.89	0.06
12	55.001	16.892	0.058
13	60.077	16.885	0.065
14	70.001	16.90	0.05
15	80.001	16.904	0.046
16	90.001	16.905	0.045
17	100.001	16.908	0.042
18	110.001	16.911	0.039
19	120.001	16.914	0.036
20	135.001	16.925	0.025
21	150.001	16.921	0.029
22	165.001	16.919	0.031
23	180.001	16.923	0.027
24	195.001	16.925	0.025
25	210.001	16.926	0.024
26	225.001	16.922	0.028
27	240.001	16.923	0.027
28	255.001	16.925	0.025
29	270.001	16.926	0.024
30	285.001	16.926	0.024
31	300.001	16.927	0.023
32	330.001	16.933	0.017
33	360.001	16.93	0.02
34	390.001	16.93	0.02
35	420.001	16.934	0.016
36	450.001	16.931	0.019
37	480.001	16.934	0.016
38	510.001	16.934	0.016
39	540.001	16.934	0.016
40	570.001	16.934	0.016
41	600.001	16.934	0.016
42	660.001	16.938	0.012
43	720.001	16.934	0.016
44	780.001	16.938	0.012
45	840.001	16.936	0.014
46	900.001	16.937	0.013

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	16.937	0.013
48	1020.001	16.939	0.011
49	1080.001	16.938	0.012
50	1140.001	16.94	0.01
51	1200.001	16.937	0.013
52	1260.001	16.944	0.006
53	1320.001	16.942	0.008
54	1380.001	16.942	0.008
55	1440.001	16.941	0.009
56	1500.001	16.942	0.008
57	1560.001	16.944	0.006
58	1620.001	16.941	0.009
59	1680.001	16.943	0.007
60	1740.001	16.942	0.008
61	1800.001	16.942	0.008
62	1860.001	16.945	0.005
63	1920.001	16.94	0.01
64	1980.001	16.941	0.009
65	2040.001	16.942	0.008
66	2100.001	16.946	0.004
67	2160.001	16.943	0.007
68	2220.001	16.944	0.006
69	2280.001	16.943	0.007
70	2340.001	16.946	0.004
71	2400.001	16.941	0.009
72	2460.001	16.941	0.009
73	2520.001	16.94	0.01
74	2580.001	16.947	0.003
75	2640.001	16.945	0.005
76	2700.001	16.945	0.005
77	2760.001	16.948	0.002
78	2820.001	16.948	0.002
79	2880.001	16.942	0.008
80	2940.001	16.944	0.006
81	3000.001	16.944	0.006
82	3060.001	16.943	0.007
83	3120.001	16.946	0.004
84	3180.001	16.944	0.006
85	3240.001	16.946	0.004
86	3300.001	16.943	0.007
87	3360.001	16.947	0.003
88	3420.001	16.944	0.006
89	3480.001	16.946	0.004
90	3540.001	16.948	0.002
91	3600.001	16.943	0.007
92	3660.001	16.946	0.004
93	3720.001	16.946	0.004
94	3780.001	16.947	0.003
95	3840.001	16.942	0.008
96	3900.001	16.941	0.009
97	3960.001	16.945	0.005

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	16.946	0.004
99	4080.001	16.944	0.006
100	4140.001	16.945	0.005
101	4200.001	16.947	0.003
102	4260.001	16.942	0.008
103	4320.001	16.947	0.003
104	4380.001	16.948	0.002
105	4440.001	16.946	0.004
106	4500.001	16.945	0.005
107	4560.001	16.948	0.002
108	4620.001	16.95	0.00
109	4680.001	16.949	0.001
110	4740.001	16.947	0.003
111	4800.001	16.951	0.001
112	4860.001	16.947	0.003
113	4920.001	16.951	0.001
114	4980.001	16.947	0.003
115	5040.001	16.947	0.003
116	5100.001	16.948	0.002
117	5160.001	16.946	0.004
118	5220.001	16.946	0.004
119	5280.001	16.945	0.005
120	5340.001	16.947	0.003
121	5400.001	16.947	0.003
122	5460.001	16.944	0.006
123	5520.001	16.948	0.002
124	5580.001	16.945	0.005
125	5640.001	16.946	0.004
126	5700.001	16.947	0.003
127	5760.001	16.948	0.002
128	5820.001	16.946	0.004
129	5880.001	16.945	0.005
130	5940.001	16.945	0.005
131	6000.001	16.947	0.003
132	6060.001	16.947	0.003
133	6120.001	16.947	0.003
134	6180.001	16.946	0.004
135	6240.001	16.951	0.001
136	6300.001	16.945	0.005
137	6360.001	16.947	0.003
138	6420.001	16.945	0.005
139	6480.001	16.944	0.006
140	6540.001	16.943	0.007
141	6600.001	16.946	0.004
142	6660.001	16.944	0.006
143	6720.001	16.947	0.003
144	6780.001	16.943	0.007
145	6840.001	16.947	0.003
146	6900.001	16.946	0.004
147	6960.001	16.946	0.004
148	7020.001	16.944	0.006

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	16.948	0.002
150	7140.001	16.944	0.006

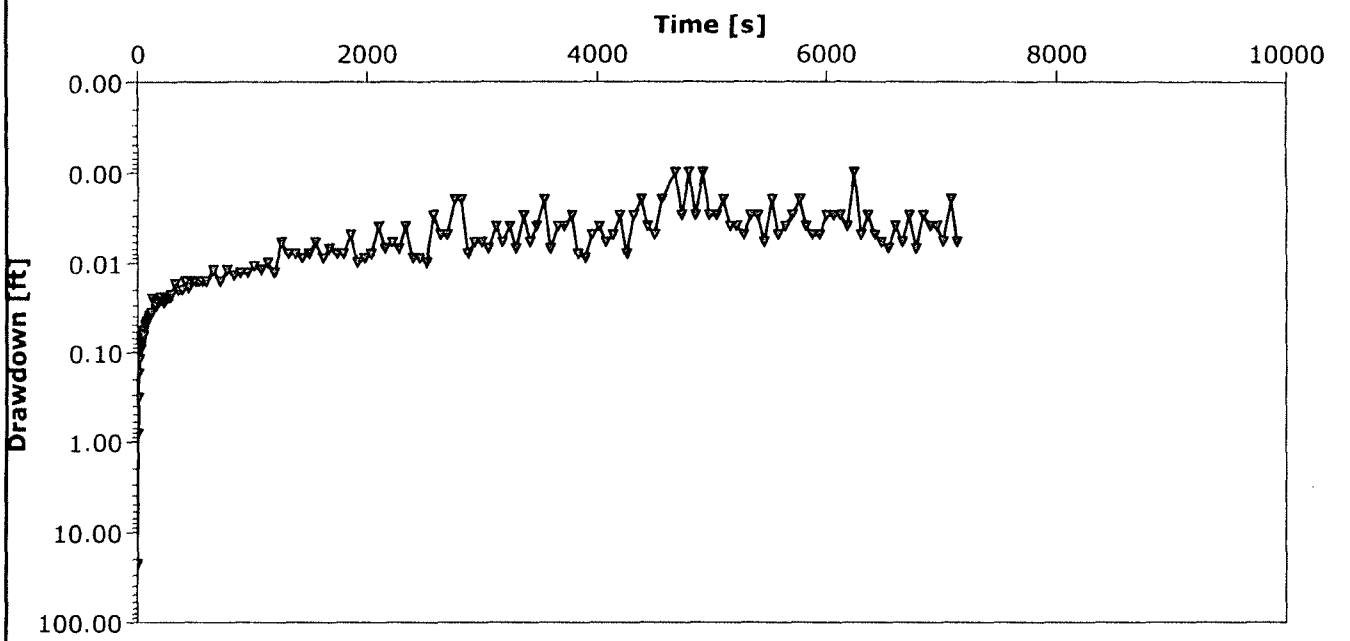
By DKB Date 10/24/08

Chkd. By CJF Date 10/29/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW303B	Test Well: MW303B
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 32.00 ft		

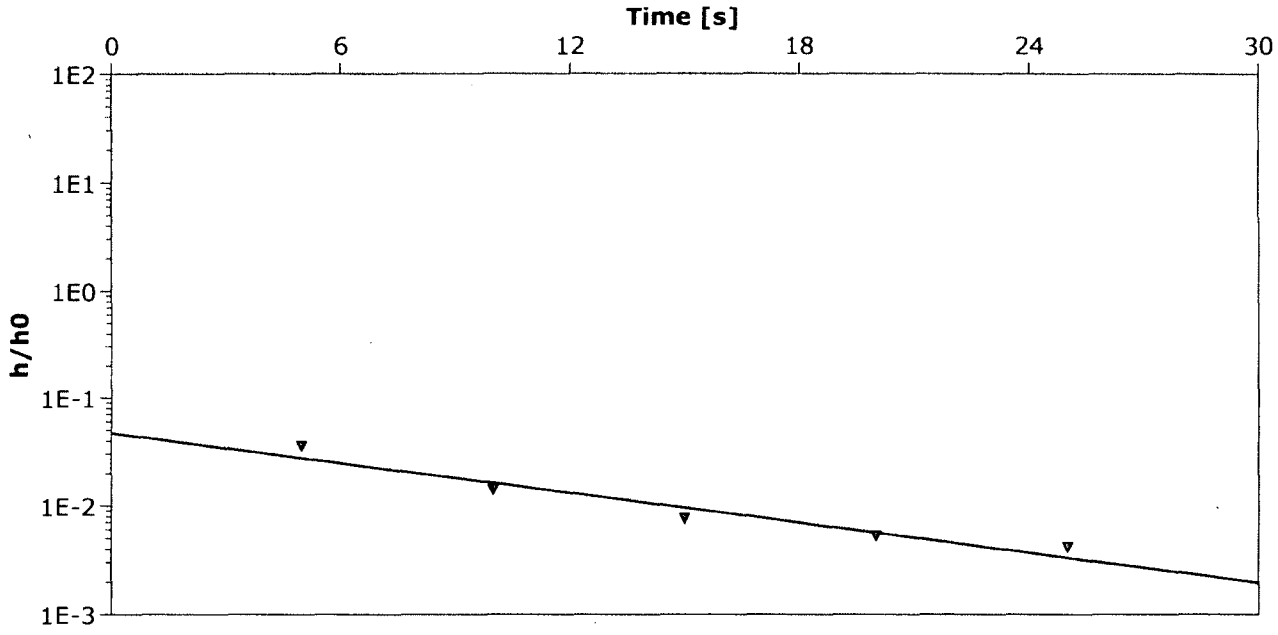


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW303B	Test Well: MW303B
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 32.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW303B	6.99×10^{0}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/29/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW303B	Test Well: MW303B
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Aquifer Thickness: 32.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW303B		6.99×10^{0}	

By DKB Date 10/24/08

Chkd By AAT Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW303C	Test Well: MW303C
Test conducted by: Daniel Bansah	Test date: 12/14/2007	
Water level at t=0 [ft]: 29.40	Static water level [ft]: 29.78	Water level change at t=0 [ft]: 0.38

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	29.397	0.383
2	5.001	27.08	2.70
3	10.001	27.441	2.339
4	15.001	27.721	2.059
5	20.001	27.947	1.833
6	25.001	28.132	1.648
7	30.001	28.281	1.499
8	35.001	28.403	1.377
9	40.001	28.503	1.277
10	45.001	28.588	1.192
11	50.001	28.651	1.129
12	55.001	28.715	1.065
13	60.001	28.769	1.011
14	70.001	28.846	0.934
15	80.001	28.933	0.847
16	90.001	28.997	0.783
17	100.001	29.055	0.725
18	110.001	29.107	0.673
19	120.001	29.155	0.625
20	135.001	29.219	0.561
21	150.001	29.275	0.505
22	165.001	29.338	0.442
23	180.001	29.376	0.404
24	195.001	29.416	0.364
25	210.001	29.454	0.326
26	225.001	29.487	0.293
27	240.001	29.518	0.262
28	255.001	29.546	0.234
29	270.001	29.572	0.208
30	285.001	29.594	0.186
31	300.001	29.614	0.166
32	330.001	29.651	0.129
33	360.001	29.68	0.10
34	390.001	29.703	0.077
35	420.001	29.722	0.058
36	450.001	29.736	0.044
37	480.001	29.753	0.027
38	510.001	29.764	0.016
39	540.001	29.775	0.005
40	570.001	29.782	0.002
41	600.001	29.787	0.007
42	660.001	29.80	0.02
43	720.001	29.805	0.025
44	780.001	29.811	0.031
45	840.001	29.819	0.039
46	900.001	29.829	0.049

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	29.837	0.057
48	1020.001	29.844	0.064
49	1080.001	29.852	0.072
50	1140.001	29.855	0.075
51	1200.001	29.862	0.082
52	1260.001	29.87	0.09
53	1320.001	29.877	0.097
54	1380.001	29.884	0.104
55	1440.001	29.889	0.109
56	1500.001	29.894	0.114
57	1560.001	29.898	0.118
58	1620.001	29.906	0.126
59	1680.001	29.907	0.127
60	1740.001	29.915	0.135
61	1800.001	29.919	0.139
62	1860.001	29.926	0.146
63	1920.001	29.926	0.146
64	1980.001	29.932	0.152
65	2040.001	29.94	0.16
66	2100.001	29.941	0.161
67	2160.001	29.95	0.17
68	2220.001	29.954	0.174
69	2280.001	29.959	0.179
70	2340.001	29.959	0.179
71	2400.001	29.964	0.184
72	2460.001	29.968	0.188
73	2520.001	29.975	0.195
74	2580.001	29.977	0.197
75	2640.001	29.983	0.203
76	2700.001	29.987	0.207
77	2760.001	29.99	0.21
78	2820.001	29.992	0.212
79	2880.001	30.001	0.221
80	2940.001	30.004	0.224
81	3000.001	30.008	0.228
82	3060.001	30.01	0.23
83	3120.001	30.015	0.235
84	3180.001	30.017	0.237
85	3240.001	30.014	0.234
86	3300.001	30.021	0.241
87	3360.001	30.027	0.247
88	3420.001	30.027	0.247
89	3480.001	30.03	0.25
90	3540.001	30.034	0.254
91	3600.001	30.04	0.26
92	3660.001	30.046	0.266
93	3720.001	30.044	0.264
94	3780.001	30.05	0.27
95	3840.001	30.054	0.274
96	3900.001	30.057	0.277
97	3960.001	30.062	0.282

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	30.069	0.289
99	4080.001	30.068	0.288
100	4140.001	30.075	0.295
101	4200.001	30.083	0.303
102	4260.001	30.086	0.306
103	4320.001	30.088	0.308
104	4380.001	30.096	0.316
105	4440.001	30.105	0.325
106	4500.001	30.106	0.326
107	4560.001	30.119	0.339
108	4620.001	30.123	0.343
109	4680.001	30.127	0.347
110	4740.001	30.131	0.351
111	4800.001	30.138	0.358
112	4860.001	30.144	0.364
113	4920.001	30.124	0.344
114	4980.001	30.126	0.346
115	5040.001	30.134	0.354
116	5100.001	30.14	0.36
117	5160.001	30.145	0.365
118	5220.001	30.139	0.359
119	5280.001	30.139	0.359
120	5340.001	30.141	0.361
121	5400.001	30.143	0.363
122	5460.001	30.15	0.37
123	5520.001	30.153	0.373
124	5580.001	30.141	0.361
125	5640.001	30.147	0.367
126	5700.001	30.152	0.372
127	5760.001	30.151	0.371
128	5820.001	30.156	0.376
129	5880.001	30.159	0.379
130	5940.001	30.164	0.384
131	6000.001	30.166	0.386
132	6060.001	30.166	0.386
133	6120.001	30.17	0.39
134	6180.001	30.172	0.392
135	6240.001	30.176	0.396
136	6300.001	30.173	0.393
137	6360.001	30.17	0.39
138	6420.001	30.173	0.393
139	6480.001	30.18	0.40
140	6540.001	30.184	0.404
141	6600.001	30.19	0.41
142	6660.001	30.192	0.412
143	6720.001	30.191	0.411
144	6780.001	30.188	0.408
145	6840.001	30.188	0.408
146	6900.001	30.188	0.408
147	6960.001	30.188	0.408
148	7020.001	30.178	0.398

By JKB Date 10/24/08

Chkd. By GOT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	30.177	0.397
150	7140.001	30.18	0.40
151	7200.001	30.183	0.403

By DKB Date 10/24/08

Chkd. By GST Date 10/27/08

Paul C. Rizzo Associates, Inc.
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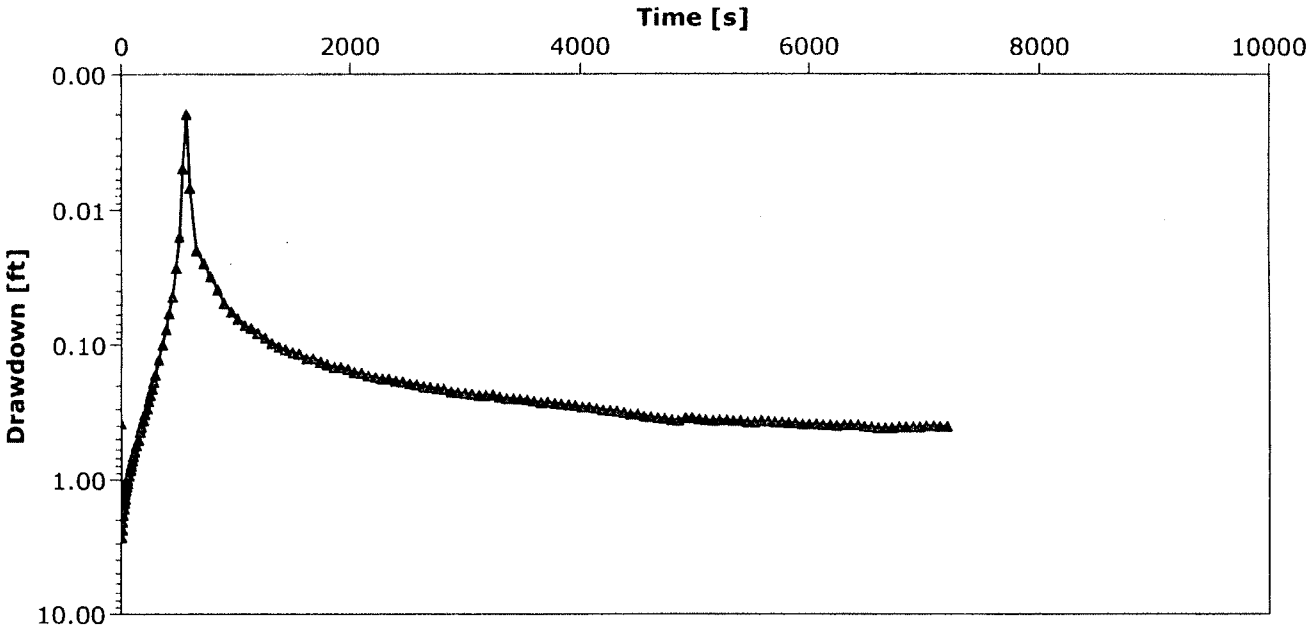
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW303C	Test Well: MW303C
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 69.00 ft		



By DKB Date 10/24/08
Chkd. By DJT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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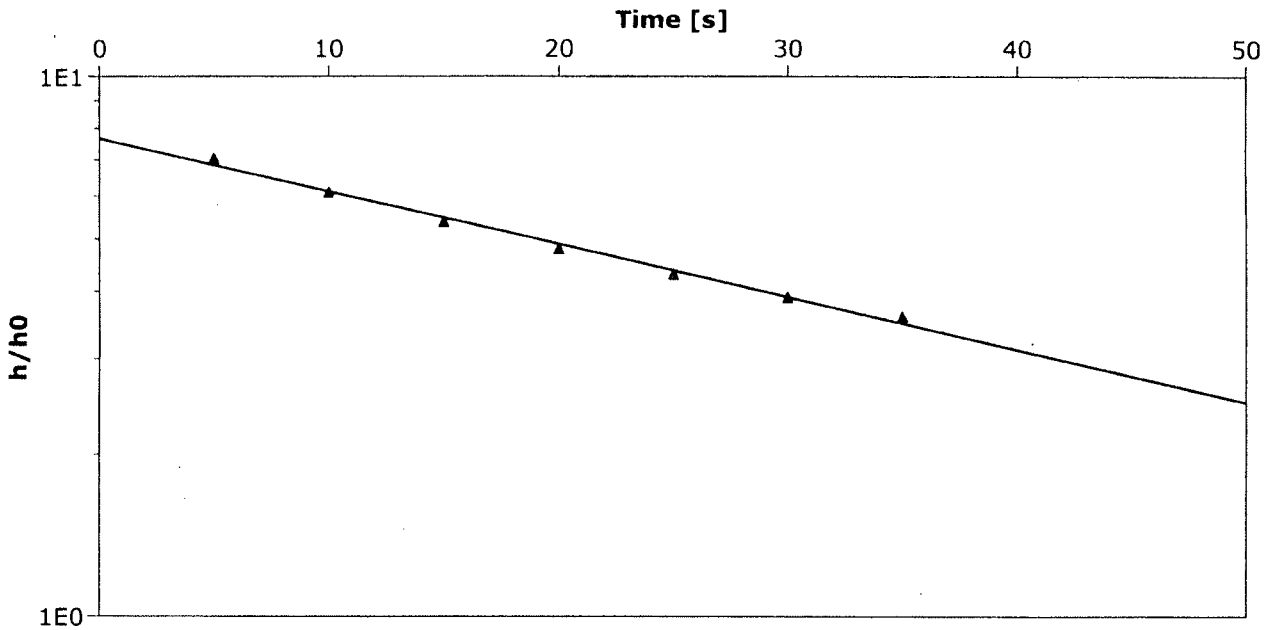
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW303C	Test Well: MW303C
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 69.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW303C	1.48×10^0	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW303C	Test Well: MW303C
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Aquifer Thickness: 69.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW303C		1.48×10^{0}	

By DKB Date 10/24/08

Chkd. By ASF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW304A	Test Well: MW304A
Test conducted by: Daniel Bansah	Test date: 12/10/2007	
Water level at t=0 [ft]: 11.67	Static water level [ft]: 12.23	Water level change at t=0 [ft]: 0.56

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	11.673	0.557
2	5	12.057	0.173
3	10	12.159	0.071
4	15	12.18	0.05
5	20	12.19	0.04
6	25	12.194	0.036
7	30	12.194	0.036
8	35	12.198	0.032
9	40	12.196	0.034
10	45.006	12.194	0.036
11	50	12.201	0.029
12	55	12.198	0.032
13	60	12.20	0.03
14	70	12.207	0.023
15	80	12.201	0.029
16	90	12.195	0.035
17	100	12.206	0.024
18	110	12.205	0.025
19	120	12.219	0.011
20	135	12.207	0.023
21	150	12.203	0.027
22	165	12.206	0.024
23	180	12.205	0.025
24	195	12.204	0.026
25	210	12.207	0.023
26	225	12.207	0.023
27	240	12.211	0.019
28	255	12.207	0.023
29	270	12.207	0.023
30	285	12.208	0.022
31	300	12.207	0.023
32	330	12.207	0.023
33	360	12.204	0.026
34	390	12.204	0.026
35	420	12.207	0.023
36	450	12.205	0.025
37	480	12.206	0.024
38	510	12.207	0.023
39	540	12.205	0.025
40	570	12.205	0.025
41	600	12.204	0.026
42	660	12.203	0.027
43	720	12.205	0.025
44	780	12.206	0.024
45	840	12.207	0.023
46	900	12.213	0.017

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960	12.21	0.02
48	1020	12.214	0.016
49	1080	12.214	0.016
50	1140	12.212	0.018
51	1200	12.211	0.019
52	1260	12.212	0.018
53	1320	12.207	0.023
54	1380	12.206	0.024
55	1440	12.207	0.023
56	1500	12.206	0.024
57	1560	12.208	0.022
58	1620	12.205	0.025
59	1680	12.206	0.024
60	1740	12.205	0.025
61	1800	12.206	0.024
62	1860	12.208	0.022
63	1920	12.207	0.023
64	1980	12.208	0.022
65	2040	12.207	0.023
66	2100	12.206	0.024
67	2160	12.207	0.023
68	2220	12.206	0.024
69	2280	12.207	0.023
70	2340	12.207	0.023
71	2400	12.21	0.02
72	2460	12.207	0.023
73	2520	12.206	0.024
74	2580	12.21	0.02
75	2640	12.208	0.022
76	2700	12.204	0.026
77	2760	12.204	0.026
78	2820	12.201	0.029
79	2880	12.201	0.029
80	2940	12.20	0.03
81	3000	12.204	0.026
82	3060	12.201	0.029
83	3120	12.201	0.029
84	3180	12.202	0.028
85	3240	12.203	0.027
86	3300	12.201	0.029
87	3360	12.20	0.03
88	3420	12.203	0.027
89	3480	12.204	0.026
90	3540	12.197	0.033
91	3600	12.204	0.026
92	3660	12.201	0.029
93	3720	12.202	0.028
94	3780	12.20	0.03
95	3840	12.199	0.031
96	3900	12.20	0.03
97	3960	12.203	0.027

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020	12.20	0.03
99	4080	12.205	0.025
100	4140	12.21	0.02
101	4200	12.212	0.018
102	4260	12.216	0.014
103	4320	12.213	0.017
104	4380	12.21	0.02
105	4440	12.212	0.018
106	4500	12.208	0.022
107	4560	12.209	0.021
108	4620	12.207	0.023
109	4680	12.209	0.021
110	4740	12.208	0.022
111	4800	12.205	0.025
112	4860	12.204	0.026
113	4920	12.209	0.021
114	4980	12.209	0.021
115	5040	12.207	0.023
116	5100	12.207	0.023
117	5160	12.206	0.024
118	5220	12.204	0.026
119	5280	12.205	0.025
120	5340	12.203	0.027
121	5400	12.204	0.026
122	5460	12.204	0.026
123	5520	12.204	0.026
124	5580	12.204	0.026
125	5640	12.207	0.023
126	5700	12.205	0.025
127	5760	12.211	0.019
128	5820	12.207	0.023
129	5880	12.21	0.02
130	5940	12.208	0.022
131	6000	12.203	0.027
132	6060	12.20	0.03
133	6120	12.201	0.029
134	6180	12.20	0.03
135	6240	12.204	0.026
136	6300	12.204	0.026
137	6360	12.201	0.029
138	6420	12.202	0.028
139	6480	12.204	0.026
140	6540	12.202	0.028
141	6600	12.203	0.027
142	6660	12.203	0.027
143	6720	12.205	0.025
144	6780	12.203	0.027
145	6840	12.207	0.023
146	6900	12.204	0.026
147	6960	12.206	0.024
148	7020	12.206	0.024

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080	12.206	0.024
150	7140	12.206	0.024

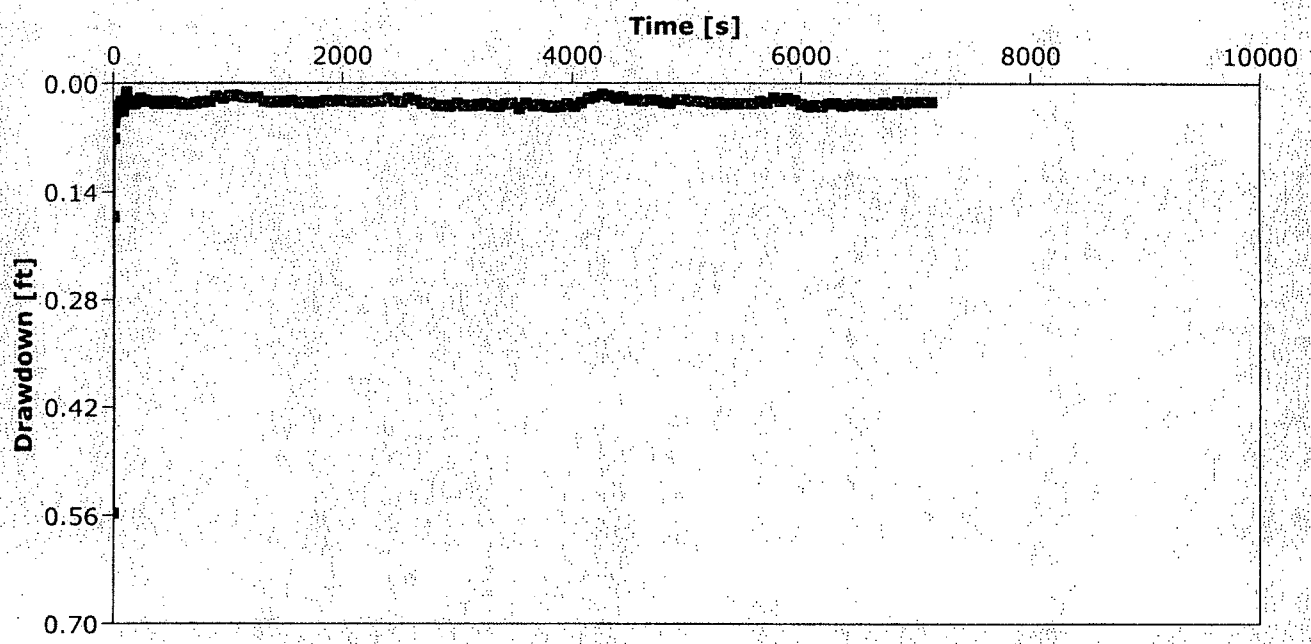
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW304A	Test Well: MW304A
Test conducted by: Daniel Bansah		Test date: 12/10/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 20.00 ft		

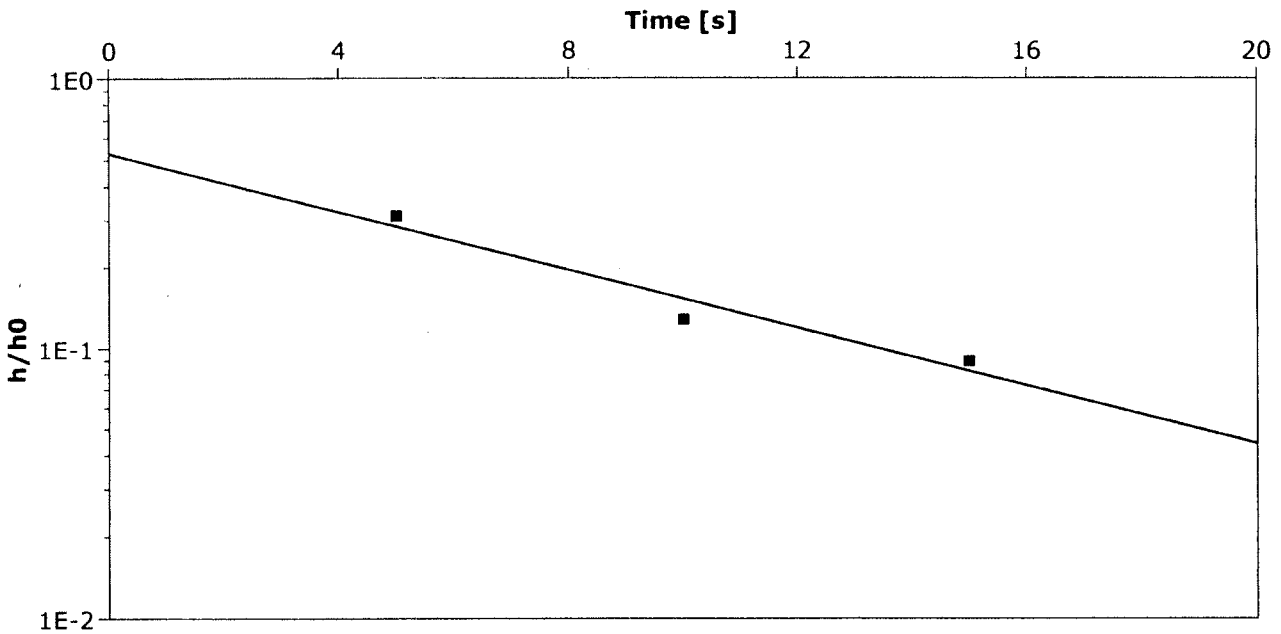


By DKB Date 10/24/08
Chkd. By GSA Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW304A	Test Well: MW304A
Test conducted by: Daniel Bansah		Test date: 12/10/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 20.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW304A	3.07×10^{1}	

By DCB Date 10/24/08
Chkd. By [illegible] Date 11/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW304A	Test Well: MW304A
Test conducted by: Daniel Bansah		Test date: 12/10/2007
Aquifer Thickness: 20.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW304A		3.07×10^{1}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW304B	Test Well: MW304B
Test conducted by: Daniel Bansah	Test date: 12/10/2007	
Water level at t=0 [ft]: 4.24	Static water level [ft]: 12.97	Water level change at t=0 [ft]: 8.73

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	4.238	8.732
2	5	12.631	0.339
3	10	13.064	0.094
4	15	12.971	0.001
5	20.001	12.924	0.046
6	25	12.928	0.042
7	30.001	12.943	0.027
8	35	12.94	0.03
9	40.001	12.942	0.028
10	45	12.926	0.044
11	50	12.90	0.07
12	55	12.947	0.023
13	60.001	12.952	0.018
14	70.001	12.938	0.032
15	80.001	12.956	0.014
16	90.001	12.927	0.043
17	100.001	12.956	0.014
18	110.001	12.954	0.016
19	120.001	12.932	0.038
20	135.001	12.941	0.029
21	150.001	12.934	0.036
22	165.001	12.941	0.029
23	180.001	12.929	0.041
24	195.001	12.937	0.033
25	210.001	12.938	0.032
26	225.001	12.924	0.046
27	240.001	12.928	0.042
28	255.001	12.925	0.045
29	270.001	12.926	0.044
30	285.001	12.933	0.037
31	300.001	12.92	0.05
32	330.001	12.922	0.048
33	360.001	12.932	0.038
34	390.001	12.915	0.055
35	420.001	12.916	0.054
36	450.001	12.942	0.028
37	480.001	12.986	0.016
38	510.001	12.957	0.013
39	540.001	12.949	0.021
40	570.001	12.935	0.035
41	600.001	12.931	0.039
42	660.001	12.924	0.046
43	720.001	12.928	0.042
44	780.001	12.913	0.057
45	840.001	12.916	0.054
46	900.001	12.925	0.045

By DKB Date 10/24/08

Chkd. By AOT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	12.905	0.065
48	1020.001	12.951	0.019
49	1080.001	12.962	0.008
50	1140.001	12.951	0.019
51	1200.001	12.938	0.032
52	1260.001	12.938	0.032
53	1320.001	12.924	0.046
54	1380.001	12.933	0.037
55	1440.001	12.928	0.042
56	1500.001	12.917	0.053
57	1560.001	12.907	0.063
58	1620.001	12.903	0.067
59	1680.001	12.902	0.068
60	1740.001	12.90	0.07
61	1800.001	12.992	0.022
62	1860.001	12.934	0.036
63	1920.001	12.916	0.054
64	1980.001	12.913	0.057
65	2040.001	12.915	0.055
66	2100.001	12.925	0.045
67	2160.001	12.904	0.066
68	2220.001	12.911	0.059
69	2280.001	12.906	0.064
70	2340.001	12.897	0.073
71	2400.001	12.893	0.077
72	2460.001	12.903	0.067
73	2520.001	12.907	0.063
74	2580.001	12.982	0.012
75	2640.001	12.962	0.008
76	2700.001	12.948	0.022
77	2760.001	12.953	0.017
78	2820.001	12.918	0.052
79	2880.001	12.928	0.042
80	2940.001	12.919	0.051
81	3000.001	12.935	0.035
82	3060.001	12.999	0.029
83	3120.001	13.015	0.045
84	3180.001	13.006	0.036
85	3240.001	12.971	0.001
86	3300.001	12.96	0.01
87	3360.001	13.041	0.071
88	3420.001	13.019	0.049
89	3480.001	12.998	0.028
90	3540.001	12.99	0.02
91	3600.001	13.101	0.131
92	3660.001	13.062	0.092
93	3720.001	13.032	0.062
94	3780.001	13.03	0.06
95	3840.001	13.006	0.036
96	3900.001	13.004	0.034
97	3960.001	12.997	0.027

By AKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	12.982	0.012
99	4080.001	13.01	0.04
100	4140.001	13.053	0.083
101	4200.001	13.021	0.051
102	4260.001	13.025	0.055
103	4320.001	13.002	0.032
104	4380.001	12.991	0.021
105	4440.001	12.984	0.014
106	4500.001	13.065	0.095
107	4560.001	13.002	0.032
108	4620.001	13.036	0.066
109	4680.001	13.051	0.081
110	4740.001	13.03	0.06
111	4800.001	13.002	0.032
112	4860.001	12.995	0.025
113	4920.001	12.988	0.018
114	4980.001	12.982	0.012
115	5040.001	12.969	0.001
116	5100.001	12.96	0.01
117	5160.001	12.955	0.015
118	5220.001	12.955	0.015
119	5280.001	12.953	0.017
120	5340.001	12.958	0.012
121	5400.001	12.945	0.025
122	5460.001	12.929	0.041
123	5520.001	12.929	0.041
124	5580.001	13.03	0.06
125	5640.001	12.953	0.017
126	5700.001	12.973	0.003
127	5760.001	13.042	0.072
128	5820.001	13.011	0.041
129	5880.001	13.003	0.033
130	5940.001	13.04	0.07
131	6000.001	13.06	0.09
132	6060.001	13.039	0.069
133	6120.001	13.013	0.043
134	6180.001	13.012	0.042
135	6240.001	12.99	0.02
136	6300.001	12.982	0.012
137	6360.001	12.977	0.007
138	6420.001	12.97	0.00
139	6480.001	12.964	0.006
140	6540.001	13.035	0.065
141	6600.001	13.018	0.048
142	6660.001	13.048	0.078
143	6720.001	13.02	0.05
144	6780.001	12.993	0.023
145	6840.001	12.986	0.016
146	6900.001	13.046	0.076
147	6960.001	13.045	0.075
148	7020.001	13.019	0.049

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	13.00	0.03
150	7140.001	12.988	0.018
151	7200.001	12.991	0.021

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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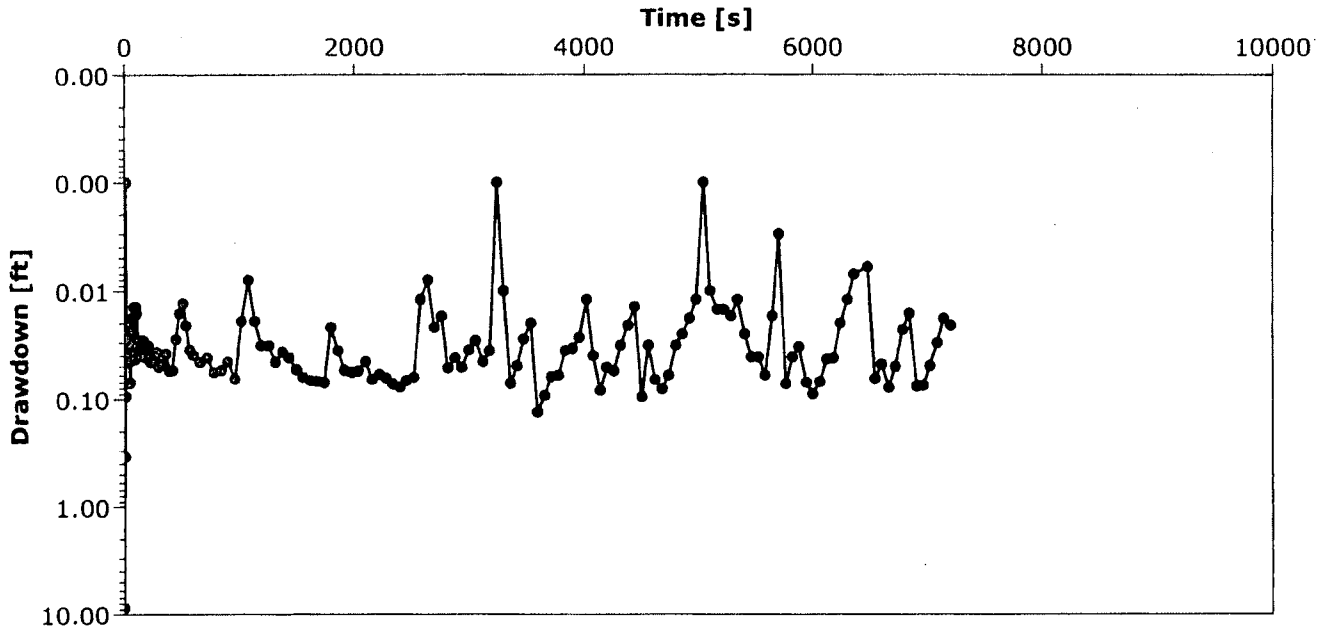
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW304B	Test Well: MW304B
Test conducted by: Daniel Bansah		Test date: 12/10/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 30.00 ft		



By DKB Date 10/24/08
Chkd. By [illegible] Date [illegible]

Paul C. Rizzo Associates, Inc.
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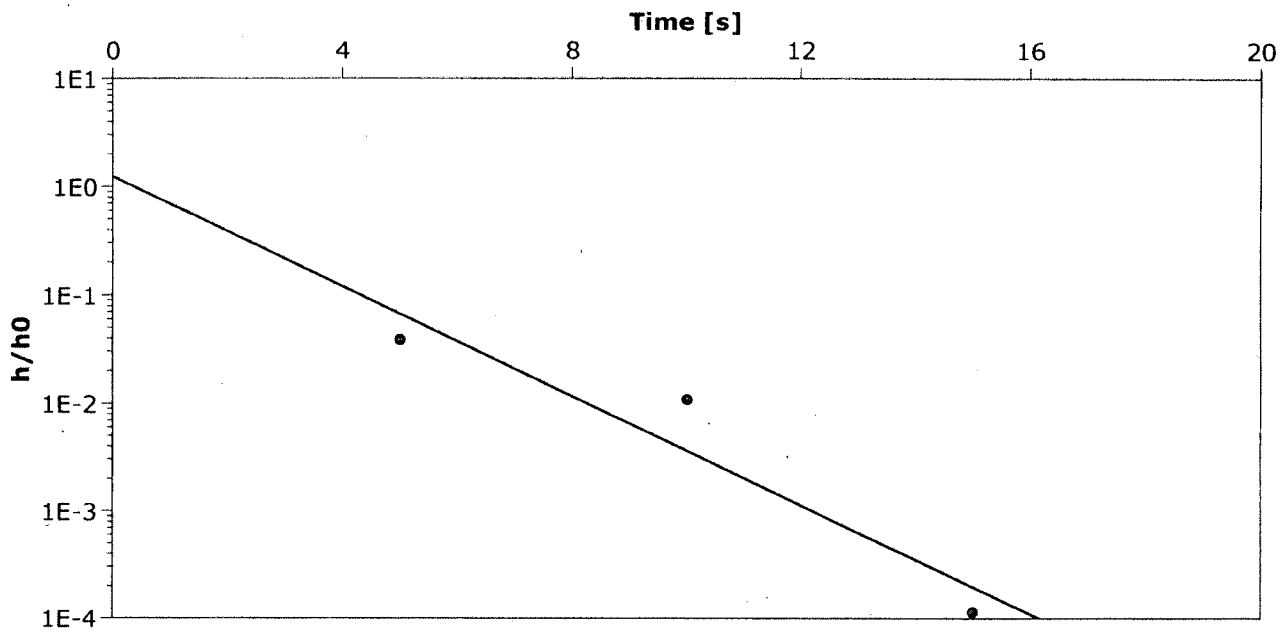
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW304B	Test Well: MW304B
Test conducted by: Daniel Bansah		Test date: 12/10/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 30.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW304B	3.85×10^{1}	

By DKB Date 10/24/08
Chkd. By GSA Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW304B	Test Well: MW304B
Test conducted by: Daniel Bansah		Test date: 12/10/2007

Aquifer Thickness: 30.00 ft

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW304B		3.85×10^{1}	

By DKB Date 10/24/08

Chkd. By DJF Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW304C	Test Well: MW304C
Test conducted by: Daniel Bansah	Test date: 12/13/2007	
Water level at t=0 [ft]: -4.63	Static water level [ft]: 13.75	Water level change at t=0 [ft]: 18.38

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	-4.634	18.384
2	5	9.671	4.079
3	10	10.202	3.548
4	15	10.233	3.517
5	20	10.268	3.482
6	25	10.299	3.451
7	30	10.325	3.425
8	35	10.355	3.395
9	40	10.384	3.366
10	45	10.412	3.338
11	50	10.44	3.31
12	55	10.468	3.282
13	60	10.492	3.258
14	70	10.538	3.212
15	80	10.598	3.152
16	90	10.654	3.096
17	100	10.701	3.049
18	110	10.746	3.004
19	120	10.797	2.953
20	135	10.87	2.88
21	150	10.936	2.814
22	165	11.004	2.746
23	180	11.061	2.689
24	195.131	11.115	2.635
25	210	11.184	2.566
26	225	11.245	2.505
27	240	11.296	2.454
28	255	11.354	2.396
29	270	11.417	2.333
30	285	11.465	2.285
31	300	11.514	2.236
32	330	11.618	2.132
33	360	11.705	2.045
34	390	11.797	1.953
35	420	11.883	1.867
36	450	11.967	1.783
37	480	12.046	1.704
38	510	12.121	1.629
39	540	12.192	1.558
40	570	12.257	1.493
41	600	12.326	1.424
42	660	12.443	1.307
43	720	12.555	1.195
44	780	12.652	1.098
45	840	12.739	1.011
46	900	12.823	0.927

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960	12.889	0.861
48	1020	12.954	0.796
49	1080	13.019	0.731
50	1140	13.067	0.683
51	1200	13.109	0.641
52	1260	13.152	0.598
53	1320	13.191	0.559
54	1380	13.227	0.523
55	1440	13.261	0.489
56	1500	13.294	0.456
57	1560	13.318	0.432
58	1620	13.338	0.412
59	1680	13.362	0.388
60	1740	13.378	0.372
61	1800	13.39	0.36
62	1860	13.398	0.352
63	1920	13.41	0.34
64	1980	13.422	0.328
65	2040	13.423	0.327
66	2100	13.431	0.319
67	2160	13.433	0.317
68	2220	13.441	0.309
69	2280	13.435	0.315
70	2340	13.442	0.308
71	2400	13.438	0.312
72	2460	13.437	0.313
73	2520	13.437	0.313
74	2580	13.442	0.308
75	2640	13.441	0.309
76	2700	13.442	0.308
77	2760	13.437	0.313
78	2820	13.438	0.312
79	2880	13.438	0.312
80	2940	13.436	0.314
81	3000	13.436	0.314
82	3060	13.439	0.311
83	3120	13.436	0.314
84	3180	13.438	0.312
85	3240	13.436	0.314
86	3300	13.437	0.313
87	3360	13.433	0.317
88	3420	13.437	0.313
89	3480	13.438	0.312
90	3540	13.434	0.316
91	3600	13.431	0.319
92	3660	13.432	0.318
93	3720	13.435	0.315
94	3780	13.43	0.32
95	3840	13.429	0.321
96	3900	13.433	0.317
97	3960	13.429	0.321

By DKB Date 10/24/08

Chkd. By AST Date 10/27/08

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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020	13.428	0.322
99	4080	13.429	0.321
100	4140	13.424	0.326
101	4200	13.424	0.326
102	4260	13.422	0.328
103	4320	13.424	0.326
104	4380	13.42	0.33
105	4440	13.423	0.327
106	4500	13.419	0.331
107	4560	13.419	0.331
108	4620	13.418	0.332
109	4680	13.415	0.335
110	4740	13.415	0.335
111	4800	13.418	0.332
112	4860	13.412	0.338
113	4920	13.412	0.338
114	4980	13.412	0.338
115	5040	13.414	0.336
116	5100	13.411	0.339
117	5160	13.412	0.338
118	5220	13.41	0.34
119	5280	13.408	0.342
120	5340	13.41	0.34
121	5400	13.41	0.34
122	5460	13.406	0.344
123	5520	13.407	0.343
124	5580	13.407	0.343
125	5640	13.407	0.343
126	5700	13.407	0.343
127	5760	13.406	0.344
128	5820	13.402	0.348
129	5880	13.407	0.343
130	5940	13.405	0.345
131	6000	13.404	0.346
132	6060	13.408	0.342
133	6120	13.404	0.346
134	6180	13.404	0.346
135	6240	13.403	0.347
136	6300	13.403	0.347
137	6360	13.406	0.344
138	6420	13.401	0.349
139	6480	13.399	0.351
140	6540	13.403	0.347
141	6600	13.40	0.35
142	6660	13.401	0.349
143	6720	13.399	0.351
144	6780	13.404	0.346
145	6840	13.399	0.351
146	6900	13.399	0.351
147	6960	13.399	0.351
148	7020	13.399	0.351

By DKB Date 10/24/08

Chkd. By ASA Date 10/27/08

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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080	13.397	0.353
150	7140	13.397	0.353

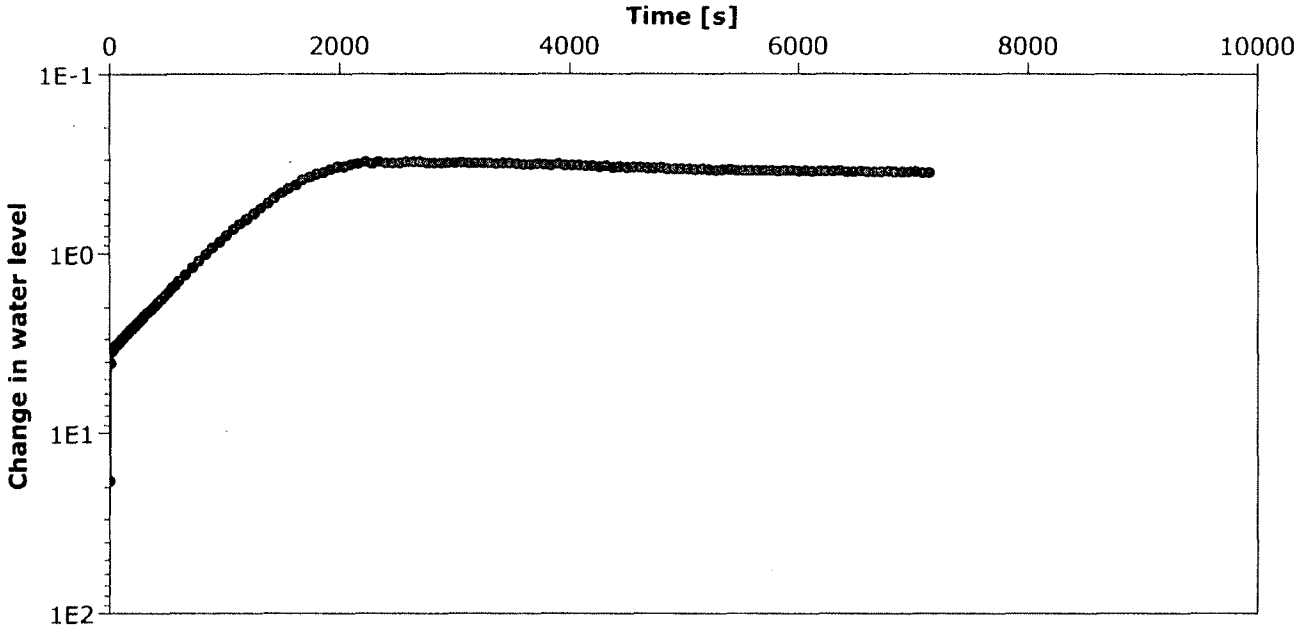
By DKB Date 10/24/08

Chkd. By ASJ Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW304C	Test Well: MW304C
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 69.00 ft		

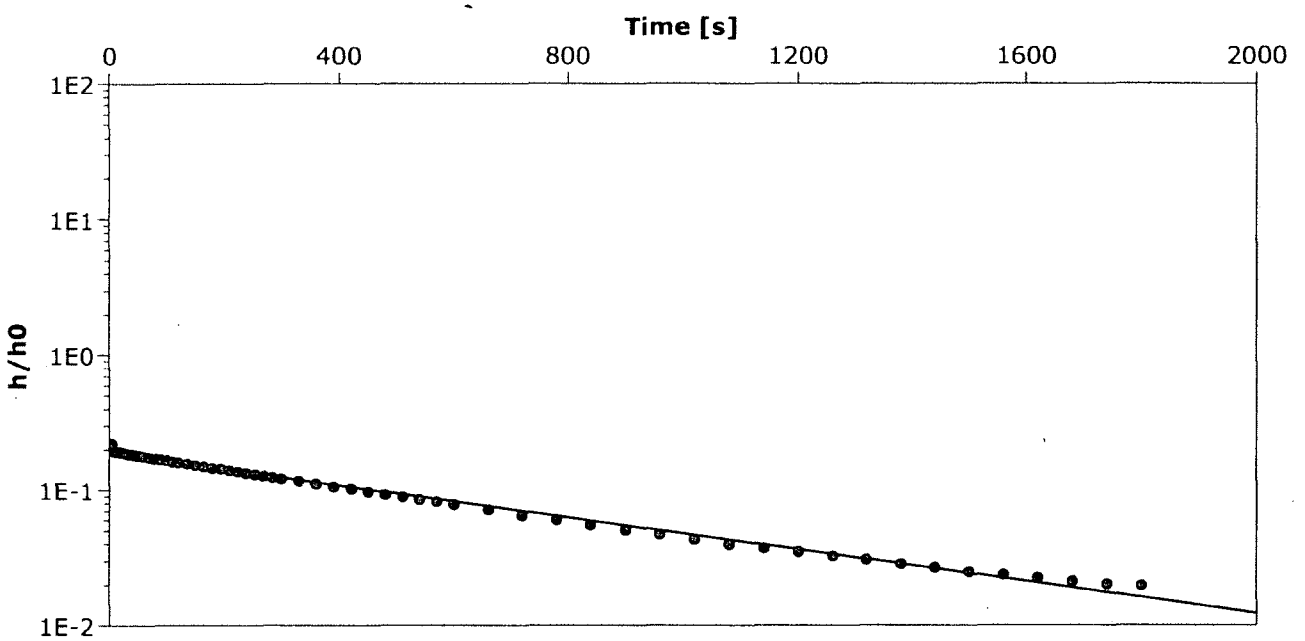


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW304C	Test Well: MW304C
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 69.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW304C	5.19×10^{-2}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW304C	Test Well: MW304C
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Aquifer Thickness: 69.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW304C		5.19×10^{-2}	

By: DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW305A1	Test Well: MW305A1
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/13/2007	
Water level at t=0 [ft]: 8.22	Static water level [ft]: 11.24	Water level change at t=0 [ft]: 3.02

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	8.224	3.016
2	5	10.16	1.08
3	10.001	10.346	0.894
4	15	10.475	0.765
5	20.001	10.579	0.661
6	25	10.67	0.57
7	30.001	10.738	0.502
8	35.001	10.799	0.441
9	40	10.842	0.398
10	45.001	10.883	0.357
11	50	10.902	0.338
12	55	10.941	0.299
13	60	10.966	0.274
14	70.001	11.003	0.237
15	80.001	11.03	0.21
16	90.001	11.051	0.189
17	100	11.065	0.175
18	110.001	11.077	0.163
19	120.001	11.106	0.134
20	135.001	11.101	0.139
21	150.001	11.114	0.126
22	165.001	11.122	0.118
23	180.001	11.126	0.114
24	195.001	11.134	0.106
25	210.001	11.137	0.103
26	225.001	11.139	0.101
27	240.001	11.146	0.094
28	255.001	11.148	0.092
29	270.001	11.155	0.085
30	285.001	11.159	0.081
31	300.001	11.161	0.079
32	330.001	11.168	0.072
33	360.001	11.171	0.069
34	390.001	11.173	0.067
35	420.001	11.177	0.063
36	450.001	11.183	0.057
37	480.001	11.184	0.056
38	510.001	11.189	0.051
39	540.001	11.191	0.049
40	570.001	11.193	0.047
41	600.001	11.193	0.047
42	660.001	11.20	0.04
43	720.001	11.20	0.04
44	780.001	11.202	0.038
45	840.001	11.204	0.036
46	900.001	11.203	0.037

By AKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	11.208	0.032
48	1020.001	11.211	0.029
49	1080.001	11.211	0.029
50	1140.001	11.211	0.029
51	1200.001	11.213	0.027
52	1260.001	11.212	0.028
53	1320.001	11.214	0.026
54	1380.001	11.213	0.027
55	1440.001	11.216	0.024
56	1500.001	11.216	0.024
57	1560.001	11.216	0.024
58	1620.001	11.217	0.023
59	1680.001	11.217	0.023
60	1740.001	11.217	0.023
61	1800.001	11.215	0.025
62	1860.001	11.214	0.026
63	1920.001	11.217	0.023
64	1980.001	11.217	0.023
65	2040.001	11.22	0.02
66	2100.001	11.221	0.019
67	2160.001	11.221	0.019
68	2220.001	11.219	0.021
69	2280.001	11.222	0.018
70	2340.001	11.222	0.018
71	2400.001	11.227	0.013
72	2460.001	11.221	0.019
73	2520.001	11.224	0.016
74	2580.001	11.223	0.017
75	2640.001	11.225	0.015
76	2700.001	11.227	0.013
77	2760.001	11.228	0.012
78	2820.001	11.225	0.015
79	2880.001	11.227	0.013
80	2940.001	11.228	0.012
81	3000.001	11.229	0.011
82	3060.001	11.23	0.01
83	3120.001	11.227	0.013
84	3180.001	11.225	0.015
85	3240.001	11.229	0.011
86	3300.001	11.222	0.018
87	3360.001	11.227	0.013
88	3420.001	11.229	0.011
89	3480.001	11.229	0.011
90	3540.001	11.225	0.015
91	3600.001	11.227	0.013
92	3660.001	11.228	0.012
93	3720.001	11.227	0.013
94	3780.001	11.231	0.009
95	3840.001	11.226	0.014
96	3900.001	11.223	0.017
97	3960.001	11.228	0.012

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	11.227	0.013
99	4080.001	11.228	0.012
100	4140.001	11.223	0.017
101	4200.001	11.227	0.013
102	4260.001	11.225	0.015
103	4320.001	11.225	0.015
104	4380.001	11.226	0.014
105	4440.001	11.22	0.02
106	4500.001	11.222	0.018
107	4560.001	11.224	0.016
108	4620.001	11.227	0.013
109	4680.001	11.226	0.014
110	4740.001	11.224	0.016
111	4800.001	11.227	0.013
112	4860.001	11.221	0.019
113	4920.001	11.219	0.021
114	4980.001	11.225	0.015
115	5040.001	11.227	0.013
116	5100.001	11.222	0.018
117	5160.001	11.22	0.02
118	5220.001	11.225	0.015
119	5280.001	11.22	0.02
120	5340.001	11.224	0.016
121	5400.001	11.225	0.015
122	5460.001	11.229	0.011
123	5520.001	11.225	0.015
124	5580.001	11.223	0.017
125	5640.001	11.225	0.015
126	5700.001	11.224	0.016
127	5760.001	11.223	0.017
128	5820.001	11.222	0.018
129	5880.001	11.228	0.012
130	5940.001	11.224	0.016
131	6000.001	11.227	0.013
132	6060.001	11.224	0.016
133	6120.001	11.223	0.017
134	6180.001	11.221	0.019
135	6240.001	11.22	0.02
136	6300.001	11.223	0.017
137	6360.001	11.218	0.022
138	6420.001	11.22	0.02
139	6480.001	11.219	0.021
140	6540.001	11.217	0.023
141	6600.001	11.221	0.019
142	6660.001	11.219	0.021
143	6720.001	11.218	0.022
144	6780.001	11.217	0.023
145	6840.001	11.218	0.022
146	6900.001	11.217	0.023
147	6960.001	11.213	0.027
148	7020.001	11.212	0.028

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/24/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	11.213	0.027
150	7140.001	11.213	0.027
151	7200.001	11.215	0.025

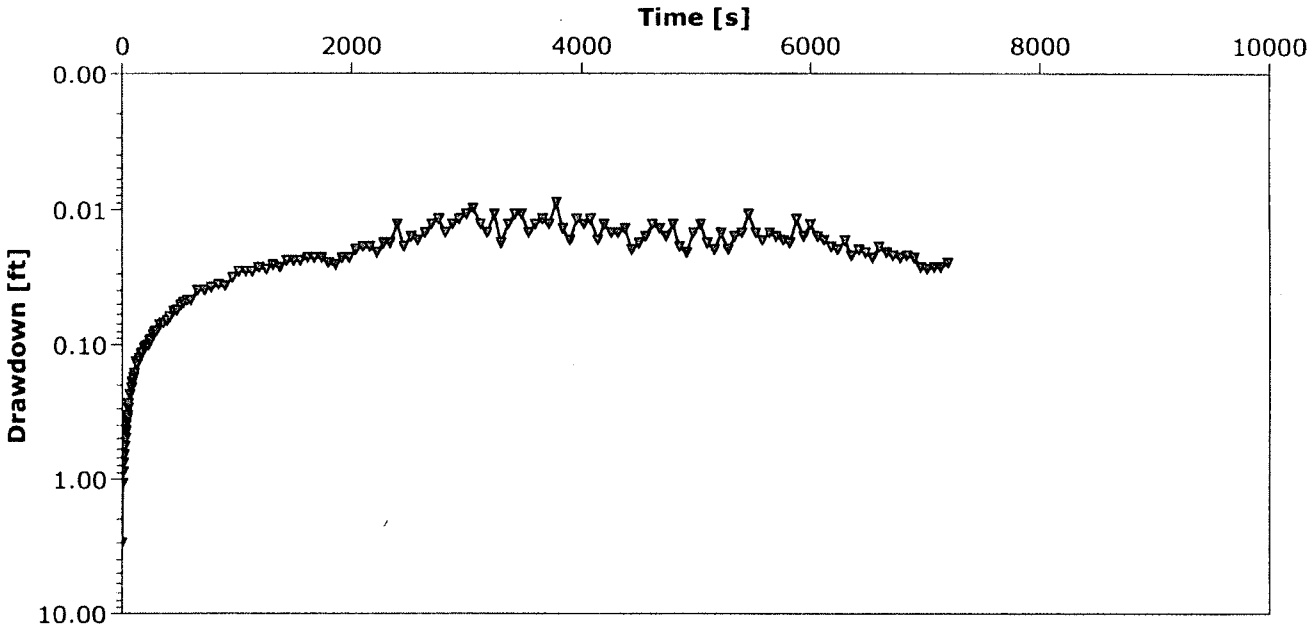
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW305A1	Test Well: MW305A1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Change in WL in Time	Analysis date: 2/11/2008
Aquifer Thickness: 23.00 ft		

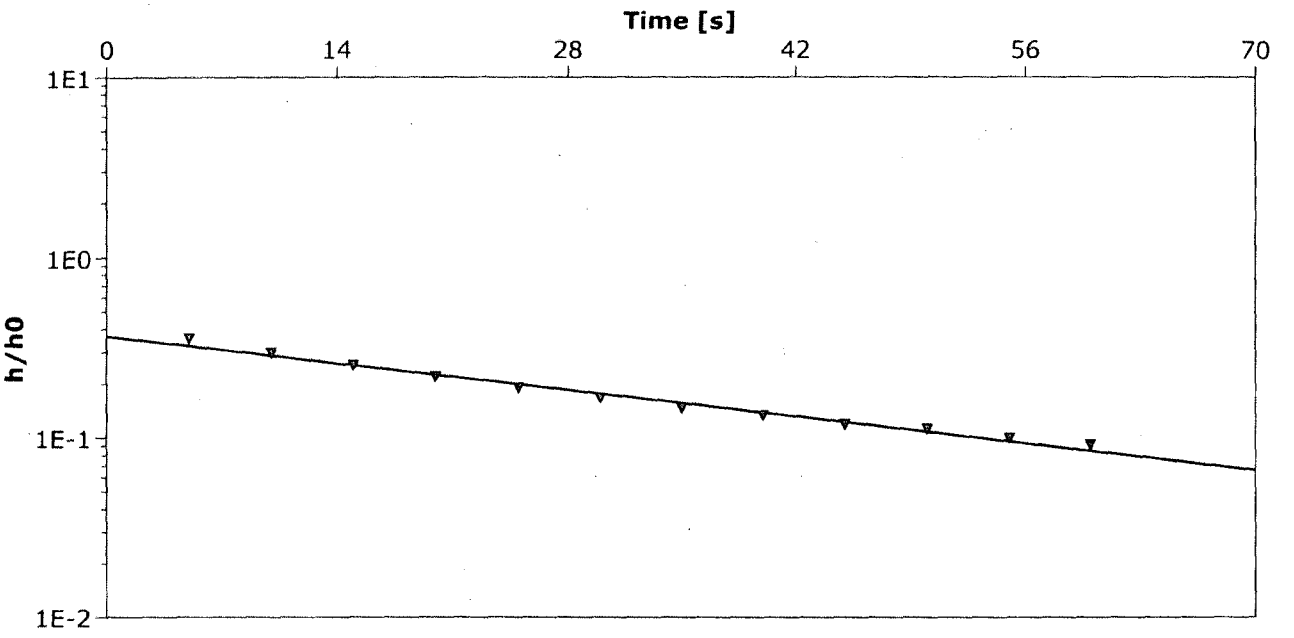


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW305A1	Test Well: MW305A1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 23.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW305A1	6.04×10^{0}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW305A1	Test Well: MW305A1
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/13/2007
Aquifer Thickness: 23.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW305A1		6.04×10^0	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/24/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW305A2	Test Well: MW305A2
Test conducted by: Daniel Bansah	Test date: 12/14/2007	
Water level at t=0 [ft]: 6.71	Static water level [ft]: 11.14	Water level change at t=0 [ft]: 4.43

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	6.71	4.43
2	5.001	10.177	0.963
3	10.001	10.646	0.494
4	15.001	10.854	0.286
5	20.001	10.951	0.189
6	25.001	10.971	0.169
7	30.001	10.995	0.145
8	35.001	11.008	0.132
9	40.001	11.019	0.121
10	45.001	11.025	0.115
11	50.001	11.033	0.107
12	55.001	11.038	0.102
13	60.001	11.04	0.10
14	70.002	11.049	0.091
15	80.001	11.052	0.088
16	90.001	11.057	0.083
17	100.001	11.061	0.079
18	110.001	11.068	0.072
19	120.001	11.067	0.073
20	135.001	11.305	0.165
21	150.001	11.289	0.149
22	165.001	11.254	0.114
23	180.001	11.222	0.082
24	195.001	11.192	0.052
25	210.001	11.168	0.028
26	225.001	11.135	0.005
27	240.001	11.11	0.03
28	255.001	11.089	0.051
29	270.001	11.069	0.071
30	285.001	11.041	0.099
31	300.001	11.033	0.107
32	330.001	11.001	0.139
33	360.001	10.985	0.155
34	390.001	10.968	0.172
35	420.001	10.954	0.186
36	450.001	10.946	0.194
37	480.001	10.941	0.199
38	510.001	10.94	0.20
39	540.001	10.932	0.208
40	570.001	10.935	0.205
41	600.001	10.93	0.21
42	660.001	10.931	0.209
43	720.001	10.932	0.208
44	780.001	10.924	0.216
45	840.001	10.918	0.222
46	900.001	10.914	0.226

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	10.905	0.235
48	1020.001	10.904	0.236
49	1080.001	10.902	0.238
50	1140.001	10.888	0.252
51	1200.001	10.89	0.25
52	1260.001	10.887	0.253
53	1320.001	10.883	0.257
54	1380.001	10.886	0.254
55	1440.001	10.882	0.258
56	1500.001	10.894	0.246
57	1560.001	10.892	0.248
58	1620.001	10.89	0.25
59	1680.001	10.891	0.249
60	1740.001	10.895	0.245
61	1800.001	10.892	0.248
62	1860.001	10.896	0.244
63	1920.001	10.897	0.243
64	1980.001	10.893	0.247
65	2040.001	10.884	0.256
66	2100.001	10.886	0.254
67	2160.001	10.88	0.26
68	2220.001	10.881	0.259
69	2280.001	10.884	0.256
70	2340.001	10.887	0.253
71	2400.001	10.885	0.255
72	2460.001	10.881	0.259
73	2520.001	10.888	0.252
74	2580.001	10.882	0.258
75	2640.001	10.886	0.254
76	2700.001	10.887	0.253
77	2760.001	10.874	0.266
78	2820.001	10.88	0.26
79	2880.001	10.884	0.256
80	2940.001	10.883	0.257
81	3000.001	10.891	0.249
82	3060.001	10.899	0.241
83	3120.001	10.905	0.235
84	3180.001	10.906	0.234
85	3240.001	10.912	0.228
86	3300.001	10.919	0.221
87	3360.001	10.921	0.219
88	3420.001	10.92	0.22
89	3480.001	10.917	0.223
90	3540.001	10.907	0.233
91	3600.001	10.901	0.239
92	3660.001	10.911	0.229
93	3720.001	10.921	0.219
94	3780.001	10.93	0.21
95	3840.001	10.925	0.215
96	3900.001	10.928	0.212
97	3960.001	10.921	0.219

By DKB Date 10/24/08

Chkd. By ADT Date 10/28/08

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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	10.916	0.224
99	4080.001	10.913	0.227
100	4140.001	10.909	0.231
101	4200.001	10.913	0.227
102	4260.001	10.916	0.224
103	4320.001	10.926	0.214
104	4380.001	10.935	0.205
105	4440.001	10.937	0.203
106	4500.001	10.939	0.201
107	4560.001	10.955	0.185
108	4620.001	10.959	0.181
109	4680.001	10.969	0.171
110	4740.001	10.966	0.174
111	4800.001	10.998	0.142
112	4860.001	10.993	0.147
113	4920.001	11.008	0.132
114	4980.001	11.003	0.137
115	5040.001	11.008	0.132
116	5100.001	11.001	0.139
117	5160.001	10.99	0.15
118	5220.001	10.994	0.146
119	5280.001	10.989	0.151
120	5340.001	10.985	0.155
121	5400.001	10.972	0.168
122	5460.001	10.962	0.178
123	5520.001	10.963	0.177
124	5580.001	10.945	0.195
125	5640.001	10.922	0.218
126	5700.001	10.915	0.225
127	5760.001	10.909	0.231
128	5820.001	10.91	0.23
129	5880.001	10.899	0.241
130	5940.001	10.891	0.249
131	6000.001	10.883	0.257
132	6060.001	10.868	0.272
133	6120.001	10.86	0.28
134	6180.001	10.855	0.285
135	6240.001	10.857	0.283
136	6300.001	10.854	0.286
137	6360.001	10.857	0.283
138	6420.001	10.855	0.285
139	6480.001	10.854	0.286
140	6540.001	10.861	0.279
141	6600.001	10.849	0.291
142	6660.001	10.847	0.293
143	6720.001	10.843	0.297
144	6780.001	10.838	0.302
145	6840.001	10.83	0.31
146	6900.001	10.826	0.314
147	6960.001	10.821	0.319
148	7020.001	10.813	0.327

By DKB Date 10/24/08

Chkd. By AST Date 10/28/08

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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	10.809	0.331
150	7140.001	10.813	0.327

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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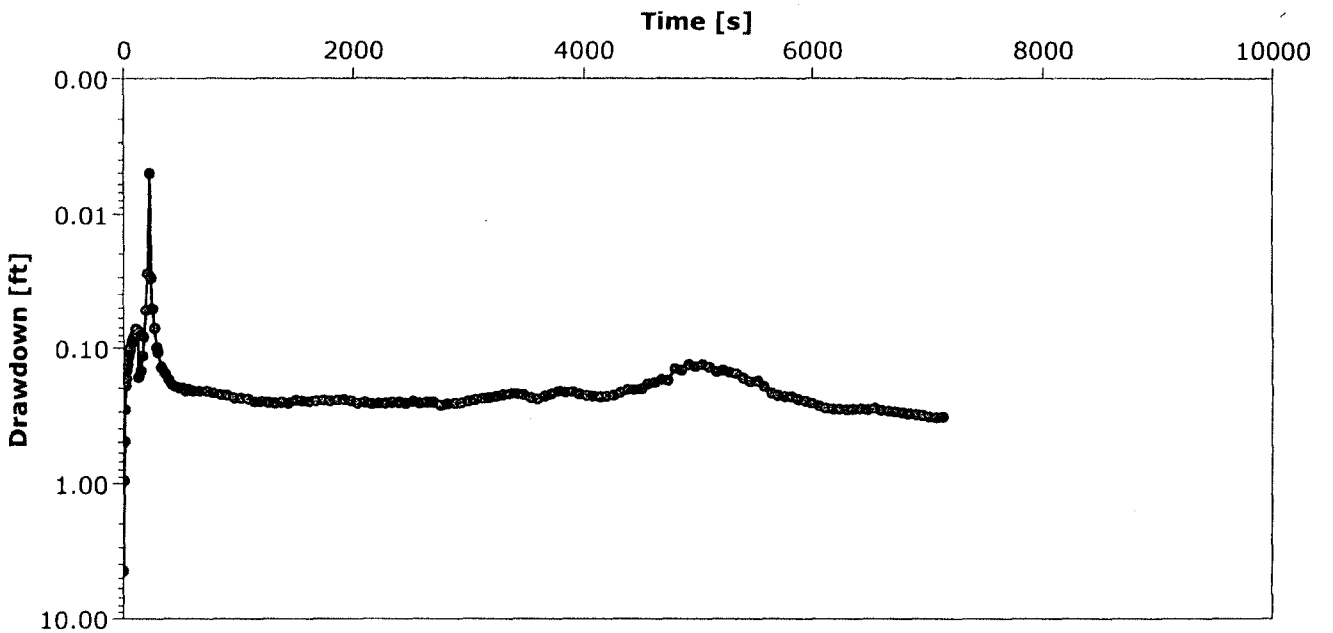
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW305A2	Test Well: MW305A2
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 23.00 ft		



By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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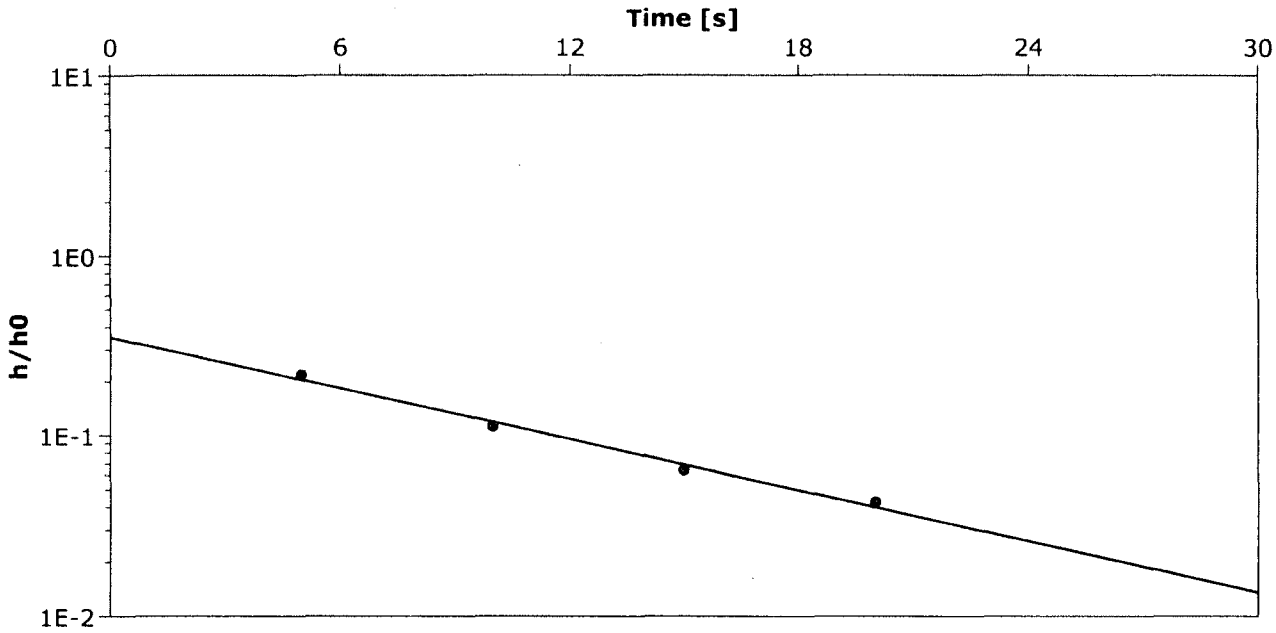
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW305A2	Test Well: MW305A2
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 23.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW305A2	7.18×10^{0}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW305A2	Test Well: MW305A2
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Aquifer Thickness: 23.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW305A2		7.18×10^0	

By DKB Date 10/24/08

Chkd. By AST Date 10/27/08

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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW305B	Test Well: MW305B
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/14/2007	
Water level at t=0 [ft]: 6.05	Static water level [ft]: 10.41	Water level change at t=0 [ft]: 4.36

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	6.054	4.356
2	5	7.962	2.448
3	10.001	8.399	2.011
4	15	8.785	1.625
5	20.001	9.091	1.319
6	25.001	9.345	1.065
7	30	9.554	0.856
8	35.001	9.723	0.687
9	40	9.848	0.562
10	45.001	9.959	0.451
11	50.001	10.042	0.368
12	55.001	10.101	0.309
13	60	10.133	0.277
14	70.001	10.226	0.184
15	80.001	10.267	0.143
16	90.001	10.293	0.117
17	100.001	10.311	0.099
18	110.001	10.326	0.084
19	120.001	10.331	0.079
20	135.001	10.339	0.071
21	150.001	10.352	0.058
22	165.001	10.353	0.057
23	180.001	10.356	0.054
24	195.001	10.36	0.05
25	210.001	10.363	0.047
26	225.001	10.369	0.041
27	240.001	10.369	0.041
28	255.001	10.375	0.035
29	270.001	10.376	0.034
30	285.001	10.379	0.031
31	300.001	10.379	0.031
32	330.001	10.381	0.029
33	360.001	10.388	0.022
34	390.001	10.387	0.023
35	420.001	10.388	0.022
36	450.001	10.39	0.02
37	480.001	10.392	0.018
38	510.001	10.393	0.017
39	540.001	10.392	0.018
40	570.001	10.395	0.015
41	600.001	10.389	0.021
42	660.001	10.396	0.014
43	720.001	10.396	0.014
44	780.001	10.395	0.015
45	840.001	10.395	0.015
46	900.001	10.398	0.012

By BKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	10.399	0.011
48	1020.001	10.398	0.012
49	1080.001	10.399	0.011
50	1140.001	10.399	0.011
51	1200.001	10.40	0.01
52	1260.001	10.397	0.013
53	1320.001	10.398	0.012
54	1380.001	10.398	0.012
55	1440.001	10.399	0.011
56	1500.001	10.397	0.013
57	1560.001	10.399	0.011
58	1620.001	10.397	0.013
59	1680.001	10.397	0.013
60	1740.001	10.401	0.009
61	1800.001	10.401	0.009
62	1860.001	10.40	0.01
63	1920.001	10.40	0.01
64	1980.001	10.40	0.01
65	2040.001	10.40	0.01
66	2100.001	10.399	0.011
67	2160.001	10.397	0.013
68	2220.001	10.399	0.011
69	2280.001	10.396	0.014
70	2340.001	10.398	0.012
71	2400.001	10.398	0.012
72	2460.001	10.398	0.012
73	2520.001	10.396	0.014
74	2580.001	10.399	0.011
75	2640.001	10.401	0.009
76	2700.001	10.399	0.011
77	2760.001	10.40	0.01
78	2820.001	10.399	0.011
79	2880.001	10.40	0.01
80	2940.001	10.396	0.014
81	3000.001	10.40	0.01
82	3060.001	10.397	0.013
83	3120.001	10.40	0.01
84	3180.001	10.398	0.012
85	3240.001	10.399	0.011
86	3300.001	10.399	0.011
87	3360.001	10.401	0.009
88	3420.001	10.402	0.008
89	3480.001	10.399	0.011
90	3540.001	10.398	0.012
91	3600.001	10.397	0.013
92	3660.001	10.399	0.011
93	3720.001	10.402	0.008
94	3780.001	10.401	0.009
95	3840.001	10.399	0.011
96	3900.001	10.40	0.01
97	3960.001	10.398	0.012

By DKB Date 10/24/08

Chkd. By [illegible] Date 11/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	10.399	0.011
99	4080.001	10.403	0.007
100	4140.001	10.399	0.011
101	4200.001	10.398	0.012
102	4260.001	10.40	0.01
103	4320.001	10.40	0.01
104	4380.001	10.396	0.014
105	4440.001	10.399	0.011
106	4500.001	10.397	0.013
107	4560.001	10.398	0.012
108	4620.001	10.398	0.012
109	4680.001	10.401	0.009
110	4740.001	10.399	0.011
111	4800.001	10.397	0.013
112	4860.001	10.40	0.01
113	4920.001	10.399	0.011
114	4980.001	10.396	0.014
115	5040.001	10.396	0.014
116	5100.001	10.398	0.012
117	5160.001	10.40	0.01
118	5220.001	10.399	0.011
119	5280.001	10.396	0.014
120	5340.001	10.396	0.014
121	5400.001	10.396	0.014
122	5460.001	10.398	0.012
123	5520.001	10.398	0.012
124	5580.001	10.401	0.009
125	5640.001	10.40	0.01
126	5700.001	10.397	0.013
127	5760.001	10.396	0.014
128	5820.001	10.40	0.01
129	5880.001	10.397	0.013
130	5940.001	10.398	0.012
131	6000.001	10.401	0.009
132	6060.001	10.394	0.016
133	6120.001	10.40	0.01
134	6180.001	10.399	0.011
135	6240.001	10.40	0.01
136	6300.001	10.396	0.014
137	6360.001	10.40	0.01
138	6420.001	10.399	0.011
139	6480.001	10.394	0.016
140	6540.001	10.394	0.016
141	6600.001	10.396	0.014
142	6660.001	10.395	0.015
143	6720.001	10.397	0.013
144	6780.001	10.396	0.014
145	6840.001	10.395	0.015
146	6900.001	10.396	0.014
147	6960.001	10.398	0.012
148	7020.001	10.398	0.012

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	10.396	0.014
150	7140.001	10.396	0.014

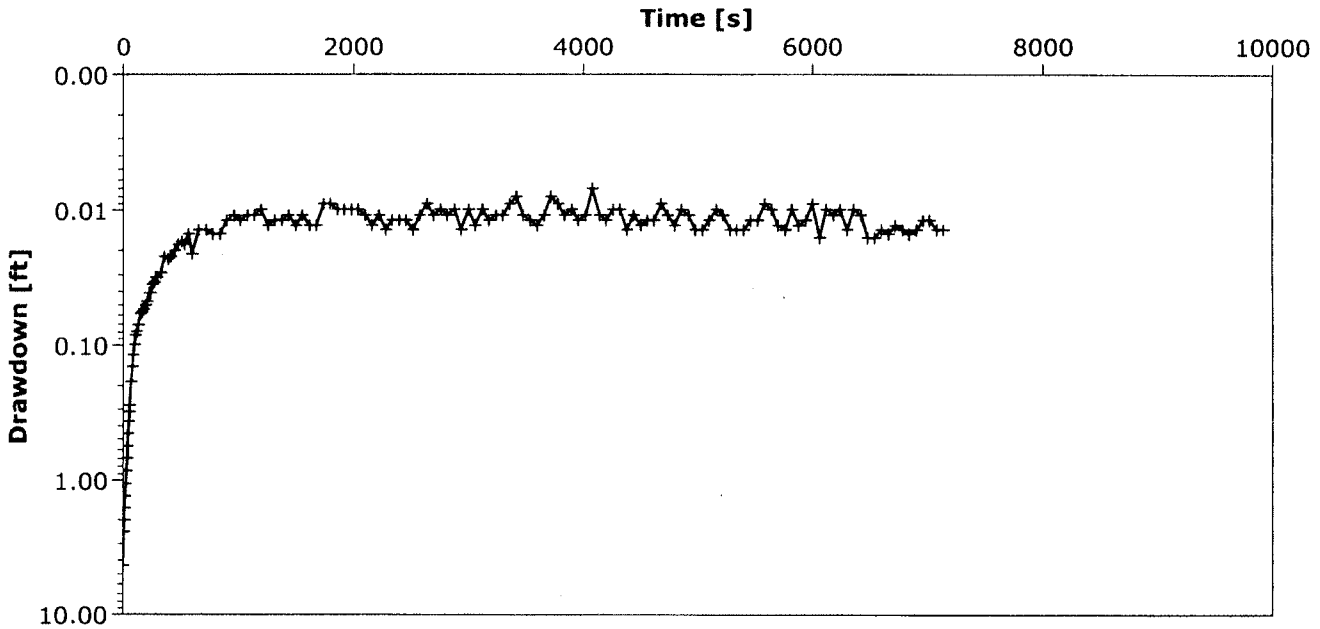
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW305B	Test Well: MW305B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/12/2008
Aquifer Thickness: 30.00 ft		



By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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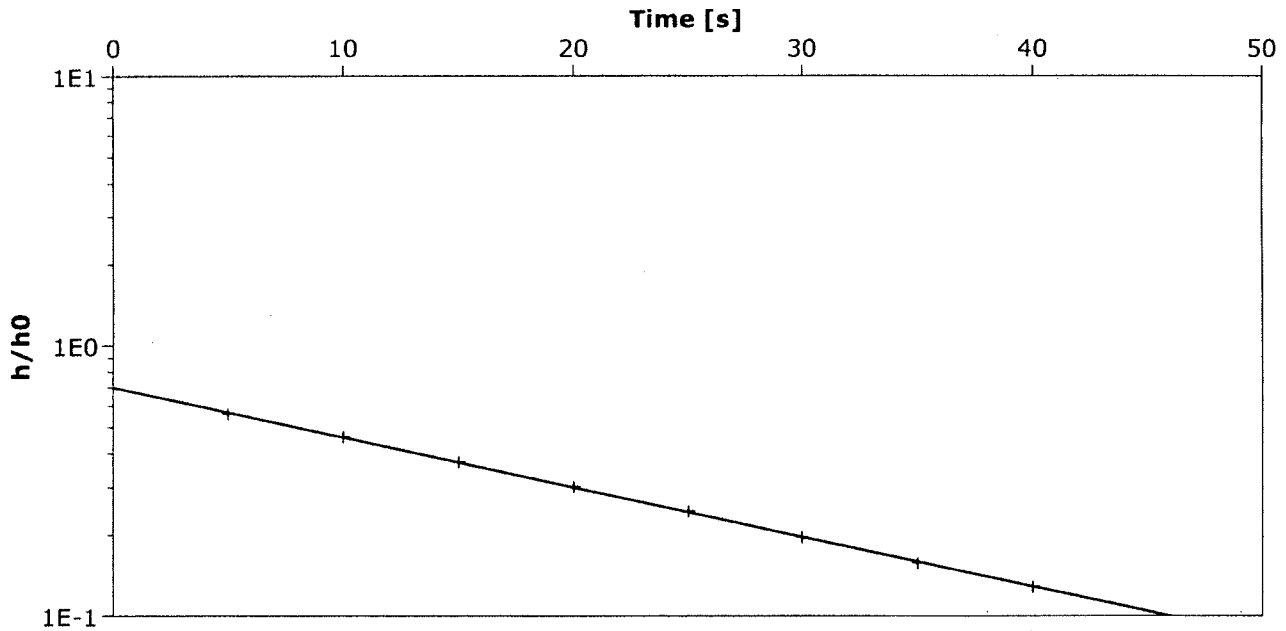
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW305B	Test Well: MW305B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/12/2008
Aquifer Thickness: 30.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW305B	2.80×10^{0}	

By DKB Date 10/24/08
Chkd. By [illegible] Date [illegible]

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW305B	Test Well: MW305B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/14/2007
Aquifer Thickness: 30.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/12/2008	Hvorslev	MW305B		2.80×10^0	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW306A	Test Well: MW306A
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/2/2007	
Water level at t=0 [ft]: 6.76	Static water level [ft]: 8.24	Water level change at t=0 [ft]: 1.48

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	6.763	1.477
2	5.001	8.034	0.206
3	10.001	8.191	0.049
4	15.001	8.232	0.008
5	20.001	8.238	0.002
6	25.001	8.231	0.009
7	30.001	8.221	0.019
8	35.001	8.216	0.024
9	40.001	8.224	0.016
10	45.001	8.224	0.016
11	50.001	8.223	0.017
12	55.001	8.225	0.015
13	60.001	8.227	0.013
14	70.001	8.223	0.017
15	80.001	8.225	0.015
16	90.001	8.227	0.013
17	100.001	8.229	0.011
18	110.001	8.235	0.005
19	120.001	8.228	0.012
20	135.001	9.14	0.90
21	150.001	8.229	0.011
22	165.001	8.234	0.006
23	180.001	8.229	0.011
24	195.001	8.232	0.008
25	210.001	8.231	0.009
26	225.001	8.227	0.013
27	240.001	8.225	0.015
28	255.001	8.232	0.008
29	270.001	8.228	0.012
30	285.001	8.231	0.009
31	300.001	8.232	0.008
32	330.001	8.23	0.01
33	360.001	8.229	0.011
34	390.001	8.229	0.011
35	420.001	8.229	0.011
36	450.001	8.227	0.013
37	480.001	8.227	0.013
38	510.001	8.225	0.015
39	540.001	8.222	0.018
40	570.001	8.221	0.019
41	600.001	8.218	0.022
42	660.001	8.222	0.018
43	720.001	8.22	0.02
44	780.001	8.219	0.021
45	840.001	8.221	0.019
46	900.001	8.222	0.018

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/24/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	8.22	0.02
48	1020.001	8.223	0.017
49	1080.001	8.228	0.012
50	1140.001	8.229	0.011
51	1200.001	8.229	0.011
52	1260.001	8.229	0.011
53	1320.001	8.227	0.013
54	1380.001	8.224	0.016
55	1440.001	8.228	0.012
56	1500.001	8.226	0.014
57	1560.001	8.227	0.013
58	1620.001	8.224	0.016
59	1680.001	8.225	0.015
60	1740.001	8.225	0.015
61	1800.001	8.225	0.015
62	1860.001	8.227	0.013
63	1920.001	8.225	0.015
64	1980.001	8.224	0.016
65	2040.001	8.228	0.012
66	2100.001	8.226	0.014
67	2160.001	8.222	0.018
68	2220.001	8.223	0.017
69	2280.001	8.224	0.016
70	2340.001	8.224	0.016
71	2400.001	8.223	0.017
72	2460.001	8.224	0.016
73	2520.001	8.224	0.016
74	2580.001	8.22	0.02
75	2640.001	8.219	0.021
76	2700.001	8.222	0.018
77	2760.001	8.222	0.018
78	2820.001	8.217	0.023
79	2880.001	8.215	0.025
80	2940.001	8.214	0.026
81	3000.001	8.217	0.023
82	3060.001	8.222	0.018
83	3120.001	8.217	0.023
84	3180.001	8.215	0.025
85	3240.001	8.217	0.023
86	3300.001	8.216	0.024
87	3360.001	8.218	0.022
88	3420.001	8.217	0.023
89	3480.001	8.221	0.019
90	3540.001	8.221	0.019
91	3600.001	8.219	0.021
92	3660.001	8.219	0.021
93	3720.001	8.22	0.02
94	3780.001	8.219	0.021
95	3840.001	8.224	0.016
96	3900.001	8.224	0.016
97	3960.001	8.219	0.021

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/24/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	8.219	0.021
99	4080.001	8.218	0.022
100	4140.001	8.221	0.019
101	4200.001	8.223	0.017
102	4260.001	8.222	0.018
103	4320.001	8.221	0.019
104	4380.001	8.219	0.021
105	4440.001	8.219	0.021
106	4500.001	8.218	0.022
107	4560.001	8.217	0.023
108	4620.001	8.217	0.023
109	4680.001	8.22	0.02
110	4740.001	8.22	0.02
111	4800.001	8.219	0.021
112	4860.001	8.217	0.023
113	4920.001	8.216	0.024
114	4980.001	8.222	0.018
115	5040.001	8.221	0.019
116	5100.001	8.221	0.019
117	5160.001	8.217	0.023
118	5220.001	8.216	0.024
119	5280.001	8.219	0.021
120	5340.001	8.224	0.016
121	5400.001	8.22	0.02
122	5460.001	8.218	0.022
123	5520.001	8.216	0.024
124	5580.001	8.221	0.019
125	5640.001	8.218	0.022
126	5700.001	8.22	0.02
127	5760.001	8.215	0.025
128	5820.001	8.221	0.019
129	5880.001	8.215	0.025
130	5940.001	8.214	0.026
131	6000.001	8.215	0.025
132	6060.001	8.218	0.022
133	6120.001	8.212	0.028
134	6180.001	8.217	0.023
135	6240.001	8.216	0.024
136	6300.001	8.214	0.026
137	6360.001	8.213	0.027
138	6420.001	8.214	0.026
139	6480.001	8.22	0.02
140	6540.001	8.216	0.024
141	6600.001	8.212	0.028
142	6660.001	8.216	0.024
143	6720.001	8.212	0.028
144	6780.001	8.215	0.025
145	6840.001	8.211	0.029
146	6900.001	8.215	0.025
147	6960.001	8.211	0.029
148	7020.001	8.216	0.024

By ALB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	8.216	0.024
150	7140.001	8.214	0.026
151	7200.001	8.212	0.028

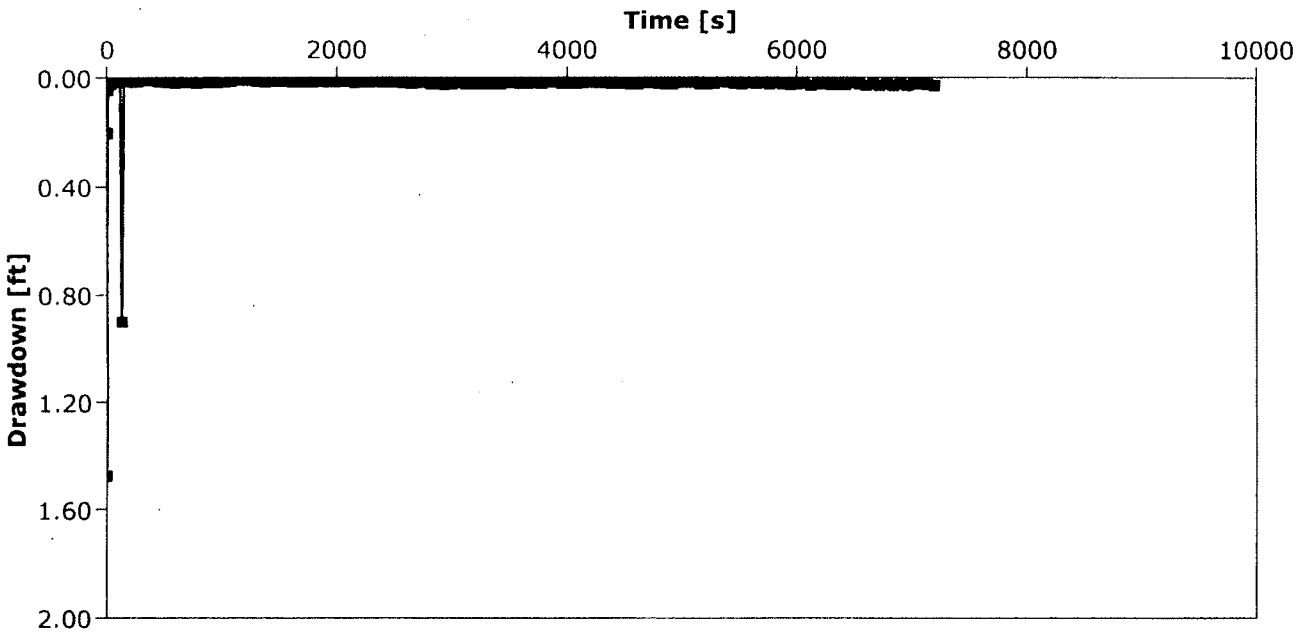
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW306A	Test Well: MW306A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 27.00 ft		



By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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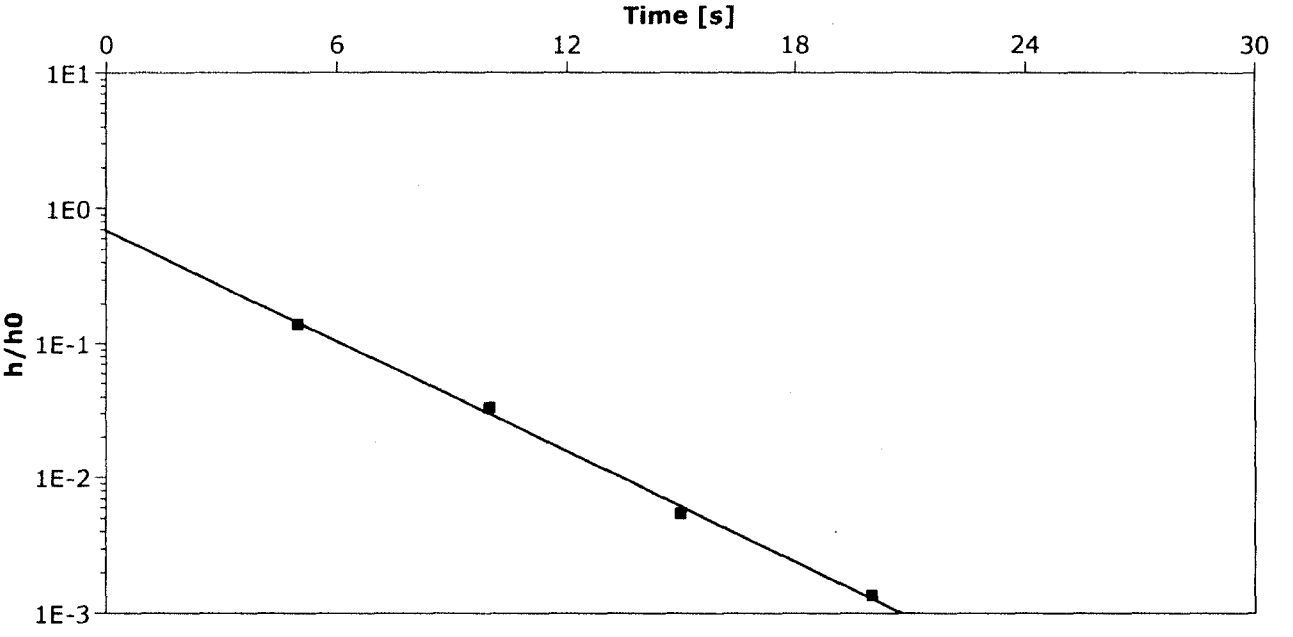
Slug Test Analysis Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW306A	Test Well: MW306A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 27.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW306A	9.63×10^{1}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW306A	Test Well: MW306A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Aquifer Thickness: 27.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW306A		9.63×10^{1}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 11/22/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW306C	Test Well: MW306C
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/2/2007	
Water level at t=0 [ft]: 5.46	Static water level [ft]: 7.61	Water level change at t=0 [ft]: 2.15

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	5.458	2.152
2	5	4.135	3.475
3	10.001	4.598	3.012
4	15	4.606	3.004
5	20.001	4.626	2.984
6	25	4.63	2.98
7	30.001	4.65	2.96
8	35	4.651	2.959
9	40	4.673	2.937
10	45.001	4.683	2.927
11	50	4.693	2.917
12	55.001	4.708	2.902
13	60	4.714	2.896
14	70.001	4.742	2.868
15	80	4.762	2.848
16	90	4.782	2.828
17	100	4.805	2.805
18	110	4.83	2.78
19	120	4.856	2.754
20	135	4.886	2.724
21	150.001	4.92	2.69
22	165.001	4.948	2.662
23	180	4.983	2.627
24	195	5.007	2.603
25	210.001	5.044	2.566
26	225.001	5.076	2.534
27	240	5.097	2.513
28	255	5.135	2.475
29	270	5.167	2.443
30	285.001	5.195	2.415
31	300.001	5.225	2.385
32	330.001	5.281	2.329
33	360.001	5.338	2.272
34	390.001	5.449	2.161
35	420.001	5.48	2.13
36	450.001	5.511	2.099
37	480.001	5.555	2.055
38	510.001	5.604	2.006
39	540.001	5.643	1.967
40	570.001	5.691	1.919
41	600.001	5.736	1.874
42	660.001	5.824	1.786
43	720.001	5.908	1.702
44	780.001	5.993	1.617
45	840.001	6.071	1.539
46	900.001	6.144	1.466

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	6.216	1.394
48	1020.001	6.288	1.322
49	1080.001	6.356	1.254
50	1140.001	6.417	1.193
51	1200.001	6.477	1.133
52	1260.001	6.532	1.078
53	1320.001	6.585	1.025
54	1380.001	6.64	0.97
55	1440.001	6.692	0.918
56	1500.001	6.736	0.874
57	1560.001	6.778	0.832
58	1620.001	6.818	0.792
59	1680.001	6.855	0.755
60	1740.001	6.90	0.71
61	1800.001	6.934	0.676
62	1860.001	6.967	0.643
63	1920.001	7.00	0.61
64	1980.001	7.031	0.579
65	2040.001	7.065	0.545
66	2100.001	7.091	0.519
67	2160.001	7.115	0.495
68	2220.001	7.141	0.469
69	2280.001	7.167	0.443
70	2340.001	7.189	0.421
71	2400.001	7.205	0.405
72	2460.001	7.23	0.38
73	2520.001	7.246	0.364
74	2580.001	7.258	0.352
75	2640.001	7.274	0.336
76	2700.001	7.297	0.313
77	2760.001	7.31	0.30
78	2820.001	7.322	0.288
79	2880.001	7.336	0.274
80	2940.001	7.343	0.267
81	3000.001	7.361	0.249
82	3060.001	7.364	0.246
83	3120.001	7.375	0.235
84	3180.001	7.388	0.222
85	3240.001	7.395	0.215
86	3300.001	7.405	0.205
87	3360.001	7.414	0.196
88	3420.001	7.418	0.192
89	3480.001	7.429	0.181
90	3540.001	7.435	0.175
91	3600.001	7.443	0.167
92	3660.001	7.452	0.158
93	3720.001	7.46	0.15
94	3780.001	7.466	0.144
95	3840.001	7.467	0.143
96	3900.001	7.468	0.142
97	3960.001	7.478	0.132

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	7.485	0.125
99	4080.001	7.485	0.125
100	4140.001	7.491	0.119
101	4200.001	7.493	0.117
102	4260.001	7.497	0.113
103	4320.001	7.501	0.109
104	4380.001	7.505	0.105
105	4440.001	7.506	0.104
106	4500.001	7.514	0.096
107	4560.001	7.514	0.096
108	4620.001	7.515	0.095
109	4680.001	7.514	0.096
110	4740.001	7.516	0.094
111	4800.001	7.523	0.087
112	4860.001	7.525	0.085
113	4920.001	7.526	0.084
114	4980.001	7.525	0.085
115	5040.001	7.528	0.082
116	5100.001	7.53	0.08
117	5160.001	7.534	0.076
118	5220.001	7.535	0.075
119	5280.001	7.537	0.073
120	5340.001	7.541	0.069
121	5400.001	7.541	0.069
122	5460.001	7.54	0.07
123	5520.001	7.539	0.071
124	5580.001	7.539	0.071
125	5640.001	7.546	0.064
126	5700.001	7.539	0.071
127	5760.001	7.544	0.066
128	5820.001	7.541	0.069
129	5880.001	7.539	0.071
130	5940.001	7.541	0.069
131	6000.001	7.542	0.068
132	6060.001	7.547	0.063
133	6120.001	7.547	0.063
134	6180.001	7.544	0.066
135	6240.001	7.545	0.065
136	6300.001	7.547	0.063
137	6360.001	7.55	0.06
138	6420.001	7.55	0.06
139	6480.001	7.543	0.067
140	6540.001	7.547	0.063
141	6600.001	7.543	0.067
142	6660.001	7.545	0.065
143	6720.001	7.548	0.062
144	6780.001	7.547	0.063
145	6840.001	7.552	0.058
146	6900.001	7.547	0.063
147	6960.001	7.546	0.064
148	7020.001	7.546	0.064

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/28/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	7.547	0.063
150	7140.001	7.549	0.061

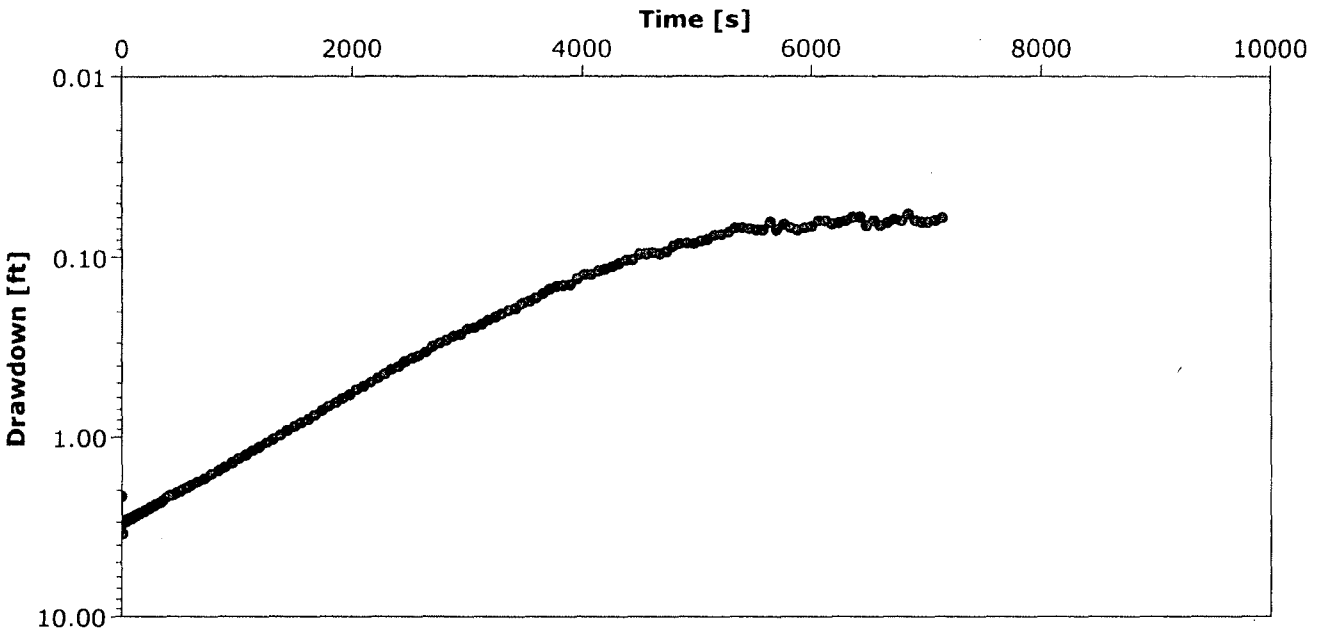
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW306C	Test Well: MW306C
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 60.00 ft		

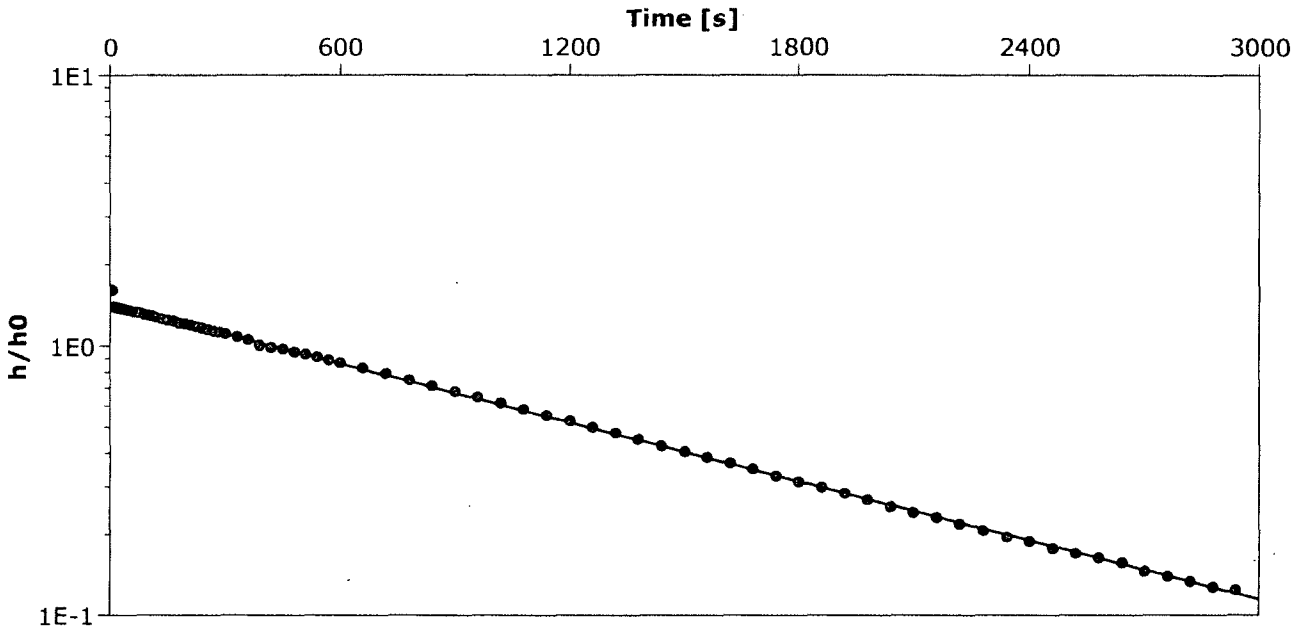


By DKB Date 10/24/08
Chkd. By ASF Date 10/29/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW306C	Test Well: MW306C
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 60.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW306C	2.69×10^{-2}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW306C	Test Well: MW306C
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Aquifer Thickness: 60.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW306C		2.69×10^{-2}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 11/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW307A	Test Well: MW307A
Test conducted by: Daniel Bansah	Test date: 12/8/2007	
Water level at t=0 [ft]: 7.60	Static water level [ft]: 5.72	Water level change at t=0 [ft]: 1.88

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	7.603	1.883
2	5.001	4.054	1.666
3	10.001	4.21	1.51
4	15.001	4.212	1.508
5	20.001	4.21	1.51
6	25.001	4.21	1.51
7	30.001	4.21	1.51
8	35.001	4.208	1.512
9	40.001	4.212	1.508
10	45.102	4.199	1.521
11	50.001	4.214	1.506
12	55.001	4.215	1.505
13	60.001	4.216	1.504
14	70.001	4.221	1.499
15	80.001	4.227	1.493
16	90.001	4.229	1.491
17	100.001	4.227	1.493
18	110.001	4.235	1.485
19	120.001	4.237	1.483
20	135.001	4.233	1.487
21	150.001	4.243	1.477
22	165.001	4.252	1.468
23	180.001	4.256	1.464
24	195.001	4.256	1.464
25	210.001	4.263	1.457
26	225.001	4.273	1.447
27	240.001	4.268	1.452
28	255.001	4.264	1.456
29	270.001	4.274	1.446
30	285.001	4.275	1.445
31	300.001	4.277	1.443
32	330.001	4.281	1.439
33	360.001	4.289	1.431
34	390.001	4.297	1.423
35	420.001	4.302	1.418
36	450.001	4.307	1.413
37	480.001	4.314	1.406
38	510.001	4.321	1.399
39	540.001	4.327	1.393
40	570.001	4.332	1.388
41	600.001	4.335	1.385
42	660.001	4.348	1.372
43	720.001	4.366	1.354
44	780.001	4.372	1.348
45	840.001	4.386	1.334
46	900.001	4.393	1.327

By DKB Date 10/24/08

Chkd. By [illegible] Date 11/29/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	4.406	1.314
48	1020.001	4.416	1.304
49	1080.001	4.419	1.301
50	1140.001	4.43	1.29
51	1200.001	4.442	1.278
52	1260.001	4.45	1.27
53	1320.001	4.459	1.261
54	1380.001	4.473	1.247
55	1440.001	4.481	1.239
56	1500.001	4.489	1.231
57	1560.001	4.496	1.224
58	1620.001	4.504	1.216
59	1680.001	4.512	1.208
60	1740.001	4.522	1.198
61	1800.001	4.529	1.191
62	1860.001	4.539	1.181
63	1920.001	4.545	1.175
64	1980.001	4.555	1.165
65	2040.001	4.563	1.157
66	2100.001	4.572	1.148
67	2160.001	4.58	1.14
68	2220.001	4.573	1.147
69	2280.001	4.578	1.142
70	2340.001	4.589	1.131
71	2400.001	4.599	1.121
72	2460.001	4.606	1.114
73	2520.001	4.61	1.11
74	2580.001	4.62	1.10
75	2640.001	4.628	1.092
76	2700.001	4.635	1.085
77	2760.001	4.638	1.082
78	2820.001	4.646	1.074
79	2880.001	4.654	1.066
80	2940.001	4.661	1.059
81	3000.001	4.667	1.053
82	3060.001	4.672	1.048
83	3120.001	4.685	1.035
84	3180.001	4.692	1.028
85	3240.001	4.703	1.017
86	3300.001	4.707	1.013
87	3360.001	4.709	1.011
88	3420.001	4.715	1.005
89	3480.001	4.722	0.998
90	3540.001	4.729	0.991
91	3600.001	4.739	0.981
92	3660.001	4.739	0.981
93	3720.001	4.747	0.973
94	3780.001	4.754	0.966
95	3840.001	4.759	0.961
96	3900.001	4.769	0.951
97	3960.001	4.773	0.947

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	4.775	0.945
99	4080.001	4.785	0.935
100	4140.001	4.796	0.924
101	4200.001	4.793	0.927
102	4260.001	4.806	0.914
103	4320.001	4.809	0.911
104	4380.001	4.814	0.906
105	4440.001	4.819	0.901
106	4500.001	4.82	0.90
107	4560.001	4.825	0.895
108	4620.001	4.835	0.885
109	4680.001	4.84	0.88
110	4740.001	4.844	0.876
111	4800.001	4.852	0.868
112	4860.001	4.858	0.862
113	4920.001	4.861	0.859
114	4980.001	4.863	0.857
115	5040.001	4.867	0.853
116	5100.001	4.873	0.847
117	5160.001	4.879	0.841
118	5220.001	4.883	0.837
119	5280.001	4.89	0.83
120	5340.001	4.894	0.826
121	5400.001	4.898	0.822
122	5460.001	4.909	0.811
123	5520.001	4.912	0.808
124	5580.001	4.919	0.801
125	5640.001	4.921	0.799
126	5700.001	4.926	0.794
127	5760.001	4.927	0.793
128	5820.001	4.931	0.789
129	5880.001	4.937	0.783
130	5940.001	4.943	0.777
131	6000.001	4.947	0.773
132	6060.001	4.951	0.769
133	6120.001	4.96	0.76
134	6180.001	4.961	0.759
135	6240.001	4.966	0.754
136	6300.001	4.968	0.752
137	6360.001	4.973	0.747
138	6420.001	4.974	0.746
139	6480.001	4.976	0.744
140	6540.001	4.987	0.733
141	6600.001	4.99	0.73
142	6660.001	4.991	0.729
143	6720.001	5.00	0.72
144	6780.001	5.002	0.718
145	6840.001	5.004	0.716
146	6900.001	5.01	0.71
147	6960.001	5.013	0.707
148	7020.001	5.021	0.699

By DKB Date 10/24/08

Chkd. By ADA Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	5.019	0.701
150	7140.001	5.026	0.694
151	7200.001	5.028	0.692

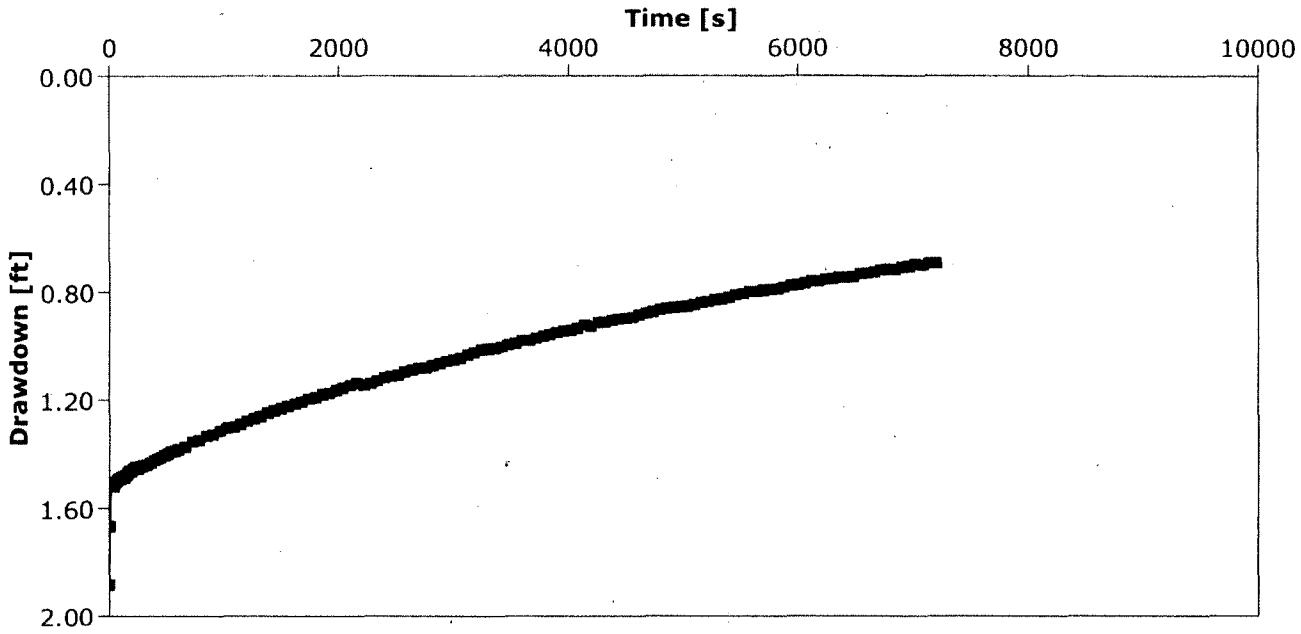
By AKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW307A	Test Well: MW307A
Test conducted by: Daniel Bansah		Test date: 12/8/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 20.00 ft		

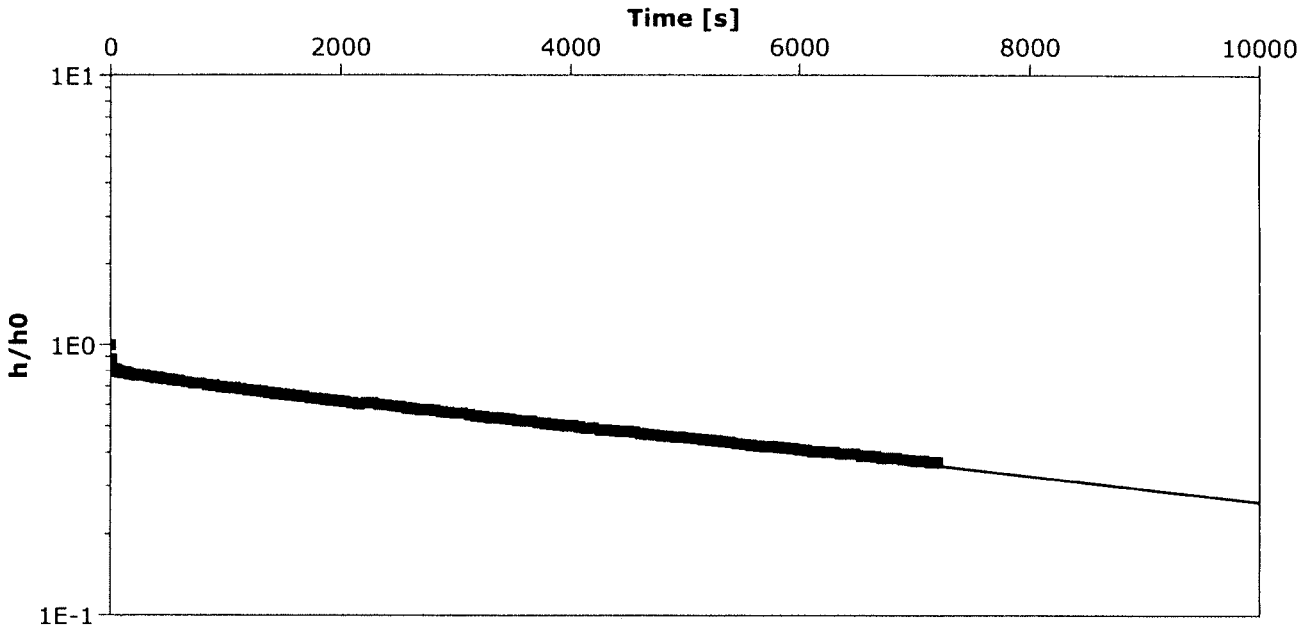


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW307A	Test Well: MW307A
Test conducted by: Daniel Bansah		Test date: 12/8/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/12/2008
Aquifer Thickness: 20.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW307A	3.38×10^{-2}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW307A	Test Well: MW307A
Test conducted by: Daniel Bansah		Test date: 12/8/2007
Aquifer Thickness: 20.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/12/2008	Hvorslev	MW307A		3.38×10^{-2}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/28/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW307B	Test Well: MW307B
Test conducted by: Daniel Bansah	Test date: 2/11/2008	
Water level at t=0 [ft]: 69.90	Static water level [ft]: 70.02	Water level change at t=0 [ft]: 0.12

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	69.898	0.122
2	5	69.535	0.485
3	10	71.252	1.232
4	15.001	69.307	0.713
5	20	69.752	0.268
6	25.001	70.292	0.272
7	30.001	69.938	0.082
8	35	69.821	0.199
9	40.001	70.009	0.011
10	45	69.953	0.067
11	50.001	69.922	0.098
12	55.001	69.951	0.069
13	60.001	69.968	0.052
14	70	69.951	0.069
15	80	69.947	0.073
16	90	69.95	0.07
17	100	69.953	0.067
18	110.001	69.952	0.068
19	120	69.955	0.065
20	135.001	69.956	0.064
21	150.001	69.949	0.071
22	165	69.956	0.064
23	180	69.954	0.066
24	195.001	69.953	0.067
25	210.001	69.962	0.058
26	225.001	69.95	0.07
27	240.001	69.97	0.05
28	255.001	69.955	0.065
29	270.001	69.956	0.064
30	285.001	69.953	0.067
31	300.001	69.95	0.07
32	330.001	69.945	0.075
33	360.001	69.955	0.065
34	390.001	69.947	0.073
35	420.001	69.953	0.067
36	450.001	69.954	0.066
37	480.001	69.961	0.059
38	510.001	69.958	0.062
39	540.001	69.977	0.043
40	570.001	69.952	0.068
41	600.001	69.954	0.066
42	660.001	69.961	0.059
43	720.001	69.948	0.072
44	780.001	69.98	0.04
45	840.001	69.952	0.068
46	900.001	69.956	0.064

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	69.945	0.075
48	1020.001	69.945	0.075
49	1080.001	69.945	0.075
50	1140.001	69.963	0.057
51	1200.001	69.942	0.078
52	1260.001	69.949	0.071
53	1320.001	69.949	0.071
54	1380.001	69.955	0.065
55	1440.001	69.951	0.069
56	1500.001	69.944	0.076
57	1560.001	69.944	0.076
58	1620.001	69.957	0.063
59	1680.001	69.945	0.075
60	1740.001	69.954	0.066
61	1800.001	69.946	0.074
62	1860.001	69.942	0.078
63	1920.001	69.961	0.059
64	1980.001	69.939	0.081
65	2040.001	69.938	0.082
66	2100.001	69.955	0.065
67	2160.001	69.952	0.068
68	2220.001	69.939	0.081
69	2280.001	69.954	0.066
70	2340.001	69.946	0.074
71	2400.001	69.954	0.066
72	2460.001	69.958	0.062
73	2520.001	69.961	0.059
74	2580.001	69.953	0.067
75	2640.001	69.957	0.063
76	2700.001	69.955	0.065
77	2760.001	69.954	0.066
78	2820.001	69.955	0.065
79	2880.001	69.952	0.068
80	2940.001	69.947	0.073
81	3000.001	69.952	0.068
82	3060.001	69.946	0.074
83	3120.001	69.943	0.077
84	3180.001	69.943	0.077
85	3240.001	69.942	0.078
86	3300.001	69.931	0.089
87	3360.001	69.941	0.079
88	3420.001	69.943	0.077
89	3480.001	69.934	0.086
90	3540.001	69.95	0.07
91	3600.001	69.933	0.087
92	3660.001	69.94	0.08
93	3720.001	69.945	0.075
94	3780.001	69.932	0.088
95	3840.001	69.936	0.084
96	3900.001	69.942	0.078
97	3960.001	69.925	0.095

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	69.943	0.077
99	4080.001	69.936	0.084
100	4140.001	69.929	0.091
101	4200.001	69.945	0.075
102	4260.001	69.933	0.087
103	4320.001	69.928	0.092
104	4380.001	69.94	0.08
105	4440.001	69.939	0.081
106	4500.001	69.941	0.079
107	4560.001	69.947	0.073
108	4620.001	69.954	0.066
109	4680.001	69.947	0.073
110	4740.001	69.941	0.079
111	4800.001	69.938	0.082
112	4860.001	69.947	0.073
113	4920.001	69.957	0.063
114	4980.001	69.949	0.071
115	5040.001	69.953	0.067
116	5100.001	69.947	0.073
117	5160.001	69.947	0.073
118	5220.001	69.941	0.079
119	5280.001	69.944	0.076
120	5340.001	69.943	0.077
121	5400.001	69.948	0.072
122	5460.001	69.943	0.077
123	5520.001	69.939	0.081
124	5580.001	69.93	0.09
125	5640.001	69.959	0.061
126	5700.001	69.946	0.074
127	5760.001	69.949	0.071
128	5820.001	69.949	0.071
129	5880.001	69.937	0.083
130	5940.001	69.921	0.099
131	6000.001	69.921	0.099
132	6060.001	69.938	0.082
133	6120.001	69.931	0.089
134	6180.001	69.94	0.08
135	6240.001	69.931	0.089
136	6300.001	69.931	0.089
137	6360.001	69.934	0.086
138	6420.001	69.934	0.086
139	6480.001	69.939	0.081
140	6540.001	69.925	0.095
141	6600.001	69.938	0.082
142	6660.001	69.938	0.082
143	6720.001	69.93	0.09
144	6780.001	69.938	0.082
145	6840.001	69.941	0.079
146	6900.001	69.943	0.077
147	6960.001	69.944	0.076
148	7020.001	69.953	0.067

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	69.942	0.078
150	7140.001	69.942	0.078
151	7200.001	69.944	0.076

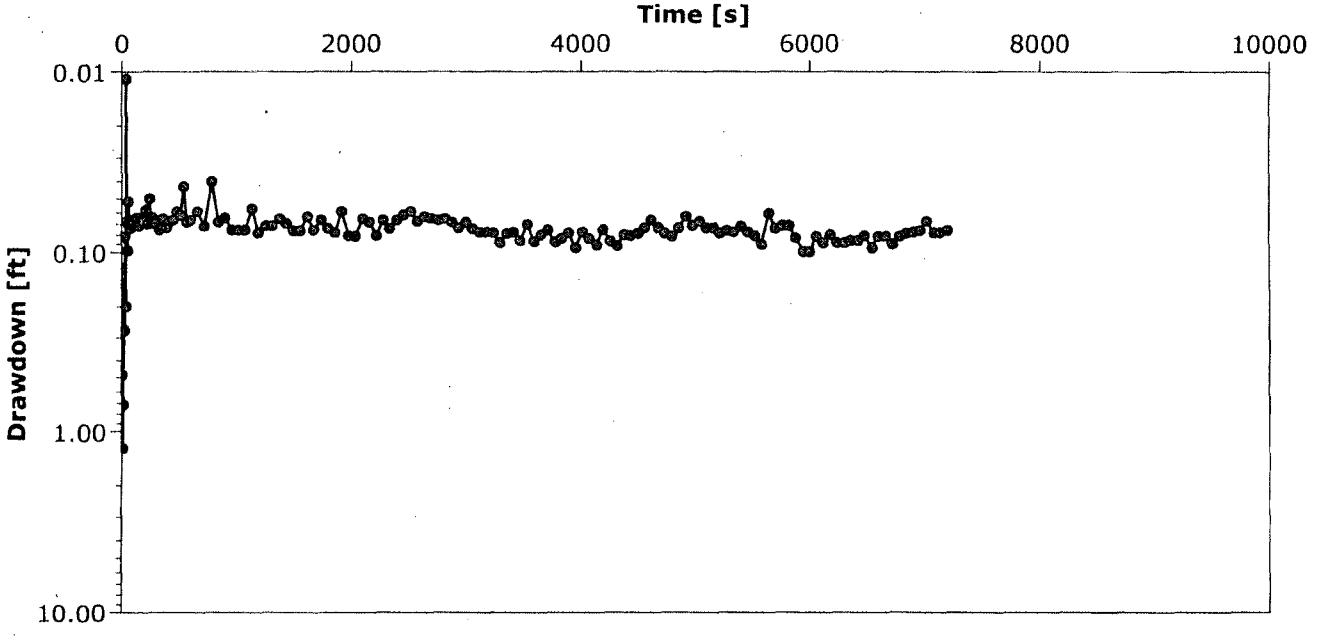
By DKB Date 10/24/08

Chkd. By [illegible] Date

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW307B	Test Well: MW307B
Test conducted by: Daniel Bansah		Test date: 2/11/2008
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 70.00 ft		

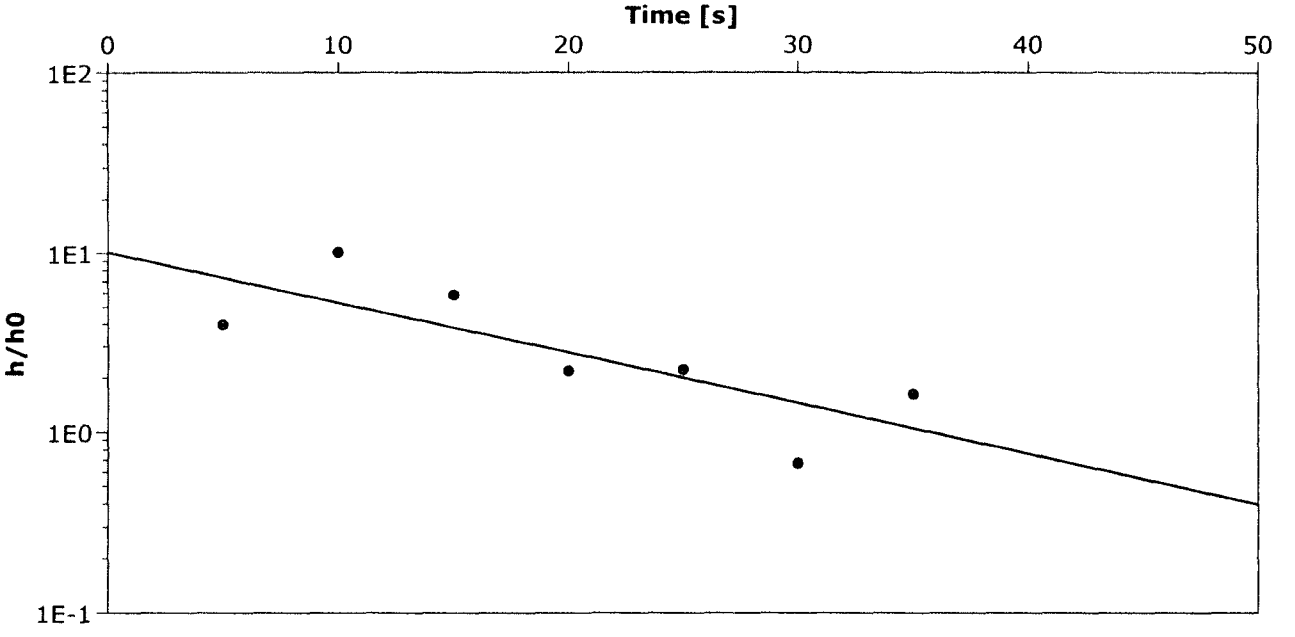


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW307B	Test Well: MW307B
Test conducted by: Daniel Bansah		Test date: 2/11/2008
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/12/2008
Aquifer Thickness: 70.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW307B	4.27×10^0	

By DKB Date 10/24/08
Chkd. By DAT Date 11/24/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW307B	Test Well: MW307B
Test conducted by: Daniel Bansah		Test date: 2/11/2008
Aquifer Thickness: 70.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/12/2008	Hvorslev	MW307B		4.27×10^0	

By DKB Date 10/24/08

Chkd. By AAA Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW308A	Test Well: MW308A
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/2/2007	
Water level at t=0 [ft]: 4.58	Static water level [ft]: 6.91	Water level change at t=0 [ft]: 2.33

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	4.581	2.329
2	5	6.802	0.108
3	10	6.811	0.099
4	15.001	6.826	0.084
5	20	6.837	0.073
6	25	6.84	0.07
7	30	6.852	0.058
8	35	6.852	0.058
9	40	6.855	0.055
10	45.001	6.862	0.048
11	50	6.858	0.052
12	55.001	6.869	0.041
13	60	6.866	0.044
14	70.001	6.869	0.041
15	80.001	6.871	0.039
16	90.001	6.872	0.038
17	100.001	7.079	0.169
18	110.001	7.074	0.164
19	120.001	7.07	0.16
20	135.001	7.06	0.15
21	150.001	7.032	0.122
22	165.001	7.01	0.10
23	180.001	6.985	0.075
24	195.001	6.959	0.049
25	210.001	6.936	0.026
26	225.001	6.911	0.001
27	240.001	6.894	0.016
28	255.001	6.877	0.033
29	270.001	6.859	0.051
30	285.001	6.847	0.063
31	300.001	6.839	0.071
32	330.001	6.823	0.087
33	360.001	6.797	0.113
34	390.001	6.787	0.123
35	420.001	6.774	0.136
36	450.001	6.759	0.151
37	480.001	6.753	0.157
38	510.001	6.748	0.162
39	540.001	6.746	0.164
40	570.001	6.738	0.172
41	600.001	6.733	0.177
42	660.001	6.726	0.184
43	720.001	6.714	0.196
44	780.001	6.714	0.196
45	840.001	6.715	0.195
46	900.001	6.715	0.195

By DLB Date 10/24/08

Chkd. By AST Date 10/29/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	6.709	0.201
48	1020.001	6.711	0.199
49	1080.001	6.692	0.218
50	1140.001	6.688	0.222
51	1200.001	6.688	0.222
52	1260.001	6.679	0.231
53	1320.001	6.675	0.235
54	1380.001	6.681	0.229
55	1440.001	6.685	0.225
56	1500.001	6.685	0.225
57	1560.001	6.69	0.22
58	1620.001	6.694	0.216
59	1680.001	6.693	0.217
60	1740.001	6.694	0.216
61	1800.001	6.701	0.209
62	1860.001	6.707	0.203
63	1920.001	6.709	0.201
64	1980.001	6.707	0.203
65	2040.001	6.712	0.198
66	2100.001	6.722	0.188
67	2160.001	6.723	0.187
68	2220.001	6.729	0.181
69	2280.001	6.733	0.177
70	2340.001	6.727	0.183
71	2400.001	6.73	0.18
72	2460.001	6.734	0.176
73	2520.001	6.736	0.174
74	2580.001	6.737	0.173
75	2640.001	6.73	0.18
76	2700.001	6.733	0.177
77	2760.001	6.731	0.179
78	2820.001	6.735	0.175
79	2880.001	6.75	0.16
80	2940.001	6.75	0.16
81	3000.001	6.756	0.154
82	3060.001	6.756	0.154
83	3120.001	6.758	0.152
84	3180.001	6.747	0.163
85	3240.001	6.743	0.167
86	3300.001	6.744	0.166
87	3360.001	6.744	0.166
88	3420.001	6.741	0.169
89	3480.001	6.744	0.166
90	3540.001	6.746	0.164
91	3600.001	6.75	0.16
92	3660.001	6.755	0.155
93	3720.001	6.756	0.154
94	3780.001	6.76	0.15
95	3840.001	6.759	0.151
96	3900.001	6.76	0.15
97	3960.001	6.77	0.14

By AKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	6.769	0.141
99	4080.001	6.771	0.139
100	4140.001	6.769	0.141
101	4200.001	6.776	0.134
102	4260.001	6.777	0.133
103	4320.001	6.77	0.14
104	4380.001	6.767	0.143
105	4440.001	6.771	0.139
106	4500.001	6.77	0.14
107	4560.001	6.769	0.141
108	4620.001	6.782	0.128
109	4680.001	6.78	0.13
110	4740.001	6.784	0.126
111	4800.001	6.783	0.127
112	4860.001	6.787	0.123
113	4920.001	6.787	0.123
114	4980.001	6.78	0.13
115	5040.001	6.781	0.129
116	5100.001	6.772	0.138
117	5160.001	6.765	0.145
118	5220.001	6.759	0.151
119	5280.001	6.755	0.155
120	5340.001	6.746	0.164
121	5400.001	6.746	0.164
122	5460.001	6.743	0.167
123	5520.001	6.736	0.174
124	5580.001	6.734	0.176
125	5640.001	6.73	0.18
126	5700.001	6.726	0.184
127	5760.001	6.726	0.184
128	5820.001	6.726	0.184
129	5880.001	6.725	0.185
130	5940.001	6.726	0.184
131	6000.001	6.723	0.187
132	6060.001	6.721	0.189
133	6120.001	6.719	0.191
134	6180.001	6.717	0.193
135	6240.001	6.723	0.187
136	6300.001	6.725	0.185
137	6360.001	6.721	0.189
138	6420.001	6.726	0.184
139	6480.001	6.726	0.184
140	6540.001	6.729	0.181
141	6600.001	6.728	0.182
142	6660.001	6.724	0.186
143	6720.001	6.726	0.184
144	6780.001	6.725	0.185
145	6840.001	6.729	0.181
146	6900.001	6.73	0.18
147	6960.001	6.732	0.178
148	7020.001	6.73	0.18

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	6.734	0.176
150	7140.001	6.735	0.175
151	7200.001	6.735	0.175

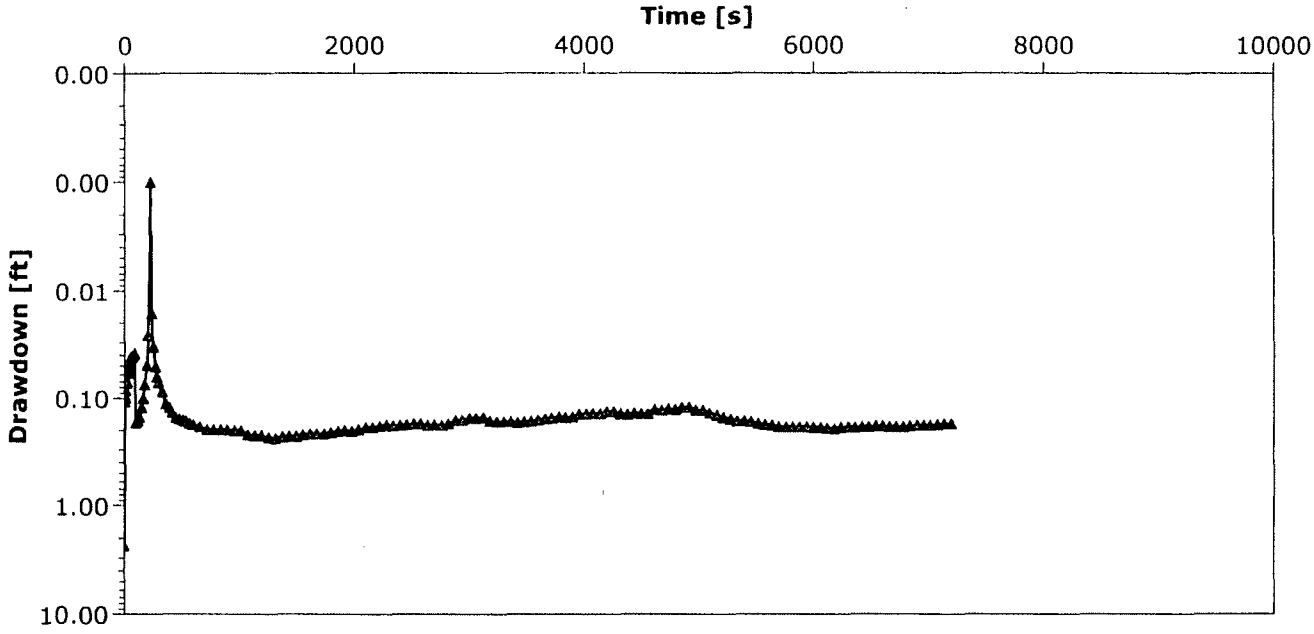
By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW308A	Test Well: MW308A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by:	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 25.00 ft		

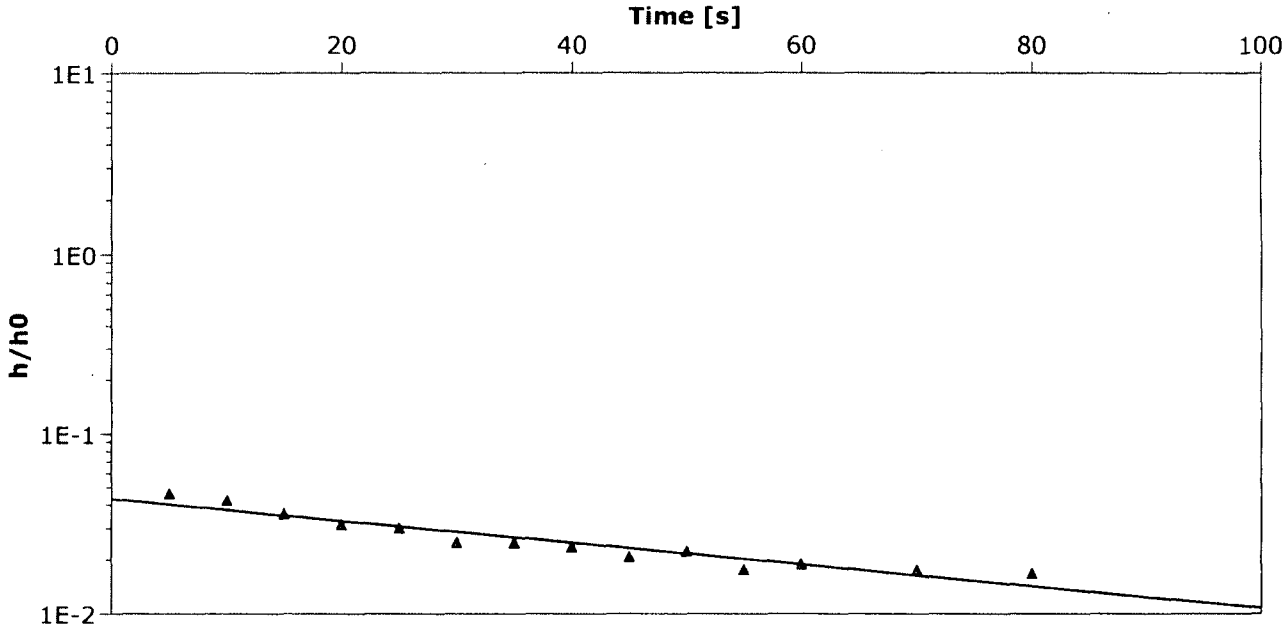


By AKB Date 10/24/08
Chkd. By AST Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW308A	Test Well: MW308A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 25.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW308A	3.43×10^{0}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW308A	Test Well: MW308A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Aquifer Thickness: 25.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW308A		3.43×10^{0}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW308B	Test Well: MW308B
Test conducted by: Daniel Bansah/Anthony Fabina Test date: 12/2/2007		
Water level at t=0 [ft]: 65.66	Static water level [ft]: 66.10	Water level change at t=0 [ft]: 0.44

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	65.656	0.444
2	5.001	65.458	0.642
3	10.001	65.44	0.66
4	15.001	65.432	0.668
5	20.001	65.424	0.676
6	25.001	65.422	0.678
7	30.001	65.419	0.681
8	35.001	65.425	0.675
9	40.001	65.419	0.681
10	45.001	65.42	0.68
11	50.001	65.422	0.678
12	55.001	65.419	0.681
13	60.001	65.415	0.685
14	68.735	65.413	0.687
15	73.735	65.41	0.69
16	78.735	65.411	0.689
17	83.736	65.41	0.69
18	88.735	65.41	0.69
19	93.736	65.413	0.687
20	98.735	65.409	0.691
21	103.735	65.407	0.693
22	108.735	65.408	0.692
23	113.735	65.407	0.693
24	118.736	65.409	0.691
25	123.735	65.407	0.693
26	128.736	65.408	0.692
27	138.736	65.402	0.698
28	148.735	65.405	0.695
29	158.735	65.402	0.698
30	168.736	65.407	0.693
31	178.735	65.40	0.70
32	188.735	65.398	0.702
33	203.735	65.401	0.699
34	218.735	65.398	0.702
35	233.736	65.405	0.695
36	248.736	65.402	0.698
37	263.736	65.421	0.679
38	278.736	65.403	0.697
39	293.736	65.398	0.702
40	308.736	65.397	0.703
41	323.736	65.396	0.704
42	338.736	65.398	0.702
43	353.736	65.395	0.705
44	368.736	65.392	0.708
45	398.736	65.392	0.708
46	428.736	65.391	0.709

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	458.736	65.391	0.709
48	488.736	65.389	0.711
49	518.736	65.388	0.712
50	548.736	65.385	0.715
51	578.736	65.389	0.711
52	608.736	65.388	0.712
53	638.736	65.385	0.715
54	668.736	65.384	0.716
55	728.736	65.385	0.715
56	788.736	65.382	0.718
57	848.736	65.38	0.72
58	908.736	65.381	0.719
59	968.736	65.382	0.718
60	1028.736	65.378	0.722
61	1088.736	65.378	0.722
62	1148.736	65.378	0.722
63	1208.736	65.379	0.721
64	1268.736	65.383	0.717
65	1328.736	65.375	0.725
66	1388.736	65.379	0.721
67	1448.736	65.377	0.723
68	1508.736	65.379	0.721
69	1568.736	65.378	0.722
70	1628.736	65.376	0.724
71	1688.736	65.376	0.724
72	1748.736	65.374	0.726
73	1808.736	65.375	0.725
74	1868.736	65.375	0.725
75	1928.736	65.377	0.723
76	1988.736	65.373	0.727
77	2048.736	65.374	0.726
78	2108.736	65.374	0.726
79	2168.736	65.373	0.727
80	2228.736	65.373	0.727
81	2288.736	65.372	0.728
82	2348.736	65.376	0.724
83	2408.736	65.372	0.728
84	2468.736	65.376	0.724
85	2528.736	65.373	0.727
86	2588.736	65.373	0.727
87	2648.736	65.367	0.733
88	2708.736	65.372	0.728
89	2768.736	65.373	0.727
90	2828.736	65.375	0.725
91	2888.736	65.374	0.726
92	2948.736	65.373	0.727
93	3008.736	65.366	0.734
94	3068.736	65.371	0.729
95	3128.736	65.368	0.732
96	3188.736	65.369	0.731
97	3248.736	65.369	0.731

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	3308.736	65.371	0.729
99	3368.736	65.371	0.729
100	3428.736	65.371	0.729
101	3488.736	65.365	0.735
102	3548.736	65.365	0.735
103	3608.736	65.367	0.733
104	3668.736	65.368	0.732
105	3728.736	65.366	0.734
106	3788.736	65.367	0.733
107	3848.736	65.366	0.734
108	3908.736	65.364	0.736
109	3968.736	65.366	0.734
110	4028.736	65.367	0.733
111	4088.736	65.365	0.735
112	4148.736	65.367	0.733
113	4208.736	65.365	0.735
114	4268.736	65.364	0.736
115	4328.736	65.363	0.737
116	4388.736	65.367	0.733
117	4448.736	65.368	0.732
118	4508.736	65.366	0.734
119	4568.736	65.366	0.734
120	4628.736	65.363	0.737
121	4688.736	65.366	0.734
122	4748.736	65.365	0.735
123	4808.736	65.366	0.734
124	4868.736	65.363	0.737
125	4928.736	65.364	0.736
126	4988.736	65.364	0.736
127	5048.736	65.364	0.736
128	5108.736	65.363	0.737
129	5168.736	65.366	0.734
130	5228.736	65.364	0.736
131	5288.736	65.367	0.733
132	5348.736	65.365	0.735
133	5408.736	65.365	0.735
134	5468.736	65.365	0.735
135	5528.736	65.366	0.734
136	5588.736	65.362	0.738
137	5648.736	65.363	0.737
138	5708.736	65.365	0.735
139	5768.736	65.362	0.738
140	5828.736	65.362	0.738
141	5888.736	65.366	0.734
142	5948.736	65.363	0.737
143	6008.736	65.362	0.738
144	6068.736	65.363	0.737
145	6128.736	65.363	0.737
146	6188.736	65.364	0.736
147	6248.736	65.365	0.735
148	6308.736	65.358	0.742

By AKB Date 10/24/08

Chkd. By [illegible] Date 10/22/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	6368.736	65.362	0.738
150	6428.736	65.363	0.737
151	6488.736	65.361	0.739
152	6548.736	65.361	0.739
153	6608.736	65.362	0.738
154	6668.736	65.357	0.743
155	6728.736	65.361	0.739
156	6788.736	65.36	0.74
157	6848.736	65.364	0.736
158	6908.736	65.36	0.74
159	6968.736	65.361	0.739
160	7028.736	65.36	0.74
161	7088.736	65.361	0.739
162	7148.736	65.358	0.742

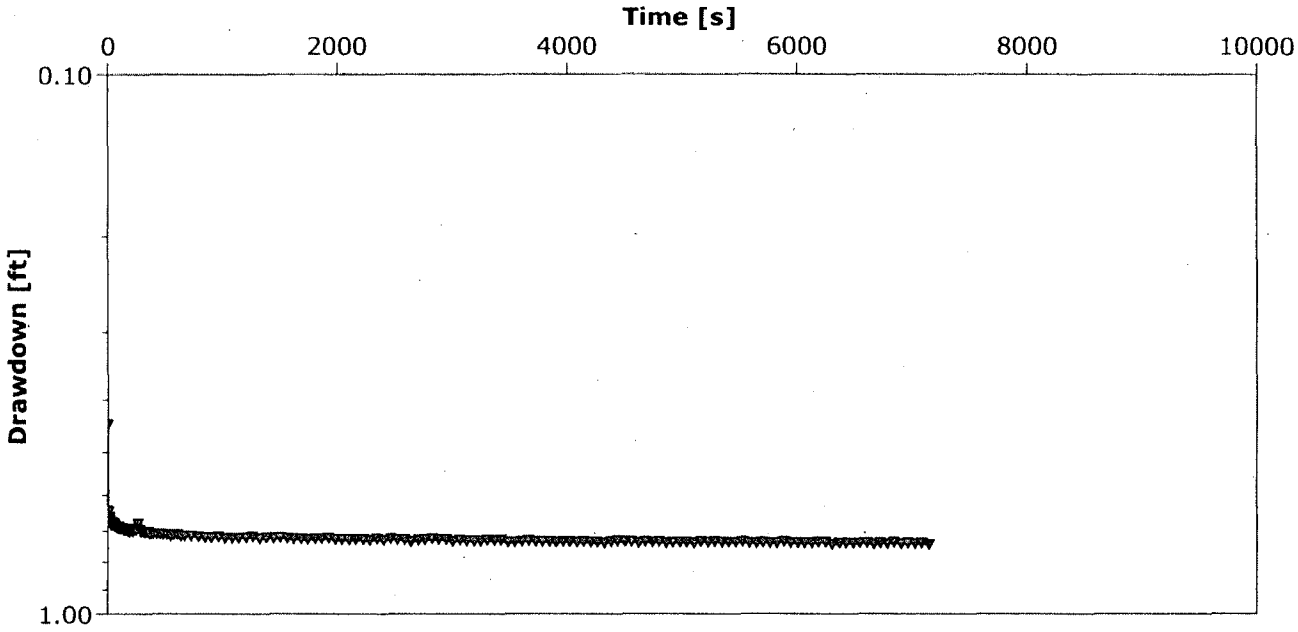
By DKB Date 10/24/08

Chkd. By ASA Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW308B	Test Well: MW308B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 25.00 ft		

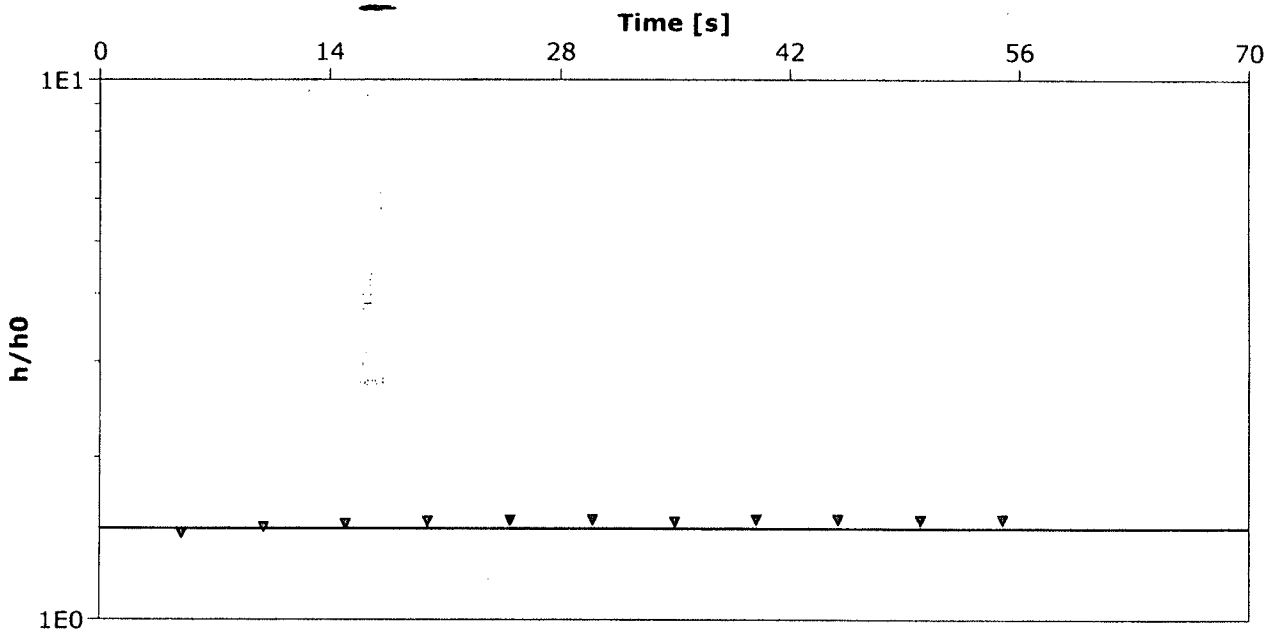


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW308B	Test Well: MW308B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/8/2008
Aquifer Thickness: 25.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW308B	2.83×10^{-7}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW308B	Test Well: MW308B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Aquifer Thickness: 25.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/8/2008	Hvorslev	MW308B		2.83×10^{-7}	

By DKB Date 10/24/08

Chkd. By AST Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW309A	Test Well: MW309A
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/10/2007	
Water level at t=0 [ft]: 5.55	Static water level [ft]: 6.39	Water level change at t=0 [ft]: 0.84

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	5.551	0.839
2	5.001	5.325	1.065
3	10.001	5.535	0.855
4	15.001	5.693	0.697
5	20.001	5.818	0.572
6	25.001	5.923	0.467
7	30.001	6.006	0.384
8	35.001	6.073	0.317
9	40.001	6.132	0.258
10	45.001	6.167	0.223
11	50.001	6.209	0.181
12	55.001	6.242	0.148
13	60.001	6.263	0.127
14	70.001	6.302	0.088
15	80.001	6.328	0.062
16	90.001	6.341	0.049
17	100.001	6.346	0.044
18	110.001	6.355	0.035
19	120.001	6.363	0.027
20	135.001	6.373	0.017
21	150.001	6.368	0.022
22	165.001	6.372	0.018
23	180.001	6.371	0.019
24	195.001	6.376	0.014
25	210.001	6.372	0.018
26	225.001	6.373	0.017
27	240.001	6.375	0.015
28	255.001	6.377	0.013
29	270.001	6.377	0.013
30	285.001	6.374	0.016
31	300.001	6.374	0.016
32	330.001	6.377	0.013
33	360.001	6.375	0.015
34	390.001	6.375	0.015
35	420.001	6.374	0.016
36	450.001	6.379	0.011
37	480.001	6.376	0.014
38	510.001	6.377	0.013
39	540.001	6.378	0.012
40	570.001	6.38	0.01
41	600.001	6.373	0.017
42	660.001	6.378	0.012
43	720.001	6.377	0.013
44	780.001	6.375	0.015
45	840.001	6.376	0.014
46	900.001	6.38	0.01

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	6.376	0.014
48	1020.001	6.373	0.017
49	1080.001	6.375	0.015
50	1140.001	6.378	0.012
51	1200.001	6.376	0.014
52	1260.001	6.379	0.011
53	1320.001	6.378	0.012
54	1380.001	6.378	0.012
55	1440.001	6.375	0.015
56	1500.001	6.372	0.018
57	1560.001	6.376	0.014
58	1620.001	6.375	0.015
59	1680.001	6.374	0.016
60	1740.001	6.374	0.016
61	1800.001	6.369	0.021
62	1860.001	6.372	0.018
63	1920.001	6.369	0.021
64	1980.001	6.37	0.02
65	2040.001	6.371	0.019
66	2100.001	6.373	0.017
67	2160.001	6.369	0.021
68	2220.001	6.369	0.021
69	2280.001	6.373	0.017
70	2340.001	6.371	0.019
71	2400.001	6.37	0.02
72	2460.001	6.367	0.023
73	2520.001	6.373	0.017
74	2580.001	6.368	0.022
75	2640.001	6.368	0.022
76	2700.001	6.368	0.022
77	2760.001	6.368	0.022
78	2820.001	6.372	0.018
79	2880.001	6.371	0.019
80	2940.001	6.371	0.019
81	3000.001	6.372	0.018
82	3060.001	6.37	0.02
83	3120.001	6.37	0.02
84	3180.001	6.37	0.02
85	3240.001	6.374	0.016
86	3300.001	6.369	0.021
87	3360.001	6.37	0.02
88	3420.001	6.368	0.022
89	3480.001	6.367	0.023
90	3540.001	6.367	0.023
91	3600.001	6.371	0.019
92	3660.001	6.368	0.022
93	3720.001	6.368	0.022
94	3780.001	6.365	0.025
95	3840.001	6.364	0.026
96	3900.001	6.365	0.025
97	3960.001	6.368	0.022

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	6.363	0.027
99	4080.001	6.364	0.026
100	4140.001	6.365	0.025
101	4200.001	6.363	0.027
102	4260.001	6.365	0.025
103	4320.001	6.368	0.022
104	4380.001	6.369	0.021
105	4440.001	6.366	0.024
106	4500.001	6.37	0.02
107	4560.001	6.365	0.025
108	4620.001	6.365	0.025
109	4680.001	6.366	0.024
110	4740.001	6.361	0.029
111	4800.001	6.362	0.028
112	4860.001	6.363	0.027
113	4920.001	6.363	0.027
114	4980.001	6.365	0.025
115	5040.001	6.365	0.025
116	5100.001	6.365	0.025
117	5160.001	6.363	0.027
118	5220.001	6.36	0.03
119	5280.001	6.364	0.026
120	5340.001	6.359	0.031
121	5400.001	6.36	0.03
122	5460.001	6.36	0.03
123	5520.001	6.362	0.028
124	5580.001	6.361	0.029
125	5640.001	6.364	0.026
126	5700.001	6.363	0.027
127	5760.001	6.364	0.026
128	5820.001	6.366	0.024
129	5880.001	6.362	0.028
130	5940.001	6.365	0.025
131	6000.001	6.365	0.025
132	6060.001	6.362	0.028
133	6120.001	6.363	0.027
134	6180.001	6.361	0.029
135	6240.001	6.361	0.029
136	6300.001	6.36	0.03
137	6360.001	6.361	0.029
138	6420.001	6.361	0.029
139	6480.001	6.36	0.03
140	6540.001	6.361	0.029
141	6600.001	6.361	0.029
142	6660.001	6.36	0.03
143	6720.001	6.363	0.027
144	6780.001	6.36	0.03
145	6840.001	6.364	0.026
146	6900.001	6.365	0.025
147	6960.001	6.365	0.025
148	7020.001	6.363	0.027

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	6.363	0.027
150	7140.001	6.364	0.026
151	7200.001	6.36	0.03

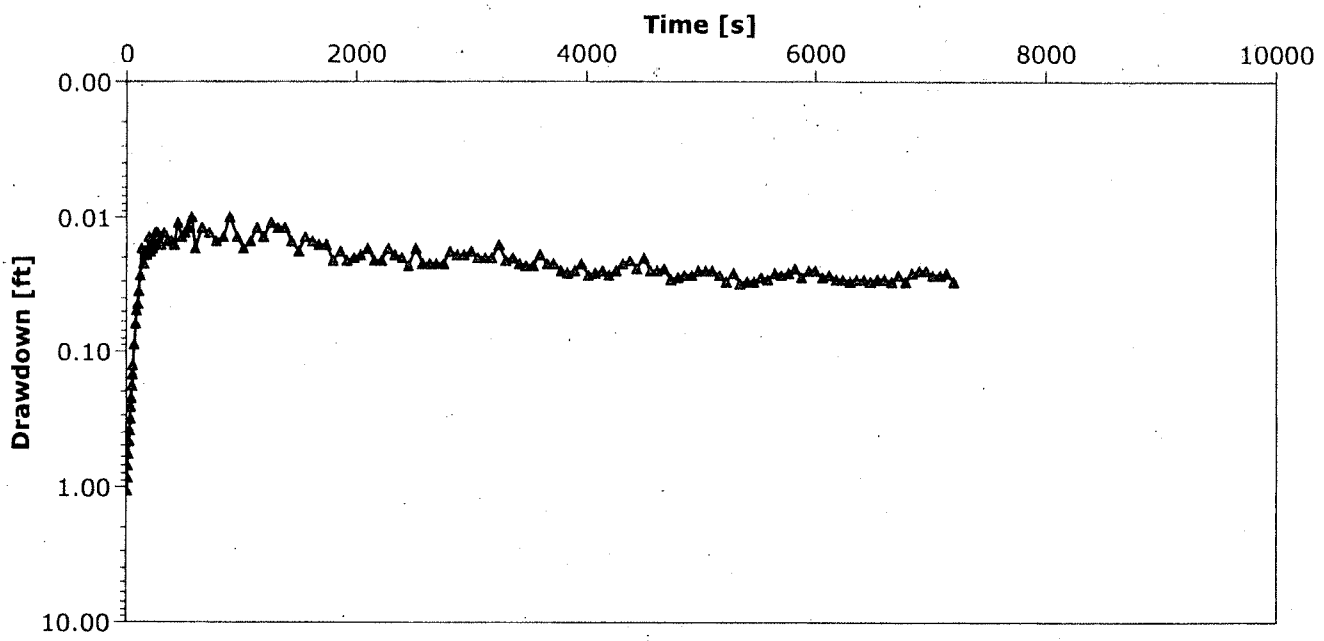
By DKB Date 10/24/08

Chkd. By ____ Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW309A	Test Well: MW309A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/10/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/8/2008
Aquifer Thickness: 14.80 ft		

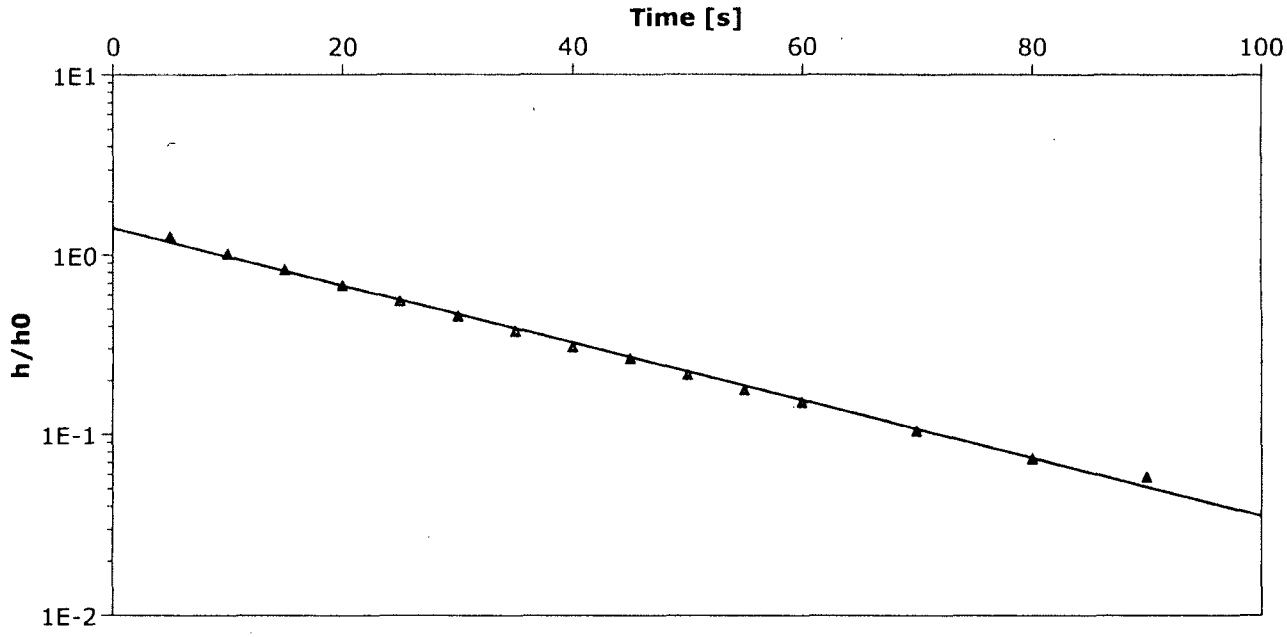


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UniStar	

Location: Berwick, PA	Slug Test: MW309A	Test Well: MW309A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/10/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 14.80 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW309A	1.51×10^{1}	

By DKB Date 10/24/08

Chkd. By ___ Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UniStar

Location: Berwick, PA	Slug Test: MW309A	Test Well: MW309A
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/10/2007
Aquifer Thickness: 14.80 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW309A		1.51×10^{1}	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW309B	Test Well: MW309B
Test conducted by: Daniel Bansah	Test date: 12/13/2007	
Water level at t=0 [ft]: 7.64	Static water level [ft]: 8.15	Water level change at t=0 [ft]: 0.51

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	7.64	0.51
2	5	4.784	3.366
3	10	6.346	1.804
4	15	6.593	1.557
5	20	6.804	1.346
6	25	6.969	1.181
7	30	7.104	1.046
8	35	7.21	0.94
9	40	7.298	0.852
10	45	7.371	0.779
11	50	7.429	0.721
12	55	7.485	0.665
13	60	7.519	0.631
14	70	7.592	0.558
15	80	7.641	0.509
16	90	7.679	0.471
17	100	7.71	0.44
18	110	7.725	0.425
19	120	7.744	0.406
20	135	7.768	0.382
21	150	7.785	0.365
22	165	7.787	0.363
23	180	7.794	0.356
24	195	7.799	0.351
25	210	7.803	0.347
26	225	7.807	0.343
27	240	7.809	0.341
28	255	7.813	0.337
29	270	7.812	0.338
30	285	7.816	0.334
31	300	7.816	0.334
32	330	7.816	0.334
33	360	7.818	0.332
34	390	7.816	0.334
35	420	7.814	0.336
36	450	7.818	0.332
37	480	7.816	0.334
38	510	7.823	0.327
39	540	7.812	0.338
40	570	7.819	0.331
41	600	7.817	0.333
42	660	7.815	0.335
43	720	7.813	0.337
44	780	7.811	0.339
45	840	7.808	0.342
46	900	7.808	0.342

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960	7.807	0.343
48	1020	7.801	0.349
49	1080	7.804	0.346
50	1140	7.804	0.346
51	1200	7.808	0.342
52	1260	7.80	0.35
53	1320	7.799	0.351
54	1380	7.798	0.352
55	1440	7.802	0.348
56	1500	7.803	0.347
57	1560	7.798	0.352
58	1620	7.798	0.352
59	1680	7.798	0.352
60	1740	7.794	0.356
61	1800	7.793	0.357
62	1860	7.793	0.357
63	1920	7.796	0.354
64	1980	7.798	0.352
65	2040	7.797	0.353
66	2100	7.796	0.354
67	2160	7.799	0.351
68	2220	7.798	0.352
69	2280	7.799	0.351
70	2340	7.796	0.354
71	2400	7.794	0.356
72	2460	7.795	0.355
73	2520	7.792	0.358
74	2580	7.794	0.356
75	2640	7.792	0.358
76	2700	7.794	0.356
77	2760	7.797	0.353
78	2820	7.79	0.36
79	2880	7.795	0.355
80	2940	7.788	0.362
81	3000	7.787	0.363
82	3060	7.788	0.362
83	3120	7.788	0.362
84	3180	7.788	0.362
85	3240	7.786	0.364
86	3300	7.786	0.364
87	3360	7.778	0.372
88	3420	7.785	0.365
89	3480	7.785	0.365
90	3540	7.785	0.365
91	3600	7.78	0.37
92	3660	7.782	0.368
93	3720	7.781	0.369
94	3780	7.783	0.367
95	3840	7.781	0.369
96	3900	7.779	0.371
97	3960	7.779	0.371

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020	7.78	0.37
99	4080	7.776	0.374
100	4140	7.778	0.372
101	4200	7.776	0.374
102	4260	7.778	0.372
103	4320	7.776	0.374
104	4380	7.774	0.376
105	4440	7.774	0.376
106	4500	7.774	0.376
107	4560	7.777	0.373
108	4620	7.773	0.377
109	4680	7.77	0.38
110	4740	7.778	0.372
111	4800	7.778	0.372
112	4860	7.773	0.377
113	4920	7.772	0.378
114	4980	7.768	0.382
115	5040	7.773	0.377
116	5100	7.773	0.377
117	5160	7.768	0.382
118	5220	7.771	0.379
119	5280	7.772	0.378
120	5340	7.77	0.38
121	5400	7.769	0.381
122	5460	7.772	0.378
123	5520	7.772	0.378
124	5580	7.77	0.38
125	5640	7.769	0.381
126	5700	7.763	0.387
127	5760	7.771	0.379
128	5820	7.766	0.384
129	5880	7.764	0.386
130	5940	7.765	0.385
131	6000	7.761	0.389
132	6060	7.758	0.392
133	6120	7.76	0.39
134	6180	7.761	0.389
135	6240	7.762	0.388
136	6300	7.755	0.395
137	6360	7.76	0.39
138	6420	7.76	0.39
139	6480	7.759	0.391
140	6540	7.759	0.391
141	6600	7.756	0.394
142	6660	7.757	0.393
143	6720	7.755	0.395
144	6780	7.755	0.395
145	6840	7.759	0.391
146	6900	7.756	0.394
147	6960	7.756	0.394
148	7020	7.753	0.397

By AKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080	7.753	0.397
150	7140	7.754	0.396
151	7200	7.752	0.398

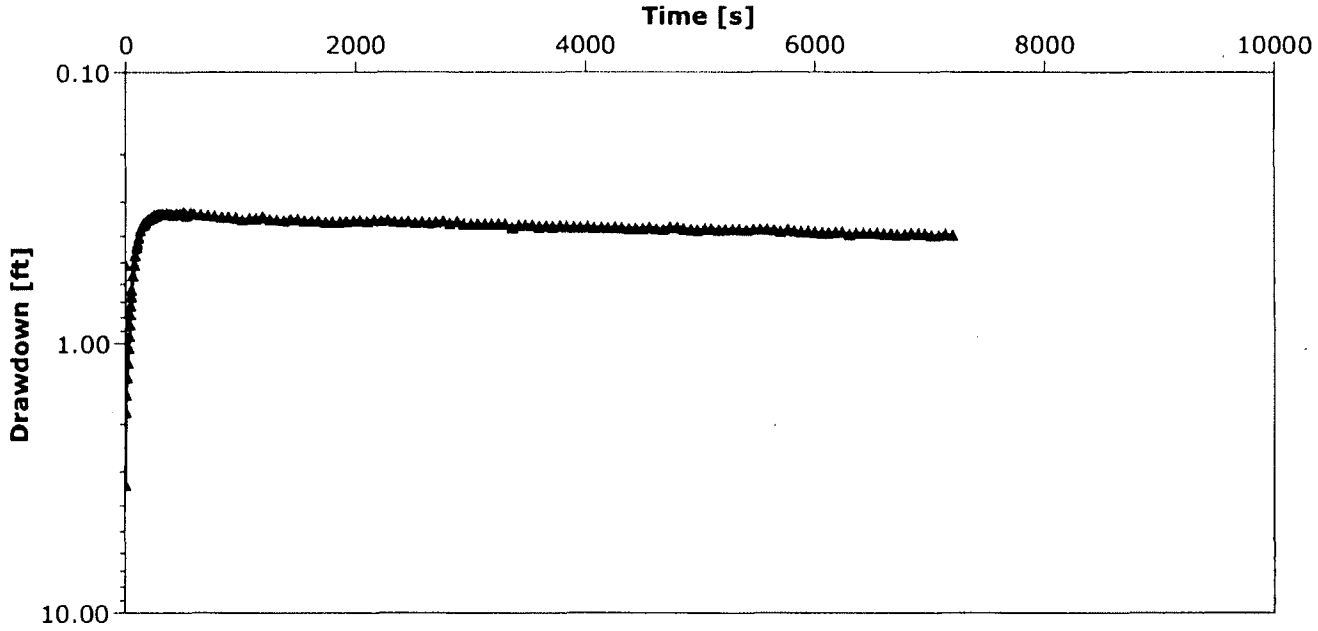
By JKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW309B	Test Well: MW309B
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 31.00 ft		

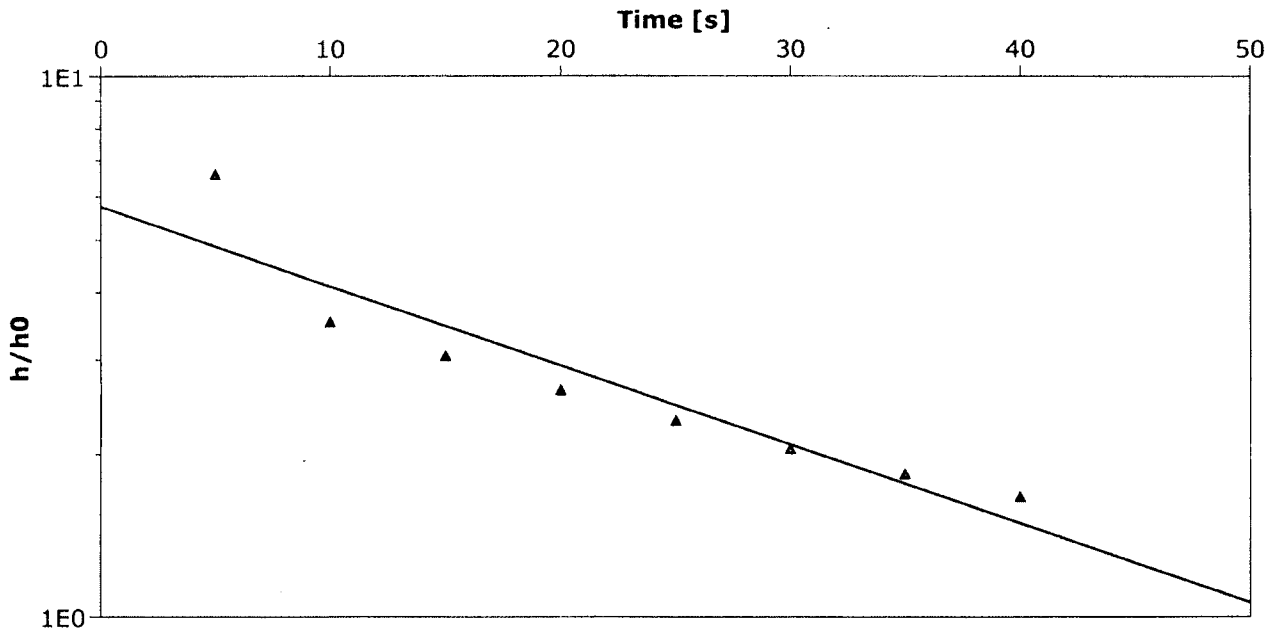


By BKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: UnitStar	

Location: Berwick, PA	Slug Test: MW309B	Test Well: MW309B
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 31.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW309B	2.23×10^{0}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: UnitStar

Location: Berwick, PA	Slug Test: MW309B	Test Well: MW309B
Test conducted by: Daniel Bansah		Test date: 12/13/2007
Aquifer Thickness: 31.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW309B		2.23×10^0	

By DKB Date 10/24/08

Chkd. By DST Date 10/27/08

Sheet No. 1 of 7

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW310A	Test Well: MW310A
Test conducted by: Daniel Bansah	Test date: 12/14/2007	
Water level at t=0 [ft]: 18.63	Static water level [ft]: 17.51	Water level change at t=0 [ft]: 1.12

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	18.629	1.119
2	5	18.074	0.564
3	10	17.852	0.342
4	15	17.78	0.27
5	20	17.742	0.232
6	25	17.719	0.209
7	30	17.70	0.19
8	35	17.686	0.176
9	40	17.677	0.167
10	45	17.67	0.16
11	50	17.658	0.148
12	55	17.651	0.141
13	60	17.647	0.137
14	70	17.636	0.126
15	80	17.629	0.119
16	90	17.621	0.111
17	100	17.613	0.103
18	110	17.61	0.10
19	120	17.604	0.094
20	135	17.591	0.081
21	150	17.588	0.078
22	165	17.601	0.091
23	180	17.588	0.078
24	195	17.579	0.069
25	210	17.579	0.069
26	225	17.576	0.066
27	240	17.573	0.063
28	255	17.573	0.063
29	270	17.573	0.063
30	285	17.571	0.061
31	300	17.57	0.06
32	330	17.57	0.06
33	360	17.569	0.059
34	390	17.57	0.06
35	420	17.57	0.06
36	450	17.569	0.059
37	480	17.567	0.057
38	510	17.569	0.059
39	540	17.57	0.06
40	570	17.569	0.059
41	600	17.568	0.058
42	660	17.566	0.056
43	720	17.57	0.06
44	780	17.566	0.056
45	840	17.568	0.058
46	900	17.566	0.056

By DKB Date 10/24/08

Chkd. By ASJ Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Water Level Data

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960	17.568	0.058
48	1020	17.566	0.056
49	1080	17.568	0.058
50	1140	17.568	0.058
51	1200	17.568	0.058
52	1260	17.568	0.058
53	1320	17.567	0.057
54	1380	17.566	0.056
55	1440	17.567	0.057
56	1500	17.566	0.056
57	1560	17.568	0.058
58	1620	17.57	0.06
59	1680	17.566	0.056
60	1740	17.566	0.056
61	1800	17.569	0.059
62	1860	17.565	0.055
63	1920	17.566	0.056
64	1980	17.566	0.056
65	2040	17.568	0.058
66	2100	17.565	0.055
67	2160	17.565	0.055
68	2220	17.567	0.057
69	2280	17.565	0.055
70	2340	17.567	0.057
71	2400	17.569	0.059
72	2460	17.568	0.058
73	2520	17.567	0.057
74	2580	17.563	0.053
75	2640	17.565	0.055
76	2700	17.566	0.056
77	2760	17.564	0.054
78	2820	17.566	0.056
79	2880	17.565	0.055
80	2940	17.566	0.056
81	3000	17.566	0.056
82	3060	17.566	0.056
83	3120	17.57	0.06
84	3180	17.565	0.055
85	3240	17.565	0.055
86	3300	17.568	0.058
87	3360	17.565	0.055
88	3420	17.565	0.055
89	3480	17.567	0.057
90	3540	17.568	0.058
91	3600	17.566	0.056
92	3660	17.566	0.056
93	3720	17.566	0.056
94	3780	17.566	0.056
95	3840	17.565	0.055
96	3900	17.568	0.058
97	3960	17.566	0.056

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020	17.561	0.051
99	4080	17.564	0.054
100	4140	17.563	0.053
101	4200	17.564	0.054
102	4260	17.563	0.053
103	4320	17.564	0.054
104	4380	17.564	0.054
105	4440	17.564	0.054
106	4500	17.565	0.055
107	4560	17.563	0.053
108	4620	17.562	0.052
109	4680	17.565	0.055
110	4740	17.563	0.053
111	4800	17.566	0.056
112	4860	17.562	0.052
113	4920	17.564	0.054
114	4980	17.566	0.056
115	5040	17.564	0.054
116	5100	17.564	0.054
117	5160	17.561	0.051
118	5220	17.565	0.055
119	5280	17.564	0.054
120	5340	17.563	0.053
121	5400	17.563	0.053
122	5460	17.562	0.052
123	5520	17.563	0.053
124	5580	17.561	0.051
125	5640	17.563	0.053
126	5700	17.564	0.054
127	5760	17.561	0.051
128	5820	17.561	0.051
129	5880	17.562	0.052
130	5940	17.562	0.052
131	6000	17.565	0.055
132	6060	17.563	0.053
133	6120	17.562	0.052
134	6180	17.559	0.049
135	6240	17.562	0.052
136	6300	17.565	0.055
137	6360	17.561	0.051
138	6420	17.562	0.052
139	6480	17.565	0.055
140	6540	17.56	0.05
141	6600	17.563	0.053
142	6660	17.564	0.054
143	6720	17.563	0.053
144	6780	17.561	0.051
145	6840	17.561	0.051
146	6900	17.564	0.054
147	6960	17.563	0.053
148	7020	17.563	0.053

By DKB Date 10/24/08

Chkd. By AAT Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080	17.562	0.052
150	7140	17.564	0.054

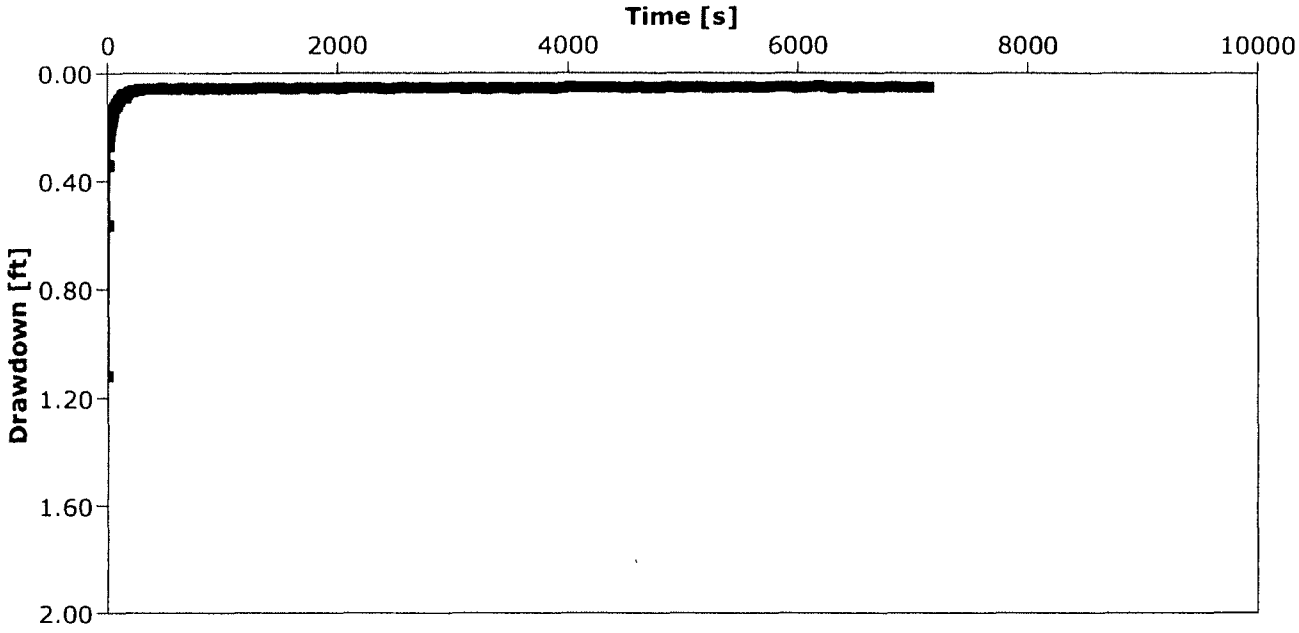
By JRB Date 10/24/08

Chkd. By CST Date 11/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW310A	Test Well: MW310A
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by:	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 23.50 ft		

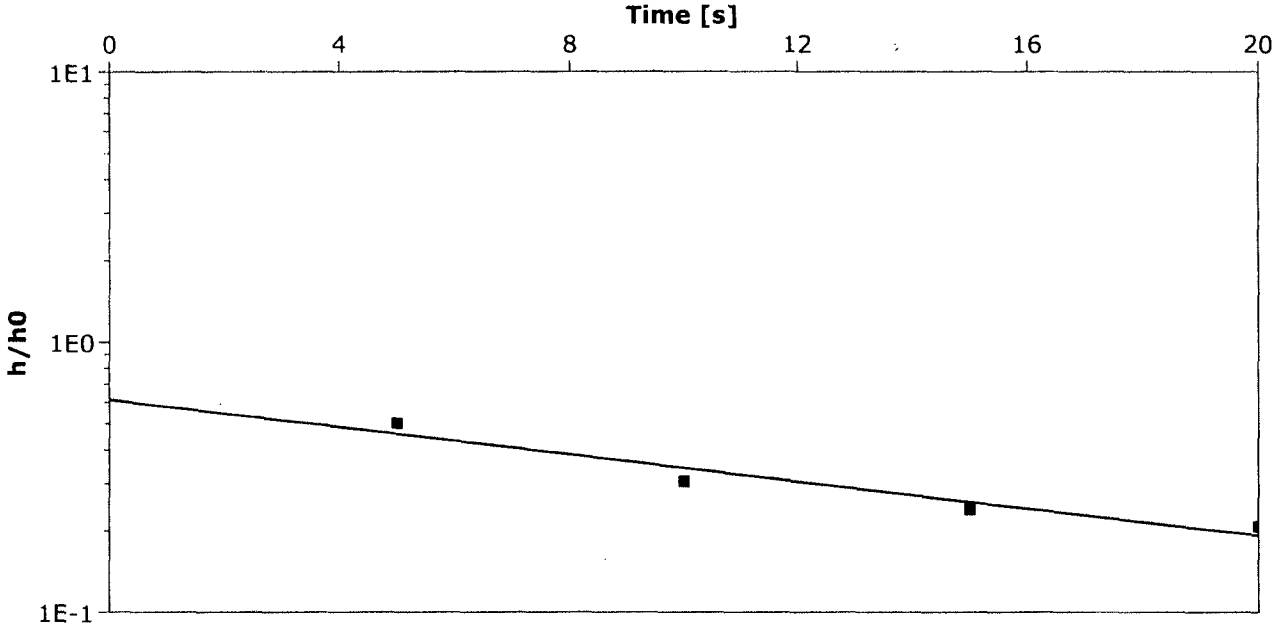


By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW310A	Test Well: MW310A
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Analysis performed by: Daniel Bansah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 23.50 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW310A	2.38×10^{1}	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW310A	Test Well: MW310A
Test conducted by: Daniel Bansah		Test date: 12/14/2007
Aquifer Thickness: 23.50 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Bansah	2/11/2008	Hvorslev	MW310A		2.38×10^{1}	

By DKB Date 10/24/08

Chkd. By ast Date 10/27/08

Paul C. Rizzo Associates, Inc.
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Slug Test - Water Level Data Page 1 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW310B	Test Well: MW310B
Test conducted by: Daniel Bansah/Anthony Fabina	Test date: 12/2/2007	
Water level at t=0 [ft]: 11.43	Static water level [ft]: 13.94	Water level change at t=0 [ft]: 2.51

	Time [s]	Water Level [ft]	WL Change [ft]
1	0	11.429	2.511
2	5.001	13.669	0.271
3	10.001	13.714	0.226
4	15.001	13.784	0.156
5	20.001	13.814	0.126
6	25.001	13.833	0.107
7	30.001	13.845	0.095
8	35.001	13.854	0.086
9	40.001	13.86	0.08
10	45.001	13.865	0.075
11	50.001	13.872	0.068
12	55.001	13.875	0.065
13	60.001	13.881	0.059
14	70.001	13.881	0.059
15	80.001	13.885	0.055
16	90.001	13.904	0.036
17	100.001	13.892	0.048
18	110.001	13.894	0.046
19	120.001	13.894	0.046
20	135.001	13.895	0.045
21	150.001	13.897	0.043
22	165.001	13.897	0.043
23	180.001	13.90	0.04
24	195.001	13.904	0.036
25	210.001	13.905	0.035
26	225.001	13.905	0.035
27	240.001	13.906	0.034
28	255.001	13.906	0.034
29	270.001	13.909	0.031
30	285.001	13.907	0.033
31	300.001	13.906	0.034
32	330.001	13.909	0.031
33	360.001	13.909	0.031
34	390.001	13.91	0.03
35	420.001	13.913	0.027
36	450.001	13.914	0.026
37	480.001	13.916	0.024
38	510.001	13.914	0.026
39	540.001	13.916	0.024
40	570.001	13.919	0.021
41	600.001	13.921	0.019
42	660.001	13.919	0.021
43	720.001	13.921	0.019
44	780.001	13.921	0.019
45	840.001	13.921	0.019
46	900.001	13.92	0.02

By DKB Date 10/24/08

Chkd. By ASF Date 10/27/08

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Slug Test - Water Level Data Page 2 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
47	960.001	13.924	0.016
48	1020.001	13.922	0.018
49	1080.001	13.922	0.018
50	1140.001	13.922	0.018
51	1200.001	13.925	0.015
52	1260.001	13.923	0.017
53	1320.001	13.925	0.015
54	1380.001	13.925	0.015
55	1440.001	13.927	0.013
56	1500.001	13.925	0.015
57	1560.001	13.928	0.012
58	1620.001	13.926	0.014
59	1680.001	13.926	0.014
60	1740.001	13.929	0.011
61	1800.001	13.929	0.011
62	1860.001	13.927	0.013
63	1920.001	13.927	0.013
64	1980.001	13.934	0.006
65	2040.001	13.928	0.012
66	2100.001	13.929	0.011
67	2160.001	13.932	0.008
68	2220.001	13.933	0.007
69	2280.001	13.931	0.009
70	2340.001	13.928	0.012
71	2400.001	13.925	0.015
72	2460.001	13.93	0.01
73	2520.001	13.929	0.011
74	2580.001	13.929	0.011
75	2640.001	13.928	0.012
76	2700.001	13.93	0.01
77	2760.001	13.93	0.01
78	2820.001	13.93	0.01
79	2880.001	13.928	0.012
80	2940.001	13.93	0.01
81	3000.001	13.929	0.011
82	3060.001	13.929	0.011
83	3120.001	13.93	0.01
84	3180.001	13.931	0.009
85	3240.001	13.932	0.008
86	3300.001	13.93	0.01
87	3360.001	13.931	0.009
88	3420.001	13.934	0.006
89	3480.001	13.932	0.008
90	3540.001	13.934	0.006
91	3600.001	13.932	0.008
92	3660.001	13.934	0.006
93	3720.001	13.933	0.007
94	3780.001	13.933	0.007
95	3840.001	13.936	0.004
96	3900.001	13.932	0.008
97	3960.001	13.934	0.006

By DKB Date 10/24/08

Chkd. By RSF Date 10/27/08

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Slug Test - Water Level Data Page 3 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
98	4020.001	13.934	0.006
99	4080.001	13.933	0.007
100	4140.001	13.933	0.007
101	4200.001	13.931	0.009
102	4260.001	13.933	0.007
103	4320.001	13.932	0.008
104	4380.001	13.933	0.007
105	4440.001	13.933	0.007
106	4500.001	13.932	0.008
107	4560.001	13.935	0.005
108	4620.001	13.933	0.007
109	4680.001	13.931	0.009
110	4740.001	13.939	0.001
111	4800.001	13.935	0.005
112	4860.001	13.939	0.001
113	4920.001	13.938	0.002
114	4980.001	13.937	0.003
115	5040.001	13.936	0.004
116	5100.001	13.937	0.003
117	5160.001	13.936	0.004
118	5220.001	13.934	0.006
119	5280.001	13.933	0.007
120	5340.001	13.933	0.007
121	5400.001	13.934	0.006
122	5460.001	13.934	0.006
123	5520.001	13.935	0.005
124	5580.001	13.933	0.007
125	5640.001	13.935	0.005
126	5700.001	13.933	0.007
127	5760.001	13.934	0.006
128	5820.001	13.933	0.007
129	5880.001	13.934	0.006
130	5940.001	13.931	0.009
131	6000.001	13.933	0.007
132	6060.001	13.933	0.007
133	6120.001	13.931	0.009
134	6180.001	13.934	0.006
135	6240.001	13.93	0.01
136	6300.001	13.934	0.006
137	6360.001	13.931	0.009
138	6420.001	13.933	0.007
139	6480.001	13.934	0.006
140	6540.001	13.932	0.008
141	6600.001	13.934	0.006
142	6660.001	13.932	0.008
143	6720.001	13.93	0.01
144	6780.001	13.931	0.009
145	6840.001	13.931	0.009
146	6900.001	13.932	0.008
147	6960.001	13.934	0.006
148	7020.001	13.933	0.007

By NKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

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Slug Test - Water Level Data Page 4 of 4

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

	Time [s]	Water Level [ft]	WL Change [ft]
149	7080.001	13.936	0.004
150	7140.001	13.938	0.002
151	7200.001	13.936	0.004

By AKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
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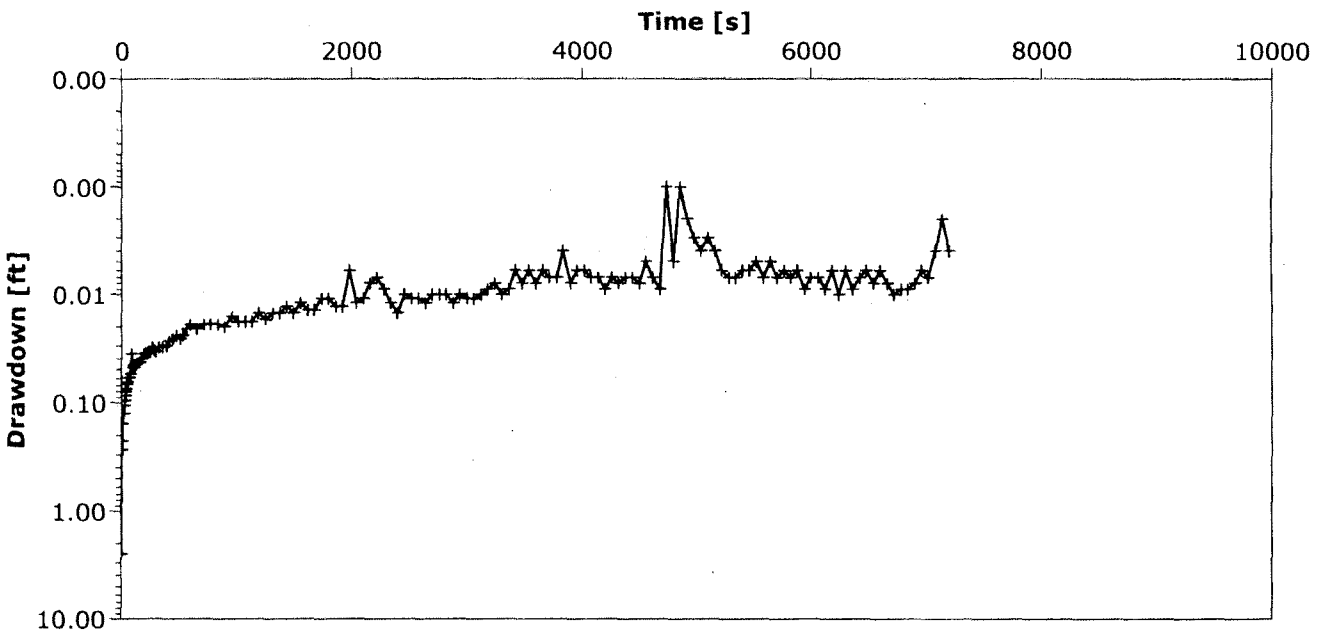
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW310B	Test Well: MW310B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Bansah	Change in WL versus Time	Analysis date: 2/11/2008
Aquifer Thickness: 35.00 ft		



By DKB Date 10/24/08
Chkd. By AST Date 10/27/08

Paul C. Rizzo Associates, Inc.
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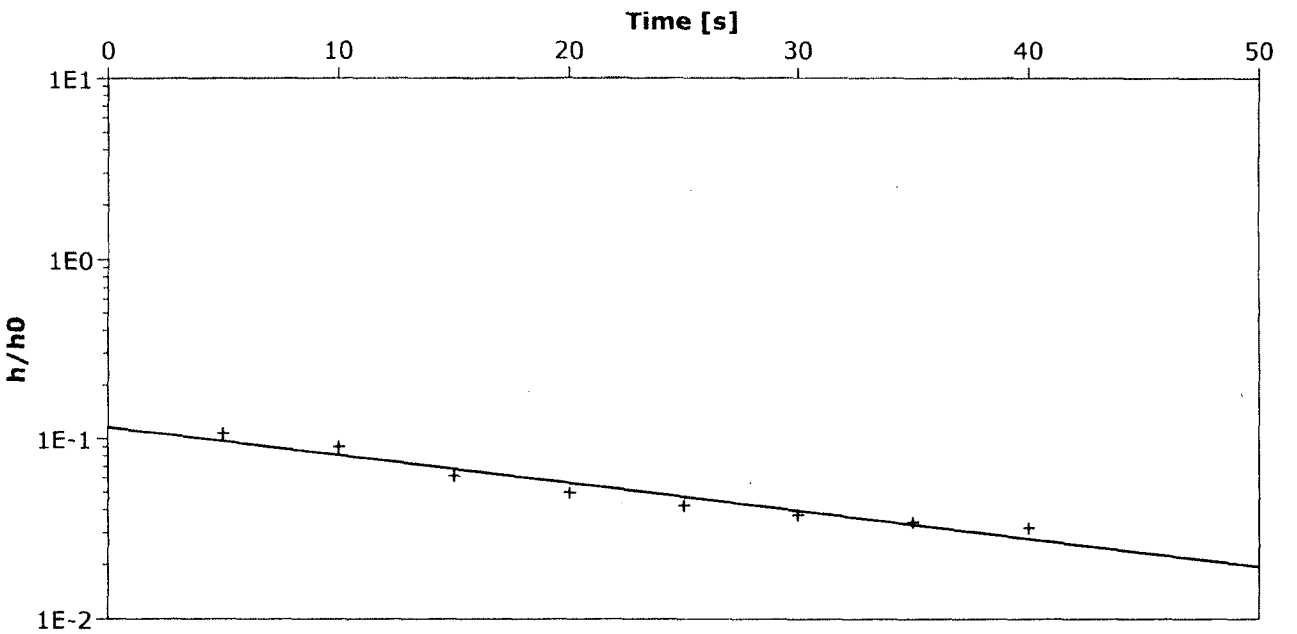
Slug Test Analysis Report	
Project: Bell Bend NPP	
Number: 07-3891	
Client: Unistar	

Location: Berwick, PA	Slug Test: MW310B	Test Well: MW310B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Analysis performed by: Daniel Banah	Hvorslev	Analysis date: 2/11/2008
Aquifer Thickness: 35.00 ft		



Calculation after Hvorslev

Observation well	Hydraulic Conductivity [ft/d]	
MW310B	2.36×10^0	

By DKB Date 10/24/08
Chkd. By [illegible] Date 10/27/08

Paul C. Rizzo Associates, Inc.
ENGINEERS & CONSULTANTS

Slug Test - Analyses Report

Project: Bell Bend NPP

Number: 07-3891

Client: Unistar

Location: Berwick, PA	Slug Test: MW310B	Test Well: MW310B
Test conducted by: Daniel Bansah/Anthony Fabina		Test date: 12/2/2007
Aquifer Thickness: 35.00 ft		

	Analysis Name	Analysis performed by	Analysis date	Method name	Well	T [ft²/d]	K [ft/d]	S
1	Hvorslev	Daniel Banah	2/11/2008	Hvorslev	MW310B		2.36×10^0	

By DKB Date 10/24/08

Chkd. By [illegible] Date 10/27/08

Attachment 3—RIZZO Calculation Package 2.5.4-2, Rev. 2:
"Groundwater Elevations, Bell Bend NPP"

PURPOSE

Provide the normal and maximum groundwater elevations at the Bell Bend Nuclear Power Plant (BBNPP) Site for use of geotechnical calculations. The plant grade elevation has been set at 674 feet above mean sea level (ft msl) so that it is at least 1 foot above the probable maximum flood (PMF) level and at least 3.3 feet above the maximum projected groundwater elevation adjacent to safety-related structures, based on requirements specified in the U.S. EPR DCD. This document presents data to show the maximum expected groundwater levels in the power block area and shows that 674 ft msl is sufficiently above maximum expected groundwater levels that it is conservative with respect to the DCD groundwater requirement.

METHODOLOGY

Evaluate groundwater elevations for the power block area and the ESWEMS pumphouse based on groundwater monitoring data and interpolation of groundwater elevation data (i.e., potentiometric surface maps).

REFERENCES

- Berwick Unit 1 RFI SL-BER-028 Rev 1
- BBNPP FSAR (Rev. 1) Section 2.4.3
- US EPR DCD, 21 FSAR Tier 2 Section 3.8
- BBNPP FSAR (Rev. 1) Section 2.4.12.3.1.1
- BBNPP FSAR (Rev. 1) Table 2.4-44 "Monthly Groundwater Elevation Measurements, BBNPP"
- BBNPP FSAR (Rev. 1) Figure 2.4-87 "Potentiometric Surface Map of Glacial Overburden Aquifer, March 2008"

1.0 NORMAL AND MAXIMUM GROUNDWATER ELEVATIONS IN MONITORING WELLS

Groundwater levels were measured over a 12-month period in monitoring wells installed within and adjacent to the power block area and proposed locations of safety related structures. The water level data are presented in BBNPP FSAR (Rev. 1) Table 2.4-44 "Monthly Groundwater Elevation Measurements, BBNPP". Four wells were chosen to best estimate the maximum groundwater elevations that have occurred in the vicinity of the power block area and the ESWEMS Pumphouse.

Monitoring well MW301A is located near the centerpoint of the containment building and best represents groundwater levels in the unconfined sand and gravel overburden aquifer in the central portion of the power block area. Monitoring well MW310A is located near the northern edge of the power block area where groundwater elevations are slightly higher in the Sand and Gravel aquifer.

Monitoring well MW302A4 is located to the east of the power block and approximately 550 feet southeast of the ESWEMS pumphouse. This well represents the well closest to the ESWEMS Pumphouse in the Sand and Gravel aquifer; thus, water levels measured in this well most closely approximate the levels that should be expected near the ESWEMS Pumphouse. Monitoring well MW317B is actually located at the proposed pumphouse location, but it is screened in the shallow bedrock approximately 10 ft below the Sand and Gravel aquifer.

As shown in the table below, the normal groundwater elevations in the power block area range from approximately 655 to 661 ft msl. The maximum measured groundwater elevation was 661.09 ft msl which occurred in March 2008. In the ESWEMS Pumphouse area, the measured groundwater elevations ranged from approximately 657 to 664 ft msl. The maximum measured elevation was 663.86 ft msl which occurred in March 2008. Based on extrapolated groundwater elevations contoured in the Sand and Gravel aquifer in March 2008 (BBNPP FSAR (Rev. 1) Figure 2.4-87 "Potentiometric Surface Map of Glacial Overburden Aquifer, March 2008"), the groundwater in the Sand and Gravel

aquifer near the ESWEMS Pumphouse could actually be a little higher; perhaps as high as 667 ft msl (see Attachment 1).

	Power Block Area		ESWEMS Pumphouse Area	
	Monitoring Well MW301A	**Monitoring Well MW310A**	**Monitoring Well MW302A4**	**Monitoring Well MW317B**
Date	**Elev (ft msl)**	**Elev (ft msl)**	**Elev (ft msl)**	**Elev (ft msl)**
October 2007	655.71	657.40	658.37	-
November 2007	657.66	659.51	660.75	660.06
December 2007	657.53	659.18	660.80	660.10
January 2008	657.68	659.25	661.57	660.78
February 2008	658.76	660.64	662.97	662.07
March 2008	659.33	661.09	663.86	662.91
April 2008	658.08	659.37	661.71	661.20
May 2008	657.38	658.37	660.86	659.97
June 2008	656.86	657.90	660.13	659.40
July 2008	655.79	656.89	658.57	657.88
August 2008	655.67	656.76	658.37	657.70
September 2008	655.03	656.40	657.87	657.15
Maximum Measured GW Elevation	**659.33**	**661.09**	**663.86**	**662.91**

Based on the maximum groundwater elevations measured in the Sand and Gravel aquifer in March 2008, the highest level measured was 663.86 ft msl. However, extrapolated values for the ESWEMS Pumphouse (from Figure 2.4-87) could be as high as 667 ft msl. Both the highest measured value (663.86 ft msl) and the highest extrapolated value (667 ft msl) are well below the value (670.7 ft msl) that is needed to satisfy the requirements of the U.S. EPR DCD.

2.0 RESULTS

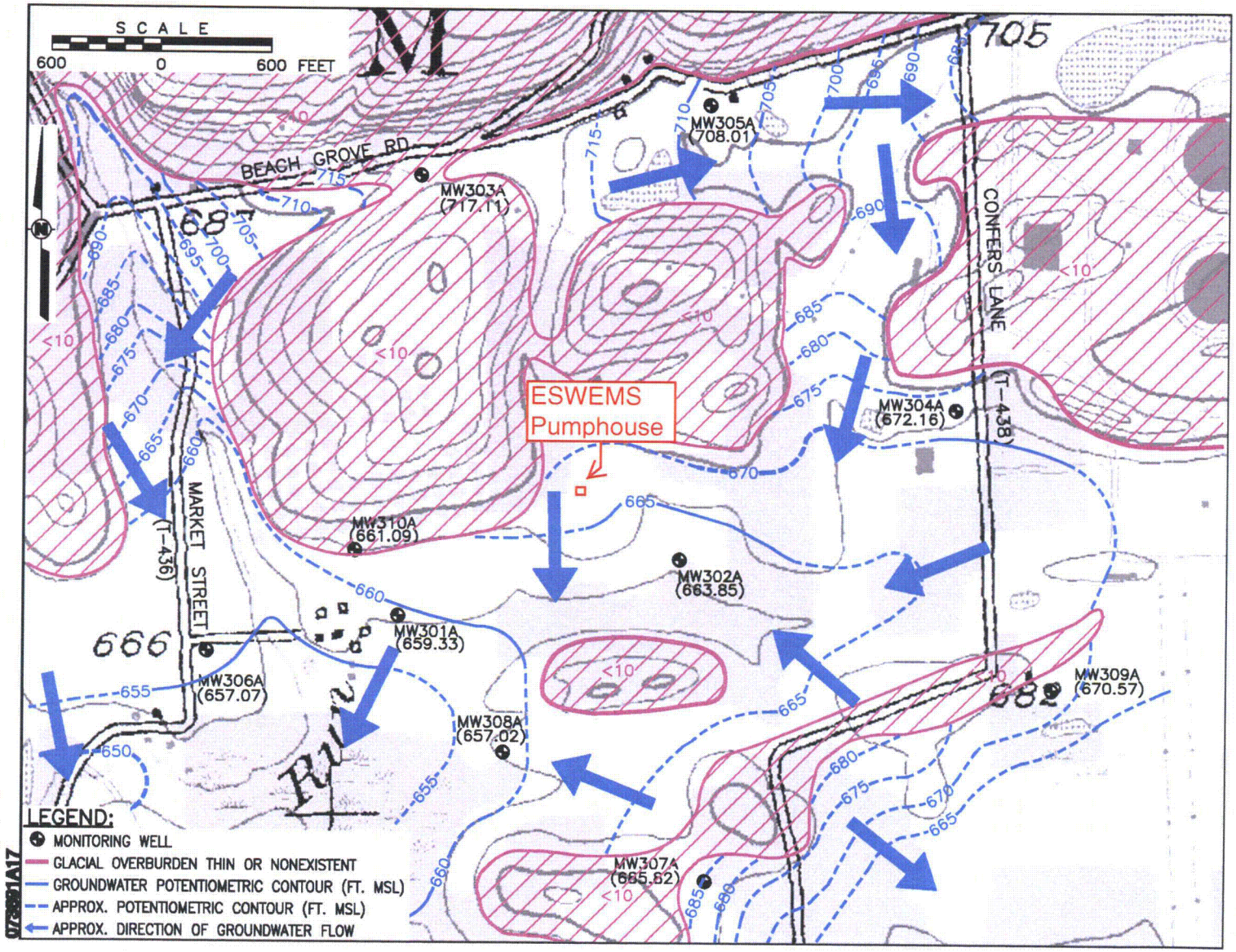
Maximum Estimated Groundwater Elevation [ft MSL]	667.0
Measured Groundwater Elevations [ft MSL]	655.03-663.86
Plant Grade [ft MSL]	674.0

ATTACHMENT 1

Figure 2.4-87
Potentiometric Surface Map of Glacial Overburden Aquifer, March 2008

(Please see the following page)

Figure 2.4-87 {Potentiometric Surface Map of Glacial Overburden Aquifer, March 2008}



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Attachment 4— Laboratory Test Reports for Overburden Materials at the BBNPP site

MACTEC

MACTEC Engineering and Consulting
2801 Yorkmont Road
Charlotte, North Carolina 28208
Phone: (704) 357-5633 Fax: (704) 357-8638

LETTER OF TRANSMITTAL

TO: **Antonio Fernandez** Paul C. Rizzo Associates, Inc Expo Mart, Suite 270-E 105 Mall Boulevard Monroeville, Pennsylvania USA 15146 Project: Berwick COL	**DATE:** April 24, 2008 **MACTEC PROJECT NO.:** 6234-07-4461 **MACTEC PROJ. NAME:** Rizzo/Berwick/Lab **SUBJECT:** Test Reports

WE TRANSMIT TO YOU: ☒ HEREWITH ☐ UNDER SEPARATE COVER

SUBJECT:	ACTION:	SENT BY:
☐ DRAWINGS	☐ FOR YOUR INFORMATION	☒ MAIL Email
☐ SPECIFICATIONS	☒ FOR YOUR COMMENT OR APPROVAL	☐ CERTIFIED MAIL
☐ CALCULATIONS	☐ RETURNED FOR CORRECTION: RESUBMIT	☐ EXPRESS
☒ REPORT	☐ APPROVED AS NOTED	☐ COURIER
☐ COST ESTIMATE	☐ AS REQUESTED	☐ HAND DELIVERED
☒ AS NOTED		☐ FACSIMILE: pages (including transmittal sheet)

COPIES	DATE	DESCRIPTION
1	4-24-08	Test Reports for Bell Bend Unit 1 Nuclear Power Plant-Batch 4

REMARKS: See Attached Test Reports for Bell Bend Unit 1 Nuclear Power Plant-Batch 4

CC:

File (1)

By: Michael D. Hamlett

Michael Hamlett
Laboratory Manager
Direct Phone: 704-357-5507

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If transmission is not received in good order, please call NAME at (000) 000-0000

Summary Of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 2216-05
Laboratory Determination Of Water (Moisture) Content of Soil and Rock by Mass.
Method B

Boring #	Sample #	Depth (ft)	Moisture Content (%)
B-301	S-3	5.0-6.5	3.8
B-301	S-5	8.0-9.5	2.6
B-302	S-1	0.0-1.5	16.7
B-302	S-2A	1.5-2.5	13.2
B-302	S-5	8.0-9.5	3.3
B-303	S-2	5.5-7.0	7.0
B-303	S-4	8.5-10.0	13.6
B-303	S-6	11.5-13.0	5.2
B-303	U-2	2.0-3.0	9.9
B-305	S-2	1.5-3.0	4.6
B-305	S-3	3.0-4.5	8.6
B-305	S-5	6.0-7.5	14.1
B-308	S-3	5.0-6.5	10.2
B-308	S-8	12.5-14.0	11.2
B-308	S-4	6.5-8.0	LM (1)
B-309	S-3	4.5-6.0	20.9
B-309	S-5	7.5-9.0	20.6
B-309	S-7	10.5-12.0	18.9
B-311	S-1	0.0-1.5	9.0
B-311	S-4	4.5-6.0	4.7
B-311	S-5	6.0-7.5	4.7
B-317	S-1	0.0-1.5	21.2
B-317	S-3	3.0-4.5	19.9
B-317	S-10	13.5-15.0	25.6
B-318	S-1	0.0-1.5	13.5
B-318	S-3	3.0-4.5	13.2
B-319	U-2	3.0-5.0	12.8
B-324	S-1	1.5-3.0	6.3
B-324	S-3	4.5-6.0	3.4
B-324	S-5	7.5-9.0	3.2
B-326	S-2	1.5-3.0	4.4
B-326	S-5	6.0-7.5	10.8
B-327	ST-2	2.3-3.6	10.4
B-333	S-2	5.0-6.5	12.2
B-333	S-5	12.5-14.0	5.7

Note (1) Limited Material to preform test.

Reviewed by: MA 4-24-08

Summary Of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 854-06
Specific Gravity Of Soil Solids By Water Pycnometer
Method B

Boring No.	Depth (ft)	Sample No.	Flask no.	TestTemperature (^{0}C)	USCS	% Passing No. 4 Sieve	Weight of Soil (grams)	Water and flask (grams)	Weight, (grams)	Specific Gravity (at test temp.)	Temperature Coefficient Factor	Specific Gravity (at 20^{0}C)
B-303	2'-3'	U-2	A	23.9	SM	98.8	51.84	360.91	393.51	2.694	0.99912	2.692
B-319	3'-5'	U-2	B	23.9	SM	93.6	51.92	362.86	395.73	2.725	0.99912	2.723
B-327	2.3'-3.6'	ST-2	C	23.9	SM	94.0	51.24	362.70	394.91	2.693	0.99912	2.691

Reviewed by: MA 4-28-08

Summary of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 5084-03
Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter Method A

Boring #	B-303
Sample #	U-2
Depth	2'-3'
Preparation Process	N/A
Specific Gravity	2.692
Initial Mass (g)	541.0
Initial Length (in)	3.022
Initial Diameter (in)	2.820
Initial Volume (in^2)	6.246
Initial Water Content (%)	9.9
Initial Dry Unit Weight (pcf)	99.4
Initial Saturation (%)	79
Final Mass (g)	582.2
Final Length (cm)	ND (1)
Final Diameter (cm)	ND (1)
Final Volume (cm^2)	ND (1)
Final Water Content (%)	20.8
Final Dry Unit Weight (pcf)	99.4
Final Saturation (%)	95
Permeant liquid used	Deaired Distilled Water
Total Back Pressure (psi)	80.0
Effective consolidation sress (psi)	3.5
Length during permeation (in)	3.022
Area during permeation (in^2)	6.246
Temperature (°C)	22.8
Initial hydraulic gradient (psi)	2.0
Average corrected hydraulic conductivity (cm/sec)	2.1×10^{-4}

Date		Time	Elapsed Time		Flow	
Start	End	Start	Minutes	Seconds	CC	K
2/29/2008	2/29/2008	8:19:00	0.5	30	5.5	2.3×10^{-4}
2/29/2008	2/29/2008	8:42:30	0.5	30	5.3	2.2×10^{-4}
2/29/2008	**2/29/2008**	**8:44:00**	**0.5**	**30**	**4.9**	**2.1×10^{-4}**
2/29/2008	**2/29/2008**	**8:45:30**	**0.5**	**30**	**4.5**	**1.9×10^{-4}**
2/29/2008	**2/29/2008**	**10:10:00**	**0.5**	**30**	**5.2**	**2.2×10^{-4}**
2/29/2008	**2/29/2008**	**10:12:00**	**0.5**	**30**	**5.3**	**2.2×10^{-4}**
NA	NA	NA	**Total**	**t = 120**	**Q = 19.9**	NA

Note: (1) Final dimensions could not be determined due to sample deterioration during removal from test cell

Reviewed By MA 4-21-08

Summary of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 5084-03
Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter Method A

Boring #	B-319
Sample #	U-2
Depth	3'-5'
Preparation Process	N/A
Specific Gravity	2.723
Initial Mass (g)	675.9
Initial Length (in)	3.115
Initial Diameter (in)	2.817
Initial Volume (in^2)	6.233
Initial Water Content (%)	12.8
Initial Dry Unit Weight (pcf)	117.6
Initial Saturation (%)	ND
Final Mass (g)	692.6
Final Length (cm)	ND (1)
Final Diameter (cm)	ND (1)
Final Volume (cm^2)	ND (1)
Final Water Content (%)	15.9
Final Dry Unit Weight (pcf)	117.6
Final Saturation (%)	95
Permeant liquid used	Deaired Distilled Water
Total Back Pressure (psi)	80.0
Effective consolidation sress (psi)	3.5
Length during permeation (in)	3.115
Area during permeation (in^2)	6.233
Temperature (°C)	22.8
Initial hydraulic gradient (psi)	2.0
Average corrected hydraulic conductivity (cm/sec)	3.0×10^{-5}

Date		Time	Elapsed Time		Flow	
Start	End	Start	Minutes	Second	CC	K
2/29/2008	2/29/2008	8:56	3	180	4.6	3.3×10^{-5}
2/29/2008	2/29/2008	10:32	3	180	3.6	2.6×10^{-5}
2/29/2008	2/29/2008	12:01	2	120	2.9	3.2×10^{-5}
2/29/2008	2/29/2008	12:03	3	180	4.1	3.0×10^{-5}

Note: (1) Final dimensions could not be determined due to sample deterioration during removal from test cell

Reviewed By MA 4-22-08

Summary of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 5084-03
Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter Method A

Boring #	B-327
Sample #	ST-2
Depth	2.3'-3.6'
Preparation Process	N/A
Specific Gravity	2.691
Initial Mass (g)	473.57
Initial Length (in)	3.05
Initial Diameter (in)	2.817
Initial Volume (in^2)	6.233
Initial Water Content (%)	10.4
Initial Dry Unit Weight (pcf)	86
Initial Saturation (%)	90
Final Mass (g)	509.62
Final Length (cm)	ND (1)
Final Diameter (cm)	ND (1)
Final Volume (cm^2)	ND (1)
Final Water Content (%)	22
Final Dry Unit Weight (pcf)	94.9
Final Saturation (%)	95
Permeant liquid used	Deaired Distilled Water
Total Back Pressure (psi)	80.0
Effective consolidation sress (psi)	3.5
Length during permeation (in)	3.05
Area during permeation (in^2)	6.233
Temperature (°C)	22.8
Initial hydraulic gradient (psi)	2.0
Average corrected hydraulic conductivity (cm/sec)	8.8×10^{-5}

Date		Time	Elapsed Time		Flow	
Start	End	Start	Minutes	Second	CC	K
2/29/2008	2/29/2008	8:58	2	120	7.8	8.3×10^{-5}
2/29/2008	2/29/2008	10:33	1	60	4.3	9.2×10^{-5}
2/29/2008	2/29/2008	12:02	2	120	8.3	8.9×10^{-5}
2/29/2008	2/29/2008	12:05	2	120	8.4	9.0×10^{-5}

Note: (1) Final dimensions could not be determined due to sample deterioration during removal from test cell

Reviewed By MA 4-24-08

Summary Of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 2974-07a
Standard Test Method for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils
Method D

Boring No.	Depth (ft)	Sample No.	Moisture Content Type	Moisture Content	Furnace Temperature (°C)	Organic Content
B-318	0'-1.5'	S-1	AS RECEIVED	14%	750	2.1%
B-318	3'-4.5'	S-3	AS RECEIVED	13%	750	3.1%

Reviewed by: MA 4-24-08

Summary Of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 7012-07
Compressive Strength And Elastic Moduli Of Intact Rock Core

SAMPLE ID	AS RECEIVED MOISTURE CONTENT	SPECIMEN DIAMETER, INCH	SPECIMEN HEIGHT, (INCH)	DIMENSIONAL REQUIREMENTS	UNIT WEIGHT (pcf)	TEST DURATION (TIME TO FAILURE IN MINUTES : SECOUNDS)	UNCONFINED COMPRESSIVE STRENGTH, (PSI)	TYPE OF BREAK	TEMP OF LAB DURING TESTING (DEGREES C°)
B-310 / R-2 / 56.4-58.0	0.6%	1.9868	4.3845	PASS	171.0	14:04	12,580	CONE & SHEAR	21.7
B-331 / R-7 / 66.4-68.6	0.9%	1.9870	4.3720	PASS	171.7	8:05	9,535	CONE & SHEAR	21.7
B-302 / R-32 / 317.3-318.8	0.3%	1.9748	4.3980	PASS	172.6	10:19	13,833	CONE & SHEAR	21.7
B-327 / R-3 / 33.5-34.5	1.1%	1.9750	4.4360	PASS	165.6	12:08	9,006	SHEAR	21.7
B-303 / R-24 / 141.9-143.5	NR	1.9810	4.3730	PASS	172.4	9:21	9,207	CONE	21.7
B-318 / R-14 / 92.7-94.2	NR	1.9850	4.4320	PASS	172.1	8:07	7,556	SHEAR	21.7
B-304 / R-8 / 109.0-110.6	0.3%	1.9570	4.3925	PASS	172.6	12:27	12,070	SHEAR	21.7
B-302 / R-3 / 51.6-52.9	0.4%	1.9763	4.3765	PASS	172.1	11:56	8,495	SHEAR	21.7
B-319 / R-4 / 40.2-41.9	NR	1.9865	4.4520	PASS	171.8	7:46	6,770	SHEAR	21.7
B-302 / R-21 / 213.1-215.1	0.4%	1.9750	4.3735	PASS	172.6	7:45	9,042	SHEAR	21.7
B-301 / R-20 / 196.7-198.9	NR	1.9573	4.3765	PASS	170.4	4:53	3,687	SHEAR	21.7
B-304 / R-14 / 170.0-171.5	0.3%	1.9680	4.3885	PASS	172.5	11:12	8,381	SHEAR	21.7
B-302 / R-11 / 109.9-111.2	0.5%	1.9740	4.3985	PASS	173.3	10:24	8,666	SHEAR	21.7
B-309 / R-7 / 53.9-55.5	0.6%	ND	ND	FAIL/BROKE DURING PREPARATION	ND	ND	ND	ND	ND
B-334 / R-9 / 63.7-65.5	NR	1.9860	4.3720	FAIL/CHIPPED EDGE	171.8	ND	ND	ND	ND
B-326 / R-1 / 40.4-41.7	1.2%	1.9783	4.4400	FAIL/BROKE AT FRACTURE LINE	168.0	ND	ND	ND	ND
B-324 / R-2 / 27.0-28.1	0.6%	1.9845	4.3430	FAIL/CHIPPED EDGE	172.3	ND	ND	ND	ND
B-301 / R-15 / 151.6-153.1	NR	1.9500	4.4115	PASS	171.2	11:34	9,929	SHEAR	21.7
B-304 / R-26 / 272.4-274.6	0.3%	1.9750	4.4000	PASS	171.9	13:44	9,924	SHEAR	21.7

Note (1) Material Type Mahantango Siltstone
Note (2) Confining Pressure: None

Reviewed by: MA 4-24-08

Summary Of Laboratory Testing
Bell Bend COL Project
MACTEC Job No. 6234-07-4461

ASTM D 6473-99(2005)
Specific Gravity And Absorption Of Rock For Erosion Control

BORING NUMBER	SAMPLE NUMBER	DATE SAMPLED	DATE TESTED	BULK	BULK (SSD)	APPARENT	ABSORPION (%)
B-301	R-20	N/A	3/18/2008	2.769	2.784	2.811	0.54
B-302	R-3	N/A	3/18/2008	2.758	2.775	2.806	0.62
B-302	R-11	N/A	3/18/2008	2.761	2.776	2.803	0.54
B-304	R-8	N/A	3/18/2008	2.763	2.777	2.801	0.48
B-310	R-2	N/A	3/18/2008	2.766	2.786	2.823	0.73
B-318	R-14	N/A	3/18/2008	2.757	2.772	2.800	0.56
B-319	R-4	N/A	3/18/2008	2.827	2.847	2.886	0.72
B-324	R-2	N/A	3/18/2008	2.763	2.781	2.814	0.66
B-326	R-1	N/A	3/18/2008	2.676	2.716	2.786	1.46
B-334	R-9	N/A	3/18/2008	2.773	2.786	2.809	0.46

Reviewed by: 4-24-08