## 2.4.13 Accidental Releases of Liquid Effluents in Ground and Surface Waters

## 2.4.13.1 Groundwater

This section provides a conservative analysis of a postulated, accidental liquid release of effluents to the groundwater at the VEGP site. The accident scenario is described. The conceptual model used to evaluate radionuclide transport is presented, along with potential pathways of contamination to water users. The radionuclide transport analysis is described, and the results are summarized. The radionuclide concentrations to which a water user might be exposed are compared against the regulatory limits.

Results are considered acceptable if the concentrations are less than the maximum permissible concentrations (MPCs) included in 10 CFR Part 20, Appendix B, Table 2, Column 2. Because the identity and concentration of each radionuclide in the mixture are known, the ratio present in the mixture and the concentration otherwise established in 10 CFR Part 20, Appendix B, for the specific radionuclide not in a mixture must also be determined. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity"). These criteria apply to the nearest potable water supply in an unrestricted area.

#### 2.4.13.1.1 Accident Scenario

The accident scenario has been selected based on information developed by Westinghouse to assist AP1000 COL applicants in evaluating the accidental liquid release of effluents **(Westinghouse 2006)**. The accident scenario assumes an instantaneous release from one of the two effluent holdup tanks located in the lowest level of the AP1000 auxiliary building.

There are two effluent holdup tanks, each with a capacity of 28,000 gal., for each AP1000 unit. These tanks have both the highest potential radionuclide concentrations and the largest volume. Therefore, they have been selected by Westinghouse as the limiting tanks for evaluating an accidental release of liquid effluents that could lead to the most adverse contamination of groundwater or surface water, via the groundwater pathway.

Westinghouse estimated the radionuclide concentrations of the effluent holdup tanks to be 101 percent of the reactor coolant. Westinghouse determined the radionuclide concentrations in reactor coolant itself to be as follows:

- For tritium (H-3), a coolant concentration of 1.0 µCi/g should be used.
- Corrosion products (Cr-51, Mn-54, Mn-56, Fe-55, Fe-59, Co-58 and Co-60) should be taken directly from the AP1000 DCD, Table 11.1-2, *Design Basis Reactor Coolant Activity*.
- Other radionuclides should be based on the AP1000 DCD, Table 11.1-2 multiplied by 0.12/0.25 to adjust the failed fuel rate from the design basis to a conservatively bounding value for this analysis.

Based on these recommendations, the expected radionuclide concentrations in the effluent holdup tanks have been calculated, and the results are summarized in Table 2.4.13-1.

# 2.4.13.1.2 Conceptual Model

Figure 2.4.13-1 illustrates the conceptual model used to evaluate an accidental liquid release of effluent to groundwater, or to surface water via the groundwater pathway. The key elements and assumptions embodied in the conceptual model are described and discussed below.

As indicated in Section 2.4.13.1.1, the effluent holdup tanks are assumed to be the source of the release, with each tank having a volume of 28,000 gal. and the radionuclide concentrations as summarized in Table 2.4.13-1. These tanks are located at the lowest level of the auxiliary building, which has a floor elevation of approximately 186.5 ft msl and is approximately 25 to 35 ft above the water table, based on water table contour plots presented on Figures 2.4.12-7 through 2.4.12-11. One of these tanks is postulated to rupture, and 80 percent of the liquid volume (22,400 gal.) is assumed to be released in accordance with Section 15.7.3 of NUREG-0800. Flow from a tank rupture would initially flood the tank room and begin to flow to the auxiliary building radiologically controlled area sump via floor drains as described in Section 3.4.1.2.2.2 of the AP1000 DCD. It is assumed that sump pumps are inoperable. According to the AP1000 DCD, this would result in the 22,400 gal. release flooding the balance of level 1 of the auxiliary building via the interconnecting floor drains. Once level 1 is flooded, it is assumed that a pathway is created that would allow the entire 22,400 gal. to enter the groundwater (unconfined aquifer) instantaneously. This assumption is very conservative because it requires failure of the floor drain system, plus it ignores the barriers presented by the 6-ft-thick basemat and the sealed, 3-ft-thick exterior walls of the AP1000 auxiliary building. Furthermore, there is a minimum of 20 ft of unsaturated zone beneath the basemat. Radionuclide concentrations would be attenuated during unsaturated zone transport as a consequence of adsorption, dispersion, and radioactive decay, which is not considered in this conservative analysis.

With the postulated instantaneous release of the contents of an effluent holdup tank to groundwater, radionuclides would enter the unconfined aquifer and migrate with the groundwater in the direction of decreasing hydraulic head. Hydraulic head contour maps for the unconfined aquifer presented in Figures 2.4.12-7 through 2.4.12-9 indicate that the groundwater pathway from a point of release in either of the AP1000 auxiliary buildings would be northward to Mallard Pond, a groundwater discharge area, as discussed in Section 2.4.12.1.3. Because the underlying Blue Bluff Marl has a very low vertical permeability, as is described in Section 2.4.12, groundwater flow in the unconfined aquifer is predominantly horizontal. The flow path is assumed to be a straight line between either auxiliary building and the south side of Mallard Pond, a distance of approximately 2,450 ft based on Figure 1-4. During saturated zone transport, radionuclide concentrations of the liquid released to the water table would be reduced by the processes of adsorption, hydrodynamic dispersion, and radioactive decay. There are no

existing water-supply wells between the postulated release points and Mallard Pond that withdraw water from the unconfined aquifer. Based on the data in Table 2.4.12-10, all water-supply wells for the existing VEGP plant withdraw their water from the deeper, confined Tertiary and Cretaceous aquifers.

Mallard Pond serves as a groundwater discharge area for the unconfined aguifer. The radionuclides associated with a liquid release would enter the surface water system via Mallard Pond. Radionuclide concentrations would be diluted in the pond and in the stream running from the pond to the Savannah River. Groundwater flow into Mallard Pond is continuous, and the pond level is controlled by a spillway. Measurements of stream flow discharge from Mallard Pond and at points downstream indicate that flow increases progressively in magnitude before discharging to the Savannah River (Bechtel 1985). Upon discharge to the Savannah River, the stream flow would mix with the Savannah River flow, resulting in significantly further dilution prior to withdrawal by the nearest surface water user. As noted in Section 2.4.1, the nearest downstream industrial surface water users include the Fort James Operating Company and the Georgia Power Company. Both companies operate river intakes that withdraw water from the Savannah River near River Mile 45, which is about 106 miles downstream of the VEGP site. The City of Savannah Municipal and Industrial Plant, and the Beaufort-Jasper County Water and Sewer Authority are the nearest downstream municipal water users. The City of Savannah obtains water from Abercorn Creek where it enters the Savannah River near River Mile 29, which is about 122 miles downstream from the VEGP site. Beaufort-Jasper County withdraws water from the Savannah River via an 18-mile canal.

# 2.4.13.1.3 Radionuclide Transport Analysis

A radionuclide transport analysis has been conducted to estimate the radionuclide concentrations that might expose existing and future water users based on an instantaneous release of the radioactive liquid of an AP1000 effluent holdup tank. Analysis of liquid effluent release commenced with the simplest of models, using demonstratively conservative assumptions and coefficients. Radionuclide concentrations resulting from the preliminary analysis were then compared against the MPCs identified in 10 CFR Part 20, Appendix B, Table 2, Column 2, to determine acceptability. Further analysis, using progressively more realistic and less conservative assumptions and modeling techniques, was conducted when the preliminary results were not acceptable.

Radionuclide transport along a groundwater pathline is governed by the advection-dispersion-reaction equation (Javandel et al. 1984), which is given as

$$R\frac{\partial C}{\partial t} = D\frac{\partial^2 C}{\partial x^2} - v\frac{\partial C}{\partial x} - \lambda RC$$
(2.4.13-1)

where: C = radionuclide concentration; R = retardation factor; D = coefficient of longitudinal hydrodynamic dispersion; v = average linear velocity; and  $\lambda$  = radioactive decay constant. The retardation factor is defined from the relationship

$$R = 1 + \frac{\rho_b K_d}{n_e}$$
(2.4.13-2)

where:  $\rho_b$  = bulk density;  $K_d$  = distribution coefficient; and  $n_e$  = effective porosity. The average linear velocity is determined using Darcy's law, which is

$$v = -\frac{K}{n_e} \frac{dh}{dx}$$
(2.4.13-3)

where: K = hydraulic conductivity; and dh/dx = hydraulic gradient. The radioactive decay constant can be written as

$$\lambda = \frac{\ln 2}{t_{1/2}}$$
(2.4.13-4)

where  $t_{1/2}$  = radionuclide half-life. Conservatively neglecting hydrodynamic dispersion, Equation 2.4.13-1 can be integrated to yield

$$C = C_0 \exp(-\lambda t)$$
 (2.4.13-5)

where: C = radionuclide concentration;  $C_0$  = initial radionuclide concentration; t = LR/v = radionuclide travel time; and L = groundwater pathline length.

To estimate the radionuclide concentrations in groundwater discharging to Mallard Pond, Equation 2.4.13-5 was applied along the groundwater pathline that would originate at either of the liquid effluent release points beneath the AP1000 auxiliary buildings and terminate at Mallard Pond. The analysis was performed sequentially as described below.

# 2.4.13.1.3.1 Transport Considering Radioactive Decay Only

An initial screening analysis was performed considering radioactive decay only. This analysis assumed that all radionuclides migrate at the same rate as groundwater and considered no adsorption and retardation, which would otherwise result in a longer travel time and more radioactive decay. The concentrations of the radionuclides appearing in Table 2.4.13-1 were decayed for a period equal to the groundwater travel time from the point of release to Mallard Pond, using Equation 2.4.13-5 with R = 1. Radionuclides having concentrations less than 1 percent of their respective MPCs were eliminated from consideration because their concentrations would be well below their regulatory limits. Any radionuclides having a concentration greater than or equal to 1 percent of their MPC were retained for further evaluation.

Evaluating transport considering radioactive decay only requires an estimate of the groundwater travel time. The groundwater travel time has been estimated by considering the locations of the effluent holdup tanks, the hydrogeologic properties of the backfill, and conservative estimates of the hydraulic gradient and hydraulic conductivity of the water table aquifer. The total saturated zone travel time is the sum of three components: (1) travel time in the backfill, (2) travel time in the water table aquifer in the area between the backfill and the point at which the hydraulic gradient steepens near OW-1005, and (3) travel time between OW-1005 and Mallard Pond. The travel time in each is a function of the travel distance, hydraulic conductivity, effective porosity, and hydraulic gradient. The basis for estimating the travel time in each of these three segments is described below.

- 1. The travel distance in the backfill was determined to be about 460 ft, which represents the shortest distance between the portion of level 1 of the auxiliary building potentially flooded by a tank rupture and the northern extent of the power block excavation. This distance considers the 71 ft between column lines 7.3 and 11 of the auxiliary building (AP1000 Doc. No. APP-1010-P2-001), the 310 ft length of the turbine building (AP1000 Doc. No. APP-0030-X4-001), and the 80 ft between the turbine building and the northern extent of the power block excavation. A hydraulic conductivity of 1,220 ft/yr (3.3 ft/day) was conservatively assigned to the backfill, which is the maximum in situ value reported for the VEGP site and was obtained from Table 2.4.12-15 of the UFSAR (SNC 2003). The effective porosity of the backfill was taken to be 0.34 as established in Section 2.4.13.1.1 of the UFSAR (SNC 2003). Because the backfill for Units 3 and 4 will be obtained from the borrow areas used for Units 1 and 2 and compacted to the same criteria, the hydraulic conductivity and porosity values observed for Units 1 and 2 should be representative of Units 3 and 4. The hydraulic gradient in the backfill was conservatively estimated to be 0.014 ft/ft using the maximum water level observed at OW-1009 (El. 163.03 ft msl), the minimum water level observed at OW-1005 (El. 132.53 ft msl), and the distance between the two observation wells (2,209 ft). Based on the aforementioned, conservatively-established parameters, the groundwater travel time in the backfill was calculated to be 9.16 years.
- 2. The travel distance between the northern extent of the power block excavation and OW-1005 was determined to be 990 ft, based on the location of OW-1005. Geotechnical borings included in Appendix 2.5A along with water table contour maps included in Section 2.4.12 indicate that groundwater flow from the power block area to the north and toward Mallard Pond will occur in the Utley limestone, because the data suggests that the limestone is continuous along this pathway. Test results given in Table 2.4.12-3 indicate that the in situ hydraulic conductivity of the Utley limestone ranges from 0.12 to 2.7 ft/day (boring logs for wells OW-1003, OW-1005, OW-1006, OW-1007, OW-1009, OW-1010, OW-1013, and OW-1015 indicate completion in the Utley limestone). UFSAR

**(SNC 2003)** hydraulic testing results, adjacent to VEGP Units 1 and 2, indicate the possibility of localized, highly permeable zones in the Utley limestone. To address the possibility that similar zones are present north of Units 3 and 4, the maximum value reported in the UFSAR, 125,400 ft/year (343 ft/day), is used in this analysis. The effective porosity of the water table aquifer has been estimated to be 0.32 based on site-specific measurements, as noted in Section 2.4.12.1.4. Effective porosities of limestone formations are typically lower. A lower value of 0.10 has been adopted from the literature **(Heath 1998)** to provide a conservative estimate of the average linear velocity. The hydraulic gradient over this segment is assumed to be the same as that in the backfill (0.014 ft/ft). Using the parameters described above, a groundwater travel time of 0.06 year is estimated for this segment.

3. The travel distance between OW-1005 and Mallard Pond is about 1,000 ft, based on site topographic surveys. As with the prior segment, groundwater flow occurs in the Utley limestone, and the same values for hydraulic conductivity (125,400 ft/yr) and effective porosity (0.10) are adopted. The hydraulic gradient is estimated to be 0.023 ft/ft using the maximum water level observed at OW-1005 (133.20 ft msl), the water surface elevation in Mallard Pond (110 ft msl), and the distance between the two (1,000 ft). A groundwater travel time of 0.03 year is estimated for this segment based the above parameters.

Summing the above travel times, the total travel time for this analysis is 9.25 years. Using Equation 2.4.13-5, the initial concentrations given in Table 2.4.13-1 were decayed for a period of 9.25 years. Table 2.4.13-2 summarizes the results considering only radioactive decay and identifies those radionuclides that would exceed their MPC by more than 1 percent. These include H-3, Mn-54, Fe-55, Co-60, Sr-90, I-129, Cs-134, and Cs-137.

# 2.4.13.1.3.2 Transport Considering Radioactive Decay and Adsorption

Radionuclides retained from the screening analysis (H-3, Mn-54, Fe-55, Co-60, Sr-90, I-129, Cs-134, and Cs-137) were further evaluated considering adsorption and retardation in addition to radioactive decay. Distribution coefficients values for Co-60, Sr-90, Cs-134, and Cs-137 were determined based on laboratory analyses of soil samples obtained from the VEGP site **(Kaplan and Millings 2006; MACTEC 2006)** and are shown in Table 2.4.13-3. Sixteen soil samples were taken from shallow test pits located in potential borrow source areas for backfill that will be required for the new AP1000 units. Laboratory testing of these backfill samples yielded distribution coefficients that range from 1.4 to 15.3 mL/g for Co, 6.0 to 51.7 mL/g for Sr, and 3.5 to 56.2 mL/g for Cs. Three additional soil samples were obtained from a vibratory boring located near B-1003. The samples acquired from the vibratory boring represent the Utley limestone based on the boring log for B-1003. Testing of the Utley limestone samples resulted

in distribution coefficients that range from 3.9 to 21.3 mL/g for Co, 14.4 to 17.4 mL/g for Sr, and 22.7 to 33.2 mL/g for Cs.

Distribution coefficients for Co, Sr, and Cs in the backfill were conservatively assigned the minimum value determined from the 16 samples (1.4 mL/g for Co, 6.0 mL/g for Sr, and 3.5 mL/g for Cs). Distribution coefficients for Co, Sr, and Cs in the Utley limestone were conservatively assigned the minimum value observed for the three vibratory boring samples (3.9 mL/g for Co, 14.4 mL/g for Sr, and 22.7 mL/g for Cs). Distribution coefficients for H-3 and I-129, which have no or little tendency for adsorption, were taken to be zero for both the backfill and Utley limestone. Distribution coefficients for Mn-54 and Fe-55 were conservatively assumed to be zero in both the backfill and Utley limestone.

Retardation factors were calculated using Equation 2.4.13-2 with the distribution coefficients as stated above, effective porosities of 0.34 for the backfill and 0.10 for the Utley limestone, and a bulk density of 1.60 g/cm<sup>3</sup>. Total radionuclide travel times were calculated by summing the radionuclide travel times in the backfill and the Utley limestone. Radionuclide concentrations were then determined at the point of discharge to Mallard Pond using Equation 2.4.13-5 and the appropriate initial concentration, decay rate, and total travel time. Results are summarized in Table 2.4.13-4 and indicate that H-3, Mn-54, Fe-55, Sr-90, I-129, and Cs-137 would exceed their respective MPC by more than 1 percent.

# 2.4.13.1.3.3 Transport Considering Radioactive Decay, Adsorption, and Dilution

The H-3, Mn-54, Fe-55, Sr-90, I-129, and Cs-137 discharging to surface water (Mallard Pond) would mix with other, uncontaminated, groundwater discharging to surface water. A dilution factor was estimated to account for the mixing and dilution of contaminated groundwater with uncontaminated groundwater. The dilution factor is the ratio of the rate at which the postulated release would discharge to surface water (Mallard Pond) as contaminated groundwater to the total rate of groundwater discharge to surface water, which would include both uncontaminated and contaminated groundwater. The magnitude of the dilution factor was estimated as described below.

The rate at which a release from an effluent holdup tank discharges to surface water (Mallard Pond) is determined by the transport characteristics of the water table aquifer. A release from an effluent holdup tank would undergo unsaturated zone transport beneath the auxiliary building, followed by saturated zone transport first through the backfill and then through the Utley limestone, and would finally discharge to Mallard Pond. The discharge rate itself is a function of the Darcy velocity and the assumed volume and dimensions of the resulting contaminant slug. The Darcy velocity was calculated to be 0.047 ft/day, using a hydraulic conductivity of 3.3 ft/day and a hydraulic gradient of 0.014 ft/ft. These values represent the hydrogeologic characteristics of the backfill as described previously. The volume of the liquid release has been assumed to be 22,400 gal. (2,995 ft<sup>3</sup>), which represents 80 percent of the

28,000 gal. capacity of one effluent holdup tank (NUREG-0800, Section 15.7.3 recommends that 80 percent of the liquid volume be considered in this analysis). Considering the effective porosity of the backfill (0.34), the release would occupy about 8,810 ft<sup>3</sup> of the saturated backfill. The shape of the resulting contaminant slug is assumed to be square in plan view and extend vertically throughout the entire saturated thickness of the backfill. Using 20 ft as a representative saturated thickness (water table to top of Blue Bluff Marl), the slug would have an area of about 440 ft<sup>2</sup> in plan view and a width of about 21 ft. The cross-sectional area of the contaminant slug normal to the groundwater flow direction would therefore be 20 ft by 21 ft or about 420 ft<sup>2</sup>. The discharge rate of the contaminant slug is then the product of the Darcy velocity and the crosssectional area, 20 ft<sup>3</sup>/day or 0.10 gpm. The rate of total groundwater discharge to surface water has been estimated as 1,125 gpm at a point just downstream of the confluence of the stream discharging from Mallard Pond and its west branch. This value is the result of stream flow measurements that were taken in the months of June and July to support the licensing of VEGP Units 1 and 2 (Bechtel 1985). Because the stream discharging from Mallard Pond and its west branch are both perennial streams, the stream flow measurements would represent the groundwater discharge. The resulting dilution factor is calculated as the ratio of 0.10 gpm to 1,125 gpm, or 9.1E-05.

This dilution factor is applied to the H-3, Mn-54, Fe-55, Sr-90, I-129, and Cs-137 concentrations reported in Table 2.4.13-4 to account for dilution in addition to radioactive decay and adsorption. Table 2.4.13-5 summarizes the resulting concentrations, which would represent the concentrations in the surface water at a point just downstream of the confluence of the stream discharging from Mallard Pond and its west branch. It is seen that the concentrations of each of these radionuclides are below their respective MPCs.

# 2.4.13.1.4 Compliance with 10 CFR Part 20

The radionuclide transport analysis presented in Section 2.4.13.1.3 demonstrates that each of the radionuclides that could be accidentally released to groundwater would be individually below its MPC. However, 10 CFR Part 20, Appendix B, Table 2, imposes additional requirements when the identity and concentration of each radionuclide in a mixture are known. In this case, the ratio present in the mixture and the concentration otherwise established in 10 CFR Part 20 Appendix B for the specific radionuclide not in a mixture must be determined. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity") as indicated by Note 4 in Appendix B, 10 CFR Part 20.

This sum of fractions approach was applied to the radionuclide concentrations conservatively estimated in Section 2.4.13.1.3. Results are summarized in Table 2.4.13-6. The ratios for the mixture sum to 0.32, which demonstrates that an accidental liquid release of effluents in groundwater would not exceed 10 CFR Part 20 limits in the Mallard Pond stream before reaching the VEGP site property (EAB).

Compliance with 10 CFR Part 20 is further assured considering that the point at which compliance has been demonstrated is within the restricted area and not a potable water source. The stream discharging from Mallard Pond is a gaining stream that discharges to, and mixes with, the Savannah River. The entire reach of this stream, about 1.0 mi. in length, is within the restricted area and not a potable water supply. The nearest potable water supply in an unrestricted area to which the 10 CFR Part 20 requirements would apply is the Savannah River. Mixing of the tributary stream flow with the Savannah River flow would dilute radionuclide concentrations further. The magnitude of this additional dilution can be estimated from the ratio of the tributary stream flow rate (1,125 gpm) to the Savannah River flow rate. Using the 100-year drought flow, given as 3,298 ft<sup>3</sup>/sec (1,480,000 gpm) in Section 2.4.11, to conservatively represent the Savannah River flow rate, a dilution factor of 7.6E-04 is calculated. Accounting for this additional dilution would further reduce radionuclide concentrations by a factor of about 1,000. Consequently, the ratios for the mixture would sum to a value much less than unity and well below the compliance limit.

# 2.4.13.2 Surface Water

No outdoor tanks contain radioactivity in the Westinghouse AP1000 design (Westinghouse **2006**). In particular, the AP1000 design does not require boron changes for load follow and does not recycle boric acid or reactor coolant water, so the boric acid tank is not radioactive. Because no outdoor tanks contain radioactivity, no accident scenario could result in the release of liquid effluent directly to the surface water.

Radionuclide	Design Basis Reactor Coolant Activity <sup>1</sup> (μCi/g)	Reactor Coolant Concentrations <sup>2</sup> (μCi/cm <sup>3</sup> )	Effluent Holdup Tank Concentrations <sup>3</sup> (μCi/cm <sup>3</sup> )
H-3	-	1.00E+00	1.01E+00
Cr-51	1.30E-03	1.30E-03	1.31E-03
Mn-54	6.70E-04	6.70E-04	6.77E-04
Mn-56	1.70E-01	1.70E-01	1.72E-01
Fe-55	5.00E-04	5.00E-04	5.05E-04
Fe-59	1.30E-04	1.30E-04	1.31E-04
Co-58	1.90E-03	1.90E-03	1.92E-03
Co-60	2.20E-04	2.20E-04	2.22E-04
Br-83	3.20E-02	1.54E-02	1.55E-02
Br-84	1.70E-02	8.16E-03	8.24E-03
Br-85	2.00E-03	9.60E-04	9.70E-04
Rb-88	1.50E+00	7.20E-01	7.27E-01
Rb-89	6.90E-02	3.31E-02	3.35E-02
Sr-89	1.10E-03	5.28E-04	5.33E-04
Sr-90	4.90E-05	2.35E-05	2.38E-05
Sr-91	1.70E-03	8.16E-04	8.24E-04
Sr-92	4.10E-04	1.97E-04	1.99E-04
Y-90	1.30E-05	6.24E-06	6.30E-06
Y-91m	9.20E-04	4.42E-04	4.46E-04
Y-91	1.40E-04	6.72E-05	6.79E-05
Y-92	3.40E-04	1.63E-04	1.65E-04
Y-93	1.10E-04	5.28E-05	5.33E-05
Nb-95	1.60E-04	7.68E-05	7.76E-05
Zr-95	1.60E-04	7.68E-05	7.76E-05
Mo-99	2.10E-01	1.01E-01	1.02E-01
Tc-99m	2.00E-01	9.60E-02	9.70E-02
Ru-103	1.40E-04	6.72E-05	6.79E-05
Rh-103m	1.40E-04	6.72E-05	6.79E-05
Rh-106	4.50E-05	2.16E-05	2.18E-05
Ag-110m	4.00E-04	1.92E-04	1.94E-04
Te-127m	7.60E-04	3.65E-04	3.68E-04
Te-129m	2.60E-03	1.25E-03	1.26E-03
Te-129	3.80E-03	1.82E-03	1.84E-03
Te-131m	6.70E-03	3.22E-03	3.25E-03
Te-131	4.30E-03	2.06E-03	2.08E-03
Te-132	7.90E-02	3.79E-02	3.83E-02
Te-134	1.10E-02	5.28E-03	5.33E-03
I-129	1.50E-08	7.20E-09	7.27E-09

# Table 2.4.13-1 Radionuclide Concentrations in the AP1000 Effluent Holdup Tanks

Table 2.4.13-1 (cont.)	Radionuclide Concentrations in the AP1000 Effluent Holdup
	Tanks

	Design Basis Reactor Coolant Activity <sup>1</sup>	Reactor Coolant Concentrations <sup>2</sup>	Effluent Holdup Tank Concentrations <sup>3</sup>
Radionuclide	(μCi/g)	(µCi/cm³)	(μCi/cm³)
I-130	1.10E-02	5.28E-03	5.33E-03
I-131	7.10E-01	3.41E-01	3.44E-01
I-132	9.40E-01	4.51E-01	4.56E-01
I-133	1.30E+00	6.24E-01	6.30E-01
I-134	2.20E-01	1.06E-01	1.07E-01
I-135	7.80E-01	3.74E-01	3.78E-01
Cs-134	6.90E-01	3.31E-01	3.35E-01
Cs-136	1.00E+00	4.80E-01	4.85E-01
Cs-137	5.00E-01	2.40E-01	2.42E-01
Cs-138	3.70E-01	1.78E-01	1.79E-01
Ba-137m	4.70E-01	2.26E-01	2.28E-01
Ba-140	1.00E-03	4.80E-04	4.85E-04
La-140	3.10E-04	1.49E-04	1.50E-04
Ce-141	1.60E-04	7.68E-05	7.76E-05
Ce-143	1.40E-04	6.72E-05	6.79E-05
Pr-143	1.50E-04	7.20E-05	7.27E-05
Ce-144	1.20E-04	5.76E-05	5.82E-05
Pr-144	1.20E-04	5.76E-05	5.82E-05

<sup>1</sup> Values from AP1000 DCD Table 11.1-2.

<sup>2</sup> For tritium (H-3) a coolant concentration of 1.0  $\mu$ Ci/g is used; corrosion products (Cr-51, Mn-54, Mn-56, Fe-55, Fe-59, Co-58 and Co-60) are taken directly from the AP1000 DCD, Table 11.1-2; and other radionuclides are based on the AP1000 DCD, Table 11.1-2 multiplied by 0.12/0.25. The density of all liquids is assumed to be 1 g/cm<sup>3</sup>.

<sup>3</sup> Values are 101% of the reactor coolant concentrations.

Table 2.4.13-2	Results of Transport Analysis Considering Radioactive Decay
	Only

Radionuclide	Effluent Holdup Tank Concentration <sup>1</sup> (μCi/cm <sup>3</sup> )	Half-life <sup>2</sup> (days)	Decay Rate <sup>3</sup> (days <sup>-1</sup> )	MPC <sup>4</sup> (μCi/cm <sup>3</sup> )	Groundwater Concentration <sup>5</sup> (μCi/cm³)	Groundwater Concentration/ MPC
H-3	1.01E+00	4.51E+03	1.54E-04	1.00E-03	6.01E-01	6.01E+02
Cr-51	1.31E-03	2.77E+01	2.50E-02	5.00E-04	2.57E-40	5.14E-37
Mn-54	6.77E-04	3.13E+02	2.21E-03	3.00E-05	3.82E-07	1.27E-02
Mn-56	1.72E-01	1.07E-01	6.48E+00	7.00E-05	0.00E+00	0.00E+00
Fe-55	5.05E-04	9.86E+02	7.03E-04	1.00E-04	4.70E-05	4.70E-01
Fe-59	1.31E-04	4.45E+01	1.56E-02	1.00E-05	1.85E-27	1.85E-22
Co-58	1.92E-03	7.08E+01	9.79E-03	2.00E-05	8.35E-18	4.18E-13
Co-60	2.22E-04	1.93E+03	3.59E-04	3.00E-06	6.60E-05	2.20E+01
Br-83	1.55E-02	9.96E-02	6.96E+00	9.00E-04	0.00E+00	0.00E+00
Br-84	8.24E-03	2.21E-02	3.14E+01	4.00E-04	0.00E+00	0.00E+00
Br-85	9.70E-04	2.01E-03	3.44E+02	1.00E+00	0.00E+00	0.00E+00
Rb-88	7.27E-01	1.24E-02	5.59E+01	4.00E-04	0.00E+00	0.00E+00
Rb-89	3.35E-02	1.06E-02	6.54E+01	9.00E-04	0.00E+00	0.00E+00
Sr-89	5.33E-04	5.05E+01	1.37E-02	8.00E-06	3.91E-24	4.89E-19
Sr-90	2.38E-05	1.06E+04	6.54E-05	5.00E-07	1.91E-05	3.82E+01
Sr-91	8.24E-04	3.96E-01	1.75E+00	2.00E-05	0.00E+00	0.00E+00
Sr-92	1.99E-04	1.13E-01	6.16E+00	4.00E-05	0.00E+00	0.00E+00
Y-90	6.30E-06	2.67E+00	2.60E-01	7.00E-06	0.00E+00	0.00E+00
Y-91m	4.46E-04	3.45E-02	2.01E+01	2.00E-03	0.00E+00	0.00E+00
Y-91	6.79E-05	5.85E+01	1.18E-02	8.00E-06	2.82E-22	3.53E-17
Y-92	1.65E-04	1.48E-01	4.68E+00	4.00E-05	0.00E+00	0.00E+00
Y-93	5.33E-05	4.21E-01	1.65E+00	2.00E-05	0.00E+00	0.00E+00
Nb-95	7.76E-05	3.52E+01	1.97E-02	3.00E-05	1.01E-33	3.36E-29
Zr-95	7.76E-05	6.40E+01	1.08E-02	2.00E-05	1.01E-20	5.03E-16
Mo-99	1.02E-01	2.75E+00	2.52E-01	2.00E-05	0.00E+00	0.00E+00
Tc-99m	9.70E-02	2.51E-01	2.76E+00	1.00E-03	0.00E+00	0.00E+00
Ru-103	6.79E-05	3.93E+01	1.76E-02	3.00E-05	9.11E-31	3.04E-26
Rh-103m	6.79E-05	3.90E-02	1.78E+01	6.00E-03	0.00E+00	0.00E+00
Rh-106	2.18E-05	4.63E-04	1.50E+03	NA <sup>6</sup>	0.00E+00	
Ag-110m	1.94E-04	2.50E+02	2.77E-03	6.00E-06	1.66E-08	2.77E-03
Te-127m	3.68E-04	1.09E+02	6.36E-03	9.00E-06	1.73E-13	1.92E-08
Te-129m	1.26E-03	3.36E+01	2.06E-02	7.00E-06	6.90E-34	9.85E-29
Te-129	1.84E-03	4.83E-02	1.44E+01	4.00E-04	0.00E+00	0.00E+00
Te-131m	3.25E-03	1.25E+00	5.55E-01	8.00E-06	0.00E+00	0.00E+00
Te-131	2.08E-03	1.74E-02	3.98E+01	8.00E-05	0.00E+00	0.00E+00
Te-132	3.83E-02	3.26E+00	2.13E-01	9.00E-06	0.00E+00	0.00E+00
Te-134	5.33E-03	2.90E-02	2.39E+01	3.00E-04	0.00E+00	0.00E+00
I-129	7.27E-09	5.73E+09	1.21E-10	2.00E-07	7.27E-09	3.63E-02
I-130	5.33E-03	5.15E-01	1.35E+00	2.00E-05	0.00E+00	0.00E+00
I-131	3.44E-01	8.04E+00	8.62E-02	1.00E-06	1.17E-127	1.17E-121
I-132	4.56E-01	9.58E-02	7.24E+00	1.00E-04	0.00E+00	0.00E+00
I-133	6.30E-01	8.67E-01	7.99E-01	7.00E-06	0.00E+00	0.00E+00
I-134	1.07E-01	3.65E-02	1.90E+01	4.00E-04	0.00E+00	0.00E+00
I-135	3.78E-01	2.75E-01	2.52E+00	3.00E-05	0.00E+00	0.00E+00

# Table 2.4.13-2 (cont.) Results of Transport Analysis Considering Radioactive Decay Only

Radionuclide	Effluent Holdup Tank Concentration <sup>1</sup> (μCi/cm <sup>3</sup> )	Half-life <sup>2</sup> (days)	Decay Rate <sup>3</sup> (days <sup>-1</sup> )	MPC <sup>4</sup> (μCi/cm <sup>3</sup> )	Groundwater Concentration <sup>5</sup> (μCi/cm <sup>3</sup> )	Groundwater Concentration/ MPC
Cs-134	3.35E-01	7.53E+02	9.21E-04	9.00E-07	1.50E-02	1.66E+04
Cs-136	4.85E-01	1.31E+01	5.29E-02	6.00E-06	1.17E-78	1.95E-73
Cs-137	2.42E-01	1.10E+04	6.30E-05	1.00E-06	1.96E-01	1.96E+05
Cs-138	1.79E-01	2.24E-02	3.09E+01	4.00E-04	0.00E+00	0.00E+00
Ba-137m	2.28E-01	1.81E-03	3.84E+02	NA <sup>6</sup>	0.00E+00	
Ba-140	4.85E-04	1.27E+01	5.46E-02	8.00E-06	4.20E-84	5.25E-79
La-140	1.50E-04	1.68E+00	4.13E-01	9.00E-06	0.00E+00	0.00E+00
Ce-141	7.76E-05	3.25E+01	2.13E-02	3.00E-05	4.02E-36	1.34E-31
Ce-143	6.79E-05	1.38E+00	5.02E-01	2.00E-05	0.00E+00	0.00E+00
Pr-143	7.27E-05	1.36E+01	5.10E-02	2.00E-05	1.25E-79	6.26E-75
Ce-144	5.82E-05	2.84E+02	2.44E-03	3.00E-06	1.53E-08	5.10E-03
Pr-144	5.82E-05	1.20E-02	5.78E+01	6.00E-04	0.00E+00	0.00E+00

<sup>1</sup> Values from Table 2.4.13-1.

<sup>2</sup> Values from NUREG/CR-5512, Table E.1 (Kennedy and Strenge 1992), and U. S. Department of Health Radiological Health Handbook (USDOH 1970) for Sr-92, Rh-106, and Ba-137m.

<sup>3</sup> Values calculated from Equation 2.4.13-4.

<sup>4</sup> Maximum Permissible Concentrations (MPCs) from 10 CFR Part 20, Appendix B, Table 2, Column 2

<sup>5</sup> Values calculated from Equation 2.4.13-5 for a travel time of 9.25 years.

<sup>6</sup> Maximum Permissible Concentration (MPC) is not available.

		K <sub>d</sub> Value (mL/g)				
Soil Sample	Со	Sr	Cs			
Samples F	From Potential B	orrow Sources A	reas			
A-10(a)	8.1	13.2	56.2			
C-7	3.9	9.0	14.8			
D-10	1.7	7.8	9.9			
E-7	10.1	25.7	19.9			
E-12	15.3	51.7	10.7			
G-9	7.9	9.8	> 25.5			
J-11	13.5	9.2	> 47.4			
K-10	15.2	10.0	19.3			
L-7	1.7	11.4	18.8			
M-5	7.3	9.3	16.8			
N-3	5.8	10.7	7.8			
P-8	6.5	7.0	5.3			
Q-7	3.2	9.3	14.6			
H-6	1.4	6.0	3.5			
S-9	3.0	8.6	19.3			
R-8	2.1	10.5	13.5			
Samples From Barnwell Formation (Utley Limestone)						
B-1003V-55-65	10.9	17.4	> 30.1			
B-1003V-65-75	3.9	15.0	22.7			
B-1003V-75-82	21.3	14.4	33.2			

# Table 2.4.13-3 Results of kd Analysis

Source: Kaplan and Millings 2006

		Backfill		Ut	ley Limestone		Total		
Radionuclide	Distribution Coefficient (cm <sup>3</sup> /g)	Retardation Factor <sup>1</sup>	Travel Time <sup>2</sup> (years)	Distribution Coefficient (cm <sup>3</sup> /g)	Retardation Factor <sup>1</sup>	Travel Time <sup>2</sup> (years)	Travel Time <sup>3</sup> (years)	Groundwater Concentration <sup>4</sup> (μCi/cm <sup>3</sup> )	Groundwater Concentration / MPC
H-3	0.0	1.0	9.16	0.0	1.0	0.09	9.25	6.01E-01	6.01E+02
Mn-54	0.0	1.0	9.16	0.0	1.0	0.09	9.25	3.82E-07	1.27E-02
Fe-55	0.0	1.0	9.16	0.0	1.0	0.09	9.25	4.70E-05	4.70E-01
Co-60	1.4	7.6	69.48	3.9	63.4	5.75	75.24	1.15E-08	3.83E-03
Sr-90	6.0	29.2	267.70	14.4	231.4	21.00	288.71	2.41E-08	4.82E-02
I-129	0.0	1.0	9.16	0.0	1.0	0.09	9.25	7.27E-09	3.63E-02
Cs-134	3.5	17.5	159.98	22.7	364.2	33.06	193.03	2.18E-29	2.42E-23
Cs-137	3.5	17.5	159.98	22.7	364.2	33.06	193.03	2.85E-03	2.85E+03

# Table 2.4.13-4 Results of Transport Analysis Considering Radioactive Decay and Adsorption

<sup>1</sup> Values calculated from Equation 2.4.13-2 using a bulk density of 1.60 g/cm<sup>3</sup> and effective porosities of 0.34 and 0.10 for the backfill and Utley limestone, respectively.

<sup>2</sup> Travel time calculated as the product of the retardation factor and groundwater travel time (9.16 years for backfill and 0.09 years for Utley limestone).

<sup>3</sup> Total travel time calculated as the sum of backfill and Utley limestone travel times.

<sup>4</sup> Groundwater concentration calculated from Equation 2.4.13-5 using total travel time.

# Table 2.4.13-5 Results of Transport Analysis Considering Radioactive Decay, Adsorption, and Dilution

Radionuclide	Groundwater Concentration <sup>1</sup> (μCi/cm <sup>3</sup> )	Surface Water Concentration <sup>2</sup> (μCi/cm <sup>3</sup> )	Surface Water Concentration / MPC
H-3	6.01E-01	5.45E-05	5.45E-02
Mn-54	3.82E-07	3.46E-11	1.15E-06
Fe-55	4.70E-05	4.26E-09	4.26E-05
Sr-90	2.41E-08	2.18E-12	4.37E-06
I-129	7.27E-09	6.59E-13	3.29E-06
Cs-137	2.85E-03	2.58E-07	2.58E-01

<sup>1</sup> Values from Table 2.4.13-4.

 $^2\,$  Surface water concentrations calculated as the product of the groundwater concentration and the dilution factor (9.1E-05).

	Concentration / MPC						
Radionuclide	Decay <sup>1</sup>	Decay and Adsorption <sup>2</sup>	Decay, Adsorption, and Dilution <sup>3</sup>	Minimum			
H-3	6.01E+02	6.01E+02	5.45E-02	5.45E-02			
Cr-51	5.14E-37			5.14E-37			
Mn-54	1.27E-02	1.27E-02	1.15E-06	1.15E-06			
Mn-56	0.00E+00			0.00E+00			
Fe-55	4.70E-01	4.70E-01	4.26E-05	4.26E-05			
Fe-59	1.85E-22			1.85E-22			
Co-58	4.18E-13			4.18E-13			
Co-60	2.20E+01	3.83E-03		3.83E-03			
Br-83	0.00E+00			0.00E+00			
Br-84	0.00E+00			0.00E+00			
Br-85	0.00E+00			0.00E+00			
Rb-88	0.00E+00			0.00E+00			
Rb-89	0.00E+00			0.00E+00			
Sr-89	4.89E-19			4.89E-19			
Sr-90	3.82E+01	4.82E-02	4.37E-06	4.37E-06			
Sr-91	0.00E+00			0.00E+00			
Sr-92	0.00E+00			0.00E+00			
Y-90	0.00E+00			0.00E+00			
Y-91m	0.00E+00			0.00E+00			
Y-91	3.53E-17			3.53E-17			
Y-92	0.00E+00			0.00E+00			
Y-93	0.00E+00			0.00E+00			
Nb-95	3.36E-29			3.36E-29			
Zr-95	5.03E-16			5.03E-16			
Mo-99	0.00E+00			0.00E+00			
Tc-99m	0.00E+00			0.00E+00			
Ru-103	3.04E-26			3.04E-26			
Rh-103m	0.00E+00			0.00E+00			
Rh-106 <sup>4</sup>	0.00E+00			0.00E+00			
Ag-110m	2.77E-03			2.77E-03			
Te-127m	1.92E-08			1.92E-08			
Te-129m	9.85E-29			9.85E-29			
Te-129	0.00E+00			0.00E+00			
Te-131m	0.00E+00			0.00E+00			
Te-131	0.00E+00			0.00E+00			
Te-132	0.00E+00			0.00E+00			
Te-134	0.00E+00			0.00E+00			
I-129	3.63E-02	3.63E-02	3.29E-06	3.29E-06			
I-130	0.00E+00			0.00E+00			
I-131	1.17E-121			1.17E-121			
I-132	0.00E+00			0.00E+00			

# Table 2.4.13-6 Compliance with 10 CFR Part 20

Radionuclide	Decay <sup>1</sup>	Decay and Adsorption <sup>2</sup>	Decay, Adsorption, and Dilution <sup>3</sup>	Minimum
I-133	0.00E+00			0.00E+00
I-134	0.00E+00			0.00E+00
I-135	0.00E+00			0.00E+00
Cs-134	1.66E+04	2.42E-23		2.42E-23
Cs-136	1.95E-73			1.95E-73
Cs-137	1.96E+05	2.85E+03	2.58E-01	2.58E-01
Cs-138	0.00E+00			0.00E+00
Ba-137m <sup>4</sup>	0.00E+00			0.00E+00
Ba-140	5.25E-79			5.25E-79
La-140	0.00E+00			0.00E+00
Ce-141	1.34E-31			1.34E-31
Ce-143	0.00E+00			0.00E+00
Pr-143	6.26E-75			6.26E-75
Ce-144	5.10E-03			5.10E-03
Pr-144	0.00E+00			0.00E+00
			Sum of Ratios =	0.32

# Table 2.4.13-6 (cont.) Compliance with 10 CFR Part 20

Sum of Ratios =

<sup>1</sup> Table 2.4.13-2.

<sup>2</sup> Table 2.4.13-4.

<sup>3</sup> Table 2.4.13-5.

<sup>4</sup> No MPCs are published for Rh-106 and Ba-137m. However, the half-lives for these radionuclides are short (less than 1 day) and they decay to near zero values. Their ratios have been taken as zero.

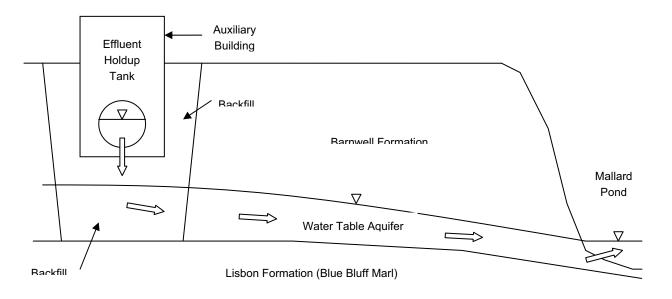


Figure 2.4.13-1 Conceptual Model for Evaluating Radionuclide Transport in Groundwater

# Section 2.4.13 References

(Bechtel 1985) Bechtel Corporation, Flow Rate in Mathes Pond Stream & West Branch Stream, Calculation Number G-008, Vogtle Nuclear Power Plant, Job No. 9510-091, 1985.

(Heath 1998) Heath, R. C., Basic Ground-Water Hydrology, U. S. Geological Survey Water-Supply Paper 2220, 1998.

(Javandel et al. 1984) Javandel, I., Doughty, C. and Tsang, C-F, *Groundwater Transport: Handbook of Mathematical Models, Water Resources Monograph 10*, American Geophysical Union, 1984.

**(Kaplan and Millings 2006)** Kaplan, D. I., and Millings, M. R., Distribution Coefficients for the Vogtle Early Site Permit, WSRC-TR-2006-00246, Savannah River National Laboratory, Washington Savannah River Company, Aiken, South Carolina, July 2006.

(Kennedy and Strenge 1992) Kennedy, W. E., and Strenge, D. L., NUREG/CR-5512, *Residual Radioactive Contamination From Decommissioning*, Volume 1, Pacific Northwest Laboratory, October 1992.

**(MACTEC 2006)** Report of Soil and Groundwater Sampling and Laboratory Testing, Southern Advanced Light Water Reactor, Early Site Permit, Vogtle Electric Generating Plant, Burke County, Georgia, MACTEC Project No. 6141-06-0090, MACTEC Engineering and Consulting, Inc., June 2006.

**(SNC 2003)** Southern Nuclear Operating Company, Updated Final Safety Analysis Report, Vogtle Electric Generating Plant, Revision 11, May 2003.

**(USDOH 1970)** U. S. Department of Health, Education, and Welfare, Radiological Health Handbook, January 1970.

**(Westinghouse 2006)** AP1000 Calculation Note Number APP-WLS-M3C-021, Liquid Tank Rupture Evaluation (COL Item 15.7.6), Revision 0, Westinghouse Electric Company, LLC, 2006.

# Appendix 2.4A—Observation Well Installation and Development Report

(Excludes contents of report Appendix J)

Prepared by Earth Sciences and Environmental Engineering, Technical Services, Southern Company Generation

November 2005

# VOGTLE ALWR ESP PROJECT FINAL DATA REPORT ES1374

Prepared By

Earth Science and Environmental Engineering Technical Services Southern Company Generation

November 2005

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Vogtle ALWR ESP Project Fnal Data Report ES1374

# VOGTLE ALWR ESP PROJECT FINAL DATA REPORT

Prepared By

Earth Science and Environmental Engineering Technical Services Southern Company Generation

November 2005



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#### Vogtle ALWR ESP Project Fnal Data Report ES1374

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## **1.0 INTRODUCTION**

This report presents the information specified in the Bechtel Corporation (Bechtel) document titled *Technical Specification for Groundwater Well Installation for Southern ALWR ESP Project, Burke County, Georgia* (Bechtel Specification Number 25144-002-3PS-CY00-00002-000). This work occurred from May 24 through June 17, 2005. Southern Company Generation provided field supervision, technical consultation, and drilling subcontractors under the technical direction of Bechtel and SNC ESP Project.

Daily and weekly logs were developed during the project. These are respectively included in Appendices A and B.

# 2.0 SURVEYING SERVICES

The final well survey was provided by Georgia Power Land Engineering Group, Atlanta, Georgia, following the completion of the well installation program. A new survey was also performed for the existing wells to be used in the project. Qualified land surveyors performed the survey and met all survey requirements of the State of Georgia.

The horizontal survey was based on the plant grid system and converted to the State of Georgia coordinate system of northing and easting. The survey originated at a benchmark established for Plant Vogtle. Ground surface elevations were based on the 1927 National Geodetic Vertical Datum (NGVD). The horizontal survey meets the third-order accuracy (1:5000) and the elevation survey is accurate to at least the nearest one-tenth of a foot. This survey data is included in Appendix C.

The locations of the boreholes were determined by SCS and Bechtel using a hand held GPS unit. The proposed well layout coordinates are from existing distribution system layout drawings provided by Georgia Power.

## 3.0 UNDERGROUND UTILITY DETECTION

A survey to locate underground utilities was completed before the drilling work began at the site. The survey was completed by Mr. John Lattner, Vogtle Engineering, on May 23, 2005. All locations were clear of obstructions with the exception of OW-1009, which was offset to avoid fire protection water and electrical lines.

## 4.0 DRILLING AND SAMPLING

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The drilling program began on May 24, 2005. Drilling was performed by: Kilman Brothers, Stone Mountain, Georgia; Greene's Water Wells, Inc., Gray, Georgia; S&ME, Inc., Blountville, Tennessee; and Prosonic Corporation, New Ellenton, S.C. A list of the equipment used on site during the investigation is included in Appendix D.

Drilling initially used both 3-1/4" ID and 4-1/4" ID hollow-stem augers (HSA) using Central Mine Equipment (CME) drill rigs. After discovering the 3-1/4" HSAs were too small to adequately set a well, all shallow aquifer wells were drilled, sampled, and set using 4-1/4" ID HSAs. In addition to conventional drilling procedures, rotosonic drilling was provided by Prosonic. This drilling technique uses high-frequency resonant energy. This resonant energy is transferred down the drill string at various sonic frequencies to provide a continuous relatively undisturbed core sample. SCG recommended this method due to the depths necessary for deep well installation, difficult drilling conditions for the conventional equipment as well as its increased speed of drilling.

Soil samples were collected through the hollow stem augers at 5 foot intervals using standard 2' split-spoon samplers, driven 18" by a standard 140 pound hammer or approved automatic hammer. Samples were logged on the site and representative portions were placed in 8-ounce glass sample jars labeled with the sample number, boring number, date, depth, and standard penetration test (SPT) data, including *n* the number of blows over a one-foot sample interval. Bag sampling of representative portions of the continuous 4" rotosonic core samples proceeded at the same 5-foot intervals as the spoon samples. The rotosonic, grab-sample intervals are correlative to the SPT sample intervals. The rotosonic samples were double-bagged and labeled with the same information as the SPT samples, except for *n*.

The complete soil boring logs are included in Appendix E. Due to the initial use of incorrect auger size (3-1/4" ID HSA) for some of the initial wells, some holes were cement-bentonite grout abandoned and new holes were drilled, generally adjacent to the original borehole. The abandoned holes are labeled as 'A' (for example, OW-1002A). The borehole abandonment forms and well construction details are included in Appendix F.

A brief description of the drilling and sampling for each location follows.

## <u>OW-1001A</u>

Boring OW-1001A was started and completed on May 25, 2005. The borehole was drilled to a depth of 100' with 3-1/4" ID HSAs by Greene's. It was determined that the auger size was incorrect for the installation of the pre-pack well screen. No boring log was created for this hole since OW-1002A, located adjacent to the hole, was logged from the surface to 108.5 feet below ground surface. The hole was abandoned and grouted by S&ME on June 5, 2005.

#### OW-1001

Shallow well OW-1001 is installed approximately 10 feet from boring OW-1001A. Drilling on this hole continued from May 24 to May 29, 2005. No log was created for the upper portion of this hole since the adjacent boring OW-1002 was logged from the surface down. This boring was completed by Greene's to a depth of 140 feet and logged by an SCS geologist from split-spoon samples. Shallow well OW-1001 is installed in this boring.

#### <u>OW-1002A</u>

Boring OW-1002A was drilled on May 24 and 25, 2005. The borehole was drilled to a depth of 108.5' with 3-1/4" ID HSAs by Greene's. The hole was logged by an SCS geologist from split-spoon samples. It was determined that the auger size was incorrect for the installation of the pre-pack well screen. The hole was abandoned and grouted by S&ME on June 5, 2005.

#### OW-1002

Boring OW-1002 was started on June 2 and completed on June 6, 2005 by Prosonic. The borehole was drilled to a depth of 237 feet. The hole was logged by an SCS geologist from continuous 4" samples. Deep well OW-1002 is installed in this boring.

#### OW-1001 and OW-1002 are a well pair.

#### <u>OW-1003A</u>

Boring OW-1003A was started and completed on May 24, 2005. The borehole was drilled to a depth of 88.5 feet with 3-1/4" ID HSAs by S&ME, Inc. The hole was logged by an SCS geologist from split-spoon samples. It was determined that the auger size was incorrect for the installation of the pre-pack well screen. The hole was abandoned and grouted by S&ME on June 5, 2005.

#### OW-1003

Boring OW-1003 was started and completed on May 25, 2005. This boring was drilled approximately ten feet south of OW-1003A with 4-1/4" ID HSAs by S&ME. No log was prepared for this hole due to the proximity of OW-1003A. The hole was drilled down to 90.5' with no sampling and shallow observation well OW-1003 was installed.

#### **OW-1004**

Boring OW-1004 was started on June 3 and completed on June 11, 2005. The boring was drilled to a depth of 187 feet by Prosonic and logged by an SCS geologist from continuous 4" ID samples. Sampling in this boring began at 87' since OW-1003, the adjacent shallow well, was sampled to 88.5' feet. Prosonic had to shut down from June 4 to June 8 for training. Deep observation well OW-1004 was installed.

#### OW-1003 and OW-1004 are a well pair.

#### <u>OW-1005A</u>

Boring OW-1005A was started and completed on May 31, 2005. The auger boring was drilled to depth of 75 feet with 3-1/4" ID HSAs by Kilman. It was determined that the auger size was incorrect for the installation of the pre-pack well screen. This well was abandoned and grouted by S&ME on June 5, 2005. The hole was logged by an SCS geologist from samples collected in jars at the time of boring.

#### <u>OW-1005</u>

Boring OW-1005 was started on June 2 and completed on June 7, 2005. Due to the incorrect size of the augers used at OW-1005A, this new hole was offset approximately 10' from that boring. The boring was drilled to 170' with 4-1/4" ID HSAs by S&ME. No sampling was performed in the upper portion of the hole due to the proximity of OW-1005A. The hole was logged by an SCS geologist from split spoon samples from 68.5 feet to 170.0 below ground surface. OW-1005 is installed in this boring.

#### <u>OW-1006A</u>

Boring OW-1006A was started on June 3 and completed on June 4, 2005. This boring was drilled to 125' by S&ME with 4/1/4" ID HSAs. The hole was logged by an SCS geologist from split-spoon samples. This boring was abandoned due to a shortage of augers. Additional augers necessary to reach the marl unit could not be brought onsite quickly and the potential for HAS deviation in the existing hole warranted a decision to start in a new hole when sufficient augers were available. The hole was abandoned and grouted by S&ME on June 5, 2005.

#### <u>OW-1006</u>

Boring OW-1006 was started on June 9 and completed on June 14, 2005, by S&ME. No sampling was performed in the upper 118.5' feet due to the proximity of boring OW-1006A which was taken to 125'. No standard penetration tests were obtained from this hole due to drilling problems. The split-spoon sampler was pushed to collect samples. Shallow well OW-1006 is installed in this boring.

#### <u>OW-1007</u>

Boring OW-1007 was started on June 4 and completed on June 8, 2005. The boring was drilled to 122 feet by Greene's with 4-1/4" ID HSAs. No sampling was performed in the upper 98.5' due to the proximity of boring OW-1008 which was logged down to 105' by an SCS geologist from split-spoon samples. Shallow well OW-1007 is installed in this boring.

#### OW-1008

Boring OW-1008 was started on May 31 and completed on June 1, 2005. The upper portion of the hole was drilled by Kilman with 3-1/4" ID HSAs to 105 feet and logged by an SCS geologist from split-spoon samples. The remainder of the hole was drilled by PROSONIC to a depth of 247 feet. The lower portion of the hole was logged from continuous 4" ID samples. Deep well OW-1008 was installed in this boring.

#### OW-1007 and OW-1008 are a well pair.

#### OW-1009

Boring OW-1009 was started on May 24 and completed on May 25, 2005. The boring was drilled by S&ME with 4-1/4" ID HSAs to 100' and logged by an SCS geologist from split-spoon samples. Shallow well OW-1009 is installed in this hole.

#### <u>OW-1010</u>

Boring OW-1010 was started and completed on June 1, 2005. The boring was drilled by S&ME with 4-1/4" ID HSAs to 93.5 feet and logged by an SCS geologist from split-spoon samples taken to 95 feet. Shallow well OW-1010 is installed in this hole.

#### <u>OW-1011</u>

Boring OW-1011 was started on June 11 and completed on June 12, 2005. The boring was drilled by Prosonic to a depth of 217 feet and logged by an SCS geologist from continuous 4" ID samples taken from 87 feet to the bottom of the hole. Sampling of the upper 87 feet was not performed in this hole due to the proximity of OW-1012, which was sampled and logged from the surface to 93.6 feet. Deep well OW-1011 is installed in this boring.

#### OW-1012

Boring OW-1012 was started on May 31 and completed on June 1, 2005. The boring was drilled by S&ME with 4-1/4" ID HSAs to 93.6 feet and logged by an SCS geologist from split-spoon samples taken to 95 feet. Shallow well OW-1012 is installed in this hole.

#### OW-1011 and OW-1012 are a well pair.

#### <u>OW-1013</u>

Boring OW-1013 was started on June 9 and completed on June 10, 2005. The boring was drilled by S&ME with 4-1/4" ID HSAs to 103.5 feet and logged by an SCS geologist from split-spoon samples taken to 105 feet. Shallow well OW-10013 is installed in this hole.

#### <u>OW-1014</u>

Boring OW-1014 was started and finished June 11, 2005. The boring was drilled to a depth of 197.4 feet by Prosonic and logged by an SCS geologist from continuous 4" samples. Sampling in this boring began at 97 feet since OW-1015, the adjacent shallow well, was logged to 88.5 feet. Deep observation well OW-1014 was installed in this boring.

#### OW-1015

Boring OW-1015 was started May 30 and completed June 3, 2005. The boring was drilled to 120 feet by Greene's with 4-1/4" ID HSAs. The boring was logged by an SCS geologist from split-spoon samples. Shallow observation well OW-1015 was installed in this boring.

#### OW-1014 and OW-1015 are a well pair.

## 5.0 GROUNDWATER OBSERVATION WELLS

Fifteen wells were installed at the site between the dates of May 26 and June 15, 2005. Twenty-two observation wells were previously installed. Details of the new wells are provided in Appendix F. Table 5-1 summarizes this data.

Table 5-1 Observation well construction details										
			Top of	Well	Screen	Total	Screen	Screened	Screened -	
Well	Date	Ground	Casing	Dia.	Slot	Well	Length	Interval,	Interval,	Unit
ID	Installed	Elev.	Elev.	(in)	Size (in)	Depth (ft)	(ft)	Depth (ft)	El. (ft)	
OW-1001	5/29/05	230.854	233.494	2	0.01	133	10	121 - 130	109.724 -	shallow
									100.224	
OW-1002	6/6/05	227.442	230.502	2	0.01	237	10	219 – 229	7.812 -	deep
0 11 1002	010100			-					(-)2.188	
OW-1003	5/26/05	223.044	226.284	2	0.01	90.5	10	75.5	146.914 -	shallow
	5/20/05	2201011		-	0101	, 010		84.8	137.614	
OW-1004	6/10/05	222.92	225.671	2	0.01	187	10	153.25 -	69.04 -	deep
	0, 10, 00	222.72		-	0.01	10,		163.26	59.04	
OW-1005	6/7/05	264.389	267.289	2	0.01	176.8	10	157.3 -	106,459	shallow
0 1005	0,1105	201.505	207.207	2	0.01	170.0		167.3	96.459	Ununo II
OW-1006	6/14-	223.044	226.284	2	0.01	135.5	10	116 - 126	110.491 -	shallow
0 11 1000	15/05	223.044	220.204	4	0.01	155.5	10	110 120	100.491	Siluito W
OW-1007	6/7/05	216.91	219.96	2	0.01	120	10	102 -	114.28 -	shallow
0 100/	0///05	210.91	219.90	2	0.01	120	10	111.5	104.28	Siluitow
OW-1008	6/1/05	216.65	219.71	2	0.01	247	10	230 - 240	(-)13.98 -	deep
0 1000	0/1/05	210.05	217.71	4	0.01	247	10	230 - 240	(-)23.98	deep
OW-1009	5/27/05	220.887	223.647	2	0.01	97.9	10	84 - 94	136.257 -	shallow
0 - 1009	5121105	220.007	223.047	2	0.01	51.5	10	04-74	126.257	Shanow
OW-1010	6/1/05	216.895	219.905	2	0.01	94.8	10	73.3 –	142.965 -	shallow
0-1010	0/1/05	210.095	219.905	2	0.01	94.0	10	83.3	142.965	Shanow
OW-1011	6/13/05	205.785	209.043	2	0.01	217.6	10	200.6 -	4.555	deep
0w-1011	0/15/05	205.785	209.043	2	0.01	217.0	10	200.0 - 210.6	(-)5.445	uccp
OW-1012	6/1/05	205.355	208.684	2	0.01	93.5	10	74.0 -	130.725 -	shallow
000-1012	0/1/05	205.555	200.004	2	0.01	95.5	10	83.4	121.325	shanow
OW-1013	6/10/05	216.869	219.809	2	0.01	103.5	10	83.5	121.325 132.775 –	shallow
000-1015	0/10/03	210.809	219.009	2	0.01	105.5		93.5	132.775 -	shanow
OW 1014	(11105	000.077	002.056	2	0.01	107	10			daan
OW-1014	6/11/05	220.867	223.856	2	0.01	197	10	182 – 192	38.237 -	deep
- OW 1015	(12)05		000 157		0.01	100	10	02 102	28.237	shallan
OW-1015	6/3/05	220.427	223.157	2	0.01	120	10	93 - 103	126.797 -	shallow
					L		<u> </u>	L,	116.797	

 Table 5-1 Observation well construction details

All new wells and the inactive wells were developed by S&ME, Inc. Well development forms are included in Appendix G. The existing wells were also inspected by SCS and Bechtel. Well inspection forms are included in Appendix H. Water level measurements are being performed by the Plant under its existing Quality Assurance Program.

## 6.0 SAMPLE STORAGE

{

Soil samples collected from split-spoon and continuous sampling are stored onsite. Glass sample jars were used for split-spoon samples and zip-lock bags were labeled and double-bagged for the continuous 4" samples from the Prosonic rig. All samples, with the exception of those sent to the laboratory for analysis, are stored in a secure building within the plant site.

## 7.0 LABORATORY TESTING

Soil testing for selected samples was assigned by Bechtel. The samples were collected and delivered to the Southern Company Generation Construction Field Services soil laboratory in Alabaster, Alabama. Soil classification tests with hydrometer were performed. The laboratory results are presented in Appendix I.

#### 8.0 SITE CLEAN UP

Site clean up to the plant's satisfaction was performed by the drillers.

#### 9.0 SITE PHOTOGRAPHY

Digital photography of the site investigation is included as a courtesy, although the specifications did not require this work. The photographs (Appendix J) of the site investigation include selected soil samples, equipment, and site conditions.

Vogtle ALWR ESP Project

# **APPENDIX** A

# **DAILY FIELD LOGS**

	Daily Field Log
5/24/2005	• Started OW-1002A (Greene).
	• Started OW-1009 (S&ME)
	• Started OW-1003. Drilled to 88.5' with 3-1/4" ID HSAs.
5/25/2005	• Completed OW-1002A. This hole was abandoned due to incorrect auger size
	• Drilled to 100' at OW-1001A. Abandoned this hole due to incorrect auger
	size.
	<ul> <li>Continuing at OW-1003 with 4/14" ID HSAs to bottom of yesterday's 3-1/4"</li> </ul>
	ID HSA borehole. Restarted sampling at ~75'. Completed OW-1003.
	• Well at OW-1003 offset 10' due to 10' of cave-in in boring. Drilled down
	without sampling. OW-1003 well installation notes attempting to set pre- pack in open hole
	<ul> <li>S&amp;ME development crew standing by for direction.</li> </ul>
	<ul> <li>Kilman crew dropped supplies by OW-1003, OW-1002 and then heading to</li> </ul>
	OW-1002 and then heading to OW-1008. Had to standby till ~2 o'clock while well was relocated due to
	accessibility. Kilman did not bring enough HSA and rod to complete holes
	• Greene sampled OW-1002Ato 115'. Offset and drilled OW-1001A since no
	well materials were available to set well at the time. Wrong size augers were
	used. Had to pull out and re-drill with correct 4-1/4" ID HSAs. Greene not
	able to grout up hole since they did not have necessary equipment
	• Continue sampling on OW-1009 (S&ME). Equipment breakdown in
	coquina.
5/26/2005	• Started OW-1001 (Greene). Thin bed of hard crystalline limestone at 100'
572072005	and again at 110'.
	<ul> <li>Completed OW-1003 (S&amp;ME)</li> </ul>
	<ul> <li>Development team completes 803A and 809</li> </ul>
5/27/2005	Completed OW-1009 (S&ME)
	• Development team pump burns out
	• Completed OW-1001 except grout installation
5/28/2005	OFF
5/29/2005	• Greene moves chemical grout pump to OW-1001. No grout delivered so
	grout taken from OW-1003 (6 bags). 2 additional bags brought in and 1 bag
5 100 1000 5	CETCO Super GeL X. Grouted hole up to 70'
5/30/2005	• Intermittent rain
5/21/2005	Started OW-1015 (Greene)
5/31/2005	• Kilman at OW-1005. Drilled to 78.5' and encountered flowing sand
	<ul> <li>Intermittent rain. Hard rain set in by 3:00</li> <li>Sand up in suggest at OW 1015. Continuing on this hole.</li> </ul>
	<ul> <li>Sand up in augers at OW-1015. Continuing on this hole</li> <li>Prosonic onsite. Tom Moorer walked them through security. Brought only</li> </ul>
	• Prosonic onsite. For Moorer walked them through security. Brought only 150' drilling capability but sent helper to get additional tooling to reach 300'.
	<ul> <li>Discussed vibrations from Prosonic rig on plant equipment with Don Moore.</li> </ul>
	He did not see need for additional calcs to proceed
	• Green successfully cleans auger and took 98.5 to 100' sample.
	<ul> <li>Discuss number swap on well labeling with Louise Headland</li> </ul>
	<ul> <li>Started lower portion OW-1008 (Prosonic)</li> </ul>
	• Started OW-1012 (S&ME)
5/31/2005	<ul> <li>Showed location for OW-1006 to Kilman. They request road improvement</li> </ul>

# **Daily Field Log**

······	Vogtle ALWR ESP Project
	S&ME drilling OW-1012. Well completed
	• S&ME drilling OW-1010.
	<ul> <li>Development completed on 804, 805A, 853, 854, 856</li> </ul>
6/2/2005	
01212003	
	• Completion of OW-1010. Well is accidentally lifted during grouting but
	returned to planned depth. Bechtel approves well as is.
	• S&ME moves to OW-1005. Kilman drilled original OW-1005 but pulled out
	Well abandoned by S&ME. Cable broke and grazed S&ME Ted's shoulder.
	Ted declined emergency room visit
	• S&ME second rig moves to OW-1006
	• Development completed on 27, 850A 852, 855
6/3/2005	<ul> <li>OW-1002B completed (Prosonic)</li> </ul>
0/3/2003	
	• Started OW-1004 (Prosonic)
	• OW-1005B and OW-1006A started by S&ME rigs. Out of auger on OW-
	1005 at ~3 pm.
	• OW-1015 completed (Greene)
	• Development completed on OW-1003, OW-1009, OW-1010, OW-1012, OW
	1015
6/4/2005	• Greene encounters difficult drilling at 105'. Had to retool for mud to stabiliz
	borehole and clean flowing sand from HAS
	<ul> <li>Surface completion by S&amp;ME at OW-1002`</li> </ul>
	• Prosonic leaves site for training
	• OW-1015 surface completion by S&ME
	Started OW-1007 (Greene)
6/5/2005	• OW-1001A abandoned by S&ME
	• OW-1001 and OW-1006 surface completion by S&ME
	• OW-1002A abandoned by S&ME
	• OW-1003A abandoned by S&ME
	<ul> <li>OW-1005A abandoned by S&amp;ME</li> </ul>
6/6/2005	OW-1006A abandoned by S&ME
0/0/2003	• Started 1007 (Greene)
	Development completed for OW-1001
	GPS locations taken for new wells
	• Drillers report using 32 bags of grout in OW-1001 on top of 70 feet of grout
	already in hole. This shrank to about 20' bgs and additional 10 bags were
	used to top it off. S&ME used a total of 120 bags to abandon OW-1001A,
	OW-1002A, and top off OW-1001 and OW-1002
6/7/2005	<ul> <li>OW-1002 A, and top on OW-1001 and OW-1002</li> <li>OW-1005 completed (S&amp;ME)</li> </ul>
	<ul> <li>OW-1007 completed (Greene)</li> </ul>
	• Conversation with Bechtel to confirm using Schedule 80 PVC in holes over
	100', due to inability to insert well pumps. Southern Co expresses concerns
	about representativeness of water table conditions at OW-1001 and multiple
	saturated zones in OW-1005 and OW-1006.
	• Attempted to rig a 'stand off' on water level meter to aid in getting reliable
	water level measurement down PVC. Capillary attraction making reading
	difficult in 1008 and other deep wells. 'Stand-off' initially worked but then
	held water, which continuously trickled over GeoSlope probe thus negating
	its usefulness.
	<ul> <li>Bechtel calls to say OW-1001 appears to be OK because of recovery and</li> </ul>
	another well and boring are not required there
6/8/2005	
0/0/2005	• OW-1006 assigned to Greene
	OW-013 assigned to S&ME
6/9/2005	• OW-1006 started (Greene)
	• Started OW-1013 (S&ME)

	Vogtle ALWR ESP Project	
	• OW-1013 completed (S&ME)	
6/11/2005	OW-1014 started and completed (Prosonic)	
	• OW-1011 started (Prosonic)	
6/12/2005	OW-1011 completed (Prosonic)	a to de
6/13/2005	• OW-1004 surface completion (S&ME development team)	
	• OW-1011 surface completion (S&ME development team)	
	• OW-1014 surface completion (S&ME development team)	
	• OW-1006 continues	
6/14/2005	<ul> <li>Development completed on OW-1002, OW-1004, OW-1007, OW</li> </ul>	V-1008,
	OW-1011, OW-1014	
	OW-1006 completed	
6/15/2005	• Development completed on 142, 179, 27, OW-1005, OW-1013	
6/16/2005	OW-1006 surface completion and development (S&ME develop	ment team)
	• Inspected wells LT-1B, LT-12, and LT-7A. Made note of depth	
	bottom of wells. No redevelopment recommended	

Vogtle ALWR ESP Project

# **APPENDIX B**

# WEEKLY FIELD LOG

### Vogtle ALWR ESP Project Weekly Field Log

				Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday N	<i>l</i> ionday 1	uesday We	ednesday	Thursday
Well	Purpose	Status	Driller	24-May-05	25-May-05	26-May-05	27-May-05	5 28-May-05	29-May-05	30-May-05	5 31-May-0	5 1-Jun-05	2-Jun-0	5 3-Jun-05	4-Jun-0	5 5-Jun-05	6-Jun-05	5 7-Jun-08	5 8-Jun-05	9-Jun-0	5 10-Jun-0	11-Jun-0	5 12-Jun-05	13-Jun-05	14-Jun-05	15-Jun-05	16-Jun-05
0.11.1001																											
OW-1001	Shallow	Completed	Greene	i an air an an an an air air air air air an air air an air air an air an air an air an air an air air an air ai		i			ann a seisean aite							All shade and share					—						
OW-1001A	Shallow	Abandoned	Kilman						Optical							Abandoned by S&ME						1					
011-1001A	Shallow	Abandoned	Ningi						C 48 (5 (2 (3							Abandoned by											
OW-1002A	Shallow	Abandoned	Greene					:		i .						S&ME							1				
OW-1002	Deep	Completed	Prosonic	1		· · ·	<b>—</b>							1							· · · ·		1		· · · · · ·		
											-			1		Abandoned by							t t				
OW-1003A	Shallow	Abandoned	S&ME Tim	in a state of the												S&ME											
OW-1003	Shallow	Completed	S&ME Tim							ľ																	
	_			1 1											soluis Stitle, Nyre t												
OW-1004	Deep	Started	Prosonic											for a series of the	As ann an Canac -		the state	f det inde					<u> </u>				
OW-1005A	Shallow	Abandoned	Kilman					1								Abandoned by S&ME					1		1 1				
OW-1005A OW-1005	Shallow	Completed	S&ME Ted													OBME			~		· .						
	Shallow	Completed	JANIL 160					-					<u> </u>		<u> </u>	Abandoned by		<u>†</u>	+	···			+ +				
OW-1006A	Shallow	Abandoned	S&ME Tim											i i		S&ME		i i									
OW-1006	Shallow	Located	Greene											2	the interview of the							<b>WHERMITE</b>					
OW-1007	Shallow	Completed	Greene							·													l l	· · · · · · · · · · · · · · · · · · ·			
												1						1									
								· ·				1															
OW-1008	Deep	Completed	Kilman/Prosonic*		·			,			autica.											_					
OW-1009 OW-1010	Shallow Shallow	Completed	S&ME Ted S&ME Tim			· · · · · · · · · · · · · · · · · · ·												+				-	+ +				
OW-1010 OW-1011	Deep	Completed Completed	Prosonic															+		-		1.52					
OW-1012	Shallow	Completed	S&ME Ted											+	<u> </u>			-									
OW-1012	Shallow	Completed	S&ME Ted				1				88	1		+	<u> </u>	· <del>  · · · ·</del>					1	-	· · · · · · · · · · · · · · · · · · ·	· · · ·			
OW-1014	Deep	Completed	Prosonic				1													n. « – – – – – – – – – – – – – – – – – –	<u>*</u>	TO BEEL					
OW-1015	Shallow	Completed	Greene											1	1								1				·
														Surface						1. A.					Developed		
														completion OW				1				i I			and surface		. 1
														1003								· :			completion		. 1
														Developed OW	4							1.1		0	DW-1002,		. 1
											Helped		Developed	1003, OW-					Surface						DW-1004,		Surface
			1								gather		850a, 852,	1009, OW-	Surface	Surface			completions				· ·				Completion
						Developer	Surface						855 Surface		completions OW				OW-1005,		Surface						and
Development Team						Developed 803a. 809	Completion OW-1009	:			assembled	804, 805a, 853, 854, 856	Completion	1012, OW-	1002 OW-	OW-1001 OW-1006			OW-1007, OW-1012	(Section -	completion	/ / 31				W-1005, OW-	development OW-1006
Development Team		L	l	1		8038, 809	1044-1009	i			new pump	853, 854, 856	01010	1015	1015	1000-1006			UW-1012	CIPPSED:	OW-1013	704-1-8114-		19	JVV-1014 10	013	000-1006

\* Kilman 5/25 - 26. Prosonic 5/31-6/1

1.1.25

Drilling/well installation period - start to finish

Time offsite, no drilling (Holiday, training, week-end)

Vogtle ALWR ESP Project

# **APPENDIX C**

### **SURVEY DATA**

EXISTING WELL SURVEY NEW WELL SURVEY

Copyright © 2005, Southern Company Services, Inc. All Rights Reserved.

		ogtle Existing Well		
Well	Northing	Easting	El. Ground (ft.)	El. Top of Casing
				(TOC ft.)
	(NAD27)	(NAD27)		
142	1143282.409	622260.403	222.377	223.797
179	1144061.205	621778.747	274.668	275.068
802A	1142201.703	624195	215.558	218.258
803A	1142085.387	622896.031	218.394	219.574
804	1141599.597	622224.797	223.603	225.373
805A	1141616.153	624395.699	233.988	235.76
806B	1143821.568	623724.453	214.314	215.414
808	1144624.291	623297.746	214.871	215.771
809	1143320.36	621857.189	NA	223.671
LT-1B	1143390.484	623301.286	218.053	220.654
LT-7A	1143154.107	623314.265	217.813	218.563
LT-12	1142776.798	623597.644	218.274	219.024
LT-13	1143136.424	624108.674	218.273	220.073
27	1143622.414	627928.859	208.836	210.406
29	1144982.746	626389.789	190.83	192.61
850A	1146728.881	624482.466	225.225	227.025
851A	1143869.697	621064.25	261.685	263.325
852	1140993.937	627377.483	199.408	201.308
853	1146016.483	623191.496	226.599	229.969
854	1144900.49	621914.54	235.584	237.324
855	1142159.143	627948.361	216.767	218.668
856	1139928.479	626555.6	185.495	187.107

### Vogtle New Well Survey (NAD27)

Location	Northing	Easting	El. Ground (ft.)	El. Top of Casing
	dia dia dia 1970 a.			(TOC ft.)
1001	1142888.724	620148.556	230.224	232.864
1002	1142887.782	620189.341	226.812	229.872
1003	1142864.056	621884.337	222.414	225.654
1004	1142842.176	621880.794	222.29	225.041
1005	1144047.86	620408.765	263.759	266.659
1006	1143817.854	619179.749	226.491	229.971
1007	1142383.767	619301.009	216.28	219.33
1008	1142347.939	619306.686	216.02	219.08
1009	1141891.645	620888.608	220.257	223.017
1010	1140808.986	620051.708	216.265	219.275
1011	1139956.246	621033.045	205.155	208.413
1012	1139969.496	621045.924	204.725	208.054
1013	1140805.4	621715.032	216.239	219.179
1014	1140565.502	623070.234	220.237	223.226
1015	1140550.576	623086.318	219.797	222.527

Vogtle ALWR ESP Project

### **APPENDIX D**

### FIELD INSTRUMENTS/EQUIPMENT

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Contractor	Tools/Rig Description
Greene Water Well, Inc.	CME 75 Auger drill with water tank; manual hammer
	1-ton crew truck
	Chevrolet Pickup HD
	4-1/4" ID hollow stem auger – 125'
	3-1/4" ID hollow stem auger
	90' NWJ rod
Kilman Brothers	CME 45; 4X4; no water tank, auto hammer
	125' of 3 1/4" <sup>ID</sup> hollow stem auger
	110' N rod
	2 cutter heads
S&ME	3 F-Series, <sup>3</sup> / <sub>4</sub> -ton trucks
(2 rigs)	1 personal vehicle
	2 CME 55 Auger/Wash drill rigs with SPT Autohammers
	Grundfos pump
	Static water level indicator
	Generator
	Steam Junny
	2 grout plants with tremie pipe
	3-1/4" ID hollow stem augers – 90'
	4-1/4" ID hollow stem augers – 180'
	NWJ rods with 4" fishtail or 6" rollercone – 180'
	6 2' split spoons
PROSONIC	SR-083 drill rig w/ 6" outer drive casing and 4" sampling tube
	Two 1-ton crew trucks
	Onboard grout machine
	Pressure washer
SCS	Provided 60' 4 1/4" ID hollow stem augers
	Extra – 1 bundle (19) 5' AWJ rods
	9 loose 5' AWJ rods
	14 loose 10' NWJ rods
	Chemical grouting machine

Contractor	Well Development Tools	
S&ME	Grunfos Rediflo2 submersible pump	
	200' of hose and power lead	
	1 Generac 5000 Watt, 10 HP 110/240V AC generator	<u> </u>

Well Supplies		
Schedule 80 PVC slotted screens - 10' length		
Schedule 80 PVC risers - 10' length	•	

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Vogtle ALWR ESP Project

Schedule 80 PVC riser - 2 1/2' length Schedule 80 PVC riser - 5' length Schedule 40 PVC slotted screens - 10' length Schedule 40 PVC risers - 10' length Schedule 40 PVC risers - 5' length Schedule 40 PVC risers - 2 1/2' length

> DSI 1A filter sand JC50FS by Unimen filter sand Foster Dixiana

CETCO Goldseal 3/8" bentonite chips CETCO Puregold medium

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Vogtle ALWR ESP Project **APPENDIX E** 

## **BORING LOGS**

**OW-1001 OW-1002 OW-1002A OW-1003 OW-1004 OW-1005 OW-1005A OW-1006 OW-1006A OW-1007 OW-1008 OW-1008A OW-1009 OW-1010 0W-1011 OW-1012 OW-1013 OW-1014 OW-1015** 

**LEGEND** 

N	Standard Penetration Resistance. The sum of the number of blows from a 140 pound hammer needed to drive the sampler over the sampling depth of 6 to 18 inches.
Bpf	Blows per foot. Unit of measure for 'N'.
WOR	Split spoon sampler penetrates by weight of the sampling rods alone.
WOH	Split spoon sampler penetrates by the weight of 140 pound hammer alone, with no blows from the hammer.

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OUTHER		DRILLING	G LOG				Hole No.	OW-1001
EON tergy to Serve	NPANY Your World" GEC	OLOGICAL	SERVIC	ES			Sheet 1	of 5
m	Vogtle ALWR SSAR	÷			HOLE DEPTH	140'		ELEV. 230.85
OCATION	Burke County, Georgia		COORDINA	TES N	-	888.724	E	620148.556
N(	NA BEARING NA	· · ·	CONTRACT	, · ·	Greene		DRILL NO.	CME 75
RILLING MET	/ 1/// UCA	NO. SAMPLES		4		NO. U.D. SAMPLE	· · · ·	NA
ATER TABLE	100 7		TIME AFTE	R COMP.			DATE TAKEN	5/24/2005
PE GROUT		ŇA	MI		NA			5/24/2005
ALLER	Arthur RECORDER S. Bearce	APPRO	<u> </u>	NA			COMP. DATE	5/29/2005
		-	Sample No.		Standard Penetration Test			
F Elev, Ft.	Material Description, Classification and Remarks			From To Ft.	Blows	N BPF	Comments	
230.85	OW-1001 was installed in this borehole. OW-1001 is	····						
229.85	a well pair with OW-1002							. 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997
A	Soil sampling for the upper portion was							
	completed in OW-1002A to the top of the MARL at 105							
227.85	bgs. Sampling in this hole began at 113.5 feet bgs. (Sheet 4)							
226.85								
227.86	A previous borehole (OW-1001A) was made for this well but abandoned. No log was prepared.	was						·
224.85								
223.85								
222.85								
			1.					·. ·
221.85								
222.86								
219.85		e e e						
218.85								
217.85				·.				
216.85		•						
11 - A 4 4								1997 - 19
217.86				• •				
214.85		•				1. A. A. A. A.		
213.85				na serie de la composición de la compos La composición de la c				
· .								·
212.85				•				
211.85				14 A.				1 1 1
210.85								
209.85				1 A.				· * •
208.85							1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
207.85							an tanàn ang taon Tanàna mang taona	
000.05								
206.85 n GS9901 7	26-20(				l			

	HERN		DRILLI	NG LO	G		Hole No.	OW-1001
	COMPA Serve Your	World <sup>*</sup>	GEOLOGIC	AL SERV	ICES		Sheet 2	of 5
SITE		Vogtle ALWR SSAR	· · · · · · ·		TOTAL DEPTH	140	SURF	ELEV. 230.854
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	From To	Standard Penetration Test Blows	N	Comments	
25	205.85	See Page 1						
		See Faye I						
26	204.85						• . • .	
27	203.85							
28	202.85							
29	201.85					- 19-		
30	200.85			. · · .			-	
	1997 - 1997 1997 - 1997 - 1997						· · ·	in the second
31	199.85		54 			-		
32	198.85		- -					an a
33	197.85							
34	196.85							
35	195.85							
36	194.85			· · · ·			n general. Generalise	
37	193.85			· ·				
38	192.85		· .					
39	191.85							
40	190.85							
41	189.85					· .		1997 - 19
42	188.85		· · ·					
43	187.85							14. 1. 1.
	1		· · · · ·					
44	186.85							
45	185.85							
46	184.85					· · .	•	
47	183.85							
48	182.85							
49	181.85							
50	180.85		1					
51	179.85							
	· · · · · · · · · · · · · · · · · · ·							
52	178.85							
53	177.85							
54	178.86							
55	175.85							
56	174.85							·
.rm G\$99	901 7-26-200	<b>14</b>	2.4	A - 25				

Banage Network Neur Werkeff         Vogite ALURS SAR         FAL DEFIN         Table 3 of 5           976         Vogite ALURS SAR         FAL DEFIN         1460'         REV. 220.864           978         Neur Vogite ALURS SAR         Segman Freedwarks Teat         200.000         11.460'         REV. 220.864           77         173.85         See Page 1         Segman Freedwarks Teat         Image Neuroscience Teat         Image Neu	SOUT	HERN A		RILLING					Hole No.	OW-1001
User         User <thuser< th="">         User         User         <thu< th=""><th>Energy to</th><th></th><th>Vorld<sup>-</sup> GEO</th><th>LOGICAL</th><th>SERVIC</th><th>ES</th><th></th><th></th><th>Sheet 3 of</th><th>5</th></thu<></thuser<>	Energy to		Vorld <sup>-</sup> GEO	LOGICAL	SERVIC	ES			Sheet 3 of	5
Deam     Bew     Deam Mature (Decreption, Constructions and Renoute)     Prime Te     Bowe     N     Conversion       17     17.88     See Page 1     Image: See Page: See Page: See Page 1     Image: See Page: See	SITE		VOGTIE ALWH SSAH	Sample No.				140'	ELEV.	230.854
58       172.45         59       171.45         60       170.45         61       169.45         62       168.65         63       167.65         64       168.65         65       165.65         66       164.85         67       163.05         68       164.85         70       159.85         71       159.85         72       158.85         73       157.65         74       166.65         75       155.85         76       154.85         77       153.85         78       152.85         81       149.85         82       148.55         83       147.85         84       146.85         85       145.65         86       145.55         86       145.55	Depth	Elev.	Material Description, Classification and Remarks	Gample No:				Cor	nments	
171.45         60       170.45         61       109.45         62       180.45         63       167.45         64       186.85         65       185.85         66       184.85         70       180.85         71       159.85         72       198.85         73       157.85         74       166.85         75       155.85         76       159.85         77       159.85         78       150.85         81       147.85         82       148.85         83       147.85         84       146.85         85       145.85         86       145.85	57	173.85	See Page 1							
90       170.85         91       199.85         92       198.85         93       107.65         94       196.85         95       105.565         96       194.455         96       194.355         98       192.355         98       192.355         99       191.355         90       191.355         70       190.355         71       199.85         72       196.85         73       197.455         74       196.85         75       195.85         76       194.455         77       193.85         78       192.25         79       191.165         80       190.35         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       145.85         87       143.85	58	172.85								
61       199.55         62       168.55         63       167.55         64       166.55         65       163.56         66       144.65         67       163.85         68       162.25         69       161.85         70       160.85         71       159.85         72       158.85         73       157.65         74       156.55         76       155.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         83       147.85         84       145.85         85       145.85	59	171.85			- 4 		· · ·	· · ·		
61       199.55         62       168.55         63       167.55         64       166.55         65       163.56         66       144.65         67       163.85         68       162.25         69       161.85         70       160.85         71       159.85         72       158.85         73       157.65         74       156.55         76       155.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         83       147.85         84       145.85         85       145.85	60	170.85						e e e est		
62       168.85         63       167.85         64       166.85         65       165.86         68       164.95         67       163.85         68       162.86         70       160.35         71       159.86         72       156.86         73       157.86         74       156.86         75       155.85         76       154.86         77       153.86         78       152.85         79       151.85         80       150.85         81       149.85         82       148.86         83       147.85         84       149.85         85       145.85							· .	1940 - 1940 1940 - 1940 1940 - 1940		
63       167.85         64       166.85         65       163.85         66       164.85         67       163.85         68       162.25         69       161.85         70       160.85         71       159.85         72       158.85         73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       149.85         83       147.85         84       146.95         85       145.85         86						1997 - 19				
44       166.85         65       165.86         66       164.85         67       163.85         68       162.85         69       161.85         70       160.85         71       159.85         72       158.85         73       157.85         74       156.85         77       153.85         78       152.85         79       151.86         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       143.85										
65       165.85         66       164.85         67       163.85         68       162.85         69       161.85         70       160.85         71       159.85         72       159.85         73       157.85         74       156.85         75       155.85         76       152.85         77       153.85         78       152.85         79       151.85         80       150.86         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       143.85						-	••			
66       164.85         67       163.85         68       162.85         69       161.85         70       160.85         71       159.85         72       156.85         73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       146.85         83       147.85         84       146.85         85       145.85         86       143.85	64	166.85					•			
67       163.85         68       162.85         69       161.85         70       160.85         71       159.85         72       158.85         73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       145.85         86       145.85         86       143.85	65	165.85								
68       162.85         69       161.85         70       180.85         71       159.85         72       158.85         73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         80       150.85         81       149.85         82       146.85         85       145.85         86       145.85         86       145.85         86       145.85         86       145.85	66	164.85								
69       161.85         70       160.85         71       159.85         72       158.85         73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       145.85         87       143.85	67	163.85					÷.,			
70       160.85         71       159.85         72       158.85         73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       145.85         87       143.85	68	162.85								nation Sincer
71       159.85         72       158.85         73       167.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       143.85	69	161.85								· · · · · · · · · · · · · · · · · · ·
71       159.85         72       158.85         73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       143.85	70	160.85								
72       158.85         73       157.85         74       156.85         75       155.85         76       152.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       143.85	71									
73       157.85         74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       145.85         87       143.85										
74       156.85         75       155.85         76       154.85         77       153.85         78       152.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         86       145.85         86       145.85         87       143.85				• •				n en san San san		
75       155.85         76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86					**					
76       154.85         77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86					. ·					
77       153.85         78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       143.85	75									
78       152.85         79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       145.85         87       143.85	76	154.85								
79       151.85         80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86	77	153.85								
80       150.85         81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86	78	152.85								
81       149.85         82       148.85         83       147.85         84       146.85         85       145.85         86       143.85	79	151.85				·				
82       148.85         83       147.85         84       146.85         85       145.85         86	80	150.85						an a	· · · · · · · · · · · · · · · · · · ·	
83       147.85         84       146.85         85       145.85         86	81	149.85		1997) 1997						
84     146.85       85     145.85       86	82	148.85								
84     146.85       85     145.85       86	83									
85     145.85       86										e e e e e e e e e e e e e e e e e e e
<u>86</u> <u>87 143.85</u>						,				
87 143.85										
		140.05				the second				
	87	143.85						1		

	HERN	DRILLIN DRILLIN	IG L	OG	· · ·		Но	e No.	OW	-1001
	COMP		L SE	RVICES				Sheet	4 of 5	
SITE		Vogtle ALWR SSAR	· · · ·		TOTAL DEPTH	•	140'	SURF	.ELEV.	230.854
epth FT.	Elev. FT.	Material Description, Classification and Remarks	Sample No.	Stan From To FT.	dard Penetration T Blows	est N BPF	(	Comments		
89	141.85									
90	140.85									
91	139.85									
:92	138.85					-			÷.	
93	137.85								÷	
94	136.85							- - -		
95	135.85									
96	134.85		. t. j.							
97	133.85									
98	132.85				· .		. ••	· · ·		14 14
99	131.85					1 1	5/29/05			
100	130.85						<u>▼</u> 99' from	ground		
101	129.85						surface			
102	128.85		ĺ .				Difficult	drilling at 1	00'	· ·
103	127.85									
104	126.85									
105	125.85		•			1994 - S. 1997 -				
106	124.85									
107	123.85						5/24/05			
108	122.85						<u>▼</u> 108.7' fr	om TOC		n Sjann Antonio Antonio
109	121.85									
110	120.85						Difficult	drilling at 7	10'	· · · ·
111	119.85									
112	118.85									
113	117.85	Sampling begins at 113.5'								
114	116.85	Dark grey LIMESTONE bed, 0.2' thick with black macro fossils, thin laminae (~0.05')of CHALK on bottom	1	113.50-	50/3"	50/3"			. ·	
115	115.85		Į .	115						
	114.85					2 s.				
	113.85									
118			2	118.5- 120	50/2"	50/2"	·			
119	-	Buff sandy COQUINA	<b>i</b>	-1	1	1	1			

		DRILLING LOG	-	· · · ·			Hole No. OW-1001
	·	GEOLOGICAL SERVICES	-				Sheet 5 of 5
SITE		Vogtie ALWR SSAR		ette	TOTAL DEPTH	14	0' SURF.ELEV. 230.8
Depth FT.	Elev. FT.		Sample No.	Stan From To Ft.	dard Penetration T Blows	est N BPF	
		Material Description, Classification and Remarks		FIGH TO FL	Diows	IN DFF	Comments
121	109.85	Buff sandy COQUINA				· ·	
122	108.85						
123	107.85		ŀ				
124	106.85	No recovery, auger used to grind through interval		123.5-	50/0"	50/0"	
125	105.85			125	14		
126	104.85		1				
127	103.85						
128	102.85						
							an an Albert and Albert Albert and Albert and Al Albert and Albert and A
129	101.85	Dark grey LIMESTONE 2" layer	3	128.5- 130	50/2"	50/2"	
130	100.85		an t	,00	and and a second se		
131	99.85						
					· · ·		
132	98.85				1.1		
133	97.85						
134	96.85		4	133.5-135	18-19-25	44	
					10-10-20		
135	95.85	Approximately 3" of dark greenish grey MARL in spoon					
136	94.85				· ·		
137	93.85						
		Greenish gray MARL		136.5-138	50/2"	50/2"	
138	92.85			· · · ·			
139	91.85			t i		· .	
140	90.85		<b>.</b>	138.5-140	50/2"	50/2"	
		Boring Terminated at 140'	1			00.2	
141	89.85		· ·				1500 gallons of water lost
142	88.85				· · ·		cleaning bottom of hole.
143	87.85						Pumped at 60 gpm.
	1.4				an a		
144	86.85						
145	85.85						
146	84.85						
147	83.85					**	
148	82.85			· · · ·			
	81.85		1				
			I I		1		
149							
149	82.86						
149 150							

SOUT	HERN	DRILL	ING L	OG			Hole No.	OW-1002
nergy to	Serve You	r World" GEOLOGIC	AL SE	RVICES			Shee	et 1 of 8
SITE		Vogtle ALWR SSAR			HOLE DEPT	н 237	S	URF.ELEV. 227.442
LOCATIC	DN			NATES N	114	2887.782	£	620189.341
ANGLE		NA BEARING NA	CONTR		Prosor	nic	DRILL NO.	SR-083
DRILLING			ES	continuou	JS	NO. U.D. SAMI	PLES	NA
WATER	TABLE DE	PTH 93.5' ELEV. 133.312' T		R COMP	NA	D/		6/6/2005
TYPE GF	ROUT	NA QUANTITY NA	M	IX1	NA		ART DATE	
DRILLER	l	Tony RECORDER Steve Bearce APPR		NA	· · · · · · · · · · · · · · · · · · ·	DRILLING CO		6/6/2005
epth Ft	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Stan From To	idard Penetration Blows	Test N	Comme	
			-					110
0	227.44	Sampling not started until 87' below ground surface.				_		
1		Because drill technology changed, the hole had to be						
2	226.44	offset approximately 20' North of original borehole.				:		
		Well OW-1002 is installed in this borehole.						
3	225.44			44 A.	s.		1	
4	224.44	and a second second Second second					· · · ·	
5	223.44							entra este de la composición de la comp
6	000.44				1. A.		 	
6	222.44			1.5 S				
7	221.44							
8	220.44							
9	010.44					1.1		
9	219.44							
10	218.44				1			
11	217.44							
	216.44				н. 1			
13	215.44							
14	214.44							
15	213.44							
1			н. 1. т.					
16	212.44				1			
17	211.44							н н. А
18	210.44			· .				. •
19	209.44		ľ					
20	208.44							
21	207.44				la serie de la s			
				2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000 - 2000	ч."			
22	206.44						at searches	
23	205.44				1			
	204.44			1				

								N-1002
Energy S	o Serve You	r World GEOLOGIC/ Vogtle ALWR SSAR	AL SE	RVICES	TOTAL DEPTH	237	Sheet 2 of SURF.ELEV.	Harddan yw arwydd yw
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Sta From To	ndard Penetration Test Blows	N	Comments	% Rec ROD
25	202.44	See page 1						
26	201.44			· · · · ·				
27	200.44							
28	199.44		<b>.</b> .					
29	198.44		•					
30	196.44							
31	196.44		<b> </b>					
32	195.44			••• 				
33	194.44							
34	193.44							
35	192.44						ala an Taona an Airtean Airtean	
36	191.44							
37	190.44							
38	189.44							
39	188.44		1 .					
40	187.44			· · .				
41	186.44							
42	185.44						an thài 1970 an Antairtean ann an Airtean Airtean	
43	184.44							
44	183.44					1		
45	182.44		1.	1				
46	181.44							
47	180.44							
48	179.44		1					
49	178.44			· .				
50	177.44							
51	176.44							
52	175.44							
53	174.44			· · .				
54			-					
55	172.44	le de la construcción de la constru La construcción de la construcción d La construcción de la construcción d						
56 Form GSS	171.44		1 - 30		and and a second se			

	· · · · ·								-
	THERN COMP						· · · · · · · · · · · · · · · · · · ·	W-1002	:
·	to Serve You	World GEOLOGIC	AL SE	RVICES		237	Sheet 3 of		
SITE _	<u></u>		Sample		TOTAL DEPTH	237	SURF.ELEV.	227.4	442
Depth	Elev.	Material Description, Classification and Remarks	No.	From To	Blows	N	Comments	% Rec	RQ
57	170.44	See page 1				· · ·			÷.,
58	169.44			3. 1				1994) 12	
÷.,									
59	168.44								
60	167.44								1
61	166.44				ł			• . •	-
62	165.44								2.5
63	164.44			ъ.,					
64	163.44								
65	162.44								
66	161.44								
67	160.44					1. A. A.			
	4 - 1 								
68	159.44				n frankriger				
69	158.44								
70	157.44				n an an tha an an tha an		1.		
71	156.44			1.000			and and a second se		
72	155.44								
73	154.44		- 1911 -						
74	153.44								
75	152.44				· ·				
2				1			÷ 1		
76	151.44			·					
77	150.44								
78	149.44								
79	148.44								·
80	147.44			· ·				· (	
81	146.44				1 				1
82	145.44						an a		
83	144.44				e				
84	143.44								
85	142.44		1						
86	140.81								Ľ
87	140.44	Sampling started with ProSonic drill rig	4	+ s.					1

			RILLING L				Hole No. OW-1002
Energy to S		World GEOI	OGICAL SE	RVICES		1. 	Sheet 4 of 8
		Vogtle ALWR SSAR		н 	TOTAL DEPTH	237	SURF.ELEV. 227.44
Depth Ft. E	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Stan From To	dard Penetration Test Blows	N.	Comments
1	38.44				NA	NA	
89		Yellow tan, shelly, sandy CLAY (CH), interbedded v occasional fine-grained shelly SAND, (SW)	v/ 1	88.5		an su	
90	36.44			90.			
91	•	and a second					
92	35.44						
93 1	34.44						
1	33.44			93.5			
94	32.44		2	95			
95	31.44			· · · ·			
96				· · · · ·			
97	30.44	an an an an an an an an an Araba an Araba. An an Araba an					
98 1	29.44	Sharp contact into greenish grey MARL		an Nganakan			
1	28.44			98.5	NA	NA	
99 1	27.44			100			
100	26.44		en de la companya de La companya de la comp				
101							
102	25.44						
	24.44	na serie de la construcción de la c La construcción de la construcción d	· · ·				
12	23.44			103.5	NA		
	22.44		4	- 105		NA	
105	21.44						
106	20.44						
107							and a state of the
11 108	9.44						
11	8.44		E	108.	NS	NS	an an Argusta an Argusta an Argusta an
	17.44		5	110			
110  11	16.44						
111	15.44	na an an Araba an Araba an Araba an Araba an Araba an Araba. Ar an Araba an Araba Araba an Araba an Arab					
112	0,44						
113 11	13.81						
114	13.44		6	113.5	NA	NA	
	12.44			115			
11	11.44						en e
	10.44						
117							
118 10	08.81 08.44		7	118.5	NA	NA	
119	· ·		Í	120			
120	)7.44 )1 7-26-20						
		in4 · · · · · · · · · · · · · · · · · · ·	2.111-02				

		DRILLI						W-1002	
		GEOLOGICA	AL SEF	RVICES			Sheet 5 of	.8	
SITE	*	Vogtle ALWR SSAR		- 11 - 11	TOTAL DEPTH	237	SURF.ELEV.	227	442
			Sample No.	Star	idard Penetration Test				
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks		From To	Blows	N	Comments	% Rec	RQ
	106.44								
121	105.44	Greenish grey MARL			N				
122	103.44								
	104.44				:				
123	100.44			100 5				1 · · ·	
124	103.44		8	123.5	NA	NA			
	102.44			125					· ·
125									
126	101.44				4.19				
120	100.44		- A.					2	1.2
127								Sec.	
100	99.44							1	
128	98.44			128.5				с. С	
129			9	•	NA	NA			[ · ·
	97.44			130					22
130	96.44							1	
131	50.44			: 					1
	95.44								2
132	94.44				;				
133	34.44							1910	
	93.44			133.5				1 - 1 - 1	
134	00.44	Thin bedded, light grey, "soft" or "friable" LIMESTONE	10	-	NA	NA		1.11	
135	92.44	occurs in this interval		135					
	91.44			. ÷					
136	00.44			a Tanan					
137	90.44				4 g (				
	89.44	Greenish grey MARL, becoming lighter in color	1						
138	00.44	<ul> <li>Angel Anderson Anderson Angel</li> <li>Angel Angel Ang Angel Angel Angel Angel Angel Ange Angel Angel A</li></ul>		100 5	1. 19				***
139	88.44		11	138.5	NA	NA			
the state	87.44			140				. · .	1
140									1
141	86.44			-					
	85.44							1	1
142									
143	84.44			All the	le internet			1.	
	83.44	$\frac{1}{2} \left( \frac{1}{2} + \frac{1}{2} \right) = \frac{1}{2} \left( \frac{1}{2} + \frac{1}{2} \right) \left( \frac{1}{2}$		143.5					
144			1`2	-	NA	NA		1 .	
4.45				145					1
145	81.44								1
146			ł.						1
	80.44		1					1.1.2	
147	79.44		1				· · · · ·		
148	/ 5.44		1				•		
	78.44	1	1	148.5			· * *		
149		2 this I IMESTONE hade between 1471 and 1571	13	150	NA	NA			
150		2 thin LIMESTONE beds between 147' and 157'	1 .	150					1.
	76.44		1	t ·	1				].
151	÷		1						1
	75.44		1 5			1		1	1

Form GS9901 7-26-2004

	DRILLI					Hole No. OW-1002
	GEOLOGICA	AL SE	RVICES		о 0	Sheet 6 of 8
SITE	Vogtle ALWR SSAR	· .		TOTAL DEPTH		SURF.ELEV. 227.44
		Sample No.		dard Penetration Test		
Depth Ft. Elev. Ft.	Material Description, Classification and Remarks	·	From To	Blows	N	Comments
153 73.44						
154 72.44		14	153.5	NA	NA	
			155			
155 71.44						
156 70.44						
157 69.44	Greenish grey MARL				- 	
158 68.44		· .				
159 67.44		15	158.5	NA	NA	
160 66.44			160			
						ana ang ang ang ang ang ang ang ang ang
161 65.44		-				
162 64.44		1		n an		
163 63.44		16	163.5	ΝΑ	NA	
164 62.44			165	NA		
165 61.44						
166 60.44		ŀ	1 A.			
		1				
167 59.44				· · ·		
168 58.44		1	168.5	1914 - L L		
169 57.44		17	170	NA	NA	
170 56.44		1				
171 55.44			•			
172 54.44		1	· · ·			
10 C	Light olive grey sandy CLAY grading to>					and a second second Second second
173 53.44	1. · · · · · · · · · · · · · · · · · · ·		173.5			
174 52.44		18	175	NA	NA	
175 51.44	Light olive grey fine- to coarse-grained SAND composed					
176 50.44	of shell fragments and CLAY					
177 49.44		_		and the second	Ì	
178 48.44	Greenish grey MARL	· ·				
179 47.44		19	178.5	NA	NA	
		'	180			
180 46.44			••			
181 45.44						
182 43.81						
183 43.44			183.5			
		20	185	NA	NA	
184 41.81 orm GS9901 7-2		A - 34		<u> </u>	1	L

		DRILLI					Hole No. OW-1002
		GEOLOGICA	AL SE	RVICES			Sheet 7 of 8
BITE		Vogtle ALWR SSAR			TOTAL DEPTH	23	7 SURF.ELEV. 227.4
			Sample	Star	idard Penetration Test		
epth Ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To	Blows	N	Comments
185	42.44						·
186	41.44	na an tha an an an tha an the same and a same					
187	40.44						
с. <sup>1</sup>	1.0	Greenish grey MARL		· · · · · · · · · · · · · · · · · · ·			
188	39.44			188.5			
189	38.44		21	-	NA	NA	
190	37.44			190			
				1. A.			
191	36.44						
192	35.44						
193	34.44						an a
	1.6.1			193.5			
194	33.44		22	- 195	NA	NA	
195	32.44		1				
196	31.44						
107	20.44		1				
197	30.44						
198	29.44			198.5	and a second sec		
199	28.44		23	-	NA	NA	
200	27.44			200			
4							
201	26.44		1	-			
202	25.44						
203	24.44			203.5			
			24		NA	NA	
204	23.44			205			and the second se
205	22.44						
206	21.44						
	20.44						
208	19.44			208/5			
209	18.44		25	· ·	NA	NA	
	17.44		1	210		- + .	• • • • • • • • • • • • • • • • • • •
1.1				· .			
211	16.44		ļ				
212	15.44						
	14.44						
		~ 1/2' gradation to dark grey fine- to medium-grained		213.5			
214	ļ	SAND (SP) with minor amounts of silt and organics and 3/4' thick lignite layer	26	- 215	NA	NA	
215	12.44			210			
	11.44	· · · · · · · · · · · · · · · · · · ·	1				

		DRILLI					Hole No. OW-1002
. *		GEOLOGIC	AL SE	RVICES		2	Sheet 8 of 8
SITE		Vogtle ALWR SSAR	2	. te	TOTAL DEPTH	237	SURF.ELEV. 227.442
			Sample No.		dard Penetration Test		
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks		From To	Blows	N	Comments
217	10.44		н. С. 1				
218	9.44	6" grey CLAY layer					
				218.5	· · · ·		
219	8.44		27	220	NA	NA	
220	7.44			220			
221	6.44	Light greenish grey fine- to medium-grained, silty glauconitic SAND (SM)					
223	4.44						
			ŀ	223.5			
224	3.44		28	- 225	NA	NA	
225	2.44						
226	1.44				·		
227	0.44						
-	5	and the second secon			NA	NA	
228	-0.56		29	228.5			
229	-1.56			230			
230	-2.56			1			
231	-3.56					° .	
				· · ·	a ser tra se	- 19 C	
232	-4.56						
233	-5.56			233.5			
234	-6.56		30	-	NA	NA	
235	-7.56			235			
236	-8.56			a to se			
						1917 - 19	
237	-9.56	Boring terminated at 237'. Well OW-1002 installed in	-				
238	-10.56	this borehole.					
239	-11.56			1			
240	-12.56						
	-13.56			1			
242	-14.56				. I		
243	-15.56	4					
244	-16.56		1.1				
	-17.56						
			ľ				
246	-18.56	<b>4</b>					
247	-20.19			· ·			
248	-20.56						
	-21.56						

	DMPANY				- 	Hole No.	
Energy to Se	rve Your World <sup>*</sup> GEOLOGI	CAL SE	RVICES		· · · · ·		et 1 of 4
	Vogtle ALWR SSAR			HOLE DEPTH	108.5		SURF.ELEV. <u>NA</u>
1 A.	Burke County, Georgia	-	DINATES N	<u> </u>	NA	E	NA
ANGLE -	NA BEARING NA			Greene	<u> </u>	RILL NO.	CME 75
DRILLING N		ES	22	N	IO. U.D. SAMPL	ES	NA
WATER TAI	BLE DEPTH 90' ELEVNA		· · · · · · · · · · · · · · · · · · ·		DAT		5/25/2005
TYPE GROU	T NA QUANTITY NA	N	nix N	A	DRILLING STA		5/24/2005
DRILLER	Greene/Arthur RECORDER Steve Bearce APPR	ROVED _	NA		DRILLING CO	P. DATE	5/25/2005
epth FT. Ele	, FT. Material Description, Classification and Remarks	Sample No.	Stan From To Ft.	dard Penetration T Blows	est N BPF	Commo	ents
0							
				· · · · · · · · · · · · · · · · · · ·	<u>├</u> ───┤		
1							• . • .
2		· .					and a start of the
3						1. 	
				: .			
4	Red brown silty SAND (SM) to SAND (SW), fine- to coarse-grained	1A	3.5-5	11-13-15	28		
5							
6			1.00	· _ ···			
7 x 1			an a				
8			10 M				
9	Yellow brown SAND (SW), fine- to medium-grained	2A	8.5-10	6-8-10	18	· .	
10		17.		n e Konstanto de la			
			н. 	- *			
11							
12					· · · · · · ·		· · · · · · · · · · · · · · · · · · ·
13						· · · ·	
				:			
14	Light brown clayey SAND (SC), fine- to medium-grained	ЗA	13.5-15	3-4-5	9		
15							
16		ан. С. 19					
17							
		* .					
18							
19		4A	18.5-20	4-4-3	7		
20							• • • • • •
21							
22				·			- 
23							
20							
24	7-26-2004						

SOUTHER	DRILL		18 J.			Hole No. OW-10
Energy to Serve	GEOLOGIC	AL SE	RVICES			Sheet 2 of 4
SITE	Vogtle ALWR SSAR	Sample	Stan	TOTAL DEPTH		08.5 SURF.ELEV.
Depth FT. Elev. F	Material Description, Classification and Remarks	No.	From To FT.	Blows	N BPF	Comments
25	Light tan sandy Clay (CL)	5A	23.5-25	4-4-5	9	
26						
27						
28						
		н 				
29		6A	28.5	3-3-3	6	
30			30			
31		}	1997 - 1997 1997 -			
32		:		er Talist		
33						
34	Buff COQUINA in layers ~=1/2 recovery of coquina	7A	33.5	50/3"	50/3*	
35			35			
36						
37						
38						
1.1.1	Buff colored, white shelly (<10%) clayey SAND (SC)		00 F	10.0.0	1	
39	Bur colored, while shelly (<10%) clayey SAND (SC)	8A	38.5	10-9-8	17	
40			40			
41						
42	<b>-</b>		.e			
43						
44	Same as above but no shells	9A	43.5	3-4-5	9	
45			45		a se a se	
46						
47			1			
48						
49	Buff colored fine sandy CLAY (CL)	10A	48.5	7-2-9	11	
50			50			
51						n an Arran a Arran an Arran an Arr
52		1				
53						
			53.5	1010		
54	Grading to clayey fine SAND (SC)	11A	55	4-2-10	12	
55 56				1. 		

	HERN		NG L	OG	.*		Hole No. OW-1002A
	COMP		L SE	RVICES			Sheet 3 of 4
		Vogtle ALWR SSAR			TOTAL DEPTH	10	8.5' SURF.ELEV.
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Stand From To Ft.	dard Penetration Tes Blows	N BPF	<b>0</b>
	2104.11.			110/11/01/2	Diows		Comments
57	<u></u>		1.1.1				
58							
59		Buff colored, sandy shelly (15%) CLAY (CL)	12A	58.5-60	28-26-13	-39	high N due to shells
60							
61				a di Angelandia. Angelandia		· · · ·	
62				· · ·			
63							
		Puff colored fine arginged claureu CAND (CO)	104	60 E 05			
64		Buff colored fine-grained clayey SAND (SC) moist	13A	63.5-65	11-13-19	32	
65							
66							
67				a di se			
	· · · ·	Tan, slightly pink fine-grained sandy CLAY (CL), with fine- grained SAND, (SC) slightly moist					
68				and the	an th		
69			14A	68.5-70	8-12-50	62	
70	:						
71						· • .	
72			· · ·				
73							
74		Buff colored slightly green shelly, clayey, SAND (SC)	15A	73.5-75	8-12-27	39	
75			1				
76				-	а. — А. А.		
77			1	· · ·			
78							
79		Light brown, silty, fine-grained SAND (SM), moist	16A	78.5-80	5-20-25	45	
. 80	< € . <sup>1</sup>					1. 	
81							
	•						
82							
83			Į .				
84			17A	83.5-85	11-21-25	46	
<b>8</b> 5							
86						1 .	
87					1	· `	
88	901 7-26-2	2004 2.4A		· .		1	

r			· · · · · · · · · · · · · · · · · · ·					
sou		ANY	DRILLI		1			Hole No. OW-100
Energy	to Serve Yoz	ur World	GEOLOGIC	AL SE	RVICES			Sheet 4 of 4
SITE	Vogtle /	ALWR SSAR				TOTAL DEPTH	10	8.5 SURF.ELEV
Depth	Elev.	Material Description, Classification and Rema	arks	Sample No.	Stan From To	dard Penetration Test Blows	N	Comments
89		Tan fine-grained SAND, (SP), wet		18A	88.5-90	12-25-31	. 56	
90								5/24/05
,			en e			· · · ·		
91							-	surface
92	· ·				· · ·			
93	1 <u>1</u>		•			. ·		
94		Buff silty, SAND, (SM), wet		19A	93.5-95	50/4"	50/4"	
95	· .							<ul> <li>A state</li> <li>A state</li> <li>A state</li> <li>A state</li> </ul>
	<u> </u>			1				
96			1		· · ·	an a		
97	- 14 - 14							
98							· .	
99		Saturated with shell fragments (thin, 4mm, t	o thick,	20A	98.5-100	12-50/3"	12-	
100		~1cm)			n an tais Tais		50/3"	
101								
			••••••					
102	<u> </u>							
103								
104	14 			<b>.</b> .				
105		Greenish grey, MARL, damp		21A	103.5-105	3-1-50	51	
106								
107			· · ·					
			4.					
108			· ·		· .			
109		Boring Terminated @ 108.5'. This borehole was abandoned due to use o	f 3 1/4"	22A	108.5-110	11-50	61	
110	ļ	augers.					· • •	
111		Moved over approximately 20			e e e e		1.	
112		feet north and drilled OW-1002 with ProSon Well was installed in borehole OW-1002.	ac rig.					
113					e de la companya de l La companya de la comp			
114	· .							
115				j.				
1	<u> </u>	an a	• • •	·	ang sang sa Tanàna ang			
116								
117								
118						·		
119								
120 Form GS								

SOUT	HERN COMP	DRILL GEOLOGIC					Hole No	
	o Serve Tos			INVICES		00	*	eet 1 of 4
SITE		Vogtle ALWR SSAR Burke County, Georgia			HOLE DEPTI			SURF.ELEV. NA
LOCATIO		······································		DINATES N		NA	E _	NA
ANGLE		NA BEARING NA			S&ME	V	RILL NO.	
DRILLIN	IG METHO		s	18		NO. U.D. SAMPLI		NA
WATER	TABLE DE		IME AFTE			DAT	E TAKEN	
TYPE G	ROUT	NA QUANTITY NA	Ň	nix N	JA	DRILLING STA		5/24/2005
DRILLEF	R	TIM RECORDER Steve Bearce APPR	OVED	NA		DRILLING COM	IP. DATE	5/24/2005
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Star From To Ft.	idard Penetration	Test N BPF	Com	nents
							Conin	
0						+		
1					- 			
2								
-0	111							
3		Red-brown silty-clayey SAND (SM-SC) fine- to medium- grained, moist						
4								
			1	3.5-5	7-13-17	30		
5	;;		1					
6								
· 7	· · ·							
						r i		
8								
9		Light brown, silty SAND, (SM) to SAND (SW) fine- to						
10		medium-grained	2	8.5-10	9-6-6	12		
11								an an ta sa ta
12			1 · ·					
13					-			
14		Red-brown silty-clayey SAND (SM-SC), fine-grained	<b>.</b>					
15			3	13.5-15	8-11-13	24		
16	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997							
17							•	
				.				· · · · · · · · · · · · · · · · · · ·
18		Red brown sandy SILT (ML) and						
19		Red-brown silty-clayey SAND, (SM-SC) fine-grained						
20			4	18.5-20	9-14-15	29		
20					-			
21								
22								
			1					
23						T T		
1		Yellow-brown SAND, (SW)	1.					

2.4

	COMP	GEOLOGICA			Hole No. OW-1003 Sheet 2 of 4		
SITE		Vogtle ALWR SSAR	Sample	<u></u>	TOTAL DEPTH		0SURF.ELEVNA
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To Ft.	Blows	N BPF	Comments
25		Fine- to medium-grained SAND, (SW) damp	5	23.5-25	8-11-17	28	
26			, ·				
27							
28							
29		Red-Brown silty SAND (SM) with laminations of clayey					
30		SAND (SM), clay and silt	6	28.5-30	6-5-7	12	
31							
32							
33							
34							
35		Yellow-brown with mottled grey clayey SAND (SC) and fine-grained SAND, damp	· 7·	33.5-35	7-5-5	10	
36							
37							
38	····						
39		Same as above with some sandy CLAY laminations, damp	8	38.5-40	4-4-4	8	
40				· _ ^			
41	·						
42							
43							
44		Yellow brown sandy CLAY (CL) fine- grained SAND, damp	. 9	43.5-45	3-3-4	7	
45	· · · ·						
46				- -			la de la sector de la companya de la sector La sector de la companya de la sector de la se
47				an a			
48		Layered yellow brown clayey SAND, (SC) and yellow					
49		brown sandy CLAY, moist	10	48.5-50	3-3-4	7	
50					0-0-4		
51	*.						
52							
53	<u></u>			et geore			
54		very moist	11	53.5-55	2-2-5	<b>7</b>	
55						l a trans	
56						1	

OUT		DRILLIN	IG L	OG			Hole No. OW-1003
nergy to	Serve Your	World GEOLOGICA	L SE	RVICES			Sheet 3 of 4
SITE	···	Vogtle ALWR SSAR	1. 		TOTAL DEPTH		SURF.ELEV. NA
epth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Stan From To FT.	dard Penetration Te Blows	N BPF	Comments
57							
· · ·							
58							
59	I	Light pinkish tan SAND (SW), fine- to medium-grained	12	58.5-60	2-7-9	16	
60					270		
61					е на страна и страна Страна и страна и стр		
62							
				an a			
63							5/25/05
64		ight tan clayey SAND (SC)	13	63.5-65	WOR	WOR	▼ 63.6' from ground
65			10	00.0 00		WOIT	surface
66			. •				
67							
68				la atra Arrona			
69	I	Buff colored clayey SAND, (SC) fine to medium grained SAND	14	68.5-70	WOR 18"	WOR	Saturated
70				00.0-70	WOITIO	18"	
71							
72			1.5	- 			
						- -	
73							
74		Same as above	15	73.5-75	WOR 12"	WOR	
75			15	10.5-75	WORTZ	12"	
76							
77							
				· · 1			
78						1	
79		Reddish brown silty SAND (SM)	16	78.5-80	1-1-2	3	
80					1-12		
81							
82			1.				
83					ļ		
		Light tan silty SAND (SM)		а 1		÷	
84			17	83.5-85	1-1-2	3	
85		Tan and grey clayey COQUINA					
86							
87			Í.		1	. ·	

· · · · · ·						-		e de la composición d
SOUT	HERN	DRILLIN					Hole No.	OW-1003
	Serve Yos	ar World GEOLOGICA	LSER	VICES			Sheet 4	of 4
SITE		Vogtle ALWR SSAR	Comolo	· · · ·	TOTAL DEPTH	91	DSURF.E	LEV. N
Depth Ft.	Ft.	Material Description, Classification and Remarks	Sample No.	From To Ft.	lard Penetration Tes Blows	N BPF	Comments	
89			18	88.5-90	13-21-23	44	an di seria. Seria di seria	
90		Greenish grey MARL						
91		BORING Terminated at 90.0'						
92		This borehole was abandoned due to the use of 3 1/4" augers.		· · · ·				
93				4.7	· · · ·			
					4 1.4			
94	· . ·	Shallow well OW-1003 was installed approximately 10' south of this borehole. No boring log was prepared						
95		for the hole due to the proximity of this borehole.						
96			ľ					
97								
98	<del>i.</del>							
99								
100								a and a second
101				an en en en				
102			•					
103				1. J. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				· · ·
104	-			Also in				
105	-			н. 1997 - Алт			an a	
				1995) 1997 - 1997 1997 - 1997				
106								ан 11 т
107								
108						·	an a	
109	·							
110						· .		
111								
112				su t				
113	•						na an a	
114	· .							
115	4.5				an a			
116							an a	
117								
118								
119	<u> </u>							1.4
120								· . ·

0	UTHE		e station		DRILL	ING LOC					Hole No.	OW-1004
ner		APANY Your World			GEOLOGIC	AL SERVI	CES				Sheet 1	of 7
SIT			Vo	ogtle ALWR SSAR		at in the		HOLE DE	РТН	187	SURF.	elev. 222.9
	CATION		Burke Cou	nty, Georgia		COORDIN	IATES N	-	-		E	
2		NA	BEARING	N/	<u>م الم الم الم الم الم الم الم الم الم ال</u>	-		Pros			DRILL NO.	
	LLING MET		Sonic			LES						NA
	TER TABLE		·	ELEV. NA			R COMP.		- <sup>NO.</sup>			
		NA								·.	DATE TAKEN	6/3/2005
×	LLER	Tony, Mike		S. Bearce			NIA.	· · · · · · · · · · · · · · · · · · ·				6/11/2005
				G. Dealce	AP	PROVED		Standard Penetratic	n Test	DHILLING	COMP. DATE	
oth	Elev. Ft.		Material Description	, Classification and Remarks		No.	From To Ft.	Blows		N BPF	Comments	
0	222.92	a a tala										34 - L
	001.00										en de la serie de la serie La serie de la s	
			was not sampled									
2			well pair with OV	V-1003. The well is	;			s				
3	219.92	approximately	ieet Of UW	- 1003.			· · ·					
	010.00	See boring log										ан 19 - Д
			escription of upp	Jer Seuiments.								
5	217.92		1 4			· · ·		· · ·				
;	216.92							1. *	94) 1			
		e de la composition de la comp	an a							- 19 g		
4	215.92		n an									100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100
3	214.92	the start is		· ·		· · ·				[ · .]		
,	213.92			e de la composición de			м. К	1 .				
							1.5 1.5					
의	212.92						•				-	
1	211.92				•							
2	210.92				• • •							·
							1	1				
3	209.92											
4	208.92						· ·					
5	207.92				· · · ·							
					-							
6	206.92				-	-	а. 1 <sup>4</sup>				an An an an an	
7	205.92				· · ·						÷	
٦	204.92						н. 19. г.					
1						1 m 				an Bart		
9	203.92							· · · · ·				
0	202.92				- 1							
T					e System		1 ·			] .	•	
4	201.92						* *	A.				
2	200.92						1					
3	199.92											
		1										
4	198.92	ł ·					L	ł	· · · · ·	1		

	THERN COMP to Serve You	ANT	LING	· · · · · ·	TOTAL DEPTH	187	Sheet 2 of	W-1004 7 222.92
Depth	Etev.	Material Description, Classification and Remarks	Sam No	ple From To	Standard Penetration Test	N		
25		See page 1		- Flohi 10	Brows	N	Comments	% Rec RQD
26	195.92							
27	194.92			1 1e				
28	193.92							
29	192.92				•			
30	191.92							
.31	190.92							
32	189.92							
33	188.92							
34	187.92						Б. 	
35	186.92							
36	185.92						n in the second seco	
37	184.92							
38	183.92							
39	182.92		ан 1					
40	181.92							
41	180.92							
42	179.92							
43	178.92		- 24				an An Anna an Anna	
44	177.92				•* •			
45	176.92							
46	175.92							
47	174.92							
48	173.92							
49	172.92						х.	
50	171.92			stantin S				
51	170.92		Ĭ			А. Т.		
52	169.92		201				an a	алан 1997 — найд
53	168.92							
54	163.39						an an an Arrange An Arrange An Arrange	
55 56	166.92 161.39					1		

sou	THERN	DRIL	LING	OG			Hole No.	OW-1004		
Energy	to Serve You	r World <sup>*</sup> GEOLOG	ICAL SE	RVICES	n de la composition de la comp	· · ·	Sheet 3	of 7		
SITE -	<u></u>	Vogtle ALWR SSAR	Sample		TOTAL DEPTH	187	SURF.	ELEV. <u>22</u>		
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	From To	ndard Penetration Test Blows	N ·	Comments	% Rec		
57	165.92	See page 1					•			
58	164.92						• •			
59	163.92						- - -			
60	162.92			a An an						
61	161.92		2							
62	160.92									
63	159.92		1. T. N.				*			
64	158.92									
65	157.92									
66	156.92									
67	155.92	an an an Arthur an A Arthur an Arthur an Ar								
1			· · .							
68	154.92			2 đ.			1. 19. 19 19.			
69	153.92		- 14 - 14							
70	152.92		ł							
71	151.92									
, <u>72</u>	150.92		-							
	149.92									
74	148.92									
75	147.92						n an			
76	146.92					· .				
77	145.92		l.	1. A.	e de la composición d La composición de la c					
78	144.92		2. 21.	a a						
79	143.92			1977 - 19						
80	142.92		· .							
81	141.92									
82	140.92				er en ser en Ser en ser en			er in in		
83	139.92				and the second					
84	138.92									
85	137.92									
86	132.39				e de la composition de la comp			1		
<u>87</u> 88	135.92 134.92	Start sampling at 87' Olive-tan, wet CLAY (CL)			n An State					

	HERN A COMPA Serve Your V	Vorld	G Vogtle ALWR SSAR	DRILLI SEOLOGIC/			TOTAL DEPTH	18	Hole No. OW-1004 Sheet 4 of 7 7
Depth Ft.	Elev. Ft.	Material Descri	ption, Classification and Remark	s	Sample No,	Star From To Ft.	ndard Penetration T Blows	est N BPF	Comments
89	133.92				1 -	88.5	NA	NA	Comments
90	132.92					90.0			and a second second Second second
		Greenish grey MARL		e An an an Anna		ar str			
91	131.92					•			
92	130.92								
93	129.92				2	93.5			
94	128.92				-	- '	NA	NA	
95	127.92					95			
96	126.92								
97	125.92		- 11 - 11 - 11 - 11 - 11 - 11 - 11 - 1						
98	124.92								
99	123.92				3	98.5	NA	NA	
100	122.92	· ·				100			
101	121.92						etter and and		
102	120.92	Greenish grey shelly M	ARL with white fossils			*			
	119.92	•							
	118.92				4	103.5	NA	NA	
105	117.92					105			
106	116.92								
107	115.92								
108	114.92								an an an tha an
109	113.92				5	108.5			
110	112.92					- 110	NA	NA	
111	111.92		·						and a start of the
	110.92								
	109.92						·· · · · ·		
	108.92								
	107.92				6	113.5	NA	NA	
	106.92					115			
	105.92								
	100.39								
	103.92					118.5	<b>NIA</b>		
	102.92				7	120.	NA	NA	

		DRILLI					Hole No. OW-1004
		GEOLOGIC/ Vogtle ALWR SSAR	AL SEI		<u></u>	187	Sheet 5 of 7
SITE	r · · ·		Sample		TOTAL DEPTH		SURF.ELEV. 222.92
Depth Ft.	Elev. FT.	Habid Develotion Obsettion and Develo	No.	Stan From To FT.	dard Penetration Blows	Test N BPF	
		Material Description, Classification and Remarks	-				Comments
121	101.92						
122	100.92	Shelly greenish grey MARL					
			 	-			
123	99.92		8	123.5			
124	98.92			•	NA	NA	
125	97.92			125	1		
126	96.92			ан. А			
127	95.92						
128	94.92			an a			
129	93.92	abundant (30%) gravel	1 · · · .		19 19		
129			1.1.1			N.	
130	92.92		9	130	NA	NA	
131	91.92			131.5			
132	90.92						
A. S. S.							
133	89.92		1.				
134	88.92						
135	87.92		10	133.5	NA	NA	
				135			
136	86.92						
137	85.92						
138	84.92						
139	83.92		11	138.5	NA	NA	
1	1			140			
140	82.92			·**			
141	81.92		1				
142	80.92			· · · ·			
143	79.92		12	143.5	NA	NA	
144	78.92			145			
145	77.92						
	:			· · · ·	· ·		an an an Araba. An Araba an Araba an Araba an Araba an Araba
146	76.92		ľ				
147	75.92	6" gradational contact with abundant shells (white)					
148	74.92			148.5			
	· .	Dark grey, fine- to coarse-	13	-	NA	NA	• •
149	73.92	grained SAND, (SW) with green sand grains (glauconite or dolomite?)		150			
150	68.39						
151	71.92						n an an Artana 18 - An Angelandaria
			f ·	1 .	1	1 1	

		DRILLI	NG LO	DG			Hole No. OW-100
·	••••	GEOLOGICA	L SER	VICES	л.		Sheet 6 of 7
SITE		Vogtle ALWR SSAR	<u> </u>		TOTAL DEPTH	18	B7 SURF.ELEV. 22
			Sample		andard Penetration		
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To Ft.		N BPF	Comments
153	69.92	grades to fine- to medium-grained dark grey SAND w/		153.5		1	
154		organics, cohesive leaving core barrel, wet, poorly graded with silt (SP-SM)	14	-	NA	NA	
			-	155			
155	67.92				· · · ·		
156	66.92						
157	65.92						
158	64.92			158.5			
159	63.92		15	169	NA	NA	
	62.92	and the second		100			
160							
161	61.92						
162	60.92						
163	59.92			163.5		а. 1911 — Ар	
164	58.92	Light grey, becomes loose coming out of core barrel fine-grained SAND (SP) with clay and silt	16	170	NA	NA	
165	57.92						
166	56.92						and the second sec
						No. and Anna	
	55.92			1 N.		•	
168	54.92			168.5			
169	53.92		17	- 170	NA .	NA	
170	52.92			170		:	
171	51.92						
172	50.92						
	49.92			,			
-				173.5			
1	48.92		18	- 175	NA	NA	
175	47.92	Dark grey organic, silty SAND (SM)		÷ .			
176	46.92						
177	45.92			н. 1	·		
178	44.92			178.5	а. 1		
	43.92		19	180	NA	NA	
1	42.92						
181	41.92						
182	36.39						
183	39.92			183.5	· .		
184	34 30		20	185	NA	NA	

		DRILL					Hole No. OW-1004
		GEOLOGIC	AL SE	ERVICES			Sheet 7 of 7
SITE	Vogtle A	LWR SSAR			TOTAL DEPTH	187	SURF.ELEV. 222.92
			Sample				
epth Fl.	Elev. Ft.	Material Description, Classification and Remarks	No.	Sta From To Ft.	Indard Penetration	Test N BPF	
				188.5			Comments
185	37.92	Dark grey organic, silty SAND (SM)	20	100	NA	NA	
186	36.92		1	190		1.	
187	35.92				100 A.		
		Boring teminated at 187'					an an Araba An Anna an Anna an Anna an Anna an Anna Anna an Anna an
188	34.92	Well OW-1004 is installed in this borehole.			- 		
189	33.92						
190	32.92				·		
191	31.92						
192	30.92						
193	29.92				••		
17	54 1						and a second
194	28.92				1 - A.		
195	27.92				an a		
196	26.92						n an an the alternative second second
197	25.92						
1997 - 1997 1997 - 1997 1997 - 1997							
198	24.92						
199	23.92	ante por entre a construir entre a construir de la construir de la construir de la construir de la construir d Por a construir de la construir			· · ·		
200	22.92			- -			
S., 1	21.92						
202	20.92			• • •			
203	19.92						
204	18.92						
205	17.92						
206	16.92				a de la com		
206	16.92	and a second second Second second					
208	14.92						
209	13.92						
210	12.92					a ta a a ta a	· · · · · ·
	11.92						
212	10.92				1. A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A	2.0	
213	9,92				- 111		
214	4.39						
215	7.92						
	6.92						

				ORILLIN	G LC	<b>DG</b>			Hole No	•	OW-1005
nergy to Seri	ve Your World		GEO	DLOGICAL	SER	VICES			Sh	eet 1 of	6
SITE			le ALWR SSAR				HOLE DEPTH	170		SURF.ELEV	
OCATION		Burke Coun	ty, Georgia	c	OORDI	NATES N	114	4047.86	E	620	408.765
NGLE	NA	BEARIN	IG NA	c	ONTRA	CTOR	S&ME	D		CI	ME B55
RILLING ME		4/14" HS	5A N	O. SAMPLES		19		NO. U.D. SAMPLE	:s	1	NA
VATER TABL	E DEPTH		ELEV	TIME	AFTER	COMP.	de la servició de la Contra de la servició	DAT			
YPE GROUT	Г	NA		NA	MI	< <u> </u>	A	DRILLING STA	RT DATE	6/	2/2005
	Te	ed RECORDER	R Tinsley/SCB	APPROVE	D	NA		DRILLING CON	P. DATE	6/	7/2005
epth ft. Ele	v. Ft.	Material Description, C	Classification and Remarks	S	Sample No.	Star From To ft.	dard Penetration Blows	Test N BPF	Comn	ents	
0 264	4.39				·						
								10 N 1			
1 26		ng in this borehole be acent borehole OW-	gan at 68.5°. 1005A was drilled to 1	75'.							
2 262	2.39 The boy	ehole was abandone	d due to the use of 3 t size for well installa	1/4"			•				an a
3 26	1.39	:									
4 260		rehole OW-1005 was n OW-1005A.	located approximate	ely 10' from							
		1 1	installed in this bore				100 - 100				
		ang wen Ovv-1000 IS	mataneu in triis Dufer								
6 25	8.39										•
7 25	7.39										
8 25	6.39			2 2							
9 25	5.39	-							1		
10 25	4.39						1			-	
		:									
11 25	3.39										
12 25	2.39										
13 25	1.39			." 1							
14 25	0.39		•						e de la composición d La composición de la c		
						· · ·					
15 24	9.39					.,	· · · ·			an An an An An	
16 24	8.39										
17 24	7.39										÷
18 24	6.39	н 1		-							
· · · ·									• •		
19 24	5.39										
20 24	4.39										
21 24	3.39		-						an ta ta A		
22 24	2.39								. *		
									. *		
23 24	1.39								1 1		n An Angel An Angel
24 24	0.39						· · ·		n în în		

SOU		ANY					Hole No. OW-1005
Energy	to Serve You	r World GEOLOGICA	L SE	RVICES			Sheet 2 of 6
SITE _		Vogtle ALWR SSAR			TOTAL DEPTH	17	70 SURF.ELEV. 264.38
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Star From To	ndard Penetration Test Blows	Ň	Comments
25	239.39	See page 1					
26	238.39						
27	237.39						
28	236.39			an a			
29	235.39						
30	234.39		•				
31	233.39		54 <sup>1</sup> 1				
32	232.39						
33	231.39						
34	230.39						
35	229.39						
36	228.39						
37	227.39						
38	226.39						
39	225.39						
40	224.39						
41	223.39						
42	222.39						
43	221.39					1.1	
1	220.39		- -			1	
45	219.39		-		1000 - 1000		
1.1	218.39		.14				
47	217.39			n an			
48	216.39			. *			
49	215.39			a de la			
50	214.39						
51	213.39				•		
52	212.39				an an th		
53	211.39				:		
54							
55	209.39		· . ·		н. Н		
56 orm GS9	208.39	004 <u>Z.4</u> A -	,				

Under Live         Vogite ALWR SSAT         Toral Logen Live         170         Super Live         264           Exercise         Exercise         Market Lissengen, Casaditation and Herweis         Hereit         Exercise         Exercis         Exercis         Exercise	SOUTHERN COMP Energy to Serve You	ANY World <sup>-</sup> GEOLOGIC/	DRILLING LOG GEOLOGICAL SERVICES						
Deph         Bines         Non         Bines         NBFP         Commune           77         207.39         See page 1         Kee	SITE	Vogtle ALWR SSAR					) Surf.elev.	264.389	
58       206.38         59       205.39         60       204.39         61       203.39         62       202.39         63       201.39         64       200.39         65       198.39         66       198.39         67       197.39         68       196.30         109.19       Light grey to white sandy SiLT (ML), catcareous with scattered with large and small shell fragments, very sliff         71       193.39         72       192.39         73       191.39         74       190.38         68       196.39         173       191.39         174       190.38         175       7.4.90         376       7.4.90         377       7.6.2.36         380       1041 Hagaments (ML)         174       190.38         175       7.4.90         376       7.8.5.90         151-19-24       43         163.39       1041.38         40       183.39         60       184.39         61       183.39         62       193.39	Depth ft. Elev. Ft.	Material Description, Classification and Remarks					Comments		
9       205.39         90       204.39         91       203.39         92       202.39         93       201.39         94       200.39         95       193.39         96       195.39         96       195.39         96       195.39         96       195.39         96       195.39         96       195.39         97       194.39         1041 reyr to white sandy SILT (ML), catcareous         70       194.39         1041 reyr to white sandy SILT (ML), catcareous         70       194.39         1041 reyr to white sandy SILT (ML), catcareous         77       195.39         78       195.39         77       195.39         78       195.39         79       195.39         70       195.39         71       197.39         72       195.39         74       195.39         77       197.39         78       198.39         79       195.39         80       194.39         81       193.39         82<	57 207.39	See page 1			а. — <sup>2</sup>		an a	· · · · ·	
0       204.39         01       203.39         02       202.39         03       201.39         04       200.39         05       193.39         06       195.39         06       195.39         06       195.39         06       195.39         07       197.39         08       10/hr grey to white sandy SiLT (ML), calcareous         171       193.39         172       192.39         173       191.39         174       190.39         18       68.570         195.39       Liphing tog to white sandy SiLT (ML), calcareous         171       192.39         172       192.39         174       190.39         18       68.570         195.39       Liphing rey to white sandy SiLT (ML), calcareous with scattered shell fragments (ML)         174       190.39         175       7.400         18       78.571         191.39       Stell fragments (ML)         174       190.39         175       146.39         176       186.39         177       187.39 <tr< td=""><td>58 206.39</td><td></td><td></td><td></td><td>· · · ·</td><td>e de la composition de</td><td></td><td></td></tr<>	58 206.39				· · · ·	e de la composition de			
1       203.39         62       202.39         63       201.39         64       200.39         65       199.39         66       198.39         67       197.39         68       196.39         106       195.39         Light grey to white sandy SILT (ML), calcareous with arge and smail shell fragments, very stiff         70       194.39         (17)       190.39         174       190.39         18       73.575         191.39       1ever shells, less sand         77       167.39         18       73.575         191.39       1ever shells, less sand         74       190.39         191.39       1ever shells, less sand         77       167.39         164.39       Light grey SLT, very stiff, calcareous with scattered shelf ragments (ML)         78       196.39         80       194.39         81       193.39         83       191.39         84       190.39         85       179.39         86       193.39         86       193.39         87       193.39 <td>59 205.39</td> <td></td> <td></td> <td></td> <td></td> <td>11 . I</td> <td></td> <td></td>	59 205.39					11 . I			
100       202.39         101       193.39         105       199.39         66       196.39         105       193.39         66       196.39         105       197.39         106       195.39         Light grey to white sandy SiLT (ML), calcareous with large and small shell fragments, very stiff         11       193.39         12       192.39         13       191.39         14       190.39         17       193.39         17       193.39         17       192.39         17       192.39         17       192.39         18       Greenish grey MARL         76       186.30         66       195.39         19       Greenish grey MARL         76       186.39         19       195.39         19       195.39         19       195.39         19       195.39         19       195.39         19       195.39         19       193.39         19       193.39         19       193.39         19       193.39<	60 204.39								
63       201.39         64       200.30         65       199.39         66       196.39         67       197.39         68       196.39         69       195.39         Light grey to white sandy SiLT (ML), calcareous with large and small shell fragments, very stiff         70       194.39         77       192.39         78       191.39         68       190.39         69       195.39         191.39       Greenish grey MARL         78       198.39         68       196.39         186.39       Greenish grey MARL         78       186.39         67       186.39         68       194.39         181       183.39         28       78.5-80       15-19-24         43       181.39         84       180.39         85       179.39         86       191.39         86       191.39         86       191.39         86       191.39         86       191.39	61 203.39		. •						
64       200.39       65       199.39         65       199.39       5       197.39         66       198.39       5       197.39         67       197.39       194.39       14.39         70       194.39       191.33       191.33         72       192.39       191.33       6         73       191.39       191.39       6         74       190.39       1ewer shells, less sand       78.5         77       167.39       Light grey to white calcareous with scattered shell fragments (ML)       38         78       186.39       78.5-80       15-19-24         79       185.39       183.39         80       194.39       48       83.5-85       50/2"         79       185.39       181.39       83.5-85       50/2"         81       181.39       48       83.5-85       50/2"       50/2"         84       180.39       179.39       160       160       160         85       179.39       18       83.5-85       50/2"       50/2"         86       179.39       179.39       160       160       160       160         86       179.39	· · · ·								
64       200.39       65       199.39         65       199.39       5       197.39         66       198.39       5       197.39         67       197.39       194.39       14.39         70       194.39       191.33       191.33         72       192.39       191.33       6         73       191.39       191.39       6         74       190.39       1ewer shells, less sand       78.5         77       167.39       Light grey to white calcareous with scattered shell fragments (ML)       38         78       186.39       78.5-80       15-19-24         79       185.39       183.39         80       194.39       48       83.5-85       50/2"         79       185.39       181.39       83.5-85       50/2"         81       181.39       48       83.5-85       50/2"       50/2"         84       180.39       179.39       160       160       160         85       179.39       18       83.5-85       50/2"       50/2"         86       179.39       179.39       160       160       160       160         86       179.39									
65       199.39         66       198.39         67       197.39         68       196.39         69       195.39         194.39       Ught grey to white sandy SiLT (ML), calcareous         70       194.39         71       193.39         72       192.39         73       191.39         74       190.33         6       rever shells, less sand         76       74.30         Greenish grey MARL         76       108.39         77       107.39         191.39       Greenish grey MARL         78       166.39         77       185.39         80       194.39         81       183.39         82       192.39         83       181.39         84       180.39         79       185.39         84       183.39         85       179.39         86       191.39         86       191.39         86       191.39         86       191.39         86       191.39         86       191.39 <td< td=""><td></td><td></td><td>e</td><td></td><td></td><td></td><td></td><td></td></td<>			e						
66       198.39         67       197.39         68       196.39         69       195.39         105.19       Lipht grey to white sandy SILT (ML), calcareous with large and small shell fragments, very stiff         70       194.39         71       193.39         72       192.39         73       191.39         74       190.39         76       188.39         77       167.39         1041 grey NAPIL       78         78       188.39         77       187.39         1041 grey NAPIL         78       186.39         77       186.39         78       186.39         79       186.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86       179.39         86       179.39         86       179.39         86       179.39         87       179.39         88       181.39         89       83.5-85         50/2*	· · · · ·								
67       197.39         68       196.39         69       195.39         196.39       Light grey to white sandy SILT (ML), calcareous with large and small shell fragments, very stiff         70       194.39         72       192.39         73       191.39         74       190.39         76       74.90         60       186.39         76       74.90         77       197.39         11ght grey SILT, very stiff, calcareous with scattered shell fragments (ML)         76       74.90         77       186.39         78       186.39         80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86       179.39         86       179.39         86       179.39         86       179.39         86       179.39         86       179.39         86       179.39         86       179.39         86       179.39         86       179.39								a et en	
68       196.39       Sampling begins at 68.5'       18       68.5-70       2-36-50/1       38         70       194.39       Light grey to white sandy SILT (ML), calcareous with large and small shell fragments, very stiff       18       68.5-70       2-36-50/1       38         71       193.39       Image: sandy small shell fragments, very stiff       18       8       68.5-70       2-36-50/1       38         72       192.39       Image: sandy small shell fragments, very stiff       28       73.5-75       9-14-36       50         74       190.39       Image: sandy small shell fragments (ML)       28       73.5-75       9-14-36       50         76       188.39       Image: sandy small shell fragments (ML)       38       78.5-80       15-19-24       43         78       186.39       Image: sandy shell fragments (ML)       38       78.5-80       15-19-24       43         81       183.39       181.39       181.39       83.5-85       50/2*       50/2*         84       190.39       179.39       179.39       179.39       170.39       170.39       170.39         85       179.39       179.39       179.39       170.39       170.39       170.39       170.39         86				- 1 - A 		·			
Sampling begins at 68.5'         1B         68.5-70         2-36-50/1         36           194.39         Light grey to white sandy SiLT (ML), calcareous         1B         68.5-70         2-36-50/1         36           71         193.39         ith large and small shell fragments, very stiff         7B         16         50/1*           72         192.39         rever shells, less sand         7B         73         191.39           74         190.39         rever shells, less sand         7B         7A         10         50           74         190.39         rever shells, less sand         7B         7B         163.97         9-14-36         50           76         188.39         reenish grey MARL         2B         78.5-80         15-19-24         43           78         186.39         shell fragments (ML)         4B         83.5-85         50/2*         50/2*           80         181.39         183.39         4B         83.5-85         50/2*         50/2*           84         180.39         179.39         185.39         50/2*         50/2*         50/2*								11. 	
T0       194.39       With large and small shell fragments, very stiff       50/1*         71       193.39       With large and small shell fragments, very stiff       28       73.5-75       9-14-36       50         72       192.39       fewer shells, less sand       28       73.5-75       9-14-36       50         74       190.39       fewer shells, less sand       38       78.5-80       15-19-24       43         76       188.39       shell fragments (ML)       38       78.5-80       15-19-24       43         78       186.39       shell fragments (ML)       38       78.5-80       15-19-24       43         79       185.39       181.39       48       83.5-85       50/2*       50/2*         81       183.39       48       83.5-85       50/2*       50/2*         84       180.39       48       83.5-85       50/2*       50/2*		Sampling begins at 68.5'	1B	68.5-70	2-36-50/1				
71       193.39         72       192.39         73       191.39         74       190.39         74       190.39         rewer shells, less sand       28         73       74.30         Greenish grey MARL       36         76       188.39         76.20       77.187.39         191.39       Light grey SILT, very stiff, calcareous with scattered shell fragments (ML)         78       186.39         80       184.39         80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         85       179.39		Light grey to white sandy SILT (ML), calcareous with large and small shell fragments, very stiff		- * * *		50/1"			
72       192.39         73       191.39         74       190.39         fewer shells, less sand         75       74.90         Greenish grey MARL         76       188.39         77       187.39         Light grey SILT, very stiff, calcareous with scattered shell fragments (ML)         78       186.39         79       195.39         80       184.39         81       183.39         82       162.39         83       191.39         84       180.39         85       179.39         86       179.39									
73       191.39         74       190.39         75       74.90         Greenish grey MARL         76       188.39         77       187.39         Light grey SILT, very stiff, calcareous with scattered shell fragments (ML)         78       186.39         79       185.39         80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86       179.39									
74       190.39         rewer shells, less sand       75         75       74.90         Greenish grey MARL       Greenish grey MARL         76       188.39         77       187.39         Light grey SILT, very stiff, calcareous with scattered         shell fragments (ML)         78       186.39         79       185.39         80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86       179.39         86       179.39							an an the second se		
75       74.90         76       188.39         76       188.39         76       187.39         Light grey SiLT, very stiff, calcareous with scattered shell fragments (ML)         78       186.39         79       185.39         80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86       179.39			2B	73.5-75	9-14-36	50			
Greenish grey MARL       76       188.39         76       187.39       Light grey SILT, very stiff, calcareous with scattered shell fragments (ML)       38       78.5-80       15-19-24       43         78       186.39		fewer shells, less sand							
76.20 187.39       Light grey SILT, very stiff, calcareous with scattlered shell fragments (ML)       3B       78.5-80       15-19-24       43         78       186.39       184.39       183.39       181.39       4B       83.5-85       50/2"       50/2"         81       180.39       181.39       4B       83.5-85       50/2"       50/2"         84       180.39       179.39       4B       83.5-85       50/2"       50/2"		Greenish grey MARL							
78       186.39         79       185.39         80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86	76.20								
79       185.39         80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86		shell fragments (ML)	3B	78.5-80	15-19-24	43			
80       184.39         81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86									
81       183.39         82       182.39         83       181.39         84       180.39         85       179.39         86									
82       182.39         83       181.39         84       180.39         85       179.39         86									
84     180.39       85     179.39       86					- 			<u>i</u> status	
<u>85 179.39</u> <u>86</u>	83 181.39		4B	83.5-85	50/2"	50/2"			
86	84 180.39							n e se	
	85 179.39								
	86								
87 177.39	87 177.39							n national S	

	HERN COMP			VICES	TOTAL DEPTH	1	Hole No. OW-1005 Sheet 4 of 6 SURF.ELEV. 264.389
epth ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Standa From To ft.	rd Penetration Tes Blows	st N BPF	Comments
		watchar Description, orassingation and remarks		88.5-90	7-17-30	47	
89	175.39	Light brownish grey SAND, fine to medium-grained,	5B	88.5-90	7-17-30	47	
90	174.39	slightly silty (SW), calcareous					
91	173.39	Mottled white to yellowish orange, silty SAND, with	÷				
92		small to large shell fragments, Dense (SM)				· ·	
93	171.39				7044		
94	170.39		6B	93.5-95	7- <del>9</del> -14	23	$\frac{1}{2} \left( \frac{1}{2} - \frac{1}{2} \right) = \frac{1}{2} \left( \frac{1}{2} - \frac{1}{2} \right) \left( \frac{1}{2}$
95	169.39		1	e de Secondaria			
96	168.39	Light grey SILT, very stiff (ML)			· · · · ·		
97		Pale yellow sandy SILT (ML) and silty SAND					
		SM)					
98	166.39		7B	98.5-100	7-17-34	-51	
99	165.39				· · ·		
100	164.39				1. 1. <sup>1</sup> . 1		
101	163.39					ŀ	
102	162.39						
103	161.39				1		
104	160.39	Greenish grey MARL	8B	103.5-105	18-34-29	63	
105	159.39	Pale yellow sandy SILT (ML) and silty SAND (SM)					
106	158.39						
107	157.39						
108	156.39					1	
		White SHELL HASH with fine-coarse-grained	9B	108.5-110	8-18-39	57	
		SAND and large shell fragments					
	154.39		- <u>-</u>				
	153.39						
	152.39		i.				
	151.39					- 14 A - 14 A	
114	150.39		10B	113.5-115	5 12-30-30	60	
115	149.39		1				
116	148.39						
117	147.39						
118	145.76	Same as above with increase in fines					

-	•	DRILLI	IG L	OG		· · .	Hole No. OW-1005
		GEOLOGICA	L SEF	RVICES	<u> </u>	·	Sheet 5 of 6
SITE		Vogtle ALWR SSAR			TOTAL DEPTH	17	0 SURF.ELEV. 264.389
			Sample No.		dard Penetration Tes		
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks		From To ft.	Blows	N BPF	Comments
121	143.39				· .		
122	142.39				14 A. 1		
	- 10 A.A.						
123		White SHELL HASH with fine-coarse-grained SAND (SW) and large shell fragments	12B	123.5-125	8-8-9	17	
124	140.39						
125	139.39						
126	138.39		л — т				
127	137.39						
128	136.39		13B	128.5-130	15-48-40	88	
129	135.39						
130	134.39				· · · ·	· · · .	
131	133.39						
132	132.39						
133	131.39						
		Pale yellow SAND, fine to very fine- grained, clean	14B	133.5-135	7-9-21	30	
134	130.39						
135	129.39			1. 1. <sup>1.</sup> 1.			
136	128.39			e tra-			
137	127.39						
138	126.39						
	· .						
139	125.39		1				
140	124.39	scattered shell pieces, dense	15B	138.5-140	10-13-30	43	
141	123.39		ľ				
142	122.39						
143	121.39						
144	· · ·	increasing fines	16B	143.5-145	8-12-30	42	
	1.1.1.1				U-12-0V		
145	119.39		a				
146	118.39			. *			
147	117.39		1				
148	116.39						
149	1. A.	Pale yellow, silty SAND, calcareous (SM), fine- coarse-grained with shell pieces	17B	148.5-150	) 49/50/3"	49/ 50/3"	
	115.39	Warse-gramed war shen pieces				30/3	
150	·		1				
151	113.39						
152	112.39 01 7-26-200		1		and		

		DRILLI		-			Hole No. OW-1005
	-	GEOLOGIC/ Vogtle ALWR SSAR	AL SE	RVICES		17	Sheet 6 of 6
ITE		Vogue ALWI SSAN			TOTAL DEPTH	•	70 SURF.ELEV. 264.38
Depth	Elev.		Sample No.	Stand From To	lard Penetration Test Blows	T N	
		Material Description, Classification and Remarks					Comments
153	111.39	Pale yellow, silty SAND, calcareous (SM), fine- to					
154		coarse-grained with shell pieces	18B	153.5-155	12-33-50/2	33/ 50/2"	
155	109.39						
156	108.39						
157	107.39						
158	106.39		1.1.1		and the second sec		
159	105.39						
160	104.39	Same as above, slightly more consolidated	19B	158.5-160	25-22-44		Boring paused to
161	103.39						procure more auger 6/04/05
62	102.39			99 - L			
163	101.39		2				
164	100.39			163.5-165	25-50/2"	25/	
165		Dark greenish grey MARL				50/2"	
166	98.39						
	97.39			н на 1975. На 1975 <mark>н</mark> а			
	96.39						
		Boring Terminated at 168 5		168.5 - 170	NA	NA	
98 A.	95.39 94.39	Boring Terminated at 168.5					
				an An An An An			
	93.39						
• .1	92.39						
	91.39						
	90.39			· · · ·			
1.1	89.39						
176	88.39						
177	87.39						
178	86.39						
179	85.39			н. н. н. м	1		
180	84.39						
181	83.39					1	
182	81.76						
183	81.39		1 - <sup>1</sup>		,		
	80.39		<b> </b> -				

		DI	RILLI	NG L	OG			Hole No	. OW-1005A	-
	o Serve You	r World <sup>-</sup> GEOL	OGICA	L SE	RVICES			She	et 1 of 3	
		Vogtle ALWR SSAR					75		SURF.ELEV263	5
OCATI	ON	Burke County, Georgia		COORD	INATES N		NA	E	NA	
NGLE		NA BEARING NA	in a c	CONTR	ACTOR	Kilmar		RILL NO.	CME 45	
RILLIN	IG METHOD		SAMPLES	1	15	ta da series de la compañía de la co	NO. U.D. SAMPL	ES	NA	• .
VATER	TABLE DE	ртн NA <sub>ELEV.</sub> NA	TIM		R COMP.	NA		E TAKEN	NIA	
IYPE G	ROUT	NA QUANTITY N	A	м		NA	DRILLING STA		5/31/2005	
RILLE	R	Kilman RECORDER Tinsley	APPROV	ED ·	NA		DRILLING COM	IP. DATE	5/31/2005	
	Elev. Ft.		· · · · ·	Sample No.		ndard Penetration 1	est			
epth ft.	Elev. FI.	Material Description, Classification and Remarks	4 <u>1</u>	· NO.	From To ft.	Blows	N BPF	Comm	ents	
0	263.00									
1										
	000.00	Provinte reddick valley, CAND (CD) first to result.								
2		Brown to reddish yellow SAND (SP), fine- to mediun grained, loose	m-	4 M.						
3	261.00									
4	260.00			1A	3.5-5	4-12-11	23			
	050.00		<sup>1</sup>							
5	259.00				e La la desta					
6	258.00									
7	257.00				· ·			i.e. (		
8		Mottled red and yellow silty SAND, fine- medium- grained (SW) to sandy silt (ML)		2A	8.5-10	2-10-14	24			
9	255.00									
10	254.00									
					el.					
11	253.00							na tela prime Progeni an		
12	252.00		· · · ·						· · · · ·	
13	251.00									
		Red SAND, fine-grained, loose (SP)		ЗА	13.5-15	3-7-7	14			
14	250.00									
15	249.00									
16	248.00							· · ·		
17	247.00									
18	246.00			· .						
19	245.00	Dark red, SAND, fine-grained (SP), loose		4A	18.5-20	7-6-6	12	· · ·		
19	240.00							an an she she An she she she An		
20	244.00							 		
21	243.00									
						1				• •
22	242.00									
23	241.00							-		• •
								1.1	$(x_1,y_2,\ldots,y_{n-1},y_{n-1},\ldots,y_{n-$	

SOUTHERNACY         DRILLIN GEOLOGICA           SITE         Vogtle ALWR SSAR           Depth ft.         Elev. Ft.         Material Description, Classification and Remarks           25         238.76         Red and yellow SAND, fine-grained (SP), loose           26         237.76         Pellow SAND, fine-grained (SP), loose           29         234.76         Yellow SAND, fine-grained (SP), loose           30         233.76         Yellow SAND, fine-grained (SP), loose           31         232.76         Yellow SAND, fine-grained (SP), loose           32         231.76         Yellow SAND, fine-grained (SP), loose           33         230.76         Yellow SAND, fine-grained (SP), loose           34         229.76         Yellow SAND, fine-grained (SP), loose           35         228.76         Yellow SAND, fine-grained (SP), loose           36         227.76         Yellow SAND, fine-grained, (SP), loose           37         226.76         Yellow SAND, fine-grained, (SP), loose           39         224.76         Yellow SAND, fine-grained, (SP), loose		VICES	77AL DEPTH ard Penetration Blows 111-7-8 6-7-8 7-10-11	7 <u>NBPF</u> 15 15	Hole No. Sheet SUR Comments	2 of F.ELEV.	
Depth ft.         Elev. Ft.         Material Description, Classification and Remarks           25         238.76         Red and yellow SAND, fine-grained (SP), loose           26         237.76            27         236.76            28         235.76            29         234.76            30         233.76            31         232.76            32         231.76            33         230.76            34         229.76            35         228.76            36         227.76            37         226.76            38         225.76            38         225.76	No. 5A 6A	Stand From To ft. 23.5-25 28.5-30	ard Penetration Blows 11-7-8 6-7-8	Test N BPF 15 15			
25       238.76       Red and yellow SAND, fine-grained (SP), loose         26       237.76         27       236.76         28       235.76         29       234.76         30       233.76         31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         38       225.76	No. 5A 6A	From To ft. 23.5-25 28.5-30	Blows 11-7-8 6-7-8	N BPF 15 15	Comments		% Rèt
26       237.76         27       236.76         28       235.76         29       234.76         30       233.76         31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76	6A	28.5-30	6-7-8	15			
27       236.76         28       235.76         29       234.76         30       233.76         31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Bed to light red, SAND, fine-grained, (SP), loose							
28       235.76         29       234.76         30       233.76         31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Bed to light red, SAND, fine-grained, (SP), loose							
28       235.76         29       234.76         30       233.76         31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Bed to light red, SAND, fine-grained, (SP), loose							
29       234.76         30       233.76         31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Bed to light red, SAND, fine-grained, (SP), loose							
30       233.76         31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Red to light red, SAND, fine-grained, (SP), loose	7А	33.5-35	7-10-11	21			
31       232.76         32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Red to light red, SAND, fine-grained, (SP), loose	7A	33.5-35	7-10-11	21			
32       231.76         33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Red to light red, SAND, fine-grained, (SP), loose	7A	33.5-35	7-10-11	21			. • •
33       230.76         34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Red to light red, SAND, fine-grained, (SP), loose	7A	33.5-35	7-10-11	21		1.1	
34       229.76         35       228.76         36       227.76         37       226.76         38       225.76         Red to light red, SAND, fine-grained, (SP), loose	7A	33.5-35	7-10-11	21			
35       228.76         36       227.76         37       226.76         38       225.76         Red to light red, SAND, fine-grained, (SP), loose			1 10 11	<u> </u>			
36         227.76           37         226.76           38         225.76           Red to light red, SAND, fine-grained, (SP), loose						*	
37     226.76       38     225.76       Red to light red, SAND, fine-grained, (SP), loose							
38 225.76 Red to light red, SAND, fine-grained, (SP), loose		· · · · ·					
Red to light red, SAND, fine-grained, (SP), loose							
						· .	1.1
39 224.70	8A	38.5-40	8-7-8	15			
40 223.76		۰. ۲۰					
41 222.76							
42 221.76							
43 220.76							• • •
44 219.76 some fines, (SW)	9A	43.5-45	13-8-8	16			
45 218.76							L
46 217.76							
47 216.76							
48 215.76 Brown to grey silty SAND, tine-coarse grained (SM)	10A	48.5-50	13-7-5	12			
49 214.76				- 			
50 213.76							
51 212.76							
52 211.76		· .	· · · ·	· .		a ta t	
53 210.76							•
54         209.76           Light grey CLAY (CL)           55         208.76	11A	53.5-55	3-3-3	6		2	

sou	THERN	DRILL	ING L	OG			Hole No. OW-1005A
Energy	to Serve You	r World <sup>-</sup> GEOLOGIC	CAL SE	RVICES		· · · · ·	Sheet 3 of 3
SITE		Vogtle ALWR SSAR	Sample		TOTAL DEPTH	75	SURF.ELEV
Depth ft	Elev. Ft.	Material Description, Classification and Remarks	No.	Sta From To ft.	ndard Penetration Te Blows	N BPF	Comments
57	-57.00						
58	-58.00						
59	-59.00	Light grey silty SAND very fine to fine grained, (SW)	12A	58.5-60	4-7-9	16	
60	-60.00						
61	-61.00					artina de la composición de la	
62	-62.00			-			
63	-63.00						
64	-64.00	Light grey CLAY, (CL) stiff, calcareous	13A	63.5-65	4-5-25	30	
65	-65.00						
66	-66.00						
67	-67.00						
68	-68.00		14A	68.5-70	8-12-23	35	
69	-69.00						
70	-70.00						
71	-71.00					e Harrison Anna Anna Anna Anna Anna Anna Anna Ann	
72	-72.00						
73	-73.00						
74	-74.00		15A	73.5-75	9-11-21	32	
75							
76	-76.00	Boring terminated at 75'.					
77		This borehole was abandoned due to the use of 3 1/4"					
78		augers, which are incorrect size for well installation.					
79	100 A	Borehole OW-1005 was completed approximately 10 ' from this hole using 4 1/4" augers. Well OW-1005 is		· · · · ·			
80	-80.00	installed in that hole.					
81	-81.00						
82	-82.00						
83	-83.00						
84	-84.00						n gewonne de la service. Net son de tradição
85	-85.00						
86	-86.00						
87	-87.00						
88	-88.00						

		DRILLI					No. OW-1006
nergy to	Serve You		AL SE	RVICES	:		Sheet 1 of 5
		Vogtle ALWR SSAR			HOLE DEPTH		SURF.ELEV. 227.12
OCATIO	IN	Burke County, Georgia	COOR	DINATES N			619179.749
ANGLE	· · · · · · · · · · · · · · · · · · ·	NA BEARING NA	CONTR		Green	DRILL NO.	
DRILLING				4	1	O. U.D. SAMPLES	NA
	TABLE DEI	·····	IE AFTE			DATE TAKEN	
TYPE GR		QUANTITY			IA	DRILLING START DATE	· · · · · · · · · · · · · · · · · · ·
DRILLER	<u> </u>	Arthur, Jarred RECORDER SC Bearce APPRO	VED Sample	NA		DRILLING COMP. DATE	6/14/2005
epth ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To ft.	ndard Penetration Blows		mments
0	227.12						
	м. 	No sampling prior to 118.5. See log for 1006A for soil					
1		descriptions through 120-130' depth. OW-1006A	Í				
2	225.12	was abandoned. Drilling was terminated due to shortage of auger.	· .				
3	224.12						
4	223.12				n e n		
5	222.12						
6	221.12				•		
7	220.12						
8	219.12						
9	218.12						
10	217.12						
11	216.12				· ·		
12	215.12						
12	214 12		· ·				
	214.12						
14	213.12						
15	212.12		1 . ···				
16	211.12						
	210.12		Į.		-		
	1.1						
18	209.12						
19	208.12				•		
20	207.12						
					ė		
÷	206.12		<b>i</b>				
22	205.12						•
23	204.12		<b>1</b> .				
24	203.12			e in the second se			
	203.12		<u> </u>	<u>I.</u>	1	.1	

iou'	THERN COMP		DRILLI	NG L	OG			Hole No.	OW-1006	
	comp co Serve You		GEOLOGIC	AL SE	RVICES		- 	Sheet 2	of 5	•
	Vogtle A	LWR SSAR			· ·	TOTAL DEPTH	13	5 SURF.E	LEV. 227.1	21
Depth	Elev.	Material Description, Classification and	Remarks	Sample No.	Stan From To	idard Penetration Test Blows	N	Comments		÷
25	202.12									
26	201.12	See page 1								÷.,
					· · ·	n an Arrana an Arrana Arrana Arrana Arrana				
27	200.12									•
28	199.12						[			
29	198.12									
30	197.12									
31	196.12									
32	195.12		e de la companya de l Recentra de la companya de la company							
33	194.12									
34	193.12									•
35	192.12									
36	191.12									
37	190.12									
38	189.12									
39	188.12									
40	187.12									
41	186.12				-					· ···
42	185.12		•							
43	184.12									
44	183.12			• .	4 - 1 1	· · · ·		an a		
45	182.12									
	181.12		4							
46					a A ta					
47	180.12		•	1						
48	179.12									
49 50	178.12			1						
50	177.12									
51	176.12									
52	175.12			1						·
53	174.12			1	. *					
54	172.49			1						
55	172.12		•							
56 orm GS	171.12 9901 7-26-2	004	2.4/	- 62	1	L		in an		

Energy	SOUTHERN A COMPANY Energy so Serve Your World" SITE Vogtle ALWR SSAR			GEOLOGICAL SERVICES								_ <b> </b> -	Hole No. OW-1006 Sheet 3 of 5				
SITE _		LWH SSAN				• •	Sample	S		L DEPTH		35 		RF.ELEV.	227	.121	╡
Depth	Elev.	· · · · · · · · · · · · · · · · · · ·	Material Description, Cl	assification and Rer	narks		No.	From To		Blows	N		Comment	8		·	_
57	170.12	See page 1			••• • • • •		ан на 14										
58	169.12	occ page i															
59	168.12				- -												
60	167.12										- · ·						
61	166.12												•				
62	165.12									• .		••••••			н К. – –		
63	164.12	 					- 14 - 1			•							
64	163.12																
65	162.12				÷												•
66	161.12									•.•							- 1
67	160.12														1. F.		-
															-		
68	159.12											1 A.					•
69	158.12								· .								
70	157.12							1.10 1.10						- - -	· .		
71	156.12												н (°				
72	155.12						· .										I
73	154.12			•			н. 1913 г.										
74	153.12				1. 1. j.				· .								
75	152.12					• • • •				. * •							ľ
76	151.12					•							n ta para series National de la companya de la company National de la companya de la company	•			-
77	150.12				÷												
78	149.12				۰.												
79	148.12										· .						
80	147.12			1. A.				•						•			
81	146.12											· .					
82	145.12									·							
83	144.12			an an Alaistean	•							. 		•		· ·	
84	143.12						r -					   .					
85	142.12												• •				
86	140.49												•				
87	140.12											[ ·	· · ·		· ·		
88	139.12											1			- · ·	1	I

Energy to Serve Your SITE Vogtle Al	.WR SSAR	GEOLOGIO			TOTAL DEPTH	13	Sheet 4 of 5 SURF.ELEV.
			Sample	Star	dard Penetration Test		SURF:ELEV.
Depth ft. Elev. Ft.	Material Description, Classification and	d Remarks	No.	From To ft.	Blows	N BPF	Comments
89							an a
90			1				
91							
92							
93							
94							
95			÷ *		•		
96			÷.,				
97							
98							
99							
100							
101				an. An an an an an			
102		· ·					
103							
		. *					
104							
105							
106			i				
107							
108						ан А.	
109	• • •						
			•				nan en sen en e
110							
111						. т. С	
112							
113							
114							
115							
116			İ				
117	- -						
	Sampling begins at 118.5'	- 	1	118.5-120	No SPTs		Pushed because
119	Tan sandy and shelly CLAY (CH), sat	urated				· ·	of problems
120 Form GS9901 7-26-2		2.4A -	6/			1.	

		DRILLI					Hole No. OW-1006
		GEOLOGIC	AL SE	RVICES			Sheet 5 of 5
SITE	Vogtle A	LWR SSAR			TOTAL DEPTH	1	35 SURF.ELEV. 227.12
Depth ft.	Elev. Ft.		Sample No.	Stan From To ft.	dard Penetration Test Blows	Ň	
	2107.11	Material Description, Classification and Remarks					Comments
121	106.12			art th			
122	105.12					• . •	
123	104.12						
		Tan sandy and shelly CLAY (CH), saturated					
124	103.12		2	123.5-125	NA	NA	No SPTs
125	102.12						Pushed because of drilling
126	101.12						problems
127	100.12						
128	99.12						
1.1.1			3	128.5-130	NA	NA	
129	98.12	Light tan, fine-coarse grained SAND with shell (SW)					
130	97.12						
131	96.12						
132	95.12		-				
133	94.12						
	· · · ·		4	133.5-135	NA	NA	
134		Greenish grey MARL		4. 19			last sample at 135.0'
135	92.12	Boring terminated at 133.5	-		e e e		
136	91.12		- 				~six 150 gallon tubs
137	90.12		-				of water used during drilling
138	89.12						
	88.12						
140	87.12				· · · ·		
141	86.12					ľ	
142	85.12					* .	
143	84.12						
	83.12					.  .	
· · ·			1			i <sup>n</sup>	
	82.12					1	
146	81.12		1				
147	80.12						
148	79.12					ľ	
149	78.12						
						·	
	76.49						
151	76.12					1	
152	75.12	2.4,					

OUTHE CO			DRILLIN					Hole N	o. OW-1	006A
nergy to Seri	Your World"		DLOGICA	L SEF	VICES	·		S	heet 1 of 5	
SITE		ogtle ALWR SSAR			· · · · · · ·	HOLE DEPTH			SURF.ELEV.	
OCATION		ounty, Georgia					3910.384			399
	NA BE			CONTR			E	DRILL NO.		
		4" HAS 1					NO. U.D. SAMP	PLES		
1.00	DEPTH 79	ELEV	TIN					TE TAKEN		
TYPE GROUT		QUANTITY				JA				
	Tim Hall RECORD	ER Tinsley	APPRO	VED Sample				MP. DATE	6/4/200	05
epth ft. Elev	Ft. Material Descripti	on, Classification and Remarks		No.	From To ft.	ard Penetration Blows	N BPF	Com	ments	
0 225	49	e e e e e e e e e e e e e e e e e e e			1. 1. <sup>1</sup> . 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	10 A. 1				-
1 224	40			. * *						
						•				
2 223	<u>49</u>									· ·
3 222	49									
4 221	49 Yellowish brown SAND, 1	line-grained, loose (SP	) <sup>10</sup>	1	3.5-5	5-5-7	12			
5 220			•							
5 220	49									
6 219	<u>49</u>									
7 218	49									
8 217	49									
			•		0 5 40					
9 216	49 Strong brown SAND, fine	-grained, loose (SP)		2	8.5-10	3-3-3	6			
10 215	49									
11 214	49									
12 213	49									
								.*		
13 212	49					- -	. *			
14 211	49 Reddish yellow SAND, fi	ne-grained, loose (SP)		3	13.5-15	3-5-7	12			
15 210	49		2							
16 209	49		1 A.J.			· · · .				
							· .			
17 208	49	· ·				· .				
18 207	49									
19 206	49 Red and yellow SAND, fi	ne-grained, loose (SP)		4	18.5-20	3-4-5	9		e Standard and	
20 205										
1										
21 204	49									
22 203	49									
23 202	49				•					-
		•		1	1.1	1	4 1			

sou	THERN	DRILLI			• •		Hole No. OW-1006
Energy	to Serve You	r World <sup>-</sup> GEOLOGIC	AL SEI	RVICES			Sheet 2 of 5
SITE _		Vogtle ALWR SSAR	Sample		TOTAL DEPTH	12	5
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To ft.	dard Penetration T Blows	N BPF	Comments
25	201.49	Red and yellow SAND, fine-grained, loose (SP)	5	23.5-25	4-4-4	8	
_26	200.49						
27	199.49				1		
28	198.49		6	28.5-30	3-4-6	10	
29	197.49						
30	196.49						
31	195.49						
32	194.49						
33	193.49		· ·				
34	192.49		7	33.5-35	3-5-5	10	an a
35	191.49						
36	190.49						
37	189.49						
38	188.49	Yellowish red silty SAND, fine-grained (SM)	8	38.5-40	WOR/18"	WOR/ 18"	
39	187.49		1				
40	186.49						
41	185.49						
42	184.49						
43	183.49	White SAND, fine-grained, loose, with black minerals					
44	182.49	(SP)	9	43.5-45	WOR 1-1	2	
45	181.49						
46	180.49						
47	179.49						
48	178.49						
49	177.49		. 10	48.5-50	1-2-2	. 4	
50	1 ····	light gray CLAY, slightly sandy, medium stiff (CL)					
51	175.49			1			
52	174.49						
53	173.49						
54_	1	Reddish yellow clayey SAND (SC)	11	53.5-55	WOR/18	WOR/ 18"	
55	171.49	A set of the set of				:	

<u> </u>				20			
	OMP			·			Hole No. OW-100
Energy to S	erve Yout	Vorta GEOLOGICA Vogtie ALWR SSAR	LSER	WICES			Sheet 3 of 6
	<u> </u>				OTAL DEPTH		25
	lev. Ft.	Material Description, Classification and Remarks	Sample No.	Stand From To ft.	lard Penetration Blows	Test N BPF	Comments
57	69.49	Light gray and reddish yellow sandy CLAY (CL), soft					
1	68.49						
58	67.49		12	58.5-60	1-1-1	2	
59	07.49				the second		
	66.49						
<u>60</u>	65.49						
61							
62	64.49						
	63.49						
63							
64	62.49		13	63.5-65	WOH/18"	WHO/ 18"	
1	61.49	Yellow slightly sandy SILT (MH)	ł.			10	
65	60.49				1		
66	00.49				e de la		
1!	59.49					l ·	
67	58.49				- · ·		
68					1 - 1 1 - 1	· .	
	57.49	Mettled red to grow clause CANID for a farmer from					
69 1	56.49	Mottled red to gray clayey SAND, fine- to medium- grained (SC)	14	68.5-70	WOH/12/5	17	
70							
71	55.49						
.1	54.49						
72	53.49						
73			1997) 1			· · · ·	
	52.49						
74	51.49						
75			15	73.5-75	2-4-3	7	
76	50.49						
	49.49		- 12				
77	49.40						
78	48.49		<b>I</b>				
.14	47.49		<b>I</b>				6/3/2005
79	46.49		16	78.5-80	3-2-2	4	▼ 79' from ground
80	ŀ	Yellowish brown SAND, fine- to coarse-grained		10.0-00	J-2-2	- <b>*</b>	surface
81	45.49	slight fines (SW), loose					
14	44.49						
82	43.49			. · · ·		ж 1 —	
83			ľ				
84	42.49		17	83.5-85	12-16-17	33	
14	41.49	Pale yellow clayey SAND, to sandy CLAY with					
85		small to large shell fragments, stiff (SC-CL)	·				
86	40.49		<b>I</b> .				
13	39.49		<b>I</b> .				
87	38.49		1	E			t in the second s

1 A 1	COMP	ANY			Na 19		Hole No.		N-1006
SITE	o Serve You	Vogtle ALWR SSAR	AL JE		OTAL DEPTH	1:		4 of	
			Sample	Stan	dard Penetration			RF.ELEV.	
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To ft.	Blows	N BPF	Comments		
89		Pale yellow sandy CLAY, stiff, calcareous (shell fragments) (CL)	18	88.5-90	7-7-9	16			
90	136.49								
91	135.49					-		:	- - -
92	134.49				н 				· ·
93	133.49		19	93.5-95	8-8-9	17			
94	132.49	Pinkish white clayey SAND, fine - coarse-grained with shell fragments (SC)							
95	131.49							19 - T	
96	130.49								
97	129.49								
98	128.49				:				
99	127.49	Light gray SAND, fine-grained (SP)	20	98.5-100	12-14-17	31			
100	126.49							14 (A) 24 (A)	
101	125.49								
102	124.49								
103	123.49							·.	
104	122.49		21	103.5-105	7-7-8	15			14 1
105	121.49								:
106	120.49					· .			
107	119.49								
108	118.49	Light gray SAND, fine-to medium grained, increase in							
109	117.49	fines (SW)	22	108.5-110	10-10-10	20			
110	116.49								
	115.49		•						
	114.49								
	113.49								
	1.1.1	Very light tan silty SAND (SM)	23	113.5-115	10-11-14	25			
	111.49		Ţ						
	110.49								
	109.49								
	108.49			·					
	,	light gray COQUINA, unconsolidated	24	118.5-120	8-9-10	10		· .	
	107.49	ngni gray ooloon in, unconsonuated	24	110.5-120	0-9-10	19	· · · · ·		

		DRILLIN GEOLOGICAI	Hole No. OW-1006A Sheet 5 of 5				
SITE		Vogtle ALWR SSAR	- 04-11		TOTAL DEPTH	1	25 SURF.ELEV. 226.491
			Sample No.	SIB	Indard Penetration	Test	
Depth ft.	Elev. Ft,	Material Description, Classification and Remarks		From To ft.	Blows	N BPF	Comments
121	105.49					· · · ·	
122	104.49			an an an Taonacht			
123	103.49			÷	-		
124	102.49				ана 1997 — Алар		
125	101.49	light gray COQUINA, unconsolidated	25	23.5-12	9-16-16	32	
126	100.49	Boring terminated at 125' due to shortage of auger. This borehole was abandoned.	· 1		18 - 19 - 11 1		
127	99.49						
128	98.49		ľ				
129	97.49						$\frac{1}{2} \sum_{i=1}^{n} \frac{1}{i} \sum_{i=1}^{n} \frac{1}$
130	96.49						
131	95.49						
132	94.49						
133	93.49				1997) 1944 - 1947	·	
· ·	92.49				· · · .	1.5	
134						1 	
· · · · ·	91.49			÷	· ·		
	90.49		ł				
	89.49				ж. (1997) Алтана (1997)		
	88.49						
	87.49						
	86.49						
141	85.49						
142	84.49						
143	83.49						
144	82.49						
145	81.49						
146	80.49		ľ				
147	79.49						
148	78.49						
149	77.49					· ·	
150	76.49		л. Г				
151	75.49						

	HERN COMP		DRILLIN GEOLOGICA						o. OW-1007
SITE		Vogtle ALWR SS					122	· · · · · ·	
		Burke County, Georgia				IOLE DEPTH	42383.767		SURF.ELEV. 216.91 619301.009
		NA BEARING	NA		DINATES N	<u></u>			
								RILL NO.	
	· · · ·						NO. U.D. SAMPI	.ES	NA
	TABLE DE			IE AFTE	R COMP.		DATE	TAKEN	
TYPE GF		000000000000000000000000000000000	NA			NA	DRILLING STAF	AT DATE	
DRILLER		Arthur/Jarrell RECORDER SC Bea	ICE APPRO		NA		DRILLING COM	P. DATE	6/7/2005
epth ft.	Elev. Ft.	Material Description, Classification and R	lemarks	Sample No.	Stand From To ft.	lard Penetratio Blows	n Test N BPF	Com	ments
0	216.91			· · · · ·					
<u> </u>	210.91								
1	215.91	Compling in this basebala bases at 00 51							
2		Sampling in this borehole began at 98.5' (Sheet 4).							
3	213.91	OW-1007 is a well pair with OW-1008. Store for OW-1008 for description of upper	See boring		а. А			e see a	
4	212.91		sediments.		1 - A - A - A - A - A - A - A - A - A -			n nin di The second	
5	211.91		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -			· · ·			
3	211.91			1999 - 1999 1999 - 1999 1999 - 1999					
6	210.91				· · ·				
7	209.91		· · · · · · · ·		en ga in				
			· •			1. A. A.		e e te Este de la composition	
8	208.91								
9	207.91			100 - 14 100 - 14				•	
10	206.91								
	200.91								
11	205.91								
12	204.91								
							1	1 A L	
13	203.91								
14	202.91		· .						
	004.04				÷ *			÷.,	
15 :	201.91							·	
16	200.91				1 - E				
17	199.91		an a	ŀ .					
					•			•	
18	198.91								
19	197.91				-				ter a service
								· ·	
20	196.91	and a second							
21	195.91								
<u>,</u> T	104 01								
22	194.91					ан. Т			
23	193.91								
							2 I ·		

							·	
OU.			DRIL	LING L	.OG			Hole No. OW-1007
nergy	to Serve You	r World	GEOLOG	ICAL SE	RVICES			Sheet 2 of 5
	Vogtle A	LWR SSAR	· · · · · · · · · · · · · · · · · · ·			TOTAL DEPTH	122	SURF.ELEV. 216.91
Depth	Elev.	Material Description, Classification a	nd Remarks	Sample No.	Star From To	ndard Penetration Test Blows	I. N	Comments
25	101 01	See page 1						
26	190.91						:	
27	189.91							
28	188.91							
29	187.91							
30	186.91				·			
31	185.91		· · · ·					
32	184.91			. •	. *			
33	183.91							
34	182.91		· ·		n National			
			· · ·					
35	181.91					· · · ·		
36	180.91							
37	179.91				· · · · · ·			
38	178.91							
39	177.91							
40	176.91				e de la composición d			
41	175.91							
42	174.91							
43	173.91						2. N	
44	172.91		•					
	171.91				м. П			
45								
46	170.91							
47	169.91							
48	168.91					and and an and an and an		
49	167.91							
50	166.91							
51	165.91							
52	164.91							
53	163.91							
54	162.28							
. [	161.91				н			an an an an Araba. An ann an Araba an Araba ann an Araba An Araba
I	160.91					ľ		

(

	216					- · ·		· .	· · ·		
	1.1		ANY						Hole N		V-10
		o Serve You Vogtle /	NLWR SSAR	GICA		RVICES		12		heet 3 of 5	
					Sample		TOTAL DEPTH			SURF.ELEV.	2
	Depth	Elev.	Material Description, Classification and Remarks		No.	From To	Blows	N	Com	ments	
+	57	159.91	See page 1								
-	58	158.91									
-	59	157.91									
L	60	156.91				1				· · · · · ·	
L	61	155.91		:							
	62	154.91							· . · ·		
Г	63	153.91									
	64	152.91		· . · .	-						
	65	151.91								· · ·	
		1.1.1									
	<u>66</u>	150.91				an a					. •
+	67	149.91		· · · · ·	з.					n in the second s	
ŀ	68	148.91		.*							
	69	147.91		•	• . <sup>•</sup> .				• • •		
	70	146.91									
	71	145.91		4. A.		1.16					
	72	144.91								2 <sup>1</sup> 1	
Ŀ	73	143.91			-			ан с. 1914 г.			
	74	142.91									
	75	141.91				• • • • • • •					
	1.1	140.91									
	5	139.91								•	
										a ka	
		138.91			5						-
-	79	137.91									
		<u>136.91</u>		eta) R							
		135.91		· .					* 4.2		
-	32	134.91							· ·		
<u> </u>	33	<u>133.91</u>									
<u> </u>	34	132.91			· • •						
<u> </u>	35	131.91									
8	36	130.28									
8	37	129.91					en e			1.	
	8	128.91 01 7-26-20		2.4A						×	

COMP Energy to Serve You	ANY - World GEOLOGICAL SERVICES					Sheet 4 of 5
	LWR SSAR	1997 - 1997 1997 - 1997		TOTAL DEPTH	122	
		Sample		lard Penetration		30hr.ELEV2
Depth Ft. Elev. Ft.	Material Description, Classification and Remarks	No.	From To Ft.	Blows	N BPF	Comments
89 127.91						
90 126.91				· .		
91 125.91			N.			
92 124.91						
		-				
93 123.91						
94 122.91		* .				
95 121.91						
96 120.91				· · · ·		
97 119.91						
98 118.91	Drilling begins at 98.5					
99 117.91	<u> </u>	- <b> </b> - 1	98.5-100	WOR		
100 116.91		a ka				
101 115.91		en de la composition br>La composition de la c				
102 114.91						
					· · · · · · · · · · · · · · · · · · ·	
103 113.91	Tan fine-grained silty SAND (SM), saturated					
104 112.91		1 	103.5-105	2-4-6	10	
105 111.91						
106 110.91						
107 109.91						ng san an a
108 108.91						
109 107.91	Very light tan silty SAND (SM) becoming shelly		108.5-110	50/5"	50/5"	
110 106.91						
111 105.91						
112 104.91						
113 103.91						
	light olive grey CLAY(CH)		1 113.5-115	80/3"	50/3"	
115 101.91						
116 100.91						
117 99.91						
						n an an an Araba. An anns
118						
	Greenish grey MARL		5 118.5-120	NA	NA	
120 96.91 Form GS9901 7-26-2	2:	<u></u>	<u> </u>	L		

							Hole No. OW-1007
TE	Voatle A	GEOLOGIC	AL SE	RVICES	TOTAL DEPTH	12	2 SURF.ELEV. 216.91
			Sample	Sta	andard Penetration		
epth Ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To Ft.	Blows	N (BPF)	Comments
121	95.91	Greenish grey MARL	5	120-122	NA	NA	ss pushed with
122	94.91						hydraulics because cat-
	1.1.1	Boring terminated at 122'					head broke
123	93.91						
124	92.91						Estimated 3 auger
125	91.91						drilling fliud
126	90.91						lost in this hole.
127	89.91						Approximately 100 gallons of water used
							in drilling and
128	88.91						installation activities in addition to fluid.
129	87.91						
130	86.91						
131	85.91						
132	84.91					e de la constante de la consta	
133	83.91						
. ·	1.1.1						
134	82.91						
135	81.91						
136	80.91			· · ·			
137	79.91						
138	78.91						
139	77.91						
	76.91			· · ·			
141	75.91						
142	74.91						
143	73.91						
144	72.91						
4.1	71.91		ľ		- -	· · ·	
				1. St.			
	70.91		1 ·		* • • • •		
147	69.91		ł				
148	68.91						
149	67.91						
150	66.28						
	1		1.0	1.	I	1	

	HERN COMP									Hole No. OW-1008			
nergy to	o Serve You				DLOGICA	L SER					Sheet 1 of 8		
SITE			Vogtle A					OLE DEPTH			SURF.ELEV. 216.65		
	ON		Burke County, C		· · · · · ·		INATES N		12347.939		619306.686		
ANGLE	<u> </u>	NA	BEARING	NA	<u> </u>	CONTR					CME 45/SR-083		
DRILLIN	g method		3-1/4" HSA and Ro								NA		
	TABLE DEI		89.78' TOC ELE								6/7/2005		
TYPE GI	ROUT	· · · · · · ·			NA	M					5/25-26/2005 - Kilma		
DRILLER	٩	Топу		S Bearce	APPRO					IP. DATE	5/31-6/1/2005 - Proso		
Depth ft.	Elev. Ft.		Material Description, Classif	lication and Remarks		Sample No.	Stand From To ft,	lard Penetration Blows	N (bpf)	Cor	nments		
0	216.65												
		<u>.</u>											
1	215.65		· ·	•									
2	214.65					м				· · · · ·			
3	213.65	· ·	· · · ·		i.		· .						
4	212.65	- -											
5	211.02	Light red fir	ne-gained silty SAND	).		<u></u> 1A	3.5-5	24-25-15	40				
6	210.65						•						
7	209.65												
8	208.65				•								
9	207.65	-											
10	206.65	1				2A -	8.5-10	21-22-7	29				
11	205.65												
							1						
12	204.65									.*1			
13	203.65												
14 14	202.65					[ ·		.] :					
15	201.65					3A	13.5-15	10-15-14	29	•			
		· · ·	• • •										
16	200.65			÷,									
17	199.65						-			n S Na			
18	198.65						· · ·						
19	197.65	· · ·	· · ·										
20	196.65	1				4A	18.5-20	6-4-7	11				
21	195.65			:	- 1								
22	194.65			÷ .									
						1		1		· · ·	1.11 <sup>2</sup>		
23	193.65												
24	192.65						· · ·				· · · · ·		

SOU			NG L	.OG		· .	Hole No. O	W-1008
	to Serve You	r World <sup>-</sup> GEOLOGICA	L SE	RVICES		<u>. 1</u> . 18	Sheet 2 of	8
SITE	vogue A	ALWR SSAR			TOTAL DEPTH	2	SURF.ELEV.	216.65
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	From To	ndard Penetration Test Blows	N	Comments	% Rec RC
25	191.65	Light yellow fine-grained SAND	5A	23.5-25	15-24-47	71		
26	190.65				•			
27	189.65				n an the sector Sector 1 and 1	с. Т		
28	188.65				and a Same and a sector			
29	187.65							
30	186.65		6A	28.5-30	10 14 10			
31	185.65			20.0-30	19-14-18	32		
32	184.65							
				ant Charles Charles Charles Charles				
33	183.65							
34	182.65							
35		Light yellow fine-grained silty SAND	7A	33.5-35	28-24-19	43		
36	180.65							
37	179.65							
38	178.65							
39	177.65		1.1					
40	176.65	Light red fine-grained silty SAND	8A	38.5-40	3-8-16	24		
41	175.65							
42	174.65							
43	173.65							
44	172.65							
45	171.65		9A	43.5-45	18-27-35	62		
46	170.65							
	169.65							
·	168.65							
	167.65			N., 112				
	166.65		10A	48.5-50	14-5-6	11		
	165.65							a Alberta (alberta) Alberta (alberta)
	164.65		·					
	163.65							
	162.02			e fat		2		
	161.65							
	160.65		11A	53.5-55	20-21-23	44		

				00	en de la composition br>La composition de la c		Hole No. O	W-1008	
	COMP								, 
-	o Serve You Voatle A	- World GEOLOGICA	L SEI	IVICES		24	Sheet 3 of		CE.
			Sample	Stan	TOTAL DEPTH		SURF.ELEV.	216	.05
Depth	Elev.	Material Description, Classification and Remarks	No.	From To	Blows	N	Comments	% Rec	RQD
57	159.65				112				
58	158.65			••••••					
59	157.65								
60	156.65	Mottled reddish yellow brown fine-grained silty SAND	12A	58.5-60	4-6-6	12			
61	155.65							· · · · ·	
62	154.65								
63	153.65							e Al e a co	
2. 1. 1				i est					
64	152.65								
65	151.65	Mottled light-red fine-grained silty sand	13A	63.5-65	4-4-5	9			
66	150.65				and and a second se				
67	149.65		- X						
68	148.65		-						
69	147.65								
.70	146.65	Light red fine-grained silty SAND, moist	14A	68.5-70	3-2-3	5	and and a second se		
71	145.65								
72	144.65								ľ
73	143.65							1.	
74	142.65						an An Anna an Anna		
75	141.65	White medium grained silty SAND - moist	15A	73.5-75	2-2-2	4			
76	140.65						a ta sa ta sa ta sa		
77	139.65		5. I						÷ .
78	138.65								
	11		1				5/25.2005		
79	137.65			· .	1		<u>▼</u> 80'		
80	136.65	White silty medium-grained SAND with shell fragments	16A	78.5-80	2-3-3	6			
81	135.65								
82	134.65			-					
83	133.65								
84	132.65								
85	11.1	White silty sandy SHELL HASH	17A	83.5-85	2-2-2	4		•	.
					£-£-£	1.7			1
86	130.02								
87	129.65				1	1.1.1		1	1

50U	THERN	DRILLIN	NG L	OG			Hole No. OW-1008	
nergy	COMP to Serve You		L SE	RVICES		Sheet 4 of 8		
SITE _	Vogtle A	ALWR SSAR				247	SURF.ELEV. 216.6	
Depth ft.	Elev.ft.	Material Description, Classification and Remarks	Sample No.	Stand From To ft.	lard Penetration T Blows	est N (bpf)	Comments	
89	127.65							
							6/7/05	
90	126.65	White medium-grained silty SAND, moist	18A	88.5-90	3-4-4	8	<u>▼</u> 89.78' from TOC	
91	125.65			·				
92	124.65							
93	123.65					ан 2		
94	122.65					and and a second		
95	121.65	White medium-grained silty SAND, with shell fragments	19A	93.5-95	17-24-21	45		
96	120.65	and sharks teeth						
97	119.65		<b>.</b>		ана. 1910 г.			
						ana di Ang Marina Ang		
98	118.65		1					
99	117.65		1.0					
100	116.65	White silty SHELL HASH, saturated	20A	98.5-100	50/2"	50.2"		
101	115.65							
102	114.65							
103	113.65		2 <sup>10</sup>					
104	112.65							
105	111.65	White medium-grained silty SAND, saturated	21A	102.5-105	18-20-22	44		
	110.65							
•							Kilman drills to	
	109.65						105'	
	108.65	Yellowish tan, fine-medium and coarse grained SAND	1	108.5 - 110			Prosonic completes hole from 107'	
109	107.65	(SW) clay and silt present but generally less than 10% Coarse sand fraction composed of angular shell						
110	106.65	fragments ranging in size from 2mm to 1 cm. Occassional larger shell fragments. Abrupt change/	1 ·					
111	105.65	contact between sample intervals	1					
112	104.65							
113	103.65							
114	102.65		2	113.5-115	NA	NA		
115	101.65							
	100.65					· · ·	e de la composition d La composition de la c	
	99.65							
		Medium greenish grey MARL with occassional fossils.	3	118.5-120	NA	NA		
	97.65							
	97.65 96.65							

<u></u>						а.		e Salatione Altaria
				LOG		-	Hole No. OW-	
	Vogtle	GEOLOG	ICAL S	SERVICES	TOTAL DEPTH	247	Sheet 5 of SURF.ELEV.	
SITE	Vogile /		Sample		Standard Penetration Te			210.05
Depth	ft. Elev. Ft.	Material Description, Classification and Remarks	No.	From To ft.	Blows	N (bpf)	Comments	
121	95.65							
122	94.65							
123								
124		Medium greenish grey MARL with occassional to ssils.	4	123.5-125	NA	NA		· · ·
125	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
					n de la composition de	1946) 1947 1948		
126								. 55
127	1.1		5	128.5-130	NA	NA		
128	88.65							
129	87.65							. 1
130	86.65							
131	85,65							
132	84.65							
133	83.65		6	133.5-135	NA	NA		
134	82.65		ľ	100.0-100				
135	5 81.65							
136	80.65							
137	79.65	Greenish grey limestone, layer ~ 3" thick, fine- grained, heavier than MARL						
138	3 78.65							· · · ·
139	77.65		7	138.5-140	NA	NA		
140	2 B							
141								د بر ۱۹۹۹ - ۱۹۹۹ ۱۹۹۹ - ۱۹۹۹
142								
143	1.4					а 1		
144								•
145								•
146								1
147								
148	8 68.65	Medium greenish grey MARL with occassional fossils.	8	148.5-150	) Na	NA		
149	9 67.65							
150	b							
15	1 65.65							
152	2 64.65 S9901 7-26-20		A - 80					•

1. N. N.

	•	DRIL					Hole No. OW-1008
· · ·				ERVICES	· · ·		Sheet 6 of 8
SITE	Vogtle A	ILWR SSAR			TOTAL DEPTH	247	SURF.ELEV. 216.65
)epth ft.	Elev. Ft.		Sample No.	SI From To ft,	tandard Penetration Blows	n Test N (bpf)	
		Material Description, Classification and Remarks			Diows	N (0pr)	Comments
153	63.65						
154	62.65						
155	61.65						
156	60.65						
157.		Medium greenish grey MARL with occassional fossils.				anti Mariana Maria	
158	58.65		9	158.5-160	NA	NA	
159	57.65		, <b> </b> -				
160	56.65						
161	55.65	$\frac{1}{2} \left( \frac{1}{2} \left( \frac{1}{2} \right) + \frac{1}{2} \left( \frac{1}{2} \left( \frac{1}{2} \right) + \frac{1}{2$				and an An Anna An An Anna An	
162	54.65		eren er				
163	53.65						en Allage, statistical song References and song and song a
164	52.65		10	163.5-165	NA	NA	
165	51.65						
166	50.65					·	
	49.65	Same MARL					
	48.65						
			11	168.5-170	NA	NA NA	
	47.65 46.65						
• .				1	н н. -		
	45.65						
	44.65						
	43.65		12	173.5-175	NA	NA	n an an Araba an Arab Araba an Araba an Arab
	42.65						
	41.65						
	40.65	Grades to Shelly or fine to coarse grained SAND (SP) composed of whole and angular shell fragments in					
177	39.65	a MARL matrix (70%)			terta a		
178	38.65		13	178.5-180	NA	NA	
179	37.65						
180	36.65	"Sand" ranges from 10-30%			<b> </b>		
181	35.65	Cano Tanges IIOni 10-30%					
182							
183	33.65						
	32.65		14	183.5-185	NA	NA	

			LING L	06			Hole No. OW-1008
		GEOLOGI		and the second se			Sheet 7 of 8
SITE	Vogtle A	LWR SSAR			TAL DEPTH	247	SURF.ELEV. 216.65
			Sampl			·	n an tha tha an tha Anna an tha Tha tha tha tha tha tha tha tha tha tha t
epth ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	Stan From To ft.	dard Penetration T Blows	est N (bpf)	Comments
185	31.65		· · · · · ·				
				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
186	30.65					· .	
187	29.65	Same shelly MARL					
188	28.65		15	188.5-190	NA	NA	
189	27.65						
190	26.65						
191	25.65						
192	24.65						an a
193	23.65		· ·				
194	22.65		16	193.5-195	NA	NA	
195	21.65						
1.1		la de la construcción de la constru En esta de la construcción de la con					
196	20.65				1. 1. 1. 1. 1.		
197	19.65						
198	18.65	Same shelly MARL	17	198.5-200	NA	NA	
199	17.65		* 				
200	16.65						
201	15.65						
202	14.65						
203	13.65						
204	12.65		18	203.5-205	NA	• NA	
	11.65						
1	10.65				1		
		Dark grey silty SAND, (SM) fine grained SAND with	<b></b>				
· · · ·		some zones (1-2) feet of fine to coarse grained silty SAND (SM)					
. •	8.65		19	208.5-210	NA	NA	
209	7.65						
210	6.65						la serie de la compañía de
211	5.65				1		
212	4.65						
213	3.65						
	2.02		20	213.5-215	5 NA	NA	
	1.65					-	
	11.00	· · ·	· · · ·	·   ·	1°	1	

	· ·	DRILLIN	IG L	OG			Hole No. OW-1008
		GEOLOGICA					Sheet 8 of 8
SITE	Vogtle A	LWR SSAR			TAL DEPTH		SURF.ELEV. 216.65
						an a' a'	
Depth ft.	Elev. Ft.		Sample No.	Stand From To ft.	ard Penetration T Blows	est N (bpf)	
Jopui IL	L187. Fl.	Material Description, Classification and Remarks			DIUWS	(וקט) אי	Comments
217	-0.35				÷.,		
218	-1.35	Dark grey silty SAND, (SM) fine-grained SAND with					
		some zones (1-2) feet of fine- to coarse-grained silty	21	218.5-220	NA	NA	
219	-2.35	SAND (SM)					
220	-3.35				-		
221	-4.35		e.				
000							
223	-6.35		22	223.5-225	NA	NA	
224	-7.35						
225	-8.35						
226	-9.35	lan an a					
		Gradual change to grey fine SAND (SW)					
227	-10.35	Light grey fine SAND (SW)		1	- 1 A - 1		
228	-11.35		23	228.5-230	NA	NA	
229	-12.35			220.0-230			
230	-13.35		ľ				
	10 1						
231	-14.35						
232	-15.35		* -				
233	-16.35						
234	-17.35		24	233.5-235	NA	NA	
					1 C		
	-18.35				. •	1 : .	
236	-19.35		1 × 1	]			
237	-20.35			· .			
238	-21.35		1.				
		Grey silty SAND (SM)	25	238.5-240	NA	NA	
239	-22.35		1				
240	-23.35		·.			<b>.</b>	
241	-24.35		1.				
	-25.35						
			1				
243	-26.35	Abrupt change to light grey siliceous clay,	26	243.5-245	NA	NA	
244	-27.35	(CL), to weak SHALE					
245	-28.35		1				
	-29.35				la serie si		
247	-30.98	Boring terminated at 247'.	-				
248	-31.35	Well OW-1008 installed in this borehole.					
	1			1	T .	1	

	HERN COMP		DRILLIN GEOLOGICA			1.00 C			OW-1008A et 1 of 4
		LWR SSAR - ESP			· · · · · · · · · · · · · · · · · · ·	DLE DEPTH	107.5		SURF.ELEV. NA
		Burke County, GA		COORDI	NATES N			E	
	· · ·	NA BEARING							
		2 1/4" UAG						PLES	
1.1							<u> </u>	ATE TAKEN	
		PTH ELEV NAQUANTITY						TART DATE	
TYPE GR		그는 물건 것 같아요. 그는 것 같아요. 가지 않는 것 않는							E /00 /000E
DRILLER	۱	Kilman Bro. RECORDER RA Espo	APPRO	VED Sample		<u></u>		OMP. DATE	
lepth FT.	Elev. FT.	Material Description, Classification and R	lemarks			ndard Penetration T Blows	Test N (bpf)	Comme	ints
0						1		<b>I</b>	
- <u></u>					<u>⊢</u>	t	1	1	
1			· .		Ung Al	۱	1 · · · · · · · · · · · · · · · · · · ·		and and a second se
2	- · .				U.,	ļ		l e est	
	1		н. 1	1	$\mathbf{U} \in [\mathbf{p}]$	۱			
3				1 1	b = 1	Į ,			
4					₩	<b>1</b>	1 i		
5		Light red fine-gained silty SAND		1	3.5-5	24-25-15	40		
	1			101	1				a gara sa ka
6			а	1.1.1	<b>1</b> . 1	l	1		
7 7				1 .					en e
	1		· · ·	1	l en la sub				
8			an a	1	1. <sup>2</sup>	Į			
9		$\frac{1}{2} \sum_{i=1}^{n} \frac{1}{2} \sum_{i=1}^{n} \frac{1}$		1	1				
10				. 2	8.5-10	21-22-7	29		
					· · ·				den 1975 - Den Sterner
11		$\frac{\partial f_{i}}{\partial t} = \frac{\partial f_{i}}{\partial t} + \frac{\partial f_{i}}$							
12									
13					1				
14		$ \begin{array}{c} \left( $			a a series				
15			· ·	S-3	13.5-15	10-15-14	29		
16			• • • • • •	ļ				1 :	
17				- <b>1</b> -		1 1 1 1			- - -
18				- <b>-</b>					
		<b>1</b>							
19									
20	l			S-4	18.5-20	6-4-7	11		
1a	1 <u>.</u>				4				
21	L				1				
22	l			1	l.				
23	· · ·	1 · · · · · · · · · · · · · · · · · · ·				·			2 (* 1
24	1	2004	<u> </u>	-	1	1			· · · · · · · · · · · · · · · · · · ·

SOUT	HERN		LLING				Hole No. OW-1008/
Energy t	o Serve Yoz	r World <sup>-</sup> GEOLOG Vogtle ALWR SSAR	GICAL SI	RVICES		107.	Sheet 2 of 4
SITE		Voyile ALWA SSAN	Samp	le Star	TOTAL DEPTH	·	.5 SURF.ELEV N
Depth FT.	Elev. FT.	Material Description, Classification and Remarks	No.	From To FT.	Blows	N (bpf)	Comments
25		Light yellow fine-grained SAND	5	23.5-25	15-24-47	71	
26							
27							
28							
29					. •		
30			6	28.5-30	19-14-18	32	
1							
31							
32							
33	· · ·						
34							
35		Light yellow fine-grained silty SAND	7	33.5-35	28-24-19	43	
36							
37	-						
38	4						
39							
40		Light red fine-grained silty SAND	8	38.5-40	3-8-16	24	
41							
42			·. ·	- 			en de la constante de la const La constante de la constante de La constante de la constante de
43		1					
44							
45			ę	43.5-45	18-27-35	62	
46							
47							
48				n in the second			
49							
50			1	0 48.5-50	14-5-6	11	
51	· .						a da ser a construction de la construcción de la construcción de la construcción de la construcción de la cons La construcción de la construcción d La construcción de la construcción d
52	 						
53							
_54	ļ						
55			1	1 53.5-55	20-21-23	44	
56		24/	A - 85				



COMPANY		. · · .		- 		an An an Anna A		
Example Stores Near Near Near All ALVIRS SAR         TOTAL DEFINIT         Street 3 of d         Street 3	SOUI	HERN	DRILL	ING	LOG	<i>2</i> +		Hole No. OW-100
Due 7.         Junited Description, Closed action and Remarks         Danked Prototions Test         Test Ph         Bit Ph         Commute           37	Energy i	o Serve You	r World <sup>*</sup> GEOLOGIC	AL SI	RVICES			Sheet 3 of 4
Upen P.         Mem Pol         File         Bios         N Ref         Comments           57	SITE		Vogtle ALWR SSAR			_	· · · · · · · · · · · · · · · · · · ·	SURF.ELEV
9         1           9         1           9         1           1         1	Depth ft.	Elev. Ft.	Material Description, Classification and Remarks					Comments
9         1           9         1           00         1           11         1           12         58.5-60         4-6-6         12           12         58.5-60         4-6-6         12           13         63         1         12           14         14         14         14         14           14         14         14         14         14           15         14         14         15         63.5-65         4-4-5         9           15         14         14         14         63.5-65         4-4-5         9           16         16         14         14         63.5-65         4-4-5         9           17         14         14         14         68.5-70         3-2-3         5           17         14         14         14         68.5-70         3-2-3         5           17         14         14         14         68.5-70         3-2-3         5           17         14         14         14         14         14         14         14           17         14         14         14	57							
9         1           90         1           91         1           92         1           93         1           94         1           93         1           94         1           94         1           94         1           94         1           95         1           96         1           97         1           98         1           99         1           100         1           101         1           102         1           103         1           104         1           105         1           106         1           107         1           11         1           11         1           12         1           13         1           14         1           15         1           16         1           17         1           17         1           17         1           17         1 <tr< td=""><td>58</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>	58							
00        Mottled reddish yellow brown fine-grained silty SAND       12       58.5-60       4-6-6       12         61                62							1	
1          62          63          64          65          66          67          68          67          68          67          68          69          70          71          72          73          74          75          74          75          76          77          78          79          76          77          78          79          70          71          72          73          74          75          76			Mottled reddich vellow brown fine grained eith: SAND	10	59 5-60	166	10	
62          63          64          65          66          67          68          69          70          71          72          73          74          75          76          77          78          77          78          78          78          78          78          78          78          78          78          78          79          80          81          82          83          84          84          84 <td< td=""><td></td><td></td><td>Mottled redaish yellow brown line-grained slity SAND</td><td>12</td><td>00-00</td><td>4-0-0</td><td>12</td><td></td></td<>			Mottled redaish yellow brown line-grained slity SAND	12	00-00	4-0-0	12	
63								
64       1         65       1         66       1         67       1         68       1         69       1         69       1         70       1         71       1         72       1         73       1         74       1         75       1         76       1         77       1         78       1         79       1         70       1         74       1         75       1         76       1         77       1         78       1         80       1         81       1         82       1         83       1         84       1         84       1         84       1	62			[				
65          66          67          68          69          69          69          70          11       68.5-70         71          72          73          74          75          76          77          78          80          81          82          83          84          84          84          85          86          81          84          84          85          86          86          81          84          85          81 <td>63</td> <td></td> <td></td> <td>l :</td> <td></td> <td></td> <td></td> <td></td>	63			l :				
66	64							
67          68          69          70          70          71       1         72          73          74          75          76          77          78          79          80	65		Mottled light-red fine-grained silty sand	13	63.5-65	4-4-5	9	
68	66							
68	67							
69	68			1 a 4				
70       Light red fine-grained silty SAND, moist       14       68.5-70       3.2-3       5         71       1         72       1       1         72       1       1         73       1       1         74       1       1         75       1       1         76       1       1         77       1       1         78       1       1         78       1       1         78       1       1         79       1       1         80       1       1         81       1       1         82       1       1         83       1       1         84       1       1         84       1       1         84       1       1         84       1       1         84       1       1         84       1       1         84       1       1         84       1       1         84       1       1         84       1       1         84								
71			Light rod fine ground site CAND moist		69 5 70	0.00		
72			Light fed line-grained siny SAND, moist	14	00.5-70	3-2-3	5	
73								
74								
75       White medium grained silty SAND - moist       15       73.5-75       2-2-2       4         76	73						· · · ·	
76	74							
77 $78$ $79$ $16$ $78.5-80$ $2-3-3$ $6$ $5/26/2005$ $80$ $81$ $81$ $82$ $83$ $84$ $84$ $83$ $84$ $17$ $83.5-85$ $2-2-2$ $4$	75		White medium grained silty SAND - moist	15	73.5-75	2-2-2	4	
78	76							
79	77				1. 1. 1. 1.			
79	78							
80       White silty medium-grained SAND with shell fragments       16       78.5-80       2-3-3       6       5/26/2005         81	1.0							
81	1.1		White silty medium-grained SAND with shell fragments	16	78.5-80	2-3-3	6	5/26/2005
82	-							▼ 80' from ground
83         84           85         White silty sandy SHELL HASH           17         83.5-85         2-2-2	1.1		le en la companya de					surface
84         85         White silty sandy SHELL HASH         17         83.5-85         2-2-2         4								
85 White silty sandy SHELL HASH 17 83.5-85 2-2-2 4								an a
			White silly sandy SHELL HASH	- 17	83 5-85	0_0_0		
		<u> </u>			03.0-03	6-2-2	4	
87					•			
	88 5rm GS	1	2 4 4 - 86			: :	1	

SOUT		DRILL	ING L	OG			Hole No. OW-1008		
	COMP Serve You		AL SE	RVICES			Sheet 4 of 4		
SITE _		Vogtle ALWR SSAR			TOTAL DEPTH	107	.5 SURF.ELEV.		
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Star From To ft.	ndard Penetration To Blows	est N (bpf)	Comments		
89	· · · ·								
90		White medium-grained silty SAND, moist	18	88.5-90	3-4-4	8			
91					-				
92									
93	a d								
94									
				00 E 0E	17 04 04	45			
95		White medium-grained silty SAND, with shell fragments and sharks teeth	19	93.5-95	17-24-21	45			
96			art. Na articla						
97									
98									
99					ta da series de la composición de la co La composición de la c				
100	-								
		White silty SHELL HASH, saturated	20	98.5-100	50/2"	100+			
101									
102									
103	. * *								
104			2.						
105		White medium-grained silty SAND, saturated	21	102.5-105	18-20-22	44			
106									
107							and the state of the state of the		
108		Boring terminated at 107.5'	-						
-		due to use of 3 1/4" augers.							
109		This borehole was abandoned.							
110		Well OW-1008 is							
111		installed in adjacent borehole OW-1008.				1. H			
112			1.						
113									
114	1								
115			ľ						
116									
117		<b>1</b> • 1 • 1 • 1 • 1 • 1 • 1 • 1 • 1							
						1			
118									
119									
120 Form GS	1 · .	240-5	27	1.1		1.1.1.1.1.1.1			

OUT			NG L	OG			Hole No.	OW-1009
nergy to	o Serve You	World GEOLOGICA	L SE	RVICES			She	et 1 of 4
						100	s	SURF.ELEV. 220.887
	ON	Burke County, Georgia	COORD	INATES N	114	1891.645	Ε	620888.608
		NA BEARING NA						
DRILLIN		4-1/4" HAS NO. SAMPLES	. <u></u>	21	1	NO. U.D. SAMPL	ES	NA
WATER	TABLE DE							5/24/2005
		NA QUANTITY NA						5/24/2005
DRILLEF	R	Ted RECORDER RA Esposito APPRO		NA		DRILLING COM	IP. DATE	5/27/2005
epth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Star From To Ft.	Idard Penetration	N BPF	Comme	ints
0	220.89							
1	219.89							
2	218.89	White to red fine-grained SAND	· .					
3	217.89						e la composición de la compo	
	216.89		1	3.5-5	4-10-10	20		
4	1.1.1.1							
5	215.89	Dark red fine-grained silty SAND						
6	214.89			-	•			
7	213.89		·					
					1			
8	212.89							
9	211.89		<b>.</b>					
10	210.89		2	8.5-10	3-3-5	8		
11	209.89		÷ .	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -				
	1. A.						· · · ·	
12	208.89							
13	207.89							
14	206.89							
15	205.89		3	13.5-15	2-4-4		. <sup>.</sup>	
15				10.0-10	<u> </u>	8	. •	
16	204.89							
17	203.89		1					
18	202.89				- 			
							•	
19	201.89							
20	200.89	moist	4.	18.5-20	4-5-7	12		
21	199.89							and and a second se Second second
22	198.89						•.	
			1				-	
23	197.89			<b> </b>				
24	196.89		1 .	i se de s				

	HERN	DRILLIN				1 t.	Hole No. OW-1009
	o Serve You		L SEI	RVICES		1. S. S. S.	Sheet 2 of 2
SITE _		Vogtie ALWR SSAR			TOTAL DEPTH	100	0 SURF.ELEV. 220.88
epth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Stan From To Ft.	dard Penetration Test Blows	N BPF	Comments
25	195.89	Light yellow fine-grained SAND	5	23.5-25	5-5-6	11	
26	194.89						
27	193.89						
28	192.89						
29	191.89						
30		Light yellow fine-grained silty SAND	6	28.5-30	3-6-7	13	
31	189.89						
32			-				
	188.89						
33	187.89						
34	186.89			00 E 05	0.4.5		
35	185.89		7	33.5-35	3-4-5	9	
36	184.89						
37	183,89		*				
38	182.89						
39	181.89						
40		Light yellow fine-grained silty clayey SAND, moist	8	38.5-40	2-2-3	5	
41	179.89						
42	178.89						
43	177.89						
44	176.89						
45	175.89	Light yellow silty CLAY, moist-plastic	9	43.5-45	2-4-6	10	
46	174.89		-				
47	173.89						
48	172.89						
49	171.89						
50		Light yellow fine- to medium-grained silty SAND, moist	10	48.5-50	3-7-8	15	
51	169.89			1			
52	168.89					-	
53	167.89						
54	166.26			· · · ·			
55		Light yellow fine- to medium-grained silty SAND, moist	11	53.5-55	4-6-7	13	
56	164.89 9901 7-26-	2.4	80	· <b>I</b>			and a second

	HERN COMP			S. 1.1			Hole No. OW-1009 Sheet 3 of 4
SITE		Vogtle ALWR SSAR			TOTAL DEPTH	10	00 SURF.ELEV. 220.887
epth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Stand From To	tard Penetration Tes Blows	t N BPF	Comments
57	163.89						
58	162.89						
59	161.89					1. 1.	
60		Light yellow silty fine grained SAND - moist	12	58.5-60	4-6-6	12	
61	159.89				e the second		
62	158.89		1				
63	157.89						
64	156.89						
65		Light yellow silty fine grained SAND - moist	13	63.5-65	0-1-2	3	
66	154.89						
67	153.89						
68	152.89						
69	151.89					1.11	
		White silty fine-grained SAND - saturated	14	68.5-70	1-2-2	4	5/24/2005
70		Write sity inte-grained SAND - Saturated		00.0-70	1-2-6		70 feet from ground
71	149.89						surface
72	148.89				ан на селото на селот На селото на		
73	147.89						
74	146.89	White medium-to coarse-grained SAND,saturated	15	73.5-75	0-0-1	1	
75			1.7	70.0-70	0-0-1		
76	144.89						
77	143.89					·	
78	142.89						
79	141.89		10	78.5-80	4-5-6		
80	140.89 139.89		16	/ 8.5-80	4-0-0	11	
81 82	139.89						
83	137.89						
84	136.89	[10] When the second s second second seco					
85		Very light tan silty SAND (SM)	17	83.5-85	6-50/4"	100+	
86	134.26						
87	133.89						
88	132.89						

	THERN COMP						Hole No. Sheet 4	OW-1009 of 4	9
SITE	0.027.02.104	Vogtle ALWR SSAR	11		OTAL DEPTH	100		LEV. <u>220</u>	.887
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Stand From To Ft,	ard Penetration Tes Blows	N BPF	Comments	% Rec	R
89	131.89								
90		Tan LIMESTONE shell hash, very light tan silty SAND	18	88.5-90	50/1"	100+			
91	129.89	(SM)							
92	128.89								
93	127.89								
94	126.89	1	19	93.5-95	6-18-3	21			
95		Brown silty CLAY	19	93.3-95	0-10-0				
96	124.89		- · ·						
97	123.89								
98	122.89								
99	121.89		20	98.5-100	13 / 50/.2	100+			
100		Green MARL Boring terminated at 100'		50.3-100	13/30/.2				
101		OW-1009 installed in this borehole.							
102			1						
	117.89								1.
	116.89								
	115.89								
	114.89								
	113.89								
	112.89	allen statistication de la constatistication de la constatistication de la constatistication de la constatistic National de la constatistication de la constatistication de la constatistication de la constatistication de la c		r P					
· · · .	111.89								
	110.89								
	109.89								
	108.89								
	107.89								
	106.89		*   + 1						
	105.89								ļ
	104.89								
	103.89								
<b>—</b>	102.26 101.89								
	100.89								

			- - -		· · · · · · · · · · · · · · · · · · ·			
	HERN COMP	ANY	1.00				Hole I	No. OW-1010
SITE		Vogtle ALWR SSAR			LE DEPTH	93.5		SURF.ELEV. 216.89
	ON	Burles County Coordin	COORD	INATES N		0808.986	E	620051.708
ANGLE			CONTR		S&MI	≣	DRILL NO.	CME550
DRILLIN	G METHOD		· · · · · · · · · · · · · · · · · · ·	19	1	NO. U.D. SAM	PLES	NA
WATER	TABLE DE		IE AFTER		NA	D4	TE TAKEN	6/1/2005
TYPE GF	TUOF	NAQUANTITYNA		· · · · · · · · · · · · · · · · · · ·	IA	DRILLING ST	ART DATE	
DRILLEF	1	Tim Hall RECORDER R. Tinsley APPRO				DRILLING CO	OMP. DATE	6/1/2005
Depth Ft.	Elev.Ft.	Material Description, Classification and Remarks	Sample No.	From To Ft.	ard Penetration Blows	Test N BPF	Co	nments
0	216.90							
1	215.90						ana Ang sarah	
2	214.90							
			- 4					
× .	213.90				•	an an taon 1970 - Angelander 1970 - Angelander		
4	212.90	Reddish yellow SAND, fine- to medium-grained with	1	3.5-5	11-17-17	34		
5		coarse grains and hematite concretions, loose, (SW)						
6	210.90						н ст. Х	
7	209.90				and and a second se			
8	208.90							
9	207.90	Mottled weak red and brown SAND, fine-grained,	2	8.5-10	7-8-11	19		
10	206.90	Loose (SP)						
11	205.90							
12	204.90							
13	203.90							
14	202.90							
	201.90		3	13.5-15	6-7-7	14		
	· .							
	200.90		ľ.					
17	199.90							
18	198.90							
19	197.90			- 				
20	196.90		4	18.5-20	7-7-8	15		
	195.90			an a				
22	194.90					· ·		
23	193.90							
24	192.90				н			

50U'		DRILI	LING L	OG			Hole No. OV	V-1010
Snergy	to Serve You		CAL SE	RVICES			Sheet 2 of 4	
SITE	Vogtie A	LWR SSAR			TOTAL DEPTH	93.	5SURF.ELEV.	216.895
			Sample No.		dard Penetration Test			
Depth	Elev.	Material Description, Classification and Remarks Mottled weak red and brown SAND, fine- to medium-		From To	Blows	N	Comments	
25	191.90	grained with some coarse grains (SW)	5	23.5-25	9-9-6	15	and a second br>Second second	
26	190.90							
20	100.00							
27	189.90							
28	188.90			e de la composition de				
	407.00	Reddieb vellow CAND fine to modium grained loope						
29	187.90	Reddish yellow SAND fine- to medium-grained, loose (SW)		. · · ·				
30	186.90		6	28.5-30	9-31-42	73		
31	185.90		2 <b>1</b> 2 2					
32	184.90							
33	183.90				en e			
34	182.90							
			7	33.5-35	7-6-5	11		
35	181.90							
36	180.90							
07								
37	179.90							
38	178.90			1.1				
39	177.90							
		Same as above with some coarse grains	8	38.5-40	5-5-5	10		
40	176.90							
41	175.90							e
42	174.90		÷					
	1.00							
43	173.90							
44	172.90	Brownish yellow clayey SAND, soft, (SC)						
45	171.90		9	43.5-45	5-2-2	4		
								· · · · · ·
46	170.90		ar -	ļ				
47	169.90							
48	168.90							
	T				· · ·			
49	167.90	Mottled yellowish red clayey SAND, medium-grained (SC) with organics	10	48.5-50	2-3-3	6		
50	166.90							
51	165.90			1				
	1			-1				
52	164.90							
53	163.90							
5 <u>4</u>	162.27							÷+
55	161.90	Strong brown sand, medium-grained with slight fines	11	53.5-55	2-4-5	9		e series de la companya de
00				1				
56	160.90 59901 7-26-2	2	4A - 93		I			

5001	THERN	DRILLI	NG L	OG .			Hole No. OW-1010
	o Serve You	r World <sup>~</sup> GEOLOGIC	AL SE	RVICES	3		Sheet 3 of 4
	Vogtle A	LWR SSAR			TOTAL DEPTH		.5 SURF.ELEV. 216.89
epth Ft.	Elev.Ft.	Material Description, Classification and Remarks	Sample No.	From To Ft	Standard Penetration Blows	N BPF	Comments
57	159.90				n en		
58	158.90						6/1/2005
							▼
59	157.90	Mottled white to brown clayey SAND, medium-grained (SP), medium dense	12	58.5-60	2-7-7	14	58.5' from ground surface
60	156.90						
61	155.90						
62	154.90						
63	153.90						
	152.90						
64		Strong brown clayey SAND, fine- to medium-grained	. 13	63.5-65	WOR-2-3	5	
65	151.90	(SC)					
66	150.90						
67	149.90						
68	148.90						
69	147.90			1 - A - A		·	
70	146.90	Brownish yellow silty SAND, medium-grained, (SM)	14	68.5-70	WOH/18"	WHO/ 18"	
		For a transfer of the second s Second second s Second second sec second second sec					
71	145.90						
72	144.90						
73	143.90						
.74	142.90			70 5 75	WODA	MODI	
75	141.90	Tan poorly graded SAND with silt (SP-SM)	15	73.5-75	WOR 2'	WOR/ 2'	
76	140.90						
77	139.90			r st			
78	138.90						
79	137.90	Brownish yellow clayey, sllty SAND (SC-SM), soft	16	78.5-80	WOR/18"	WOR/	
80	136.90					18"	
81	135.90						
82	134.90						
83	133.90						
84	132.90						
85	131.90	White SHELL HASH	17	83.5-85	50/3"	50/3"	
86	101.00	Grayish green MARL	1				
			1	4	1		

	••• •• •• •• ••								
sou	THERN COMP	A	DRILLI	NG L	.0G			Hole No.	OW-1010
Energy t	o Serve You	r World	GEOLOGIC	AL SE	RVICES		1 S.	Sheet 4	of 4
	Vogtle A				<u> </u>	DEPTH	93.5	SURF.E	LEV. 216.89
Depth Ft.	Elev. Ft.	Material Description, Classification	and Remarks	Sample No.	Star From To Ft.	dard Penetration T Blows	est N BPF	Comments	
89	127.90								
		Grayish green MARL, very stiff		18	88.5-90	18-9-12	21		
90	126.90								
91	125.90					а. 1	· · ·		
92	124.90								X
93	123.90	Boring terminated at 93.5'		-			an an an an		
94	122.90	Well OW-1010 installed in this boring	g.	-					
				19	93.5-95	21-50/4"	50/4"		
95	121.90								
96	120.90								
97	119.90								
98	118.90								
99	117.90			5 . A.					
100	116.90		a de antes de la composición de la comp En la composición de la En la composición de la						an taon 1997. Taon taon 1997
101	115.90								
102	114.90						÷ .		
103	113.90								
104	112.90						· ·		
105	111.90		· · · · ·						
106	110.90								
	109.90		· · ·				4		
								1997 - 1997 -	
	108.90								
109	107.90	and the second							
110	106.90	and a second	·						
111	105.90								an an Anna Anna Anna Anna Anna Anna Ann
112	104.90			Ĩ				anta anta anta anta Anta anta anta anta anta anta anta anta	· · ·
	103.90					· .			
114	102.90								<sup></sup>
1.1	101.90								
	100.90			Ĩ			ļ		
	99.90					an an Article			
118									
119	97.90				•				
120	96.90	2004	2.4/	4 - 95	· [ .	1 . <sup>E</sup>	[ . · · ·		

• • • • • •	HERN COMP						1	o. O neet 1 of		
						гн <b>217</b>				785
	)N	Burke County, Georgia				9956.246				
		NA BEARING NA	CONTR	ACTOR	Prosor	nic <sub>c</sub>	RILL NO.	SF	-083	
1 - E -	G METHOD	Cania		continuous		NO. U.D. SAMPL	.es	N.	A	
WATER	TABLE DE	TH NA ELEV. NA TIM		R COMP.	NA	DAT	E TAKEN	· ·	NA	
	ROUT	NA QUANTITY NA	м	IX N	A	DRILLING STA			1/2005	••••••
DRILLER	۹	Tony RECORDER John Pugh APPRO	VED	NA		DRILLING CO	MP. DATE	6/12	2/2005	
epth ft.	Elev. Ft.	Material Description, Classification and Remarks	Sampie No.	Stand From To	tard Penetration Blows	Test N	Com	ments	% Rec	RC
0	205.79									
-										
1		Sampling in this boring started at 87'. Borehole OW-1012 was sampled from the surface to 93.6'.			an a					
2	203.79	These two are a well pair.			• .					
3	202.79		· .							
4	201.79				· · ·				t.	
5	200.79									. <sup>1</sup>
										н Т.
6	199.79				1					e.
7	198.79				. *					
8	197.79				-	and a set				
9	196.79						•			÷ .
10	195.79						• •			
11	194.79									
12	193.79									
13	192.79						· · · ·	1		
14	191.79				-					
15	190.79				- 11 - 11 - 11 - 11 - 11 - 11 - 11 - 1					
• .	1.00		1.							
16	189.79									
17	188.79									
18	187.79									
19	186.79		а 1		· .				1:	
20	185.79									
				1	1					
21	184.79		1						1	
22	183.79						n e			
23	182.79				· .					
• •	181.79		·· .				·· ·			

2.4A - 96

								Hole No. O	W-1011
	COMP	ANY World <sup>*</sup>						Sheet 2 of	
SITE		Vogtle ALWR SSAR				OTAL DEPTH	21		205.785
Depth ft.	Elev. Ft.	Material Description, Classification and Remark	s	Sample No.	Star From To ft.	ndard Penetratio Blows	n Test N BPF	Comments	
25.	180.79	See page one.	1994). •					n an an Arthur The Arthur Arthur Arthur	
26	179.79								
27	178.79					* a a -			
28	177.79								
29	176.79								
30	175.79				· · ·	1			
31	174.79				t e se				
32	173.79								
33	172.79	n an an Anna an Anna an Anna Anna an Anna Anna							
34	171.79								
35	170.79			ļ					
36	169.79		ander anderen. Anderen gese						
37	168.79			. 					
38	167.79		n de la composition de la comp						
39	166.79						· · .		
40	165.79			÷.					
41	164.79								
42	163.79			<b>.</b>					
43	162.79		алан 1971 - Мариянан 1971 - Мариянан						
44	161.79								
45	160.79								
46	159.79								
47	158.79			1					
48	157.79								
<u>49</u>	156.79		· · ·	<b>.</b>					
50 51	155.79 154.79			[. 					
52	153.79			Î					
<u> </u>	152.79					· · · ·			• 1997 • 1997
54							· .		
55	150.79			1					
56	149.79		2.4A	97					

SOUT	THERN COMP	DRILL	ING I	OG			Hole No.	ON	/-1011
_	to Serve You	r World GEOLOGIC	AL SE	RVICES			Sheet	3 of 7	
SITE _	Vogtle A	NLWR SSAR				217	SURI	ELEV.	205.78
Depth ft.	Elev, Ft.	Material Description, Classification and Remarks	Sample No.	Sta From To ft.	andard Penetration Te Blows	N BPF	Comments		
57	148 70	See page one.					Continienta		
		use page one.					•• .		
58	147.79							•	
59	146.79								
60	145.79								
61	144.79								
62	143.79								
63	142.79								
64	141.79			and an th					
65	140.79				an a	:			
66	139.79			- 44 - 14 					
67	138.79								
68	137.79					4	alah ing panakat Panganakat		1.1 1.1
69	136.79								
· · · · ·									
70	135.79			an an an Ar					
71	134.79				the second second				
72	133.79								
73	132.79						and the second		
74	131.79			ан. 1911 - 1911 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914			• • • •	н стан 194	
75	130.79				$(t_{i}, \mu_{i})$		ang sa		
76	129.79								
77	128.79				е. Т				
78	127.79					·			
79	126.79								
80	125.79			1					
81	124.79								
82	123.79		1						
83	122.79								
84	121.79								
1.1	1.1								
85	120.79						eta eta e		
86	119.16				и. 				
87	118.79	Begin sampling at 87' with ProSonic rig.							
88	117.79			·	1				

5001			DRILLI					Hole No. OW-1011
	o Serve You Voatle A	World <sup>-</sup> LWR SSAR	GEOLOGICA	LSE	RVICES		2	Sheet 4 of 7
SITE _				Sample	Stand	TOTAL DEPTH		SURF.ELEV. 205.78
Depth	Elev.	Material Description, Classification and Re	marks	No.	From To	Blows	N	Comments
89	116.79	Greenish grey CLAY, stiff						
90	115.79			1	88.5-90	NA	NA	
91	114.79							
92	113.79							
93		Dark greenish to olive-grey CLAY, moist, s	stiff, light			· · · · · · · · · · · · · · · · · · ·		
94		gray mottling		2	93.5-95	NA	NA	
95	110.79			Γ				
96	109.79							
97	108.79							
98	107.79							
				<b>.</b>				
99	106.79	Greenish grey CLAY, stiff, moist, small sh	ell fragments	3	98.5-100	NA	NA	
100	105.79							
101	104.79							
102	103.79		en de la companya de La companya de la comp		••	an ta An ta ta ta		
103	102.79			- an .			a. e.	
		Greenish grey CLAY, stiff, small shell frag	ments	· .				
1		not moist	inonio,	4	103.5-105	NA	NA	
	100.79		· · · · ·					
106	99.79							
107	98.79		· · · · · · · · · · · · · · · · · · ·					
108	97.16							
109	96.79	LIMESTONE 2" Greenish grey CLAY, slightly moist, limes	tone	-				
1	95.79	fragments		5	108.5-110	NA		
÷ .								
	94.79							
	93.79							
	92.79							
114	91.79	Greenish grey CLAY, not moist, larger sh	ell fragments	6	113.5-115	NA	NA	
115	90.79	an a						
116	89.79						1.	
117	88.79							
	87.16							
<u> </u>	1		stone chunks		· ·			

n Starten	n de la composition de la comp					• · · ·			
 	• •		DRILLI						W-1011
01TE	Vogtle A	LWR SSAR	GEOLOGIC	AL SE			217	Sheet 5 of	
SITE	Vogile A			Sample	· · ·	TOTAL DEPTH		SURF.ELEV.	205.7
Depth ft.	Elev. Ft.	Material Description, Classification and Remain	arks	No.	From To ft.	dard Penetration T Blows	N BPF	Comments	27 2244
121	84.79								·
122	83.79		• •					· · · ·	
123	82.79	Light grey LIMESTONE 4"				·			
124		Greenish grey CLAY, slightly moist				e si e			•
125	80.79	,,,,,,,		8	123.5-125	NA	NA		
			·		120.0-120				
126	79.79					e ana			·· .
127	78.79			. · · ·					. * *
128	77.79						· · · ·		
129		Light-grey CLAY, stiff		-					
130	75.79		۰ ۲۰	9	128.5-130	NA	NA		
131	74.79								
132	73.79				i in t				
133	72.79						1		
134	71.79					н. 1.			-
135	70.79			10	133.5-135	NA	NA		
136	69.79						10 A		
137	68.79			1.1					
138	67.79						· · ·		
139	66.79		ал. С						
140	65.79	Greenish grey CLAY, stiff		11	138.5-140	NA	NA		
141	64.79								
142	63.79		· · · ·						
143	62.79								
144	61.79					a ser as	. 1		
145	60.79			12	143.5-145	NA	NA		
	59.79								
147	58.79								
148	57.79	potential void		ŀ				н И	· · · ·
	56.79								
		Greenish arou CLAV stiff		1.2	140 5 150	NIA			
150		Greenish grey CLAY, stiff	· · · ·	13	148.5-150	NA	NA		
151	54.79				а. А. А.				
152 Form GS99	53.79 01 7-26-200	4		100					

-	·- · ·	DRILLIN			•	1	Hole No. OW-1011
		GEOLOGICA	L SEF	RVICES			Sheet 6 of 7
ITE	Vogtle A	LWR SSAR			TOTAL DEPTH	21	7 SURF.ELEV. 205.785
		n an	Sample No.	Standa	ard Penetration Te	st	
)epth	Elev. 152.50	Material Description, Classification and Remarks		From To	Blows	N BPF	Comments
153	152.50 52.79						
154	51.79	Light bluish-grey, very fine sands to sandy CLAY,			n de la composition Notas de la composition de la compositio		
155	50.79	Loose, moist, clayey	14	153.5-155	NA	NA	
156	49.79						
157	48.79						
158	47.79						
159	46.79	Light grey, slightly sandy CLAY, moist					
160	45.79		15	158.5-160	NA	NA	
161	44.79						
62	43.79					$\{1, \dots, n\}$	
163	42.79						
		Light grou oilth, clighth, condu OLAV,					
164		Light grey, silty, slightly sandy CLAY, moist					
65	40.79		16	163.5-165	NA	NA	
166	39.79					a Secondaria	
167	38.79						
168	37.79			1.12		а с ал с	
169 1	36.79	Greenish grey sandy silty CLAY, bright green and					
170	35.79	tan nodules	17	168.5-170	NA	NA	
	34.79						
	33.79						
	32.79						
174	31.79				t de la composition de la comp		
175	30.79		18	173.5-175	NA	NA	
176	29.79				<u> </u>		
177	28.79						
178	27.79	Dark olive grey CLAY, stiff					andra an
	26.79						
			19	178.5-180	NA	NA	
	25.79		19	170.3-160			
181	24.79						
182			·				
183	22.79	Dark olive grey sandy CLAY					
184	21.79	244 -	101			- I -	

•		DRILLI			1		Hole No. OW-1011
	· · · · ·	GEOLOGICA	L SE	RVICES			Sheet 7 of 7
ITE	Vogtle A	LWR SSAR			TOTAL DEPTH	217	SURF.ELEV. 205.785
		andra and an	Sample No.		ard Penetration		
epth ft.	Elev. Ft.	Material Description, Classification and Remarks		From To ft.	Blows	N BPF	Comments
185	20.79		20	183.5-185	NA	NA	
186	19.79						
187	18.79			ta an			
			1		-		
188	17.79						
189	16.79	Dark grey sandy CLAY			e The second	р. А	
190	15.79		21	188.5-190	NA	NA	
191	14.79				la Esta esta		
192	13.79						an an Arran Arra an Arra an Arra an Arra an Arra an
193	12.79						
194	11.79	Dark grey clayey fine SAND grading to					
195	10.79		22	193.5-195	NA	NA	
			, - -	100.0-100			
196	9.79	Clayey medium-grained SAND			n e prove		
197	8.79						
198	7.79						
199	6.79	Dark bluish-gray silty fine- to medium-grained SAND					
200	5.79	very moist	23	198.5-200	NA	NA	
201	4.79						
202							
	1.						and and a second se
203							
204	1.79						
205	0.78	Gray poorly graded sand with silt (SP-SM)	24	203.5-205	NA	NA	
206	-0.22						
206	-0.22						
208	-2.22						
209	-3.22				a series and		
		Gray poorly graded sand with silt (SP-SM)	25	208.5-210	NA	NA	
210	-4.22	an an an tha an		200.0-210			
211	-5.22	Silty gravelly SAND with fossils, shark teeth					
212	-6.22		1.				
213	-7.22						
214	-8.85	Dark bluish gray medium- to coarse-grained SAND					
215	-9.22		26	213.5	215	NA	
ч. Т.	-10.22	Boring terminated at 217'	ŀ	1997 - 19	1		

5

		DRILLING			Hole No.	OW-1012
nergy to Serve	'our World"	GEOLOGICAL SI	RVICES		She	et 1 of 4
ыте		1	· · · · · · · · · · · · · · · · · · ·	HOLE DEPTH 93.6	s	URF.ELEV. 205.355
			DINATES N			
	NA BEARING					
RILLING MET						
VATER TABLE	· · · · · · · · · · · · · · · · · · ·	225' TIME AFTI		NA DA		6/1/2005
TYPE GROUT						
DRILLER	Ted/Rick RECORDER Tinsley				MP. DATE	6/1/2005
epth Ft. Élev.	Material Description, Classification and Rem	Sampl arks No.		ndard Penetration Test Blows N BPF	Comme	ants
0 205.	6	*	1.4 N			
				· · · ·	22	
1 204.	6					
2 203.	6					
3 202.	6					
4 201.	6 Weak red SAND (SW), very fine - fine grain	ed loose				er en son A ser en son anter en s
1.4.4	mottled					
5 200.	6	4	3.5-5	2-2-3 5		
6 199.	6					
7 198.	6					
8 197.	6					
0 197.						
9 196.	6		an a			
10 195.	6	2	8.5-10	2-5-5 10		
11 194.	6					
10 102			and the second			
12 193.						
13 192.					an an said	
14 191.	6				1. 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19	
15 190.	6 Same as above with stronger mottling	3	13.5-15	3-5-5 10	lan Bolthol Alexandro	
16 189.			· · · · ·			
17 188	9 <u>6</u>					
18 187	Brown SAND, fine to medium grained, loos	e, (SW)				
19 186	6					
			10-05			
20 185.		4	18.5-20	5-15-26 41		
21 184	<u>16</u>		·			N. A. State
22 183	6				· · ·	
						an a
· · · · · · · · · · · · · · · · · · ·	Reddish yellow SAND					
24 181.						

SOUI		DRILLI						W-1
	to Serve You	r World <sup>-</sup> GEOLOGICA	AL SE	RVICES			Sheet 2 of	
SITE	Vogtle /	ALWR SSAR		2.	TOTAL DEPTH	9	3.6 SURF.ELEV.	
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Star From To	ndard Penetration Test Blows	N BPF	Comments	
25	180.36	Reddish yellow SAND (SP), fine- to medium-grained	5	23.5-25	6-16-17	33		
26	179.36	with fines						
27	178.36							
28	177.36							
29	176.36	Reddish yellow SAND (SP), fine-grained, loose						
30	175.36		6	28.5-30	3-7-7	14		
	174.36							
31	1. A.		1					
32	173.36		•					
33	172.36							
34	171.36							
35	170.36		- 7	33.5-35	3-5-6	11		
36	169.36							
37	168,36							
38	167.36			a de la composición d				
39	166.36			s i str				
40	165.36		8	38.5-40	2-5-6			
41	164.36					-		
1.18								
42	163.36		1 <sup>1</sup>			100 - 120 100 - 120	and the second second	
43	162.36					· .		
44	161.36					. * •		
45	160.36		9.	43.5-45	3-2-2	4		
46	159.36							
47		Reddish yellow SAND (SW), medium- to coarse-grained,						
1.1	1.1	loose, with fines				• •		
48	157.36							
49	156.36		1				6/1/2005 ▼	
50	155.36		10	48.5-50	1-1-2	3	49.5' from ground surface	
51	154.36			a de la composición d				
52	153.36	Pale yellow CLAY (CL), slightly sandy						
53	152.36							
54								
	10000		11	53.5-55	WHO/2/3	_	micas	
55_	150.36		<b> </b> '''	00.0-00	WHU/2/3	5	inicas	

					н		
sou			ILLING L				Hole No. OW-10
Energy	to Serve You	r World <sup></sup> GEOLO	GICAL SE	RVICES		02	Sheet 3 of 4
SITE -			Sample	e Stand	lard Penetration	93.	.6SURF.ELEV2(
Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To Ft.	Blows	N BPF	Comments
57	148.36			· · ·			
58	147.36						
59	146.36						
60	145.36	Pale yellow CLAY (CL), slightly sandy	12	58.5-60	1-1-2	3	
61	144.36			- · ·			
62	143.36		2 				
63	142.36		4 <sup>4</sup> 2				
64	141.36				n an the The		
65	140.36		13	63.5-65	2-1-3	4	
66	139.36		e a l				
67	138.36			N.			
68	137.36						
69	136.36	Pale yellow sandy CLAY, soft (CL)		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			
70	135.36		14	68.5-70	WOH/	WHO/1	
71	134.36				WOH/ 1		
	133.36						
73		Brown SAND, fine- to medium-grained with pale					
74	131.36	yellow silt (SM)		н			
				70 5 75			
75	130.36		15	73.5-75	WOH/ WOH/	WOH/	
76	129.36			· · · ·		1	
77	128.36		· ]				era 1997 - Children States 1997 - States 1997 - States
78	127.36						
79	126.36	Pale olive SILT (ML)					
80	125.36		16	78.5-80	2-4-6	10	
81	124.36			· .			
82	123.36						
83	122.36						
84	121.36	Pale yellow SILT, micaceous (ML)					
85	120.36		17	83.5-85	2-3-4	7	Black minerals
86							
87	118.36						
88	117.36		2.44				

Sample Standard Penetration Test	Energy	COMP COMP to Serve You			RVICES		02		OW- t 4 of 4
Date PL         Box PL         Manual Description, Classified and filaments         How To FL         How To FL	SITE _			Sample				SU	RF.EL.EV.
90       115.36         91       114.36         92       113.36         93       112.36         94       111.36         94       111.36         95       100.30         97       108.36         98       07.36         99       105.36         101       104.36         102       103.36         103       102.36         104       11.36         105       10.36         104       104.36         105       105.36         106       96.36         107       96.36         108       95.36         109       96.36         111       94.36         112       95.36         113       92.36         114       91.36         115       90.38         116       96.36         117       98.36         118       114	Depth Ft.	Elev. Ft.	Material Description, Classification and Remarks					Comment	<u>s</u>
91       114.36         92       113.36         93       112.36         94       111.35         95       110.36         96       100.36         97       106.36         98       107.36         99       106.36         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       80.36         106       9.36         107       98.36         108       9.36         109       106.36         100       106.36         101       104.36         102       103.36         103       102.38         104       101.38         105       80.36         106       9.36         107       98.36         118       9.36         119       9.36         110       9.36         111       9.36         112       9.36         114       91.36         115       9.36         116 <td>89</td> <td>116.36</td> <td>Grayish green MARL, very stiff</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	89	116.36	Grayish green MARL, very stiff						
92       113.36         93       112.36         94       111.36         95       110.36         96       109.36         97       109.36         98       107.36         99       108.36         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       9.3.6         107       9.3.6         108       102.36         104       101.36         105       100.36         106       9.3.6         107       9.3.6         108       9.3.6         109       9.5.36         110       95.36         111       9.3.6         112       9.3.6         113       2.3.6         114       9.3.6         115       9.3.6         116       8.3.6         117       8.3.6         118	90	115.36		18	88.5-90	18-25-50	75		· · · · ·
92       113.36         93       112.36         94       111.36         95       110.36         96       109.36         97       109.36         98       107.36         99       108.36         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       9.3.6         107       9.3.6         108       102.36         104       101.36         105       100.36         106       9.3.6         107       9.3.6         108       9.3.6         109       9.5.36         110       95.36         111       9.3.6         112       9.3.6         113       2.3.6         114       9.3.6         115       9.3.6         116       8.3.6         117       8.3.6         118	91	114.36			an Na sanatan	arta angles Marina			- : - · · · -
93       112.36         94       111.36         95       110.36         96       100.36         97       108.36         98       106.36         99       106.36         90       106.36         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       105.36         107       9.3.6         108       102.36         109       9.3.6         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       9.3.6         107       9.3.6         110       9.3.6         111       14.36         112       9.3.6         113       2.3.6         114       9.3.6         115       9.3.6         116       9.3.6         117       8.3.6         118	92				- 14 - 1 - 1				
94       111.36       Boring Terminated at 83.6"         95       110.36       Well OW-1012 installed in this borehole.       19       93.5-95       50/1"       50/1"         96       109.36       107.36       99       106.36       10       105.36       10       10.36         100       105.36       101       104.36       101       104.36       101       104.36         102       103.36       103.36       103.36       104       101.36       104.36         103       102.36       103.36       104       101.36       104.36       104.36       104.36       104.36       104.36       104.36       104.36       104.36       104.36       104.36       105.36       104.36       105.36       104.36       105.36       105.36       105.36       106.36	÷	11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			алан (тара) 1910 - Саран (тара) 1910 - Саран (тара)				
Boing         Boing         Well CW-1012 installed in this borehole.         19         93.5-95         50/1*         50/1*           06         109.86	93								
95       110.36       Well OW-1012 installed in this borehole.       19       93.5-95       50/1*       50/1*         96       109.36	94	111.36	Boring Terminated at 93.6'						
97       108.36         98       107.36         99       106.36         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       99.36         107       98.36         108       97.36         109       96.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.38         116       89.38         117       88.38         118       89.38         119       96.36	· 95			19	93.5-95	50/1"	50/1"		
98       107.36         99       106.38         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       99.36         107       96.36         110       95.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         115       90.36         116       99.36         117       86.36	96	109.36		<b>.</b> .	in the state				esti i Ny seri
99       106.36         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       99.36         107       98.36         108       97.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       99.36         117       88.36         118       9.36	97	108.36							
99       106.36         100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       99.36         107       98.36         108       97.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       99.36         117       88.36         118       9.36	98	107.36							
100       105.36         101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       99.36         107       98.36         100       97.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       93.36         117       83.36         118       0									
101       104.36         102       103.36         103       102.36         104       101.36         105       100.36         106       99.36         107       98.36         108       97.36         109       96.36         110       95.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       94.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         111       96.36         112       93.36         113       92.36         114       91.36         115       90.36         116<								en de la composition br>Composition de la composition de la comp	
102       103.36         103       102.36         104       101.36         105       100.36         106       99.36         107       98.36         108       97.36         109       96.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       68.36         118       0.16	100	105.36				1942 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 -		an di san di San di san di	
103       102.36         104       101.36         105       100.36         106       99.36         107       98.36         108       97.36         109       96.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         117       88.36         118       9.36	101	104.36							i en
104       101.36         105       100.36         106       99.36         107       98.36         109       96.36         110       95.36         111       94.36         1114       91.36         115       90.36         116       89.36         117       88.36	102	103.36							
105       100.36         106       99.36         107       98.36         108       97.36         109       96.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118	103	102.36			1.11				
105       100.36         106       99.36         107       98.36         108       97.36         109       96.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118	104	101.36		ана Страна			the second		
106       99.36         107       98.36         108       97.36         109       96.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118			$\frac{\partial F}{\partial x} = -\frac{\partial F}{\partial x} + \frac{\partial F}{\partial x} +$				1. A.	an a	
107       98.36         108       97.36         109       96.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118							1997 - 1997 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		
108       97.36         109       96.36         110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118								en en en	
109       96.36         110       95.36         111       94.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118	107	98.36							
110       95.36         111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118	108	97.36						· . ·	-
111       94.36         112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118	109	96.36		•				n en	
112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118	110	95.36			· · · · ·				-
112       93.36         113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118	111	94.36							
113       92.36         114       91.36         115       90.36         116       89.36         117       88.36         118									
114       91.36         115       90.36         116       89.36         117       88.36         118						n tha that			
115       90.36         116       89.36         117       88.36         118							a terretaria. A terretaria		
116     89.36       117     88.36       118		· · · ·							
<u>117 88.36</u> <u>118</u>				[ .					
118		1.0							
	117	88.36							
119 86.36	118			<u>н</u> ,					
	119	86.36						· · · · ·	

OUTHE CO				DRILLIN	IG L	DG	1. A.		Hole	No. OW	-1013
	ve Your World			OLOGICA						Sheet 1 of 4	
SITE		Vo	gtle ALWR SSAR							SURF.ELEV.	
OCATION			unty, Georgia							62171	
DRILLING ME	THOD	4 1/4" Hollow	stem auger	NO. SAMPLES		20		NO. U.D. SAM	PLES	NA	<u></u>
WATER TAB	E DEPTH	49'	ELEV. 167.23	9' TIN	E AFTE	R COMP	NA	D/	TE TAKEN	6/9/2	005
TYPE GROU											
	Ted	Miller RECORDER	S. Bearce	APPRO	. —				OMP. DATE	6/10/2	2005
epth Ft. Ele	/. Fl.	Material Description	, Classification and Remarks		Sample No,	Stand From To Ft.	lard Penetration Blows	Test N BPF	Co	mments	
0 216	6.87						a Na ser se				
									atte de pe		
1 218	<u></u>			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1							
2 214	1.87		an a				artini. Artini				 
3 213	3.87										
4 212	.87 Orange	brown clayey SAN	D (SC)								
8. E			······································								tija: Na st
5 211	.87				1	3.5-5	8-8-9	17			arta Alexandre
6 210	).87						<i>u</i> *				
7 209	9.87										
8 208	.87					-				and and and a second	- 1 
· ·											
9 207	7.87					i da c	· · ·				
10 206	5.87				2	8.5-10	5-10-9	19			
11 205	i.87										
12 204	.87	n de la deserva. Nota de la deserva de la de Maria de la deserva de la d					Alan an a		in the start of th	el de la composition No de la composition	
			· · ·	1.							
13 203	1.87						н 1911 - 19			ati n	
14 202	2.87 Burgun	dy or hematitic clay	ey SAND (SC)								
15 201	.87				3	13.5-15	2-2-3	5	en det Sense de later	s de la composición d	
16 200	87							ata San Sati	n an		
										in sa si	
17 199	0.87										
18 198	.87		• • •								
19 197		l orange, brown, and	d light gray sandy C	LAY							
20 196	(CL)				4	18.5-20	3-4-5				
	ì				-	10.3-20	J-4-D	9			
21 195	.87						et de la		1.+		
22 194	.87	-					· ·				
23 193	.87		a Alaman ang ang ang ang ang ang ang ang ang a								
		dy hematite coated	fine-grained to coar								

Snergy t	THERN COMP • Serve You Vogtle A	ANY		VICES	TOTAL DEPTH	10	Hole No. OW-1013 Sheet 2 of 4 3.5 SURF.ELEV. 216.869
	Elev. Ft.		Sample No.	Stand	ard Penetration	est	
Depth Ft.		Material Description, Classification and Remarks Fine- to coarse-grsained SAND (SW) with minor		From To Ft.	Blows	N BPF	Comments
25	191.87	amounts of clay, moist	5	23.5-25	4-5-6	11	
26	190.87			1 1 1 1 1 1 1 1			
27	189.87	Yellow brown fine SAND (SP) minor clay, moist					
28	188.87			·· '			
29	187.87						
30	186.87		6	28.5-30	2-3-5	· 8· ·	
31	185.87			l jer S			
32	184.87			a and and and		2	
33	183.87		а — 19 1		44 44 4		
1.1.1						 -	
34	182.87						
35	181.87		7	33.5-35	3-6-10	16	
36	180.87						
37	179.87						
38	178.87			ana an an Antonio		· .	
39	177.87			e set	· .		
40	176.87		8	38.5-40	3-6-9	15	ng ang sang sang sang sang sang sang san
41	175.87						
42	174.87						
43	173.87		·**		· · ·	an Na san	
1 A.	172.87						
44							
45	· .	Same as above, wet	9	43.5-45	2-2-5	- 7	
46	170.87		×., .				
47	169.87						
48	168.87						
49	167.87					1. A.	6/9/2005 ▼
50	166.87	Same as above - saturated	10	48.5-50	1-3-5	8	▼ 49 from ground surface
51	165.87						
52	164.87						
53	163.87	Yellow brown, wet, SAND (SC)					
54	162.24	clay content higher		-			
55	161.87		11	53.5-55	3-2-5	7	
56	160.87		1.00				

	Compa	NY				<u></u>		Hole No. OW-1013
Energy to SITE	Serve Your	World <sup>-</sup> GEO Vogtle ALWR SSAR		AL SE	RVICES	TOTAL DEPTH	103	5 SURF.ELEV. 216.869
Depth Ft.	Elev. Ft.			Sample No.		ndard Penetration Te	əst	
		Material Description, Classification and Remarks			From To Ft.	Blows	N BPF	Comments
	159.87						1	
58	158.87		•		200 A.			
59	157.87	lo recovery						
60	156.87			12	58.5-60	2-2-2	4	
61	155.87							
62	154.87							
63	153.87		-					
64	152.87	ame as above with clay blobs, saturated			· · ·			
65	151.87			13	63.5-65	1-3-5	8	
66	150.87			-				
	149.87		14.1 1					
:	148.87							
	147.87					•••		
	146.87		••	14	68.5-70	2-3-4	. 7	
					00.5-70	2-0-4		
	145.87				1. 1.			
1.14	144.87							
	143.87			1997) 1				
· .	142.87		•.					
75	141.87			15	73.5-75	2-4-6	10	
76	140.87							
77	139.87							
78	138.87							
79	137.87							
80	136.87	an fine- to coarse-grained SAND (SW) with med	ium	16	78.5-80	5-10-10	20	
	135.87	Source Branner Blank organie Material						
82	134.87							
83	133.87							
84	132.87	 		1. <sup>1</sup>				
85	131.87 T	an fine- to medium-grained SAND (SP-SM) with	tan or	17	83.5-85	3-2-4	6	
86	130.24	ray clay "tubes" or bioturbation						
87	129.87					· · · ·	ал. 1 а.	
88	128.87		2.4A -					

OUT								Hole No.	OW-10	13
	o Serve You	-World GEOL	DGICA	L SEF	VICES		100		4 of 4	
ITE	Vogtle A	LWR SSAR		Sample		OTAL DEPTH	103.	SUR	F.ELEV	16.869
epth ft.	Elev. Ft.	Material Description, Classification and Remarks	•.	No.	From To Ft.	Blows	N BPF	Comments		
89	127.87	Light olive tan calcareous silty fine-grained SAND								
90	126.87	(SP - SM)		18	88.5-90	6-7-9	16	an an Taona an Ar		
91	125.87			1 <sup>1</sup>						
92	124.87		*						1 	
93	123.87	<ul> <li>A state of the sta</li></ul>								
		light olive tan calcareous CLAY (CL), wet but not								
94		saturated			00.5.05	4 10 15	24			
95	121.87			19	93.5-95	4-19-15	24			
96	120.87			. ·						i den
97	119.87			1	•••	949.) 1			· · ·	
98	118.87		1. 		4			· · · · ·	an a	
99	117.87								ana. Ang sa	
100	116.87	Greenish gray MARL		20	98.5-100	13-28-50/3	28/ 50/3"			
101	115.87						30/3		an an an Arrison An Arrison	
102	114.87			<b>.</b>						4 M
103	113.87								ан 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 - 1996 -	
104	112.87	Boring terminated at 103.5'								
105	111.87	Well OW-1013 installed in this borehole.								
	110.87									
	109.87									
	108.87									
а. т.	i.									
	107.87									
1	106.87		ta et	х. Эк						
	105.87									, i
	104.87									
	103.87									
	102.87		÷							
115	101.87							• * *		
116	100.87									-
117	99.87									
118	. 			1 · .						
119	97.87					· .				
120	96.87							1.1.1		

					<u> </u>	1997 - 1997 1997 - 1997 1997 - 1997 - 1997					
:0U'	COMP	ANY	LLING L				Hole No. OW-1014				
	to Serve Yos	r World <sup>®</sup> GEOLOG Vogtie ALWR SSAR	GICAL SE			107.4	S	Sheet 1 of 7			
SITE _		Burke County, Georgia				<b>197.4</b> 5.502		SURF.ELEV. 220.867 623070.234			
ANGLE		NA BEARING NA		NATES N	Prosonic		E				
				continuous	-	.D. SAMPLE	NILL NO.		SR-083 NA		
WATEF	TABLE DE			R COMP.	NA	· · ·	TAKEN		NA		
TYPE G	ROUT	NA QUANTITY NA		IX NA	DRII	LLING STAR	T DATE		6/11/2005		
DRILLE	R	Michael RECORDER SBearce AF	PPROVED	NA	DRI		P. DATE		6/11/2005		
Depth	Elev.	Material Description, Classification and Remarks	Sample No.	Standar From To	d Penetration Test Blows	I N	Con	nments	% Rec	RC	
0	220.87										
1		This borehole was not sampled until 97'.					<u></u>			+	
2		OW-1014 is a well pair with OW-1015. See boring log OW-1015 fro description of the upper sediemnts.			an An An An An An						
3	217,87		e Ditt								
4	216.87										
5	215.87										
6	214.87										
7	213.87										
8	212.87										
9	211.87										
					· · · ·						
10	210.87										
11	209.87	n an an Arthread br>Arthread an Arthread an Arth			·					2 2	
12	208.87							•			
13	207.87						• • • • •	n Alegoria Grand			
14	206.87							an an Sairte		· ·	
15	205.87									.	
16	204.87										
17	203.87										
18	202.87				14 1		-	1 - E - E		1	
· · · ·											
19	201.87		· .								
20	200.87									ľ	
21	199.87										
22	198.87									.	
23	197.87			· .*							
24	196.87										

	· · · ·				9 1 . 			-	1		<u> </u>
OUI		ANV	DRILLI					Hole N		W-1014	·
nergy I	o Serve You	r World"	GEOLOGICA	L SEI	RVICES			-	sheet 2 of		
		Vogtle ALWR SSA	H	Sample		TOTAL DEPTH	197	.4	SURF.ELEV.	220.	867
Depth	Elev.	Material Description, Classification and Rem	arks	No.	From To	Blows	N	Cor	nments	% Rec	R
25	195.87	See page 1									
26	194.87										
27	193.87										
28	192.87		· · ·	-							÷.,
				н. 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 -							
29	191.87			÷							
30	190.87										
31	189.87		· · ·						a Ali an an an an Ali an		
32	188.87			- 							
33 🤇	187.87										
34	186.87								- -		
35	185.87										
36	184.87										
37	183.87		14 - 14 - 14 - 14 - 14 - 14 - 14 - 14 -			· · ·					
38	182.87										
39	181.87				-						
40	180.87										
1.	179.87										
41					÷						. 
42	178.87			• . i						а 19	- 1
43	177.87										
44	176.87				•						
45	175.87										
46	174.87										
47	173.87										
48	172.87							· ·			
49	171.87										1
50	170.87										
51	169.87										
52	168.87			Í							
53	167.87										
54					· · · · ·						
55	165.87			1.0							
56	164.87		ĸ	1						÷.,	

SOUT	COMP	Hole No. OW	/-1014					
Energy	COMP to Serve You	DRILLIN World" GEOLOGICA					Sheet 3 of 7	
SITE _		Vogtle ALWR SSAR			TOTAL DEPTH	197.4	SURF.ELEV.	220.86
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Star From To Ft.	ndard Penetration T Blows	est N BPF	Comments	t de la composition de
57	163.87	See Page 1						<u></u>
58	162.87		<sup>1</sup>					
59	161.87		-					
60	160.87							n e i Linder
61	159.87							
62								ч. Э.,
	158.87							
63	157.87							
64	156.87		•					
65	155.87							
66	154.87							
67	153.87							
68	152.87							
69	151.87							
70	150.87							
71	149.87							
72	148.87							
73	147.87							
74	146.87		с. <sup>с</sup>					
75	145.87							
76	144.87							
77	143.87							
78	142.87							
79	141.87							
80	140.87			· · · ·	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			
81	139.87		÷					
82	138.87							- <u></u>
83	137.87							•
84	136.87							
85	135.87							
86								
87	133.87		· .				an a	1. t

	THERN COMPI	World <sup>-</sup> GEOLOG	DRILLING LOG GEOLOGICAL SERVICES						
SITE		Vogtle ALWR SSAR	Sample	Stor	FOTAL DEPTH	197.	4 SURF.ELEV.	220.	
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks	No.	From To ft.	Blows	N BPF	Comments	<u> </u>	
89	131.87	See page 1			••.				
90	130.87								
91	129.87					na an Na		•	
92	128.87			1. S.					
93	127.87								
94	126.87					1. S. S.			
95	125.87								
96	124.87								
97		Sampling begins at 97'							
98		Red orange silty clayey SAND							
99	121.87								
100		White-tan fine- to medium-grained SAND		98.5-100	NA	NA			
101	119.87								
102		Brownish-yellow silty CLAY with shell fragments							
103	117.87								
104		Light greenish-brown carbonaceous stiff CLAY with Limestone pieces			• • •				
105	115.87		2.	103.5-105	5 NA	NA			
106	114.87								
107	113.87			le se est				-	
108	112.87								
109	111.87	Moderately stiff greenish-grey carbonaceous clay							
110	110.87	with shell hash	3	108.5-110	NA	NA	fizz		
111	109.87							-	
112	108.87		 	1 1 <sup>1</sup> 1					
113	107.87			ĺ · · ·				н 1	
114	106.87	Greenish grey stiff calcareous CLAY with small shell							
115	105.87	ragments	4	113.5-115	5 NA	NA			
116	104.87		n Al e						
117	103.87								
118									
119	101.87								
120	100.87		5	118.5-120	NA	NA		•	

		DRILLI	NG I	LOG			Hole No. OW-1014
1.00		GEOLOGIC					Sheet 5 of 7
SITE		Vogtle ALWR SSAR			TOTAL DEPTH	197.4	SURF.ELEV. 220.867
Depth ft.	Elev. Ft.		Sample No.	Stand From To ft,	lard Penetration Te Blows	N BPF	
		Material Description, Classification and Remarks					Comments
121	99.87						
122	98.87						
123	97.87						
124	96.87	Greenish grey stiff calcareous CLAY with small shell fragments					
	1			100 5 105			
125	95.87		6	123.5-125	NA	NA	
126	94.87						
127	93.87			1 a a 6 A			
128	92.87						
129	91.87						
e e de la composition	90.87		7	128.5-130	NA	NA	
130			<i>1</i>	120.5-150	INA		
131	89.87		÷.,				
132	88.87						
133	87.87						
134	86.87						
/ 135	85.87	Same as above with coarse shell fragments and	8	133.5-135	NA	NA	
		limestone chunks					
136	84.87				- 		
137	83.87		- 4 - A				
138	82.87						
139	81.87						
140	80.87		9	138.5-140	NA	NA	
141	79.87						
			•		•		
142	78.87						
143	77.87						
144	76.87						
145	75.87		10	143.5-145	NA	NA	
146	74.87						
147	73.87						
148_	72.87		·				
149	71.87						
150	70.24		11	148.5-150	NA	NA	
151	69.87						
152	68.87						
	9901 7-26-200	1 )42.4A	- 115	J	<u>.</u>	<u> </u>	

		DRILLI					Hole No. OW-1014	
		GEOLOGIC	AL SE		Sheet 6 of 7			
SITE		Vogtle ALWR SSAR			TOTAL DEPTH	SURF.ELEV. 220.86		
epth FT	Elev. FT.		Sample No.	Sta From To FT.	Indard Penetratio	n Test N Bbpf		
		Material Description, Classification and Remarks					Comments	
153	67.87							
154	66.87							
155	65.87	Greenish grey stiff calcareous CLAY with small shell	12	153.5-155	NA	NA		
156		fragments						
157	63.87				·			
158	62.87							
159	61.87							
160	60.87		13	158.5-160	NA	NA		
161	59.87							
162	58.87							
163	57.87							
164	56.87							
165	55.87		14	163.5-165	NA	NA		
1 - 1			[	100.0-100				
166	54.87		1					
167	53.87							
168	52.87		ľ					
169	51.87	Light green slightly clayey SAND, turns light grey with brief (~1 hour) exposure to air, with bioturbation						
170	50.87	saturated	15	168.5-170	NA	NA		
171	49.87							
172	48.87							
173	47.87							
174	46.87		16	173.5-175	5 NA	NA		
175	45.87		1 · ·					
176	44.87	Bottom of carbonate clay or confining layer	-					
177_	43.87	Dark grey silty SAND, (SM - SP), high organic content,						
178	42.87	saturated	·					
179	41.87				1			
180	40.87		17	178.5-18	0 NA	NA		
•			· ''	1, 0.0-10				
181	39.8/	Light grey, fine quartz SAND (SP), saturated						
182								
183	37.87							
184	36.87		16		1		· · · · · · · · · · · · · · · · · · ·	

		DRILL GEOLOGI					Hole No.	et7 of 7	V-1014
SITE		Vogtle ALWR SSAR			TOTAL DEPTU	197.			220.8
SHE		Toglic ALTITICOAT			TOTAL DEPTH	137,	• S(	JRF.ELEV.	220.0
Depth ft.	Elev. Fl.		Sample No.	Sta From To ft.	ndard Penetration T Blows	Test N BPF			
		Material Description, Classification and Remarks					Commer	ts	
185	35.87	Light grey, silty, fine-grained SAND (SM), saturated	18	183.5-185	NA	NA	an an an Arrange An Arrange Arrange		
186	34.87	Dark grey fine sandy SILT (ML)							
187	33.87								
188	32.87								
189	31.87				• *				
190		Grey poorly graded SAND with silt (SP-SM)	19	188.5-190	NA	NA			
					, , , , , , , , , , , , , , , , , , , ,				
191	29.87								
192	28.87								
193	27.87	For the second secon							
194	26.87								
195	25.87		20	193.5-195	NÁ	NA			
196	24.87								
197	23.87		21	195-197.4	NA	NA			
198	22.87	Boring terminated at 197.4							
199	21.87	Well OW-1014 installed in this borehole.							
200	20.87								
201	19.87								
	18.87		1						
	17.87								
							al a		
	16.87						ан ал ай Солон ал ай	ана 1911 — на	
	15.87								
206	14.87								
206	14.87								
208	12.87								
209	11.87			1					
210	10.87								
211	9.87								
212	8.87								
213	7.87								
214									
215	5.87	1							
216 Form GS	4.87 9901 7-26	l 2004 2.47	4 - 117	<u> </u>	<u>I</u>	I	· ·		

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OUTHE			DRILLI	NG L	OG			Hole No.	OW-1015
COI nergy so Serv	<b>MPANY</b> e Your World <sup>-</sup>		GEOLOGIC	AL SE	RVICES	· · · · · · · · · · · · · · · · · · ·		Shee	t 1 of 4
		Vogtle ALWR SSAR			1				IRF.ELEV. 220.4
OCATION		Burke County, Georgia			NATES N		550.576	E	623086.318
						Greene	· · · · · ·		CME 75
DRILLING ME		4 1/4" HSA	NO. SAMPLES		24	N	O. U.D. SAMPL	is	NA
WATER TABL		73' ELEV.			COMP.		DA		
TYPE GROUT	NA	QUANTITY	NA	MD	< <u>N</u>	Α	DRILLING ST		5/30/2005
DRILLER	Greene , Dulong	RECORDER SBearce	APPROV	/ED	NA		DRILLING CO	MP. DATE	6/3/2005
epth Ft. Elev	v. Ft. Mate	rial Description, Classification and Remar	ks	Sample No.	Star From To Ft.	ndard Penetration T Blows	est N BPF	Commer	its
0 220	0.43		4						
1 219	9.43		an an tao an						
2 218	3.43								
3 217	7.43	eren anderen eren eren eren eren eren eren ere							
4 210	3.43 Brown fine- to m	edium -grained SAND (SW)	<5% silt						
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			~070 OII						
5 21	5.43			1	3.5-5	3-9-8	17		
6 214	4.43								
7 21	3.43								
0 01	0.40								
	2.43								
9 21	1.43 Red-brown, hema	atitic clayey SAND (SC)							
10 21	0.43			2	8.5-10	8-10-13	23		
11 20	9.43								
10 00	0.40								
	8.43				n Na sa sa sa				
13 20	7.43				· · ·				
14 20		lled fine- to medium-grained	SAND		2	- -	· .		
15 20	(SP), traces of si	IT (<5%)		3	13.5-15	9-9-13	22		
16 20	4.43								
17 20	3.43								
18 20	2.43						ta ji La ta ta		
19 20	1.43 Reddish-brown	sandy CLAY (CL) sand lamin	nae are		j tu				
	light tan				10 5 00				
20 20	0.43			4	18.5-20	10-11-14	25		
21 19	9.43								
22 19	8.43								
23 19	7.43			-					•
24 19 Form GS9901	6.43		· · · · · · · · · · · · · · · · · · ·			100 B			

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SOU	THERN COMP	DRILLI					Hole No. OW-1015
	o Serve You		AL SE	RVICES			Sheet 2 of 4
SITE	Vogtie A	ALWR SSAR	0		TOTAL DEPTH	120	SURF.ELEV. 220.427
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	From To ft.	idard Penetration Te Blows	N BPF	Comments
25	195.43	Reddish-brown, sandy CLAY (CL) sand laminae are light tan	5	23.5-25	8-11-14	25	
26	194.43						
27	193.43						
28	192.43						
29	191.43						
30	a terrar	Orange-brown fine- to medium-grained SAND (SP) damp	6	28.5-30	6-7-8	15	
31	189.43						
32	188.43						
33	187.43						
34	186.43			00 F 05			
35	185.43		<b>7</b> .	33.5-35	7-7-8	15	
36 37	184.43 183.43						
38	182.43						
39	181.43					с и с	
40	180.43		8	38.5-40	6-8-14	22	
41	179.43						
42	178.43						
43	177.43						
44	176.43						
45	175.43		9	43.5-45	10-13-15	28	
46	174.43						
47	173.43						
48	172.43		1 · · .				
<u>49</u> 50	171.43	Yellowish brown sandy CLAY (CL-CH), moist	10	48.5-50	6-7-9	16	
50	169.43				6-1-0		
52	168.43						
53	167.43						
54							
55	165.43		11	53.5-55	8-11-11	22	
56	164.43		110				

Snergy t	COMP o Serve You	ANY - World GE	DRILLIN Ologica		. '			Hole No. OW-1015 Sheet 3 of 4
SITE _	vogtie A	LWR SSAR		Sample		TOTAL DEPTH		20 SURF.ELEV. 220.42
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks		No.	From To ft.	Blows	N BPF	Comments
57	163.43		•					
58	162.43							
59		Yellowish brown clayey SAND (SC) fine-graine	4					6/2/2005
		moist	<b>-</b> ,		<b>50 5 00</b>			V
60	160.43			12	58.5-60	9-12-14	26	Water Table 59.5
61	159.43							
62	158.43	Tan fine- to coarse-grained SAND (SP) saturat	od					
63	157.43	Tarrine to coarse-grained on the (or ) saturat	eu					
64	156.43						· .	
65	155.43	Yellow brown clayey SAND (SC) saturated		13	63.5-65	1-3-5	8	
66	154.43							
	-							
67	153.43						÷	
68	152.43				44 6 6 1 1			
69	151.43			н н. С				
70	150.43		1. 	14	68.5-70	5-6-9	.15	
71	149.43							
72	148.43						-	
73	147.43							
74	146.43		an a					Water Table during
							1	drilling 5/30/2005
75	145.43		4	15	73.5-75	3-11-13	26	
76	144.43				÷			
77	143.43							
78	142.43			1. 1.				
79	141.43							
80	140.43	Same as above, though orange in appearance		16	78.5-80	3-3-5	8	
81	139.43							
82	138.43							
83	137.43							
						na an Airtean		
84	136.43	Yellow brown clayey SAND (SC) saturated			00 5			
85	135.43			17	83.5-85	2-3-3	6	
86							1	
87	133.43					a a a		
88	132.43 9901 7-26-2		<del>2.4A -</del>	20	<u> </u>			

	THERN COMP	Hole No. OW-1015 Sheet 4 of 4					
SITE	Vogtle A	LWR SSAR		1	TOTAL DEPTH	12	20 SURF.ELEV. 220.42
Depth ft.	Elev. Ft.	Material Description, Classification and Remarks	Sample No.	Standa From To ft.	ard Penetration T Blows	est N BPF	Comments
89	131.43						
90	130.43	Yellow brown clayey SAND (SC) saturated	18	88.5-90	4-9-6	15	
				00.0-00	+00		
91	129.43						
92	128.43						
93	127.43	Greyish white, fine- to medium-grained SAND (SP) saturated					sand flowed up
94	126.43						into augers. used water and
95	125.43		19	93.5-95	13-26-39	65	SuperGel X to attempt to flush.
96	124.43		1				
97	123.43						
98	122.43						
99	121.43						
100	120.43	Very light tan poorly graded SAND with silt (SP-SM)	20	98.5-100	10-13-6	19	
101	119.43						
102							
	117.43						
				an a			
	1.1	Tan shelly (coarse) fine to medium grained clayey SAND (SC)					
·	115.43		21	103.5-105	8-9-16	25	
	114.43						
107	113.43						
108	112.43						
109	111.43	Greenish Gray MARL		1. 1			
110	110.43		22	108.5-110	6-12-33	45	
111	109.43						
112	108.43						Boring Terminated at 120'. Mixed
113	107.43						fluid to clean auger and stabilize hole.
114	106.43			· · .			Bentonite was additive. Approx.
115	105.43		23	113.5-115	NA	NA	the volume of the ID of 125' of 4 1/4" ID
116	104.43		1				auger was allowed to sit overnight.
<u>117</u>	103.43					1	Cleaned hole with
118							fresh water to remove mud.
119	101.43						Volume of water used in hole was
120	100.43	Boring terminated at 120'	24	118.5-120	20-30-50/3	30/ 50/3"	200 gallons.

Vogtle ALWR ESP Project

#### **APPENDIX F**

# **ABANDONMENT FORMS**

### AND

## AS BUILT WELL CONSTRUCTION LOGS

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#### WELL ABANDONMENT DATA

PROJECT:	WELL/HOLE NO:	OW-1001A
SOUTHERN ALWR ESP PROJECT	DEPTH:	100'
	HOLE DIAMETER:	~7 5/8"
ABANDONMENT BY: S&ME, Inc.	DATE ABANDONED:	6/5/2005
<b>REASON FOR ABANDONMENT:</b> This hole was drilled with incorrect size augers.	VOLUME USED:	32 cubic feet
REMARKS:		

32 bags of grout were used to abandon this hole.

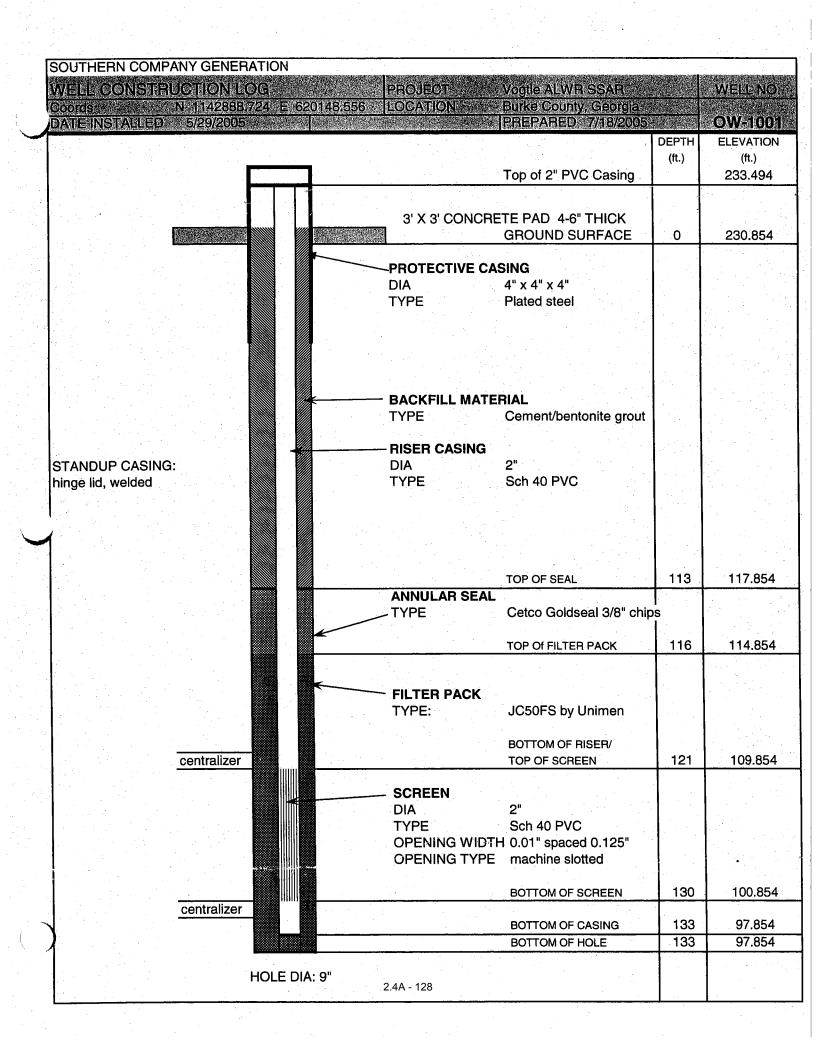
PROJECT:	WELL/HOLE NO:	OW-1002A
SOUTHERN ALWR ESP PROJECT	DEPTH:	108.5'
	HOLE DIAMETER:	~7 5/8"
ABANDONMENT BY:	DATE ABANDONED:	
S&ME, Inc.		6/5/2005
REASON FOR ABANDONMENT:	VOLUME USED:	
This hole was drilled with incorrect size augers.		35 cubic feet
REMARKS:		
35 bags of grout were used to abandon this hole.		

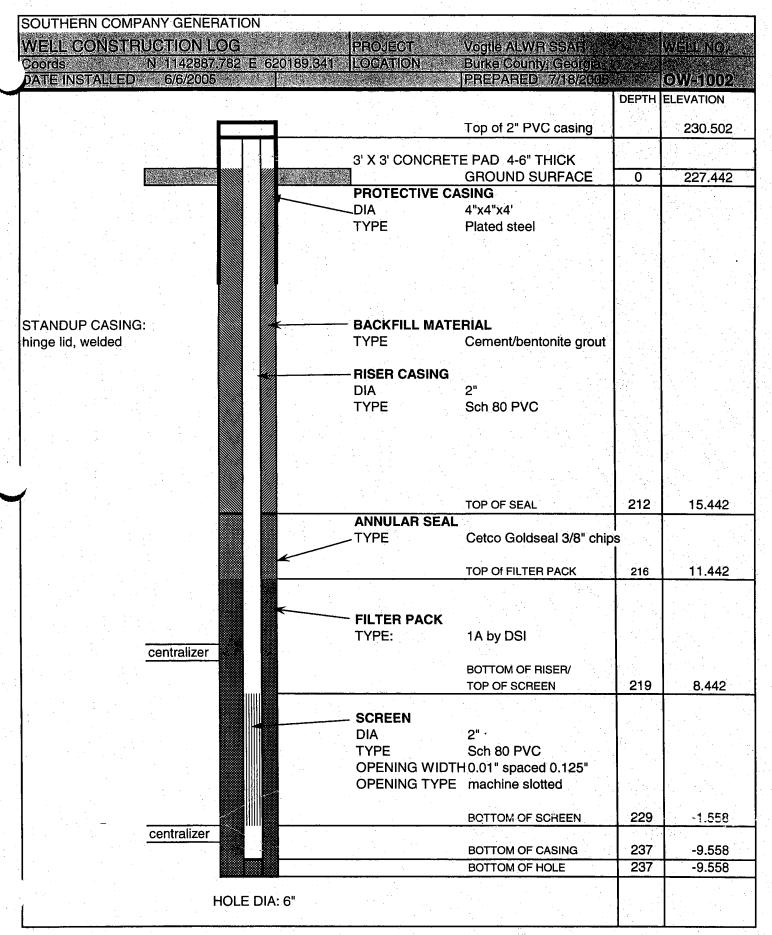
PROJECT:	WELL/HOLE NO:	OW-1003A
SOUTHERN ALWR ESP PROJECT	DEPTH:	90.00'
	HOLE DIAMETER:	~7 5/8"
ABANDONMENT BY: S&ME, Inc.	DATE ABANDONED:	5/25/2005
REASON FOR ABANDONMENT:	VOLUME USED:	
This hole was drilled with incorrect size augers.		25 cubic feet
<b>REMARKS:</b> 25 bags of grout were used to abandon this hole.		

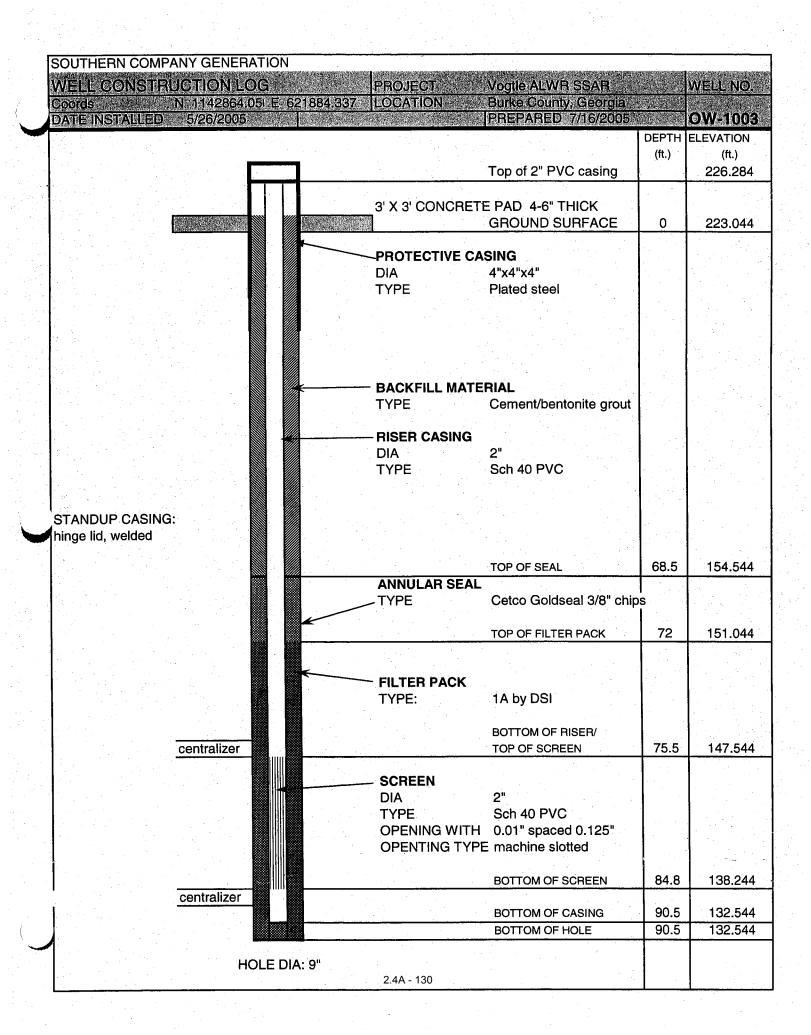
PROJECT:	WELL/HOLE NO:	OW-1006A
SOUTHERN ALWR ESP PROJECT	DEPTH:	125'
	HOLE DIAMETER:	~7 5/8"
ABANDONMENT BY: S&ME, Inc.	DATE ABANDONED:	6/5/2005
REASON FOR ABANDONMENT:	VOLUME USED:	
This hole was drilled with incorrect size augers.		40 cubic feet
<b>REMARKS:</b> 40 bags of grout were used to abandon this hole.		

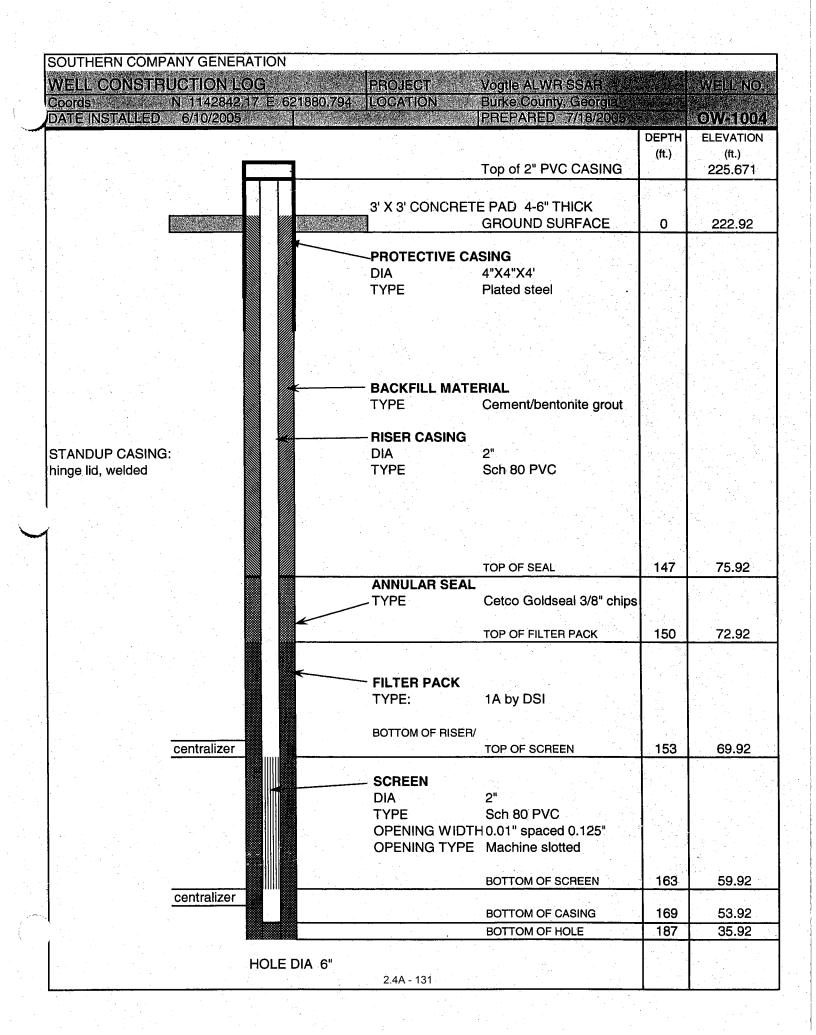
PROJECT:	WELL/HOLE NO:	OW-1005A
SOUTHERN ALWR ESP PROJECT	DEPTH:	75'
	HOLE DIAMETER:	~7 5/8"
ABANDONMENT BY: S&ME, Inc.	DATE ABANDONED:	6/5/2005
REASON FOR ABANDONMENT:	VOLUME USED:	
This hole was drilled with incorrect size augers.		25 cubic feet
REMARKS:		

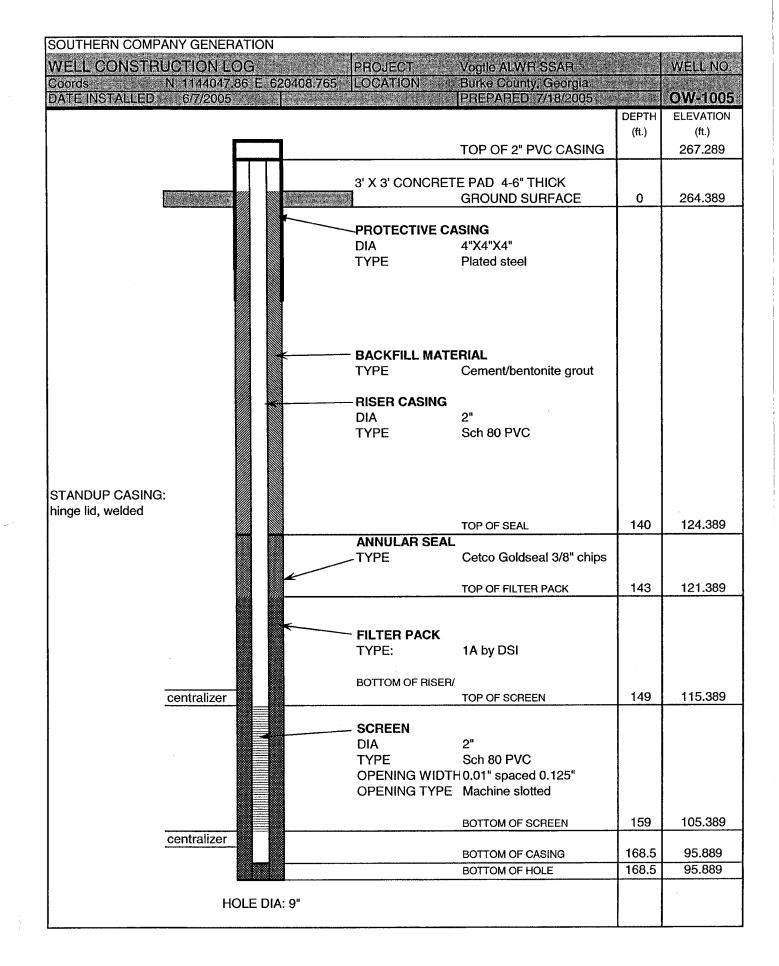
25 bags of grout were used to abandon this hole.

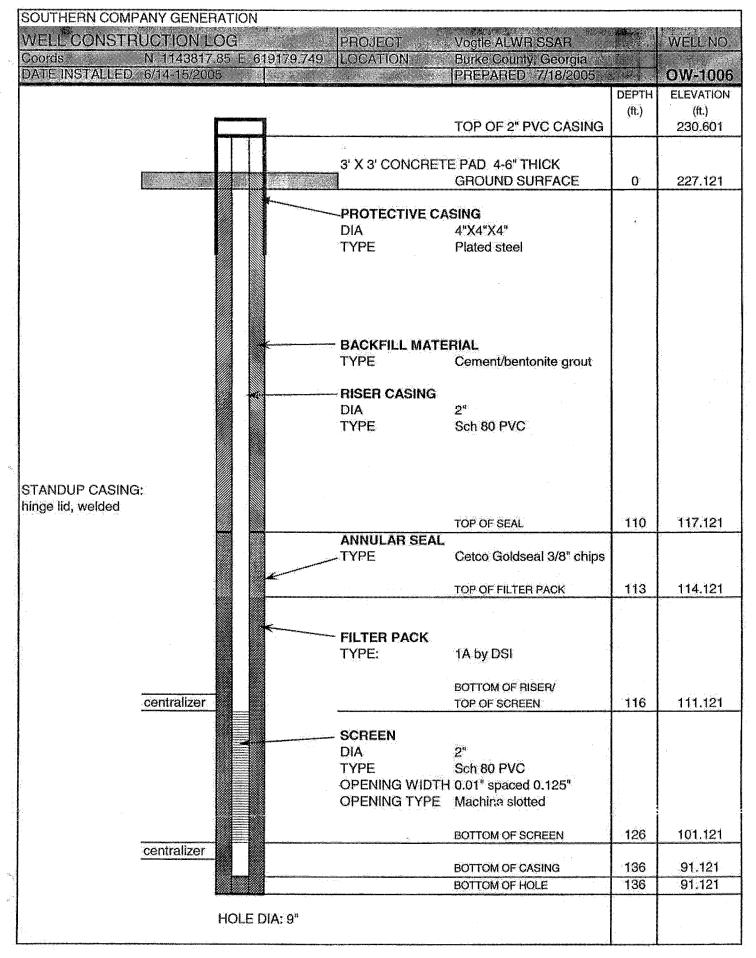


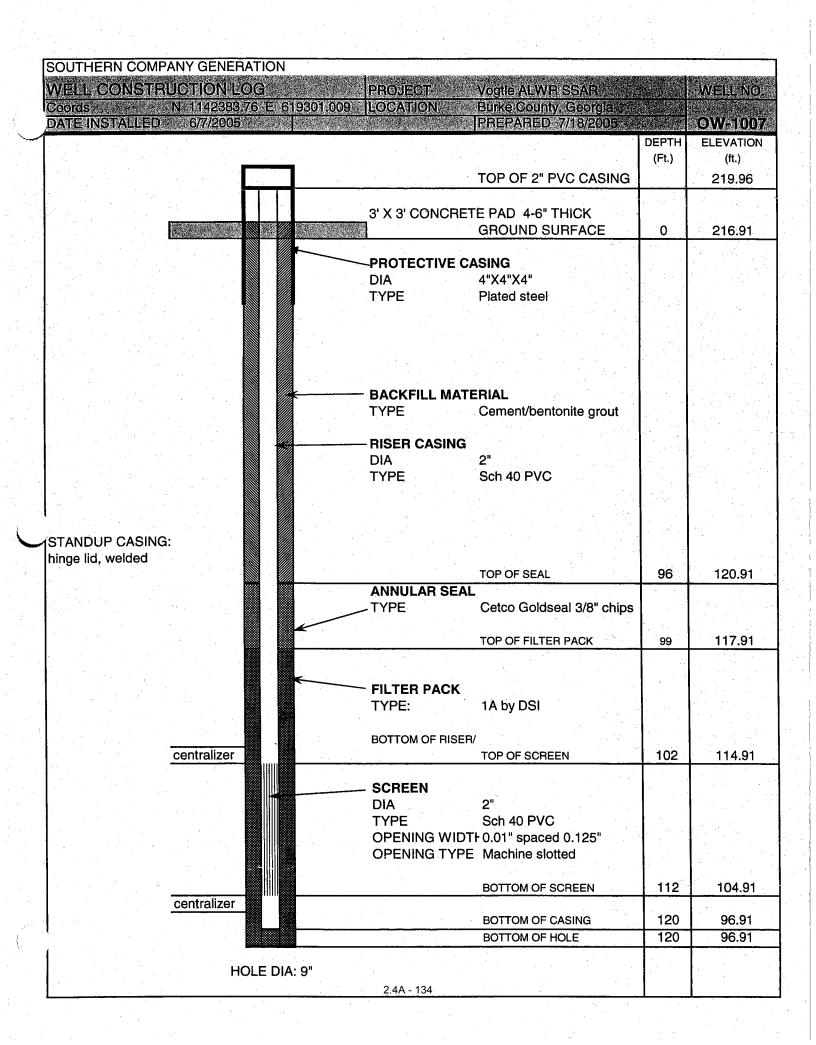


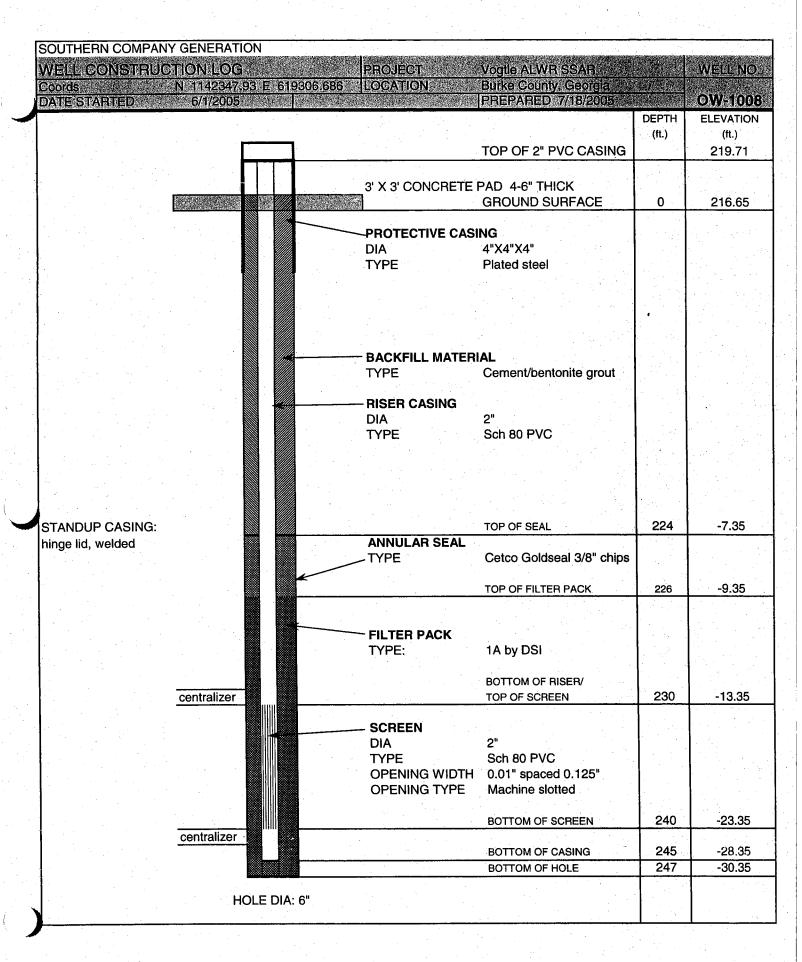


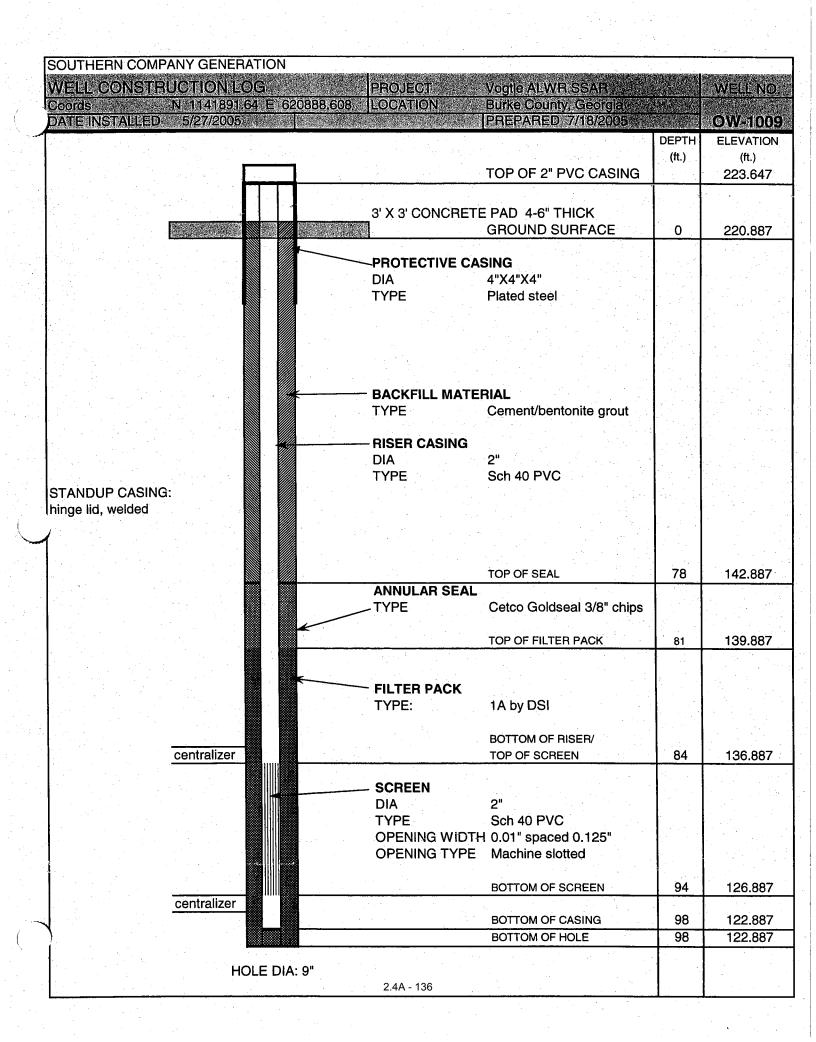


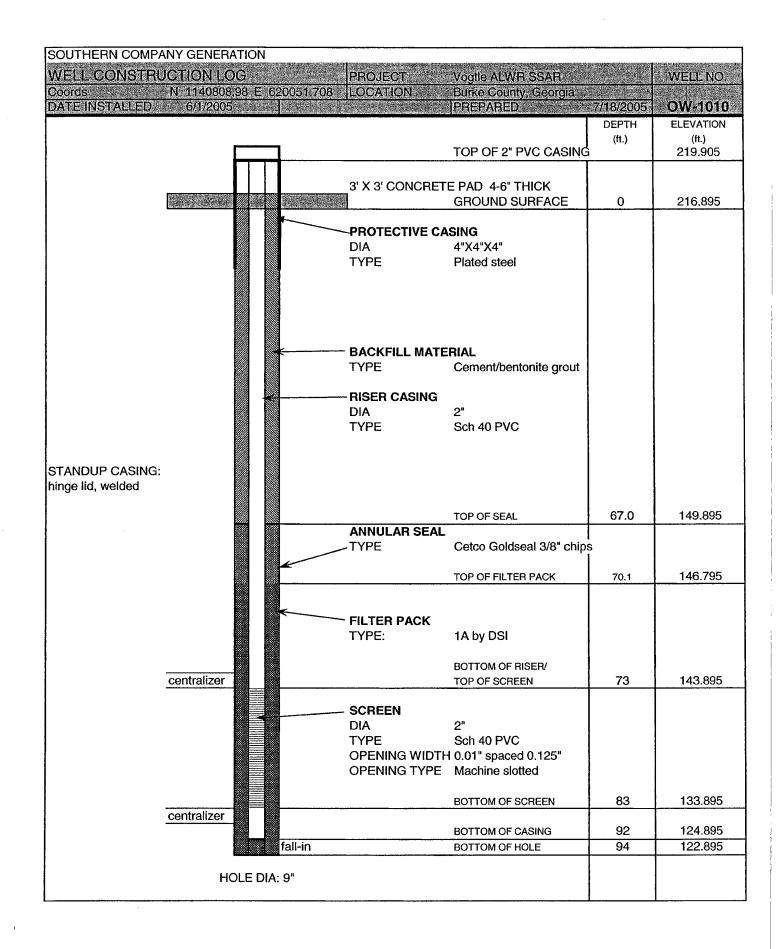






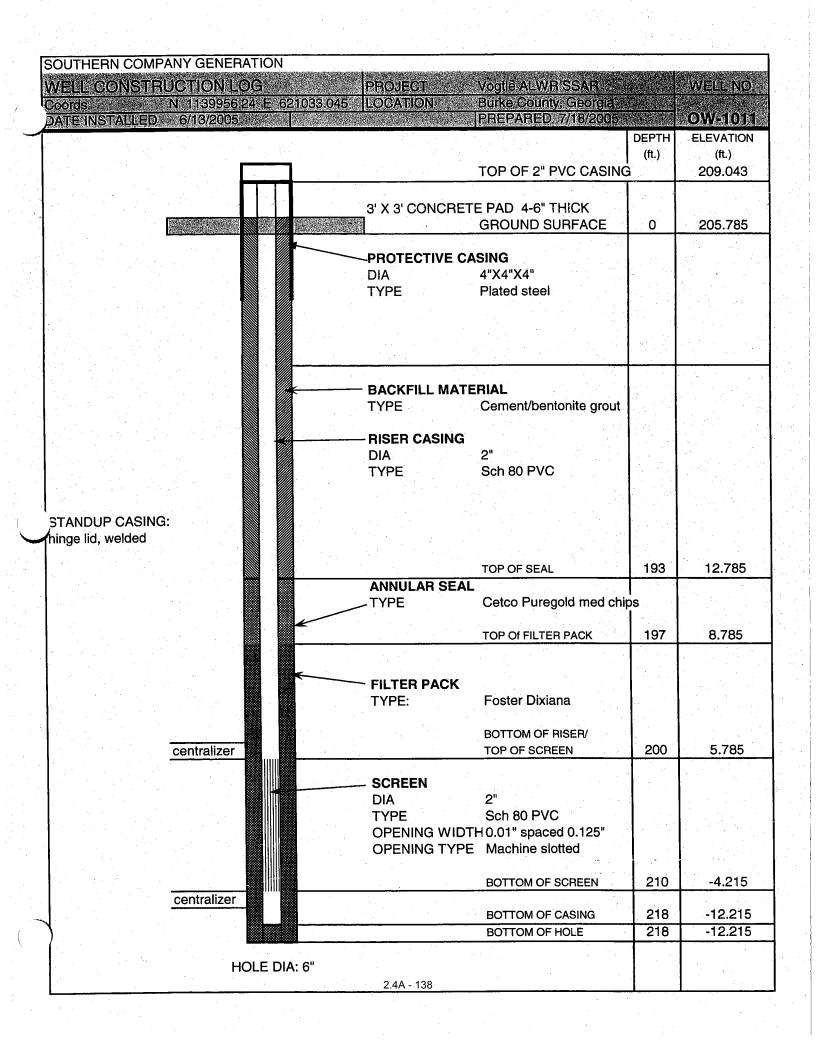


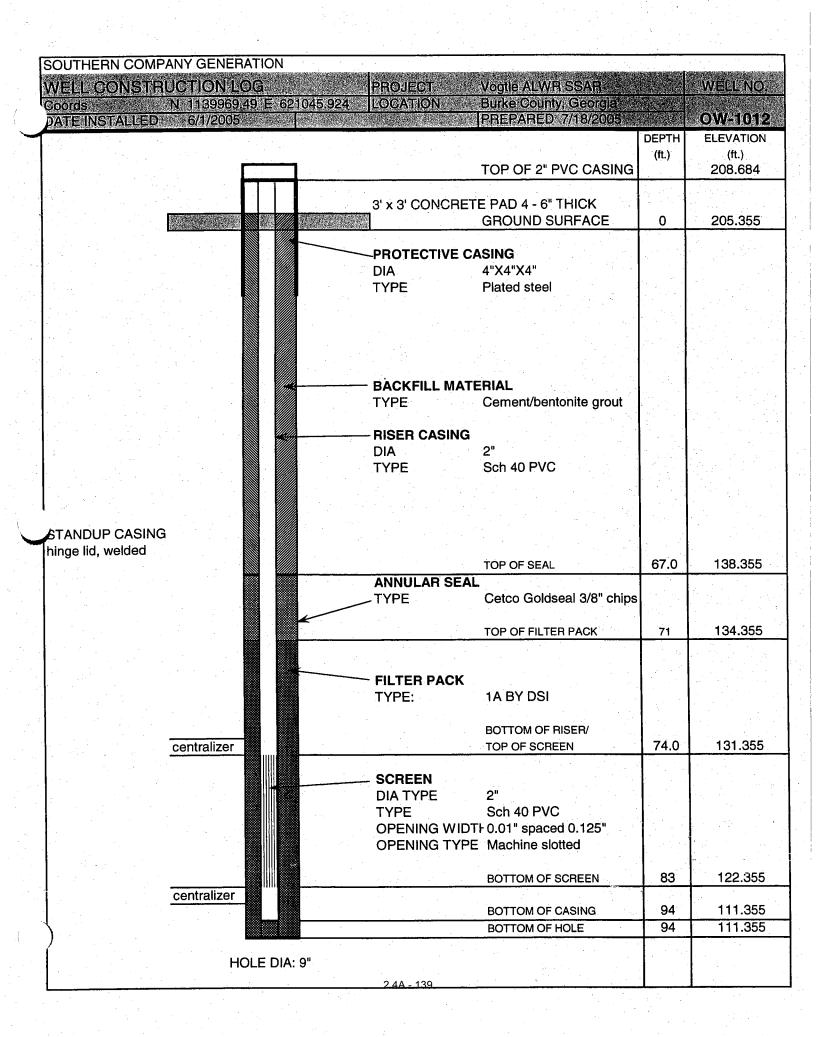


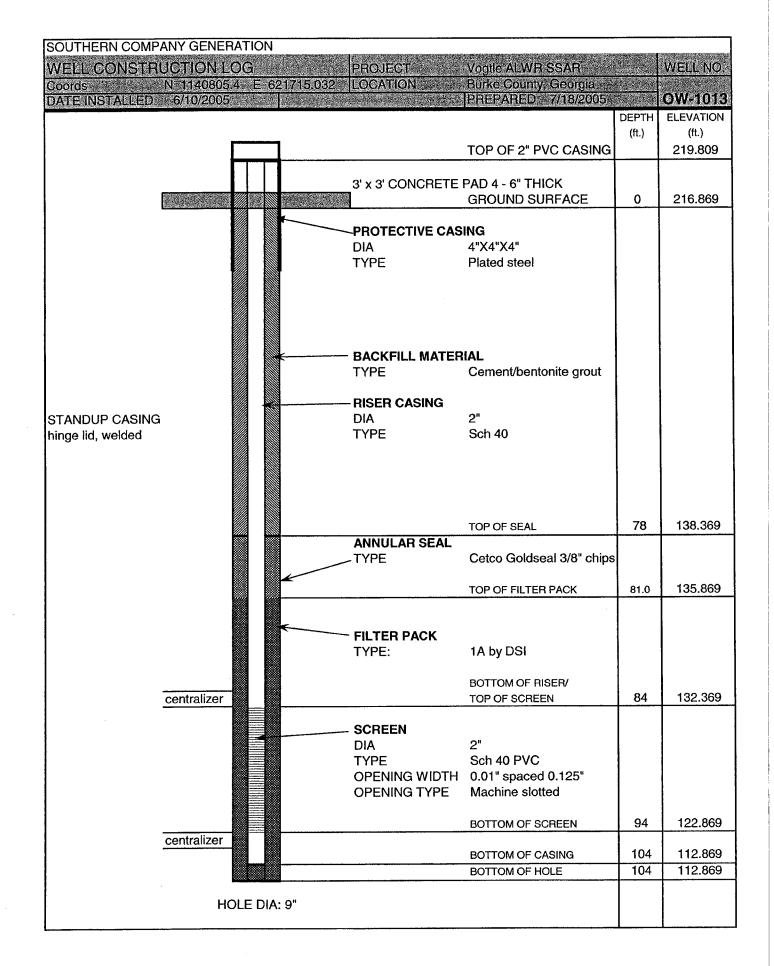


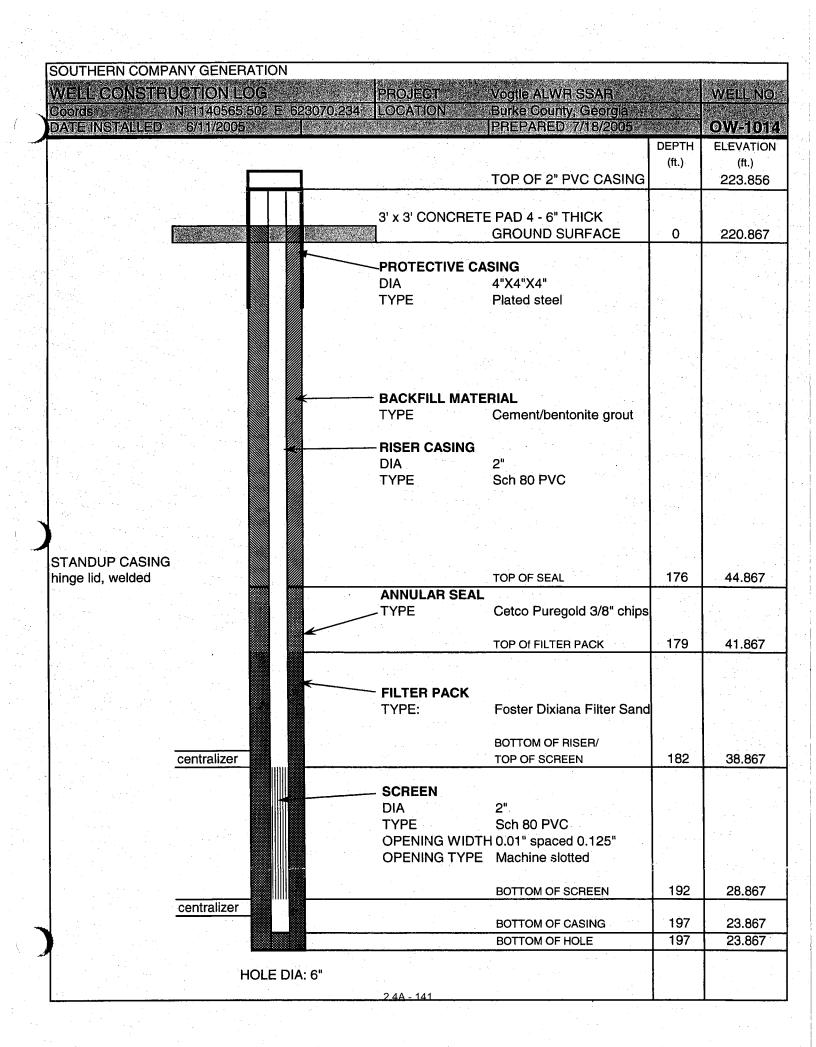
í

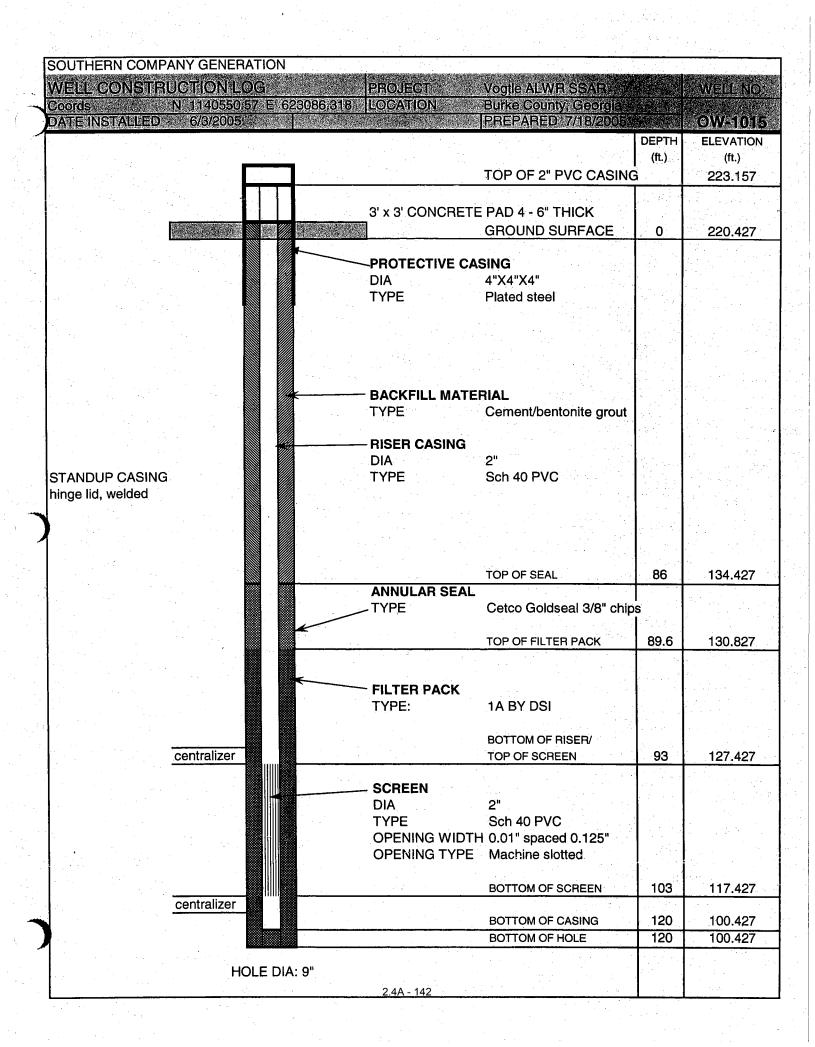
2.4A - 137











Vogtle ALWR ESP Project

# **APPENDIX G**

## WELL DEVELOPMENT FORMS

Copyright © 2005, Southern Company Services, Inc. All Rights Reserved.

ility/Project Name	County Bur	ke	Well Name	27	
Voatle STR	- Du	1			
ility/Project Name Voatle 55AR ility License, Permit or Monitoring Number					 
			Before Develo	opment After Devel	opmer
Can this well be purged dry?	es 🗆 No	11. Depth to Water			
		(from top of	a 124.85	ft.	f
Well development method:	41	well casing)			
surged with baller and balled	61				i e de la composición
surged with baller and pumper	42	Date	b. 6-2-0	٥٢ کې	
surged with block and balled	62				
surged with block and pumped	70				
surged with block, bailed, and pumped	20	Time	C. •		
compressed air	1	•			
bailed only	10	12. Sediment in we	1	inches	incl
numped only	51	bottom			1997 - P.
numped slowly	50	13. Water clarity	Clear 🛛 10	Clear 🖸 2	0
other		IJ. Water oracity	Turbid [] 1	5 Turbid 🗆 2	5
			(Describe)	(Describe)	
. Time spent developing well	min.				
. Depth of well (from top of well casing) 190.	55 ft.				1.
Depth of wen (nom of a					w
Inside diameter of well 13/4" of 1/2	" in.				
i. Inside diameter of well 13/4 OR 12					
7. Volume of water removed from well 8. Volume of water added (if any) Now	gal.	14. Total suspend solids		well is at solid waste faci mg/l	
8. Volume of Willie Allow a	·	15. COD		mg/l	
9. Source of water added /////			d by: Person's Nan	ne and Firm	
	<u>_</u>	16. Well develope		i din i ini	
10. Analysis performed on water added?	Yes X No	11MA	Relly	Sime	
		Rinio	FREDRICK	={	
(11 ycs, annou 199)		- IICR	1	1	
17. Additional comments on development:				DIC CASING	- 1
(If yes, attach results) 17. Additional comments on development: WELL COULD NOT BE PURCE PUMP WOULD NOT FIT	ed Due ?	TO DIAMETER	L SIZE OF		
PUMP WOULD NOT FIT	INTO CASI	NG.			•••••••
	ан 1910 - Салан С	an a			
and the second secon					* ** ** -
Facility Address or Owner/Responsible Party Addres	8	I hereby certify knowledge.	that the above info	mation is true and correc	
Name:			•		
		Signature:			<u></u>
Firm:		[Jignminio,			• •
		Print Name:			
<ul> <li>A second sec second second sec</li></ul>	2.4A -				•
Street:	2.47				

acility/Project Name	County Bur	tro	Well Name 142	•
Voatle 55AR acility License, Permit or Monitoring Number	<u> </u>	192		
activity LACELISE, I CHILL OF ALL				· · · · · · · · · · · · · · · · · · ·
I. Can this well be purged dry?	Yes 🗆 No		Before Development	After Development
. Can this won be purged all		11. Depth to Water (from top of	a. 70.10 ft.	DRy A.
2. Well development method:	] 41	well casing)	a. /0./0	-7
surged with bailer and bailed surged with bailer and pumped				6-15-05
surged with block and bailed		Date	b. 6-15-05	6-13-05
surged with block and pumped	- · · · · · · · · · · · · · · · · · · ·			<b>.</b>
surged with block, bailed, and pumped		Time	c. 9.130 Am	9:45A-
COMPAGE -	10		. inches	inches
bailed only pumped only	51	12. Sediment in we	l inches	Inclice
numped slowly	] 50 9 <b>10</b>	13. Water clarity	Clear X 10	Clear 20
other?		15. //	Turbid 🖾 15	Turbid C 2.5
	15 min.		(00001.00)	(Describe)
3. Time spent developing well			WATER WAS	<u> </u>
4. Depth of well (from top of well casing)	97.0 ft.		DEVELOPMENT	
4. Deput of work (	2" ' in.		+ WHEN DRY	
5. Inside diameter of well	Z ' in.		AFTER APPROX	
			1 Wai Voume	
6. Volume of water in fitter packeted well casing	4.4 gal.		REMOVED. uids were used and well is at a	olid waste facility:
		Fill in if drilling it	uios were used and wen is at a	
7. Volume of water removed from well Appley	/3. 0 gal.	14. Total suspend	ed mg/l	mg/
	Vine gal.	solids		•
8. Volume of water added (if any)	vinc 5-	15. COD	mg/l	mg
9. Source of water added //one		15. 00		
2. Domos or where a second s		16. Well develope	d by: Person's Name and Fin	n
	Ves No	TIM K		мб
10. Analysis performed on water added? (If yes, attach results)	/~		FREDRICK 39	ЛВ
and the second secon		RICIL	REDRAK (	
17. Additional comments on development:				
WELL DEVELOPED = 50 PSF OF PRES	USING AI	R ComPLES	SOR	$\frac{1}{2} \sum_{i=1}^{n-1} \frac{1}{i} \sum_{i=1}^{n-1$
~ 50 ACT OF POTS	SURG AT	Bottom OF	WEL	
~ JO POL OF TREE	0000			
Facility Address or Owner/Responsible Party Add	iress	I hereby certify knowledge.	that the above information is	true and correct to the best
Name:			•	
		Signature:		
Firm:		U.B.I.S.I.S.		
		Print Name:		
Street:	2.4A -			
City/State/Zip:	·····	Firm:		

ility/Project Name	County Bur	ko	Well Name 179	
LOGHLE 55AR cility License, Permit or Monitoring Number	Du			
Can this well be purged dry?	Yes 🛛 No	11. Depth to Water	Before Development	After Development
		(from top of	17717 4	Dun A
Well development method:		well casing)	a. 127.17 ft.	Dry A
surged with bailer and bailed	41			
surged with bailer and pumped	61		b. 6-15-05	6-15-05
surged with block and bailed	42	Date	D. 4-10-05	4-10-00
surged with block and pumped	62		•	
surged with block, bailed, and pumped	70			م مسرم بسیر و و م
	20	Time	c. 11:40 Am	11:55 A-
compressed air	10			tinker.
bailed only	51	12. Sediment in well	inches	inches
pumped only	50	bottom		_ 4
pumped slowly		13. Water clarity	Clear 🔲 10	Clear 🙇 20 Turbid 🗆 25
other			Turbid 📜 15	
	O min.		(Describe)	(Describe)
3. Time spent developing well			Stighty Turbid	WATER BECAM
	o i a' a			MORE CLEAR
4. Depth of well (from top of well casing) /33	3.62' ft.			AFTER 3 WELL
	2" ' in.			VOLUMES REMOV
5. Inside diameter of well	/ m.			
6. Volume of water in filten packaged well	O gal.			
casing / ·	. (/ gai.	Till in if drilling flui	ids were used and well is at :	solid waste facility:
		FILL IN IL CLUTTER FOR		
7. Volume of water removed from well Appen 3 8. Volume of water added (if any)	3.0 gal.			mg
7. Volume of water for both Append	<b>.</b>	14. Total suspende	••	
8. Volume of water added (if any), Ko	ne gal.	solids		
	~ <b>~</b>	15. COD	mg/l	mg
None		15.00	/	
9. Source of water added			L Manual Ele	
i de la companya de Esta de la companya d			by: Person's Name and Fin	
10. Analysis performed on water added?	Yes No	Tim Ker	$\Psi$ ) $e_{\perp}$	1-
IV. Analysis performed in		1 1	main (SSM	E
(If yes, attach results)		KICK FRG	W EORICK SSAN	
17. Additional comments on development:				
		OM PRESSOR		

Facility A	ddress or Owner/Responsible Party Address	I hereby certify that the above information is true and correct to the best of n knowledge.
Name:		Signature:
Firm:		Print Name:
Street: City/Stat	e/Zip:	Firm:

--

s ...

	County		Well Name	179	
Facility/Project Name	Bur	ke		[ ] ] ]	
Facility License, Permit or Monitoring Number					
acility License, I chille of here				<u> </u>	
			Before Dev	elopment Afte	r Development
1. Can this well be purged dry?	T Yes 🗆 No	11. Depth to Water			
		(from top of	. 127	, 26 fl.	ft.
2. Well development method:	- 41	well casing)			
surged with bailer and bailed				1	
surged with bailer and pumped		Date	ъ. 4-	1-05	
surged with block and bailed					
surged with block and pumped		a series and the series of the		•	
surged with block, bailed, and pumped	20	Time	с.		
compressed air	□ 10		.11	inches	inches
bailed only pumped only	51	12. Sediment in we bottom	<b>m</b>		
pumped only pumped slowly	□ <u>50</u>	13. Water clarity	Clear 🛛	10 Clea	r 🖸 20
other		13. Water clarity	Turbid	15 Turt	oid 🗖 2.5
0,00			(Describe)	(Des	cribe)
3. Time spent developing well	min.		1		
	133.62' fl.				
					• •
	3/4 02 1/2 in	ing an the state			
5. Inside diameter of well	79 02 (10 -		· · · · · · · · · · · · · · · · · · ·		
. Give made and well					<u> </u>
6. Volume of water in filter pack and well	gal.			- d moll is at solid	waste facility:
casing		Fill in if drilling f	luids were used	and well is at solid	
7. Volume of water removed from well	gal.		1nd -	∽ mg/l	mg/
7. Volume of water removed near the	1 -	14. Total suspen solids			
8. Volume of water added (if any)	ONE gal.	80103	· · · · ·	•	an a
8. Volume of Here		15. COD		mg/l	mg
9. Source of water added			6		Constraint and the
		16. Well develop	ed by: Person's	Name and Firm	
Photo:	Yes No	Tim	Kay	SSIME	
10. Analysis performed on water added?	<u> </u>	0	Enning	( > 140	
(If yes, attach results)		RIEK	PREDAICA	<u></u>	
17. Additional comments on development:				- 10	0 11-
17. Additional comments on development: WELL COULD NOT BE	0 - 25	TO DIAMETE	R SIZE	OF PVC	CASIN C
WITH COULD NOT BE	PURCES WE	10		the second second	
PUMP WOULD NOT F	TT INTO CAS	NG.	1		, example and
pump woold			ан. 1917 - Дана Сана Сана Сана Сана Сана Сана Сана		•
					and correct to the bes
Facility Address or Owner/Responsible Party A	Address	I hereby certif	y that the above	information is true	and correct to the bes
		knowledge.			
Name:					
$\frac{1}{2}$ , $\frac{1}$	n an the second seco	Signature:			
) Firm:					
		Print Name:			
Street:	2.4A -			•	
		Firm: -			

ility/Project Name	County Ru	rke	Well Name	803 A	
Voatle 55AR					
ility License, Permit or Monitoring Number					
	······································				
It he surred dry?	Yes 🗆 No		Before Deve	elopment Al	ter Development
Can this well be purged dry?		11. Depth to Water			• • • • •
me to the internet method:		(from top of	a. 60.2	3 ft.	Day: A
Well development method: surged with bailer and bailed	41	well casing)			
surged with bailer and pumped	61		b. 5/26	lor	Day: # 5/20/05
surged with block and bailed	42	Date	b. 7/20/	43	7- 1
surged with block and pumped	62				
surged with block, bailed, and pumped	70		c. 2:3e		3:00 pm
compressed air	] 20	Time	c. 2:3e	, ym	
bailed only	] 10		097	inches	89.20 inch
pumped only	ζ 51	12. Sediment in we			
numped slowly			Clear 🛛	10 Cl	ear 🖸 20
other	3 101	13. Water clarity	Turbid C		rbid 🗖 25
			(Describe)		scribe)
. Time spent developing well	30 min.			21 D ( MAINA	TURBID (C)
		and the spin second		<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	
. Depth of well (from top of well casing)	59,20' ft.				
. Inside diameter of well	<b>Z</b> '' in.		· · · · · · · · · · · · · · · · · · ·		
5. Volume of water in filter partrand well	4.7 gal.				
casing	4.7 gal.	Fill in if drilling fl	wide were used a	nd well is at soli	d waste facility:
		Fill In it drining is			
7. Volume of water removed from well	2. gal.	14. Total suspend		mg/l	
		solids	~	•	
8. Volume of water added (if any) $\mathcal{N}c$	NE gal.	Jonas			
Nono		15. COD		mg/l	-
9. Source of water added	······································			1	
		16. Well develope	d by: Person's N	ame and Firm	
	Ves No	Tim KE	uy - 5	SEME	
10. Analysis performed on water added?			EORICK -	CME	
(If yes, attach results)		KICK TA	EDRICK -	3	
1 1					
17. Additional comments on development:	. D. )				
Man 3 Well Volume may A Wall Volumes	s kegnied	1 ) let	Domo	ACAIT	
no A wold Volumes	Removed	(Dry) is	Para		
May A Walt Volumes Noted : Pump Rate	~ 100	ellin ser	min		
Ntd Tump Rate	~2.07			0	10
	1.	2:00 pm to	4:30 pm	4g1	36
Allowed well to recha	se pan	<u>3:00 pre 10</u>	the shows in	formation is true	and correct to the b
Facility Address or Owner/Responsible Party Add	ress	I hereby certify knowledge.	that the above m		
		Kilowicuge.			
Name:					
		Signature:			
Firm:	·				
	24A	Print Name:			
Street:					

Facility/Project Name 554 A	County Bur	ke	Well Name 803 A	
Facility/Project Name 55AR				
Facility License, Permit or Monitoring Number				<u> </u>
	A		Before Development A	fter Development
1. Can this well be purged dry?	Yes 🗆 No	11. Depth to Water (from top of	1.0.30' 0	Drum +
		well casing)	a. 601.00 ft.	<u> </u>
2. Well development method:	<b>1</b> 41	wen casing)		. /
surged with bailer and bailed	61		b. 5/26/05	5/26/05
surged with bailer and pumped		Date	b. 1/20/00	5/00/00
surged with block and bailed	62 ·			
surged with block and pumped	<b>D</b> 70		c. 4:30	4:50
surged with block, balled, and pumper	<u> </u>	Time	c. 4:30	<b>*</b>
compressed air			ell 89.20 inches	89.20 inches
bailed only	51	12. Sediment in w	ell 89.20 inches	
pumped only	<b>D</b> 50	bottom		-
pumped slowly		13. Water clarity		Clear D 20 Turbid A 25
other				
	10			Describe)
3. Time spent developing well	20 min.		Trichid (cloud)	Turnid (cland
<b>J.</b> This open-	00-01-0			
4. Depth of well (from top of well casing)	89.20' A.			
5. Inside diameter of well	2" 'm.			
5. Inside diameter of weat				
6. Volume of water in filter preloand well	11-1			
6. Volume of water in-	4.7 gal.		a the second and well is at s	olid waste facility:
casing	• •	Fill in if drilling	fluids were used and well is at s	
1 <b>A</b>	2.0 gal.			mg/
7. Volume of water removed from well	~ ~ ~	14. Total suspen	nded mg/l	
	Non gal.	solids		
8. Volume of water added (if any)	Mai-C a		mg/l	mg
Nono	· · · ·	15. COD		
9. Source of water added				
		16. Well develo	ped by: Person's Name and Firm	1
	Ves No			
10. Analysis performed on water added?	U /~		÷	
(If yes, attach results)				
17. Additional comments on development: Min of 3 well Volus Max of 4 removed Note! Pump Rote	D -	ſ		
min of 3 well Volus	mes require	e	- OMENT	an a
1		J DEU	ECOPMEN	
Mar 14 remode	(org)			
1 B RATE	~ 2,0° galle	n per ma	-,	•
Note! FUMp mic			Pazoz2	<b>)</b>
				and example to the bes
Facility Address or Owner/Responsible Party A	ddress	I hereby certi	fy that the above information is t	rue and correct to the bes
raciiity Address of Ormen Adoptement		knowledge.		
Neme			•	
Name:	- **	<b>.</b>		
\ <b></b>	· · · ·	Signature:		
) Firm:				
		Print Name:		•
Street:		49		· · · · · · · · · · · · · · · · · · ·
	·	Firm:		
City/State/Zip:			and the second	

1 \_\_11 \_\_\_\_ and a

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Facility/Project Name	County D	Well Name 804
11-110 55/FR	Bur	ice
Facility License, Permit or Monitoring Number		
		Before Development After Development
1. Can this well be purged dry?	FJ Yes X No	11 Denth to Water
		(from top of a $62.3i'$ ft. $63.10'$ ft.
2. Well development method:		well casing)
surged with bailer and bailed		6-1-05
surged with bailer and pumped	□ 61 □ 12	Date b. $6 - 1 - 05$ $6 - 1 - 05$
surged with block and bailed		
surged with block and pumped	D 62	Alatan 5:05 pm
surged with block, bailed, and pumped	□ 70 □ 20	Time c. 4:45 pm 5:05 pm
compressed air		
bailed only		12. Sediment in well inches inches
pumped only	∑ 51 □ 50	bottom
pumped slowly		13. Water clarity Clear 10 Clear 10 20
other		Turbid 🖬 15 Turbid 🗆 25
	20 min.	(Describe) (Describe)
3. Time spent developing well		VERY CLOUDY WATER CLEARED
• 11	95.09° ft.	AFTER APPRAL
4. Depth of well (from top of well casing)		I WELL VOLUME
· · · · · ·	2" in.	Kemares.
5. Inside diameter of well		
6. Volume of water in Emperators well	40	
6. Volume of water in and a second	5.3 gal.	
Casing		Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well	16.0 gal.	14 Total suspended mg/l
7. Volume of water femoved near the		14. Total suspended
8. Volume of water added (if any)	NONE gal.	solids
8. Volume of water access (		15. COD mg/l mg/l
9. Source of water added 1000		
3. Bomos or ment 4		16. Well developed by: Person's Name and Firm
10. Analysis performed on water added?	I Yes X No	Tim Kerry & SaME
(If yes, attach results)		RICK FREDRICK
		11100 110000
17. Additional comments on development:		
R Jacumes	REMOJED	· 이상 · 이상 · 이상 전체에서 이상 · 이상
O were voeines		
3 WELL JOLUMES PUMP RATE = 1.1	agal per n	nem.
FUMP KATE ~		
	- 	
		I hereby certify that the above information is true and correct to the best
Facility Address or Owner/Responsible Party	Address	
		knowledge.
Name:		

Print Name:

Firm:

Z.4A - 150

Street:

City/State/Zip:

acility/Project Name	County Bur	ko		805 A	
1/1/1/57/TR	Dur	1~ <u>C</u>			•
acility License, Permit or Monitoring Number					
					D1
. Can this well be purged dry?	Yes No No	a a D d to Weter	Before Deve	lopment Att	er Developmer
. Can this well be purged all t		11. Depth to Water (from top of	- 7/7/	09 A.	78,20' f
2. Well development method:		well casing)	a. /'/.C		
surged with bailer and bailed	41				6-1-05
surged with bailer and pumped	61	Date	b. 6-1	-05	6-1-05
surged with block and bailed	42	Daw			
surged with block and pumped				and the second sec	
surged with block, bailed, and pumped		Time	c. 6:6	io pm	7:15p
compressed air	·	The	•		na ana <b>a</b> na. Ang ana ana ana ana ang ang ang ang ang a
bailed only		12. Sediment in wel	1	inches	inch
numped only	•	bottom			
numped slowly		13. Water clarity	Clear		ar 13 20
other		13. Water Claring	Turbid		bid 🖸 25
			(Describe)		scribe)
3. Time spent developing well	55 min.	e de la companya de la	GRAN	Calad (	LOAR APTE
			VERY TT		WELL VOL
4. Depth of well (from top of well casing) /27	7.0 fl.		Veryin		conover.
4. Depth of wen (nom wp of and					
5. Inside diameter of well	2" in.				
6. Volume of water in filterpretented well	8.0 gal.		-		
casing	···· ···	Fill in if drilling flu	uids were used ar	d well is at solid	waste facility:
	110				11 - La 🖌 🚽 🗸 🖉
7. Volume of water removed from well	24.0 gal.	14. Total suspend	ed be	mg/l	Г
	1	solids			• • • • • • • • • • • • • • • • • • •
8. Volume of water added (if any)	one gal.		<u> </u>	1 1 <u>1</u>	
Nono		15. COD		mg/l	
9. Source of water added			6		<
	•	16. Well develope	d by: Person's N	ame and Firm	
	Ves No	Tim k			A
10. Analysis perionited on water detert	LI TES PALINO			C S <n< td=""><td>ΛE</td></n<>	ΛE
(If yes, attach results)		Vinit E	eptick	ZSin	
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	/	
17. Additional comments on development:					
	REMOVES	5			
O were vocornes		<b>A</b> .			
		1			
$\beta = \alpha - \alpha / \alpha$	a cal De	i mi	· · · ·	1	
PUMP RATE 21.8	ogal pe	e me			•
3 WELL VOLUMES PUMP RATE 2 1.8	ogal pe	r mt-			
		I hereby certify	that the above in	formation is true	and correct to the
Facility Address or Owner/Responsible Party Address			that the above in	formation is true	and correct to the l
Facility Address or Owner/Responsible Party Addr		I hereby certify	that the above in	formation is true	and correct to the
		I hereby certify knowledge.	that the above in	formation is true	and correct to the
Facility Address or Owner/Responsible Party Addr Name:		I hereby certify	that the above in	formation is true	and correct to the l
Facility Address or Owner/Responsible Party Addr		I hereby certify knowledge. 	that the above in	formation is true	and correct to the l
Facility Address or Owner/Responsible Party Addr Name:		I hereby certify knowledge. 	that the above in	formation is true	and correct to the l

SCS Field Form

MONITORING WELL DEVELOPMENT Gallons por foot 0.163

acility/Project Name Vogfle 55AA	County Bur	ke	Well Name 809
acility License, Permit or Monitoring Number			
•			
	El Yes X No		Before Development After Development
. Can this well be purged dry?		11. Depth to Water	
2. Well development method:		(from top of well casing)	1.50 A. 71.66 A.
surged with bailer and bailed	a □ 41 a a a a	wen casing)	
surged with bailer and pumped	D 61	<b>D</b> -44	b. 5/26/05 5/26/05
surged with block and bailed	<b>4</b> 2	Date	
surged with block and pumped	<b>6</b> 2	1	
surged with block, bailed, and pumped		Time	c. $1.45$ pm $2.00$ pm 94.35' (See INSP. Paper 7) 11 - 93.00' inches inches inches
compressed air			OA 35 ( SEE INSP. PAPORT)
bailed only	□ 10 ► 51	12. Sediment in we	11 94,55, inches inches
pumped only	∑ 51 □ 50	bottom	-135 1.35
pumped slowly		13. Water clarity	Clear $\Box$ 10 Clear $\boxtimes$ 20
other			
•	20 min.		(Describe)
3. Time spent developing well	~ _		SUGHTLY CLEAR
(pring)	93.00ft.		TURBID
4. Depth of well (from top of well casing)	10.00		
5. Inside diameter of well	2'''in		
5. Inside diameter of work			
6. Volume of water in fine pick and well			
casing	3.5 gal.	T'IL :- if duilling fl	uids were used and well is at solid waste facility:
		LIII III II GITTIINE II	
7. Volume of water removed from well	20 gal.	14. Total suspend	ed mg/l mg/
		solids	
8. Volume of water added (if any)	None gal.		
Alono		15. COD	mg/l mg/
9. Source of water added			0
		16. Well develope	d by: Person's Name and Firm
10. Analysis performed on water added?	I Yes X No	Tim	KELLY 2 SEME, INC
(If yes, attach results)			FREIDRICK STITE, INC.
n an an an an an ann an Anna a Anna an Anna an		K/CK	FREDRICE
17. Additional comments on development:			
MIN. 3 Well Volu MAX. 6 Wall Volu	MES REQUIRED		
in Coordination	IMES REMOJET	<b>N</b>	
MAX 6 Well Vola NOTED : POMPE		11.	
Pin DE	ATE = 2.0	gallm P	er MIN.
NOTED . FOMIT			
	Address		that the above information is true and correct to the best
Facility Address or Owner/Responsible Party	Address	I hereby certify knowledge.	
•	e de la companya de l	- MIOWICAGO.	
Name:			
Firm:		Signature:	
Street:		Print Name:	
	<u> </u>		
City/State/Zip:		Firm:	

**11** ......

cility/Project Name 1/0 afle_55AR	County But	rke	Well Name BSO	A
cility License, Permit or Monitoring Number				
		and the second sec	Before Development	After Development
Can this well be purged dry?	Yes D No	11. Depth to Water (from top of		125.26° ft.
Well development method:	· · · · · · · · · · · · · · · · · · ·	well casing)	a. 124.70 m.	100,00 11
surged with bailer and bailed	] 41	Well casing)		
surged with bailer and pumped	] 61		b. 6-2-05	6-2-05
surged with block and bailed	] 42	Date	D. (1-C-US	
surged with block and pumped	] 62			
surged with block, bailed, and pumped	70	a <u>a</u> n airte an	c. 3:15 pm	4:10 pr
compressed air	20	Time	c. 3.15 pm	
bailed only			inches	inche
pumped only	2 51	12. Sediment in wel	1	
pumped slowly	50	bottom	Clear 10	Clear 1 20
other?		13. Water clarity	Turbid 1 15	Turbid D 25
			(Describe)	(Describe)
	5'5 min.			
3. Time spent developing			Scientry TURAN	2 gellons
4. Depth of well (from top of well casing)	93,21' ft.			REMOVED.
4. Depth of wen (nom up of the boot of the				<u>Kemereo.</u>
5. Inside diameter of well	2" in.			· · · · · · · · · · · · · · · · · · ·
• <u>• • • • • • • • • • • • • • • • • • </u>				•
6. Volume of water in femaparization well casing	//./ gal.	Eill in if drilling flu	uids were used and well is at	solid waste facility:
	00 1 .	LIU II II di dining m		
7. Volume of water removed from well	33,4 gal.	14. Total suspende	ed mg/	
		solids		
8. Volume of water added (if any)	ente gal.			
1 com a		15. COD	mg	п
9. Source of water added				
		16. Well develope	d by: Person's Name and Fin	m
-3.3-30	Yes No	TIM K	BIN \	1
10. Analysis performed on water added?			auf 15	ME
(If yes, attach results)		Kick	FRORICK 3	/
17. Additional comments on development:				
Bomp RATE #1	Remove	=ð		
Ψ —				
Min O KATE 21	OGal P	er mar.		
	•			
Facility Address or Owner/Responsible Party Add	ress	I hereby certify	that the above information is	true and correct to the b
Facility Addiese of Contract .		knowledge.		
Name:			•	
		Simo		
Firm:		Signature:		
		Print Name:	en e	· · · · · · · · · · · · · · · · · · ·
Street:				
	2.4A -		•	
City/State/Zip:		Firm:		

Sility/Project Name		ounty But	-ke	Well Name	852	
Vogtle STAR	+-					
cility License, Permit or Monitoring Number		•				
	T Yes	N No		Before Dev	velopment Aft	er Development
Can this well be purged dry?	E Yes		11. Depth to Water		,62' <sub>ft.</sub>	96.13' ft
Well development method:	÷.		(from top of well casing)	8. 00	(06 fl	/ψ.•υ π.
surged with bailer and bailed	<b>1</b> 41	and the second	well casing)	and the second second		
surged with bailer and pumped	61			b. 6-2	- 05	6-2-05
surged with block and bailed	□ 42		Date	D. 4 -		
surged with block and pumped	62					
surged with block, bailed, and pumped	0 70	n de la compañía de l Compañía de la compañía		in	10 Am	11:40 AV
compressed air	20		Time	c. /C'.	10 1111	
bailed only	□ 10	E E		n	inches	inches
pumped only	51		12. Sediment in we	LL L		
pumped slowly	<u> </u>		bottom	Clear	10 Cle	ar 12 20
other	<u>)</u> ⊠ 🔛	1	13. Water clarity	Turbid <b>C</b>		bid 🔲 25
			and the second sec	(Describe)		scribe)
. Time spent developing well	90	min.		· · · ·		
4. Depth of well (from top of well casing)	221.6	∃ ft.			مید: « <u>میشند. بر منبود.</u> میرون م <u>تصور بر میرون</u>	
	2	'. in			• •	
5. Inside diameter of well	-					
<ul> <li>6. Volume of water in Element is well casing</li> <li>7. Volume of water removed from well</li> </ul>	21. 65 None	gal.	Fill in if drilling fl 14. Total suspend solids		and well is at solid mg/l	waste facility:
8. Volume of water suiter (it mil)	/00.000	<b></b>	15. COD		mg/l	mg
9. Source of water added				11 Demonial	Jame and Rigm	
			16. Well develope			
10. Analysis performed on water added?	Ye 🗋	s X No	Tim KE	ry	LSEM	E
(If yes, attach results)			RICK F	REDRICK	<u> </u>	
17. Additional comments on development:						
3 WELL VOLUMES	REMO	JEA				
						· · ·
PIMP RATE & 1.	Dan	1 per	Ain.			
PUMP PATE RT.	- /-	/ p-				•
						and correct to the bes
· · · · · · · · · · · · · · · · · · ·	ddress		I hereby certify knowledge.	that the above i	Monmation is due	and correct to the bes
Facility Address or Owner/Responsible Party Ad			MICHICIEC.			
Facility Address or Owner/Responsible Party Ad						
			Signature:			

City/State/Zip:

Facility/Project Name	County D	rke Well Name 853
1/2 1/2 57/TR	Du	rive 1
Facility License, Permit or Monitoring Number		
		Before Development After Development
1. Can this well be purged dry?	El Yes No	
1. Can this were to parate	• • • • • •	11. Depth to Water (from top of a 124, 50 ft. 124.62 ft.
		(from top of a. 124, 50 ft. 124.62 ft. well casing)
2. Well development method: surged with bailer and bailed	<b>□</b> 41	
surged with baller and pumped	D 61	Date b. 6-1-05 6-1-05
surged with bailer and pumped	<b>4</b> 2	Date b. $(p - 1 - 0.5)$
surged with block and bailed	□ 62	
surged with block and pumped	□ 70	12:20 pm 1:25pm
surged with block, bailed, and pumped		Time c. 12:30 pm 1:25 pm
compressed air		
bailed only		12. Sediment in well inches inches
pumped only		bottom
pumped slowly		13. Water clarity Clear 10 Clear 20
other		Turbid 🖬 15 Turbid 🗆 25
		(Describe) (Describe)
3. Time spent developing well	55 min.	SLIGHTLY CLEAR AFTER
3. Time spent coveres	····	TURBID = 2 gollows Ra
4. Depth of well (from top of well casing)	224.0 A.	<u>_102010</u> _ <u>Cyanos</u>
4. Depth of wen (nom who is not the cr		
	⊋"'in.	
5. Inside diameter of well	<b>V</b>	
6. Volume of water in Harperican well	11 7	
	16.2 gal.	a state and the second families
casing		Fill in if drilling fluids were used and well is at solid waste facility:
1	55 gal.	
7. Volume of water removed from well	000	14. Total suspended mg/l mg
	NONE gal.	solids
8. Volume of water added (if any)	NONE Bai.	mg/1 mg
Nono		15. COD mg/l mg
9. Source of water added		
		16. Well developed by: Person's Name and Firm
	T V No	
10. Analysis performed on water added?	🛛 Yes 💢 No	
(If yes, attach results)		RICK FREDRICK )
i de la companya de l		
17. Additional comments on development:		
	1 -	
3 HELL VACUMES	LEMOUTU	
C were course		
3 WELL VOLUMES PUMP LAVE 1.0 9	al pu mu	<b>~</b> .
PUMP LAVE 1.09	- /	
	Address	I hereby certify that the above information is true and correct to the best
Facility Address or Owner/Responsible Part	1 1 20000 0000	knowledge.
	ter and the second second	PIIO MICHEO.

acility/Project Name Vogfle 55AR	County Bur	ke	Well Name B	54
acility License, Permit or Monitoring Number				
<u></u>			Before Developm	ent After Development
. Can this well be purged dry? (SEE (comments)	Yes 🗆 No	11. Depth to Water		
Well development method:	L <b>41</b>	(from top of well casing)	a. 132,94	ft. 140.0 ft.
surged with bailer and bailed				
surged with bailer and pumped		Date	b. 6-1-05	6-1-05
surged with block and bailed			1999 - 1999 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	
surged with block and pumped				3:10 pr
surged with block, bailed, and pumped		Time	c. 3:00 p	om Sale pr
compressed air		1 mile		
bailed only		12. Sediment in we	inc.	hes inche:
pumped only		bottom		
numped slowly	Transfer Street St	13. Water clarity	Clear [] ] 0	Clear 12 2 0
other		15. Water charty	Turbid 1 1 5	Turbid 🔲 25
			(Describe)	(Describe)
3. Time spent developing well	0 min.		SUCHTU	AFTER 10 gal
	/		TUEBIA	LEMIVED.
4. Depth of well (from top of well casing) 22	2/. <i>31</i> ft.			
4. Deput of west (200- of the	o (I			
5. Inside diameter of well	2" in.			
5, miside diamotes of them				
6. Volume of water in first packand well	11	and the state of the		· ·
casing	4.4 gal.			- at colid waste facility.
		Fill in if drilling fl	uids were used and wen	is at solid waste facility:
7. Volume of water removed from well	10,0 gal.		•	mg/l mg
		14. Total suspend	ed	шб
8. Volume of water added (if any)	ONE gal	solids		
8. Volume of water and the first of the		15. COD		mg/l m
9. Source of water added //One		15.000		
9. Source of water about	•		11. Deserte Marre av	d Rim
		16. Well develope	d by: Person's Name an	
10. Analysis performed on water added?	🛛 Yes 💢 No	Tim	Kalf )	SCIME
(If yes, attach results)		P.a.	FREDRICK )	
(11 yes, and a second yes, and		KICK	FREDERCE	
17. Additional comments on development:				
17. Additional comments on development: THE PUMP WOULD NOT		on that	APPRNI 140.	O SOME TYP
THE PUMP WOULD NOT	- GO DEEP			
	,			
OF OBSTRUCTION IN WELL	e		- Dau	
Approx 10.0 gallows Le	MOVED A	rs then w	ONT DRY.	
a and local pe	i min			
Facility Address or Owner/Responsible Party Address		The hu partify	that the above information	on is true and correct to the be
Facility Address or Owner/Responsible Party Address	,430	knowledge.		
Name:				
		Signature:		
Firm:				
Note: A set of the				
		Print Name:		
Street:	2.4A - 1	56 Print Name:		

Voqtle 55AR	County But	rke Well Name B55
cility License, Permit or Monitoring Number		
		Before Development After Development
Can this well be purged dry?	El Yes X No	11 Depth to Water
Well development method:		(from top of a. 120.04 ft. 120.64 ft. well casing)
surged with bailer and bailed		
surged with bailer and pumped	<b>6</b> 1	Date b. 6-2-05 6-2-05
surged with block and bailed	42	
surged with block and pumped	□ 62 □	
surged with block, bailed, and pumped		Time c. 8:45 AM 9:50 Am
compressed air	20	
bailed only		12. Sediment in well inches inches
pumped only	<b>X</b> 51	bottom
pumped slowly	口 50 )127 <b>第</b>	13. Water clarity Clear DV 10 Clear D 20
other		Turbid 🖸 15 Turbid 🗖 25
		(Describe) (Describe)
3. Time spent developing well	65 min.	
4. Depth of well (from top of well casing)	225.50 ft.	
5. Inside diameter of well	2" in.	
6. Volume of water in filter perloand well	17.2 gal.	
casing		Fill in if drilling fluids were used and well is at solid waste facility:
$\hat{H}_{ij}(q)$ is a set of the s		
7. Volume of water removed from well	51.4 gal.	14. Total suspended mg/l mg
	NONE gal.	solids
8. Volume of water added (if any)	NONE gai.	
Nono		15. COD mg/l mj
9. Source of water added		
		16. Well developed by: Person's Name and Firm
10. Analysis performed on water added?	I Yes X No	TIM KELLY ) SIMT
10. Analysis performed on water added.		
(If yes, attach results)	a the second	RICK FREDRICK
17. Additional comments on development:		
3 in valumes	LEMOVES	
O WELL VELL		n an
S WELL VOLUMES PUMP RATE = 1.	- 1 -	
VIMP RATE 2 1.	Ogal per	min.
Facility Address or Owner/Responsible Party	Address	I hereby certify that the above information is true and correct to the best
Facility Address of Owner/Responsion 2 - 5		knowledge.
Name:		
A		
<b></b>		Signature:
Firm:		Print Name:

Firm:

City/State/Zip:

				1111-11 31	
ility/Project Name		County D	4.	Well Name 850	Þ
Italla STAR		Bur	rue	- <u> </u>	
ility License, Permit or Monitoring Number					
,,			·		
				Defens Davalonmen	t After Developmen
Can this well be purged dry?	Ye Ye	s 🗆 No	an market an Western	Belore Developmen	I Alter Developmen
	·/·		11. Depth to Water (from top of	a. 75.11 ft.	DRY ft
Well development method:			well casing)	a. 1/5.11 n.	· · · · · · · · · · · · · · · · · · ·
surged with bailer and bailed	. 🖬 🤞	41	WOIL CUSINE,		and a state of the second s
surged with bailer and pumped		61		1 10-1-05	6-1-05
surged with block and bailed		42	Date	U. U. I	
surged with block and pumped		62			
surged with block, bailed, and pumped		70		c. 5:35 pm	, 6:00 pr
compressed air		20	Time	c. 5.35 pm	
bailed only	_	10	10 0 11	inche	s inche
pumped only	X	51	12. Sediment in wel		
pumped slowly		50		Clear 10	Clear 12 20
other	28		13. Water clarity	Turbid <b>[]</b> 15	Turbid 🖸 25
				(Describe)	(Describe)
. Time spent developing well	25	min.			
. Depth of well (from top of well casing)	120.4	15 fl.			_
Deputor went (	•	ing and a second se			
. Inside diameter of well	2	in.			·
		1			
5. Volume of water in <b>Respects of</b> well casing		7.4 gal.	Fill in if drilling flu	uids were used and well is	
7. Volume of water removed from well	do	), 2 gal.	14. Total suspend	nd m	g/l m
	1.1		solids		
8. Volume of water added (if any)	Xon	IE gal.	solids		
8. Volume of water added (if any)	Xlon	IE gal.			g/l m
Non	Xlon	JE gal.	solids 15. COD		g/lm
	Xlon	JE gal.	15. COD	1	
9. Source of water added <u>None</u>			15. COD	d by: Person's Name and I	ium
9. Source of water added <u>None</u> 10. Analysis performed on water added?		JE gal. Yes X No	15. COD 16. Well develope Tim Ke	d by: Person's Name and I	ium
9. Source of water added <u>None</u>			15. COD 16. Well develope Tim Ke	d by: Person's Name and I	ium
9. Source of water added 10. Analysis performed on water added? (If yes, attach results)		Yes X No	15. COD 16. Well develope Tim Ke RICK FE	d by: Person's Name and I DLY 2 Si DRICK 5	'im NE
9. Source of water added 10. Analysis performed on water added? (If yes, attach results)		Yes X No	15. COD 16. Well develope Tim Ke RICK FE	d by: Person's Name and I DLY 2 Si DRICK 5	'im NE
9. Source of water added 10. Analysis performed on water added? (If yes, attach results)		Yes X No	15. COD 16. Well develope Tim Ke RICK FE	d by: Person's Name and I DLY 2 Si DRICK 5	'im NE
9. Source of water added 10. Analysis performed on water added? (If yes, attach results)		Yes X No	15. COD 16. Well develope Tim Ke RICK FE	d by: Person's Name and I DLY 2 Si DRICK 5	'im NE
9. Source of water added 10. Analysis performed on water added? (If yes, attach results)		Yes X No	15. COD 16. Well develope Tim Ke RICK FE	d by: Person's Name and I DLY 2 Si DRICK 5	'im NE
9. Source of water added 10. Analysis performed on water added? (If yes, attach results)		Yes X No	15. COD 16. Well develope Tim Ke RICK FE	d by: Person's Name and I DLY 2 Si DRICK 5	'im NE
9. Source of water added <u>None</u> 10. Analysis performed on water added? (If yes, attach results) 17. Additional comments on development: Approf 2 UEL Fum P RATE 2 1.0	u Vocu gal	Yes X No IMES RE per MA	15. COD 16. Well develope TIM Ke RICK FE MOV ED Be	d by: Person's Name and I DLY Sin DRICK FORE GOING	im ME Day
9. Source of water added <u>None</u> 10. Analysis performed on water added? (If yes, attach results) 17. Additional comments on development: Approf 2 UEL Fum P RATE 2 1.0	u Vocu gal	Yes X No IMES RE per MA	15. COD 16. Well develope TIM Ke RICK FE MOU ED Be I hereby certify	d by: Person's Name and I DLY 2 Si DRICK 5	im ME Day
9. Source of water added 10. Analysis performed on water added? (If yes, attach results)	u Vocu gal	Yes X No IMES RE per MA	15. COD 16. Well develope TIM Ke RICK FE MOV ED Be	d by: Person's Name and I DLY Sin DRICK FORE GOING	im ME Day
9. Source of water added <u>None</u> 10. Analysis performed on water added? (If yes, attach results) 17. Additional comments on development: Approf 2 UEL Fum P RATE 2 1.0	u Vocu gal	Yes X No IMES RE per MA	15. COD 16. Well develope TIM Ke RICK FE MOU ED Be I hereby certify	d by: Person's Name and I DLY Sin DRICK FORE GOING	im ME Day
9. Source of water added <u>None</u> 10. Analysis performed on water added? (If yes, attach results) 17. Additional comments on development: Approf & UEL <i>RUMP RATE</i> 2 1.0 Facility Address or Owner/Responsible Party	u Vocu gal	Yes X No IMES RE per MA	15. COD 16. Well develope TIM Ke RICK Fla MOU ED Be I hereby certify knowledge.	d by: Person's Name and I DLY Sin DRICK FORE GOING	im ME Day
9. Source of water added <u>None</u> 10. Analysis performed on water added? (If yes, attach results) 17. Additional comments on development: Approf & UEL <i>RUMP RATE</i> 2 1.0 Facility Address or Owner/Responsible Party	u Vocu gal	Yes X No IMES RE per MA	15. COD 16. Well develope TIM Ke RICK FE MOU ED Be I hereby certify	d by: Person's Name and I DLY SS DKICK FORE GOING	im ME Day
9. Source of water added <u>None</u> 10. Analysis performed on water added? (If yes, attach results) 17. Additional comments on development: Approf & UELL Fum P RATE Z 1.0 Facility Address or Owner/Responsible Party Name:	u Vocu gal	Yes X No IMES RE per MA	15. COD 16. Well develope TIM Ke RICK Fla MOU ED Be I hereby certify knowledge.	d by: Person's Name and I DLY SS DKICK FORE GOING	im ME Day

...

cility/Project Name	County Bu	ka	Well Name 1001
1/2 1/2 55/TR	Du		1
cility License, Permit or Monitoring Number			
	l		
Can this well be purged dry?	Yes 🗆 No	A D at A Water	Before Development After Development
Can this well be purged ery.	· · · · · ·	11. Depth to Water (from top of	log as a Den-
Well development method:		well casing)	a. 109.95 ft. Dig ft.
surged with bailer and bailed	41	wen casing)	
surged with bailer and pumped	61		b. 6-6-05
surged with block and bailed	42	Date	$\mathbf{D}, \ \mathbf{Q}^{-} \mathbf{Q}^{-} \mathbf{\nabla} \mathbf{S}$
surged with block and pumped	62		
surged with block, bailed, and pumped	70		c. 2:30 pm
compressed air	] 20	Time	c. 2. 30 pm
bailed only	] 10		inches inches
	51	12. Sediment in we	
pumped only	] 50	bottom	Clear 🗂 10 Clear 🗂 20
pumped slowly		13. Water clarity	Clear 10 Clear 5 20 Turbid 2 15 Turbid 25
other			
· · · · · · · · · · · · · · · · · · ·	5 min.		
3. Time spent developing well	<b>J</b>		Gray in Color
	37.15 ft.		
4. Depth of well (from top of well casing)	07/15		
	2" in.		
5. Inside diameter of well	L		
a na standardi			
6. Volume of water in filter pack and well	4 44 gal.		
casing	-11	Fill in if drilling f	luids were used and well is at solid waste facility:
	B.O. gal.		
7. Volume of water removed from well	D. C. Bar	14. Total suspend	led mg/l mg/l
	Ime gal.	solids	
8. Volume of water added (if any)	yme sa.		
None		15. COD	mg/l mg/
9. Source of water added			6
	•	16. Well develope	ed by: Person's Name and Firm
0	Ves No	TIM K	ald a second
10. Analysis performed on water added?			/Sche
(If yes, attach results)		LICK I	FREDRICK
1levenenti			ELY SEME
17. Additional comments on development: WELL WHEN DRY AI			REMANIET
WELL WHEN DRY AI	TER ONLY	B gallon	S REMOVED.
	10	· · ·	-) WATER (EVER @ 124.
Moron (EVEZ @ 12	5.49 a	5:10 pm (6-1	6-05) WATER (EVEL @ 124. (6-7- (6-05)
	E 29' A 4	-500m (6-	6-05)
WATER LEVER ( 12	5,57 (4 0		
Facility Address or Owner/Responsible Party Add	ress		that the above information is true and correct to the best
		knowledge.	
Name:			
		Signature:	
Firm:			
	<b>•</b> • • •	Print Name:	
Street:	2.4	160 14 Line Maines -	
		Firm:	_

Facility/Project Name	County D	1.	Well Name	02
Voatle 55AR	Bur	-ke	10	02
Facility License, Permit or Monitoring Number		· · · · ·		
achity License, I chille & Allense				
1. Can this well be purged dry?	es X No	11. Depth to Water (from top of		nt After Development
2. Well development method:		well casing)	a. 107.05 m	. //2.68 п.
surged with bailer and bailed	41			
surged with bailer and pumped	61	Date	b. 6-14-05	- 6-14-05
surged with block and bailed	42	Dam		
surged with block and pumped	62			
surged with block, bailed, and pumped	70	Time	o. 3:35	4:00
compressed air	20	Imc	- 0,33	
bailed only	·10	12. Sediment in we	inch	s inches
pumped only	51	bottom	•	
numped slowly	50	13. Water clarity	Clear 🖸 10	Clear 🗴 20
other?⊠		15. While clarity	Turbid 🙀 15	Turbid 🗍 25
			(Describe)	(Describe)
3. Time spent developing well 25	min.		· · · · · · · · · · · · · · · · · · ·	- WATER CLEAR
			TURASILI UNIT	E WHEN DEVROPME
4. Depth of well (from top of well casing) 245	5.60 <sup>° ft.</sup>			
4. Deput of west (100 - 17 - 17 - 17			REMOVED	LOMPLETED.
5. Inside diameter of well	2" 'in.			
6. Volume of water in <b>Electrochestal</b> well casing	22.3 gal.	Fill in if drilling fl	uids were used and well is	at solid waste facility:
7. Volume of water removed from well Approv.	70 gal.	14. Total suspend	ed II	ng/l mg/l
8. Volume of water added (if any) Non	e gal.	solids		ng/l mg/l
9. Source of water added			Constant States	
		16. Well develope	d by: Person's Name and	Firm
	Yes No		Kaly	
IV. Marybio performente				SSME
(If yes, attach results)		Kick	K FREDRICK (	••••••••••••••••••••••••••••••••••••••
17. Additional comments on development:				
17. Additional comments on covereption		1.0 1	AACTO - 1	
WELL WAS DEVELOPER	O USING	- HIR COM	PRESSOR	
WELL WAS DEVELOPED ~ 50 PSI OF PRESSUR	EATE	bottom of	WELL	
	•			
Facility Address or Owner/Responsible Party Addres	IS	I hereby certify	that the above information	is true and correct to the best of
racinty Aumess of Omici/Acoporation		knowledge.		
Name:				
		1	<ul> <li>A second sec second second sec</li></ul>	and the second
	· • · · · · · · · · · · · · · · · · · ·	Signature:	1	

Print Name:

Firm:

1

60

City/State/Zip:

Street:

User of water removed from well       State	ility/Project Name	County Bur	ke	Well Name /00	3
Can this well be purged dry? Well development method: surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block, bailed, and pumped compressed air bailed only pumped only pumped slowly other	ility License, Permit or Monitoring Number				
Can this well be purged dry? FA is a line in the line of the line					
Well development method:       aurged with bailer and bailed       41         surged with bailer and pumped       61         surged with bailer and pumped       61         surged with bailer and pumped       62         surged with block and pumped       70         compressed air       10         pumped only       51         pumped only       50         pumped slowly       50         other       72         Time spent developing well       65         4. Depth of well (from top of well casing)       97.0' ft.         5. Inside diameter of well       73.0 gal.         8. Volume of water removed from well       13.0 dal y bigs performed on water added         9. Source of water added       13.0 dal y bigs performed on water added?         10. Analysis performed on water added?       Yes X.No         10. Analysis performed on water added?       Yes X.No	<b>11 1</b>	Yes I No		Before Development	After Development
Well development metad.       41         surged with bailer and pumped       61         surged with bailer and pumped       61         surged with bailer and pumped       62         surged with block and pumped       62         surged with block and pumped       62         surged with block and pumped       70         compressed air       10         pumped slowly       51         pumped slowly       50         other       70         Time spent developing well       655         Proper state of well       2°         Time spent developing well       655         Nolume of water in filter pack and well casing)       97.6'         Proper state added (if any)       None         Nolume of water added (if any)       None         Source of water added (if any)       None         Source of water added (if any)       None         Source of water added (if any)       Yes X.No         Nolume of water added (if any)       Yes X.No         Source of water added (if any)       Yes X.No      <	Can this well be purged ury.	7		<b>D</b> 1 - 1 <sup>1</sup>	Den
surged with bailer and bailed surged with bailer and pumped surged with block and pumped	wall development method:			a. //.06 fl.	Ору п.
surged with biler and pumped surged with biler and pumped	well development miler and bailed	D 41	Well casing)		
surged with block and pumped surged with block and pumped compressed air pumped only pumped only pumped slowly other	surged with bailer and pumped	□ 61		1 10-8-05	6-3-05
surged with block and pumped avrged with block, bailed, and pumped pained all 02 0 compressed air bailed only pumped slowly other 220 Time c. 8.35 Ar 9:40 A 12. Sediment in well inches inche bottom 13. Water clarity Clear D 10 Clear 52 2 0 Turbid 5 15 Turbid 2 5 (Describe) (Describe) (Describe) 54. Depth of well (from top of well casing) 97.0' ft. 5. Inside diameter of well 2° in. 6. Volume of water removed from well A3.D gal. 8. Volume of water added (if any) Nome gal. 9. Source of water added (if any) Nome gal. 10. Analysis performed on water added? Yes ANO (If yes, attach results) Yes ANO	surged with block and bailed	□ 42	Date	b. (* 5 - 00	
surged with block, bailed, and pumped compressed air pumped slowly pumped slowly pumpe	surged with block and pumped	□ 62			
compressed air       10       20       Interview         bailed only       10       10       inches       inches         pumped only       50       50       12. Sediment in well       inches       inches         pumped slowly       50       50       13. Water clarity       Clear       10       Clear       20         1. Time spent developing well       6.5       min.       13. Water clarity       Clear       10       Clear       20         1. Depth of well (from top of well casing)       97.0'       ft.       10.       S. Inside diameter of well       2"       in.         6. Volume of water in filter pack and well       4.2       gal.       Fill in if drilling fluids were used and well is at solid waste facility:         7. Volume of water removed from well       13. D       gal.         8. Volume of water added (if any)       None       gal.         9. Source of water added       Wone       gal.         10. Analysis performed on water added?       Yes X.No         (if yes, attach results)       Yes X.No	surged with block bailed, and pumped	<b>D</b> 70		0.25. Am	9:40 4
bailed only       10       10         pumped only       51       51         pumped slowly       50       50         other       700       10         1. Time spent developing well       6.5       min.         1. Depth of well (from top of well casing)       97.0'       ft.         5. Inside diameter of well       2°       in.         6. Volume of water in filter pack and well casing       4.2       gal.         7. Volume of water removed from well       13.D gal.       Fill in if drilling fluids were used and well is at solid waste facility:         9. Source of water added       Mone       gal.         10. Analysis performed on water added?       I Yes INO         (If yes, attach results)       I Yes INO	surged with block, one of a	□ 20	Time	c. 0.3.	
pumped only       0       51       12. Source of water added         pumped slowily       0       50         other       97.0'       ft.         1. Time spent developing well       655       min.         1. Depth of well (from top of well casing)       97.0'       ft.         5. Inside diameter of well       2"       in.         6. Volume of water in filter pack and well casing       4.2       gal.         7. Volume of water added (if any)       None       gal.         9. Source of water added       13. Water clarity       Clear       Clear         10. Analysis performed on water added?       14. Yes       None       min.         10. Analysis performed on water added?       14. Yes       None       14. Yes         10. Analysis performed on water added?       14. Yes       None       15. COD       mg/l       min.         10. Analysis performed on water added?       14. Yes       None       S. M. E       Kieuk Factobieuk.       S. M. E		10			inche
pumped slowly 0 50   other 78      13. Water clarity 13. Water clarity 14. Water clarity 15. Time spent developing well 16. Time spent developing well 16. Depth of well (from top of well casing) 17. of ft. 18. Volume of water in filter pack and well 19. Source of water removed from well 10. Analysis performed on water added? 10. Yes X.No 10. Keil developed by: Person's Name and Firm 11. Water clarity 12. Source of water results) 13. Water clarity 14. Total suspended and well is at solid waste facility: 14. Total suspended and well is at solid waste facility: 15. COD 16. Well developed by: Person's Name and Firm 16. Well developed by: Person's Name and Firm 17. Keilly Amaly S. Metar Keilly S. Metar K		51	· ·		IICHC
other       12       12       13       Turbid [] 15       Turbid [] 25         4. Depth of well (from top of well casing)       97.6' ft.       10. Analysis performed on water added?       10. Analysis performed on water added?       14. Total suspended solution       15. COD       mg/l       10. Analysis performed on water added?       14. Total suspended solution         10. Analysis performed on water added?       12 Yes       14. Note       15. COD       mg/l       15. COD         10. Analysis performed on water added?       12 Yes       14. Note       15. COD       16. Well developed by: Person's Name and Firm		<b>D</b> 50			Class 51 20
1. Time spent developing well       6.5 min.         4. Depth of well (from top of well casing)       97.6' ft.         5. Inside diameter of well       2" in.         6. Volume of water in filter pack and well       4.2 gal.         7. Volume of water removed from well       13.D gal.         8. Volume of water added (if any)       None         9. Source of water added       Mone         10. Analysis performed on water added?       I Yes X No         (If yes, attach results)       I Yes X No		2区 100	13. Water clarity		
<ul> <li>Time spent developing well</li> <li>Time spent developing well</li> <li>Time spent developing well</li> <li>Depth of well (from top of well casing)</li> <li>97.6' ft.</li> <li>S. Inside diameter of well</li> <li>2° in.</li> <li>6. Volume of water in filter pack and well</li> <li>4.2 gal.</li> <li>7. Volume of water removed from well</li> <li>A.3.D gal.</li> <li>8. Volume of water added (if any)</li> <li>None gal.</li> <li>9. Source of water added (if any)</li> <li>None gal.</li> <li>10. Analysis performed on water added?</li> <li>14. Yes A.No</li> <li>15. COD</li> <li>16. Well developed by: Person's Name and Firm</li> </ul>	OTTIER				
A. Depth of well (from top of well casing)       97.6' ft.         J. Depth of well (from top of well casing)       97.6' ft.         S. Inside diameter of well       2" in.         6. Volume of water in filter pack and well       4.2 gal.         7. Volume of water removed from well       13.0 gal.         8. Volume of water added (if any)       None gal.         9. Source of water added       Mone         10. Analysis performed on water added?       I Yes A. No         (If yes, attach results)       I Yes A. No	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	6.5 min.		(000000)	
<ul> <li>A. Depth of well (from top of well casing)</li> <li>A. Depth of well (from top of well casing)</li> <li>S. Inside diameter of well</li> <li>S. Inside diameter of well</li> <li>C. Volume of water in filter pack and well</li> <li>A. Z gal.</li> <li>Fill in if drilling fluids were used and well is at solid waste facility:</li> <li>7. Volume of water removed from well</li> <li>A. J. Z gal.</li> <li>Fill in if drilling fluids were used and well is at solid waste facility:</li> <li>14. Total suspended mg/l mg/l solids</li> <li>15. COD mg/l m</li> <li>16. Well developed by: Person's Name and Firm</li> <li>TIM Kally</li> <li>S ME</li> <li><i>Licut Facebulcy</i></li> </ul>	. Time spent developing well			SUGHTLY TULAN	
2       in.         5. Inside diameter of well       2         6. Volume of water in filter pack and well       4, 2       gal.         7. Volume of water removed from well       13, D       gal.         8. Volume of water added (if any)       None       gal.         9. Source of water added       None       gal.         10. Analysis performed on water added?       I Yes X.No         (If yes, attach results)       I Yes X.No		970' ft			
<ul> <li>5. Inside diameter of weil</li> <li>6. Volume of water in filter pack and well</li> <li>6. Volume of water in filter pack and well</li> <li>7. Volume of water removed from well</li> <li>8. Volume of water added (if any)</li> <li>9. Source of water added</li> <li>10. Analysis performed on water added?</li> <li>11. Yes A. No</li> <li>12. Yes A. No</li> <li>13. COD</li> <li>14. Total suspended</li> <li>15. COD</li> <li>16. Well developed by: Person's Name and Firm</li> <li>7. Metury</li> <li>16. Well developed by: Person's Name and Firm</li> </ul>	. Depth of well (from top of well casing)	700			VOLUME REMAN
casing       III of drilling fluids were used and well is at solid waste facility:         7. Volume of water removed from well       IS. D gal.         8. Volume of water added (if any)       None gal.         9. Source of water added       None         10. Analysis performed on water added?       Yes X. No         11. Analysis performed on water added?       Yes X. No	5. Inside diameter of well	<b>2</b> 'in.			
casing       III of drilling fluids were used and well is at solid waste facility:         7. Volume of water removed from well       IS. D gal.         8. Volume of water added (if any)       None gal.         9. Source of water added       None         10. Analysis performed on water added?       Yes X. No         11. Analysis performed on water added?       Yes X. No					
casing       Fill in if drilling fluids were used and well is at solid waste facility:         7. Volume of water removed from well       Image:	6. Volume of water in filter pack and well	4.2 gal.	and the second se		
<ul> <li>7. Volume of water removed from well <i>N</i>. <i>D</i> gal.</li> <li>8. Volume of water added (if any) <i>Nome</i> gal.</li> <li>9. Source of water added <i>None</i></li> <li>10. Analysis performed on water added? □ Yes A.No</li> <li>114. Total suspended mg/ mg/ mg/ mg/ mg/ mg/ mg/ mg/ mg/ mg/</li></ul>	casing		Fill in if drilling f	uids were used and well is at s	olid waste facility:
7. Volume of water added (if any)       Nme gal.         8. Volume of water added (if any)       Nme gal.         9. Source of water added       None         10. Analysis performed on water added?       I Yes A. No         (If yes, attach results)       I Yes A. No		10 - 1			
8. Volume of water added (if any) 9. Source of water added <u>Vone</u> 10. Analysis performed on water added? <u>Ves</u> X.No (If yes, attach results) 10. Analysis performed on water added? 10. Analysis performed on water added? 11. Yes X.No 12. Yes X.No 13. COD 14. Well developed by: Person's Name and Firm 14. Keily 15. COD 16. Well developed by: Person's Name and Firm 16. Well developed by: Person's Name and Firm 17. M. Keily 18. Keily 19. Keily	7. Volume of water removed from well	N, D gal.	14 Total suspend	ed mg/l	m
8. Volume of water added (if any) 9. Source of water added <u>Mone</u> 10. Analysis performed on water added? <u>I</u> Yes <b>X</b> No (If yes, attach results) (If yes, attach results) <b>None</b> gal. 15. COD <u>mg/l</u> 16. Well developed by: Person's Name and Firm <b>TIM</b> Kerry <i>Kick Fredkick</i>		d			<
9. Source of water added <u>None</u> 15. COD <u>mg/</u> 16. Well developed by: Person's Name and Firm 10. Analysis performed on water added? <u>I Yes</u> No (If yes, attach results) 15. COD <u>mg/</u> 16. Well developed by: Person's Name and Firm <i>T IM</i> Kerry SiME <i>Rick Freediscus</i>	8. Volume of water added (if any)	Nme gal.			
9. Source of water added 10. Analysis performed on water added? (If yes, attach results) 16. Well developed by: Person's Name and Firm TIM Kerry SiME Rick FREDRICK	1/m		15. COD	mg/l	m
10. Analysis performed on water added? (If yes, attach results) (If yes, attach results)	9. Source of water added			1	
10. Analysis performed on water added? I Yes X. No TIM KELLY (If yes, attach results) Rick FREDRICK		•	16 Well develop	d by: Person's Name and Firm	L
10. Analysis performed on water added? I Yes PLNO (If yes, attach results) 17. Additional comments on development: 3 WELL VOLUMES REMOVED. THE WELL WONT DRY ATTER EACH VOLUME REMOVED ALLOWED THE WELL TO RECHARGE & PURSE 3 TIM PUMP RATE = 1.0 gallon BER MIN.					
(If yes, attach results) 17. Additional comments on development: 3 WELL VOLUMES REMOVED. THE WELL WON DRY AMER EACH VOLUME REMOVED ALLOWED THE WELL TO RECHARGE & PURSE 3 TIM PUMP RATE = 1.0 gallon BER MIN.	10. Analysis performed on water added?	LI Yes AL NO	I IM KG	JSOM	.6
17. Additional comments on development: 3 WELL VOLUMES REMOVED. THE WELL WON DRY ANER EACH VOLUME REMO ALLOWED THE WELL TO RECHARGE & PURSE 377M PUMP RATE = 1.0 gallon BER MIN.	(If yes, attach results)		RICK FA	EDRICK (	
17. Additional comments on development: 3 WELL VOLUMES REMOVED. THE WELL WON DRY AMER EACH VOLUME REMO ALLOWED THE WELL TO RECHARGE & PURSE 370M PUMP RATE = 1.0 gallon BER MIN.					
3 WELL VOLUMES REMOVED. THE WELL WOT DRY AHER EACH VOLUME REMO ALLOWED THE WELL TO RECHARGE & PURSE 3 TIM FUM P RATE = 1.0 gallon BER MIN.	17. Additional comments on development:			and the set	Pour
SWELL VOLUMES ALLOWED THE WELL TO RECHARGE & PURSE STIM FUMP RATE = 1.0 gallon BER MIN.	A las das sure Dans	OVED. THE	LELL WON DRY	AACK EACH TO	LUMB KEND
PUMP RATE = 1.0 gallon per MIN.	I WELL VOLUMES REAL	ALLOW	ED THE WELL	TO RECHARGE S	PURSE STIM
PUMP RATE = 1.0 galim per min.		· 1/- 1-	and sol		
	PIMP RATE = 1.1	gain per			
			4 C		

Facility Address or Owner/Responsible Party Address I hereby certify knowledge.			Facility Address or Owner/Responsible Party Address		tify that the above information is true and correct to the best o				the best of 1	
Name:				<u>.</u>			•			
Firm:					Signature: _					
Street:	<u> </u>			2.4A - 161	Print Name: _					
City/St	ate/Zip:				Firm: -					

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acility/Project Name	County D		Well Name	
Vogtle 55AR	Bur	·ke	1004	
acility License, Permit or Monitoring Number				
ACILITY LICENSE, I COME OF THE ST				
11 be surred drug	Yes 🗆 No	1	Before Development	After Development
. Can this well be purged dry?		11. Depth to Water		
<b>.</b>	10 - 11 - 12 - 12 - 12 - 12 - 12 - 12 -	(from top of	a. 117.80 ft.	Dry ft.
. Well development method:	<b>4</b> 1	well casing)		0
surged with bailer and bailed	<b>[]</b> 61			
surged with bailer and pumped	<b>1</b> 42	Date	b. 6-14-05	
surged with block and bailed	<b>1</b> 62		an a	
surged with block and pumped	<b>D</b> 70			1:15
surged with block, bailed, and pumped	1220	Time	c. /:00	1.15
compressed air			•	
bailed only	51	12. Sediment in well	inches	inches
pumped only	□ 50	bottom		
pumped slowly		13. Water clarity	Clear X 10	Clear 20
other			Turbid 🚺 15	Turbid 🗋 25
	15 min.		(Describe)	(Describe)
3. Time spent developing well	15 min.		WATER WAS	WATER WAS
	in a la		CLEAR AT	CLEAR WHEN
4. Depth of well (from top of well casing)	175,0 ft.		TIME OF DEVELO	
	<b><i><i>n</i></i></b> <sup><i>i</i></sup>			DRY.
5. Inside diameter of well	2" 'in.			
6. Volume of water in filter packet well	9,3 gal.			
casing	// U 5	Fill in if drilling flui	ds were used and well is at :	olid waste facility:
	· · · · · · · · · · · · · · · · · · ·			
7. Volume of water removed from well AppR	of 20 gal.	14. Total suspended	mg/l	mg
	Vone gal.	solids		
8. Volume of water added (if any)	Vone gal.		<u> </u>	
Non		15. COD	mg/l	mg
9. Source of water added			1	
		16 Well developed	by: Person's Name and Firm	a
	Yes No		· · ·	
10. Analysis performed on water added?		Tim	KELY / Se	ME
(If yes, attach results)		PICK FU	LEORICIC (	
		Pick II	<u>cas/ciae</u>	
17. Additional comments on development: WELL WAS DEVELOP		1. 1.		
1. THI LAS DEVELOP	ED USING	AIR COMPR	2558/-	
WELL WAS DEVELOP 2 50 PSI OF PRESS		AT 2-		
2 50 PSI OF PRESS	sore used	NI DOTTA	n of cattle	
	•			
Facility Address or Owner/Responsible Party Ad	dress	I hereby certify th	at the above information is t	rue and correct to the bes
racinty Audiess of Omion Copension 2 and the		knowledge.		
Name:		_		
······································				
		Signature:		
Ei-mt				
Firm:	······	Print Name:		

Firm:

City/State/Zip:

Burke100511. Depth to Water (from top of well casing)Before Development After Development 130.07" a. $\frac{130.07"}{175.05}$ ft. 171.33" b. 6-15-05Dateb. 6-15-05Dateb. 6-15-05Timec. 8:55 Am12. Sediment in well hottominches
11. Depth to Water       130.07'         (from top of a. well casing)       171.33'         Date       b. 6-15-05       6-15-05         Time       c. 8:55 Am       9:15 Am         12. Sediment in well       inches       inc
(from top of well casing) Date b. 6-15-05 6-15-05 Time c. 8:55 Am 9:15 Am 12. Sediment in well inches inc
well casing)         Date       b.       6-15-05         Time       c.       8:55 Am       9:15 Am         12. Sediment in well       inches       inc
Date     b.     6-15-05     6-15-05       Time     c.     8:55 Am     9:15 Am       12. Sediment in well     inches     inc
Time c. 8:55 Am 9:15 Am 12. Sediment in well inches inc
Time c. 8:55 Am 9:15 Am 12. Sediment in well inches inc
12. Sediment in well inches inc
12. Sediment in well inches inc
12. Sediment in well inches inc
hattam
bottom
13. Water clarity Clear D 10 Clear 20
Turbid 💢 15 Turbid 🗂 25
(Describe) (Describe)
BLIGHTLY CLEAR AF
TURBID 3WAL VOI
REMOVED.
Fill in if drilling fluids were used and well is at solid waste facility:
14. Total suspended mg/
solide
BUING
15. COD mg/l
16. Well developed by: Person's Name and Firm
RICK FREDRICK
AIR COMPRESSOR
+ AIR COMPRESSOR
F AIR COMPRESSOR
F AIR COMPRESSOR BOTTOM OF WELL
F AIR COMPRESSOR F BOTTOM OF WELL
AIR COMPRESSOR BOTTOM OF WELL I hereby certify that the above information is true and correct to the
I hereby certify that the above information is true and correct to the
I hereby certify that the above information is true and correct to the knowledge.
I hereby certify that the above information is true and correct to the
I hereby certify that the above information is true and correct to the knowledge. Signature:
I hereby certify that the above information is true and correct to the knowledge.
5 

Pacility/Project Name	County Bur	ke	Well Name	1006	
Facility License, Permit or Monitoring Number					
	JYes 🗆 No		Before Dev	elopment A	fter Development
1. Can uns wer de pungee ;	<b>5</b> 109 11 110	11. Depth to Water (from top of	a. 70	01.0	85.14 ft.
2. Well development method:		well casing)	· / Y.	81	80,14
surged with bailer and bailed					
surged with bailer and pumped	<b>-</b>	Date	h 6-16	-05	6-16-05
surged with block and bailed		Dav		-0,7	
surged with block and pumped	- · · · · · · · · · · · · · · · · · · ·		-		
surged with block, bailed, and pumped	70	Time	· 715	D Am	8:15 Au
compressed air	20	1.000			0.0
bailed only		12. Sediment in well		inches	inches
pumped only	51	bottom			
Dumped slowly	_ 50	13. Water clarity	Clear 🛛	10 C	ear 00 20
other?		1.5. Water charty	Turbid		urbid 🔂 2.5
			(Describe)	(E	escribe)
3. Time spent developing well	25 min.		Slight	4.	CLEAR
	22		THE	3.0	AT COMPLE
4. Depth of well (from top of well casing)	39.00' ft.		Close	ET AFTER	
	04		Tow.		
5. Inside diameter of well	2' in.		KENIS		
			Asro	<u> </u>	
6. Volume of water in filter protected well casing	9.7 gal.				d worte facility
		Fill in if drilling flui	ds were used a	nd well is at sol	I WASIC INCITLY.
7. Volume of water removed from well	30,0 gal.	_			mg/l
7. Volume of which folds at 2		14. Total suspended		mg/l	/
8. Volume of water added (if any)	gal.	solids			
8. Volume of which		15. COD		mg/l	mg/l
9. Source of water added //One	· · · · · · · · · · · · · · · · · · ·	15.000	/		
7. DOMICC OF WALLS	•	16. Well developed	Les Demonto h	Jama and Kirm	
		16. Well developed	by: Feisolisi	TALLIC QUO I HAL	
10. Analysis performed on water added?	I Yes X No	Tim.k	27	) <	- AAF
(If yes, attach results)	• • • • • • •	Right	FREDRIC	-/3	SME
		- NUZ	- REURIC		
17. Additional comments on development:					
				ne de la composición br>Composición de la composición de la comp	and the second
WELL DEVELOPED	USING A	IR COMPRE	SSOR		
250PSI OF PRESS	SAE AT	RETTOR	- 2/1-1	,	
- 10/ 11 /2.633		DOLLOW DI-	- WEL	L	
	•				
Facility Address or Owner/Responsible Party Add	ress	I hereby certify th	at the above in	formation is tru	e and correct to the best o
Facility Address of Ormonicasponetric		knowledge.			
Name:			<u> </u>		
Firm:		Signature:			
Street:	2.44	Print Name:			
	2.4A -				
City/State/Zip:	· · · ·	Firm:			<u></u>

cility/Project Name	County But	aka	100	7
Voatle 55AR	Du	-10 <del>2</del>		
cility License, Permit or Monitoring Number				
Can this well be purged dry?	El Yes XNO	11. Depth to Water	Before Development	After Development
	in the second second	(from top of	1.0 00 0	68.47' A
Well development method:		well casing)	a. 00.07 m	0.41
surged with bailer and bailed				
surged with bailer and pumped		Date	b. 6-14-05	6-14-05
surged with block and bailed	□ 42 □ 62			
surged with block and pumped		en an de salar de		· · · · · · · · · · · · · · · · · · ·
surged with block, bailed, and pumped	□ 70 152[20	Time	c. 5:40	5:55
compressed air	D 10			
bailed only	51	12. Sediment in wel	l inches	inches
pumped only	<b>5</b> 0	bottom		J
pumped slowly		13. Water clarity	Clear 🔲 10	Clear DA 20
other			Turbid 1 1 5	Turbid 🗗 25
1 <b>1 1</b>	15 min.		(Describe)	(Describe)
3. Time spent developing well			SLIGHTLY TURB	D. WATER CLE
4. Depth of well (from top of well casing)	115,0 ft.			AFTER DEVEL
A. Depth of Went (norm up of went comes				ComPLETED.
5. Inside diameter of well	2" in.			•
				•
6. Volume of water in filter packet well casing	7.6 gal.	Fill in if drilling flu	uids were used and well is at	solid waste facility:
7. Volume of water removed from well	APPRAY 30 gal.	A A Training and	-1mp/	ma
7. Volume of water removed from well		14. Total suspende	ed mg/	mg
	Xone gal.	14. Total suspende solids	ed mg/	mų
<ol> <li>7. Volume of water removed from well</li> <li>8. Volume of water added (if any)</li> </ol>		solids	ed mg/	
			-	
8. Volume of water added (if any)		solids 15. COD	mg/	ı mı
8. Volume of water added (if any) 9. Source of water added	Xlone gal.	solids 15. COD 16. Well develope	mg/ d by: Person's Name and Fir	
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added</li> <li>10. Analysis performed on water added?</li> </ul>		solids 15. COD 16. Well develope Time	d by: Person's Name and Fir Kerry	l mț
8. Volume of water added (if any) 9. Source of water added	Xlone gal.	solids 15. COD 16. Well develope Time	mg/ d by: Person's Name and Fir	
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added // None</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> </ul>	Yone gal.	solids 15. COD 16. Well develope Tim Rick	d by: Person's Name and Fir Kerry FREDRICK	n mi
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added // None</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> </ul>	Yone gal.	solids 15. COD 16. Well develope Tim Rick	d by: Person's Name and Fir Kerry FREDRICK	n mi
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added // None</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> </ul>	Yone gal.	solids 15. COD 16. Well develope Tim Rick	d by: Person's Name and Fir Kerry FREDRICK	n mi
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added // None</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> </ul>	Yone gal.	solids 15. COD 16. Well develope Tim Rick	d by: Person's Name and Fir Kerry FREDRICK	l mţ
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added // None</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> </ul>	Yone gal.	solids 15. COD 16. Well develope Tim Rick	d by: Person's Name and Fir Kerry FREDRICK	l mţ
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> </ul>	Yone gal.	solids 15. COD 16. Well develope Tim Rick	d by: Person's Name and Fir Kerry FREDRICK	n mi
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added Mone</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> <li>17. Additional comments on development:</li> <li>WEU DEVELOPED</li> <li>\$\approx 50 \$p5\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$</li></ul>	Xlone gal. VSING AIRE ESSURE AT	solids 15. COD 16. Well develope Tim Rick 2 Compresson Bottom of	mg/ d by: Person's Name and Fir Kerry FREDRICK C K E WERL	m Sç MC
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added Mone</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> <li>17. Additional comments on development:</li> <li>WEU DEVELOPED</li> <li>\$\approx 50 \$p5\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$</li></ul>	Xlone gal. VSING AIRE ESSURE AT	solids 15. COD 16. Well develope TIMA RICK 2 ComPRESSO BOTTOM OF 1 hereby certify to	d by: Person's Name and Fir Kerry FREDRICK	m Sç MC
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added // None</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> </ul>	Xlone gal. VSING AIRE ESSURE AT	solids 15. COD 16. Well develope Tim Rick 2 Compresson Bottom of	mg/ d by: Person's Name and Fir Kerry FREDRICK C K E WERL	m SciMC
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added Mone</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> <li>17. Additional comments on development:</li> <li>WEU DEVELOPED</li> <li>\$\approx 50 \$p5\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$</li></ul>	Xlone gal. VSING AIRE ESSURE AT	solids 15. COD 16. Well develope TIMA RICK 2 ComPRESSO BOTTOM OF 1 hereby certify to	mg/ d by: Person's Name and Fir Kerry FREDRICK C K E WERL	m SciMC
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added Mone</li> <li>10. Analysis performed on water added? (If yes, attach results)</li> <li>17. Additional comments on development: WEU DEVELOPED ~ 50 p57 OF PR</li> <li>Facility Address or Owner/Responsible Party Name:</li> </ul>	Xlone gal. VSING AIRE ESSURE AT	solids 15. COD 16. Well develope TIMA RICK 2. Completesson Bottom of I hereby certify the	mg/ d by: Person's Name and Fir Kerry FREDRICK C K E WERL	m Sç MC
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added Mone</li> <li>10. Analysis performed on water added?</li> <li>(If yes, attach results)</li> <li>17. Additional comments on development:</li> <li>WEU DEVELOPED</li> <li>≈ 50 p57 OF PR</li> <li>Facility Address or Owner/Responsible Party</li> </ul>	Xlone gal. VSING AIRE ESSURE AT	solids 15. COD 16. Well develope TIMA RICK 2 ComPRESSO BOTTOM OF 1 hereby certify to	mg/ d by: Person's Name and Fir Kerry FREDRICK C K E WERL	m Sç MC
<ul> <li>8. Volume of water added (if any)</li> <li>9. Source of water added</li></ul>	Xlone gal. Yes X.No VSING AIR ESSURE AT Address	solids 15. COD 16. Well develope TIMA RICK 2. Completesson Bottom of I hereby certify the	mg/ d by: Person's Name and Fir Kerry FREDRICK C K E WERL	m SciMC

City/State/Zip:

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Vogtle 55AR	County Bur	ke	Well Name 100	2B
cility License, Permit or Monitoring Number				
Can this well be purged dry?	Yes X No	11. Depth to Water	Before Developmen	nt After Developmen
Well development method:		(from top of	a. 93,52 ft	94.85 A
surged with bailer and bailed	41	well casing)		
surged with bailer and pumped	61			1 11
surged with block and bailed	42	Date	b. 6-14-05	6-14-05
surged with block and pumped	62			
surged with block, bailed, and pumped	70		ه و مسیر	Cine
compressed air	20	Time	c. 5:00 pm	5:25 pm
bailed only	10			
pumped only	51	12. Sediment in wel	l inche	s inche
pumped slowly	50	bottom		V.
other		13. Water clarity	Clear 🔲 10	Clear 🙇 20
			Turbid 🙀 15	Turbid D 25
Time ment developing well 2	5 min.		(Describe).	(Describe)
. Time spent developing well			SUTGHTLY TUR	AD. CLEAR WAT
	Q.8 ft.			Witten Dever
. Depth of well (from top of well casing) 2.5	0ו0 •••	$(1,1) \in \mathcal{F}_{\mathcal{F}}$		COMPLETED.
	<b>Z</b> '' 'in.			
. Inside diameter of well	×			
a standard and and and a		and the second	· · · · · · · · · · · · · · · · · · ·	
5. Volume of water in filter parloand well	26.0 gal.			
casing		Fill in if drilling fly	nids were used and well is	at solid waste facility:
	<b>~</b>			
7. Volume of water removed from well Appled	EO gal.	14. Total suspende	ad 🦯 m	g/l mg
		solids		
B. Volume of water added (if any)	re gal.			
Nona		15. COD	m	g/l mj
9. Source of water added _/////			1	
		16 Well developer	by: Person's Name and F	im
	No. Mala			
a de la serie de la ser	Yes X No	11M	KELLY ) <	SIME
(If yes, attach results)		Ricks	ENEDRICH (	, - mc
		Macr	never	
17. Additional comments on development:				
WELL DEVELOPED US = 50 PSI OF PRESSU	OIL AIR	ComPRESS	JOR .	
WELL DEVELOPED VS				
		RATTANDE	WELL	
≈ 50 pSI OF PRESSU	RE AV			
	•			
Facility Address or Owner/Responsible Party Address	SS	I hereby certify t	hat the above information	s true and correct to the bes
	•	knowledge.		
Name:				
	••			
Firm:		_ Signature:		
			and the second	
Street:		66 Print Name:		
		_  Firm:		

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acility/Project Name	C	County But	-ke	Well Name	1009	
acility License, Permit or Monitoring Number			1			
acting License, 2	·	·		<u> </u>	<u> </u>	
. Can this well be purged dry?	D Yes	X No	11 Denth to Water	Before Dev	velopment	After Development
, Call this well of P 0	· ·		11. Depth to Water (from top of	1.07	0	69.93' fl
. Well development method:			well casing)	a. 40.7	D IL	(0-1-1-) IL
surged with bailer and bailed	41		WCII Casing)			
surged with bailer and pumped	61	Í.		b. 6-3	~~	6-3-05
surged with block and bailed	0 42	2	Date	0. 6-2	-03	
surged with block and pumped	0 62	2			•	
surged with block, bailed, and pumped	0 70	Di la segui				8:23 m
compressed air	2	D	Time	c. 7:35	A	•••••
		D				inche
bailed only	5	1	12. Sediment in we	u	inches	Inclic
pumped only	<b>D</b> 5	0	bottom			
pumped slowly other			13. Water clarity	Clear 🛛 Turbid 🙀	10	Clear 20 20 Turbid 1 25
	48			(Describe)		(Describe)
3. Time spent developing well	70	min.	an an an an an an	TAN IN	Court	Clem AFTEL
	~					6 WEL VOUME
4. Depth of well (from top of well casing)	97.0	>′ ft.				REMOVED .
5. Inside diameter of well	2"	in.				
6. Volume of water in filter pack and well	59	1				
casing	J. 1	gal.	mut to the dutilities of	hear ware used	and well is at !	solid waste facility:
			Fill in it drilling in	ulus were used		
7. Volume of water removed from well	35.	4 gal.	14. Total suspend	ed	mg/l	m
	xIne	gal.	solids		·, ·.	
8. Volume of water added (if any)	MAR	Ber.				
Nono			15. COD		mg/l	m
9. Source of water added				ŀ	5	
		* 1	16. Well develope	d by: Person's	Name and Fir	<b>D</b>
		es No	TIM KE	i de la construcción de la constru		
10. Analysis performed on water added?		es par no	I'M TE	nny	) 57'1	E
(If yes, attach results)			RIGH I	REDRICK	1.1.	and the second second second
	<u></u>	· · · · · · · · · · · · · · · · · · ·	- Por Po		/	
17. Additional comments on development:	1					
				1		
6 - Well VocumES	5 KO	NOVED				
PUMP RATE = 1.0	· /	1				

			I hereby certify knowledge.	that the above information is true and correct to the best of n		
	Name:				Allowingsi	
)	Firm:				Signature:	
	Street:		<u>.</u>	2.4A - 167	Print Name:	
	City/Sta	ate/Zip:			Firm:	

ility/Project Name	County Bu	rke	Well Name 10	10
Voatle 55AR		1		
ility License, Permit or Monitoring Number				
a the summed day?	El Yes X No		Before Developmen	t After Development
Can this well be purged dry?		11. Depth to Water		
Well development method:		(from top of	1. 55.41 ft.	90.52' A.
surged with bailer and bailed	<b>1</b> 41	well casing)		
surged with bailer and pumped	61			6-3-05
surged with block and bailed	42	Date	b. 6-3-05	0-2-00
surged with block and pumped	<b>62</b>		· · · · · · · · · · · · · · · · · · ·	
surged with block, bailed, and pumped	0 70			12:40 pm
compressed air	20	Time	c. 11:30 Am	
bailed only	D 10			inche
pumped only	51	12. Sediment in well	inches	
pumped slowly	D 50	bottom	Class 10	Clear 12 20
other	28 1	13. Water clarity	Clear 10 Turbid 15	Turbid M 25
			(Describe)	(Describe)
Time spent developing well	80 min.			
			VERY TURBIA	SULARY TV
. Depth of well (from top of well casing)	92.0' ft.			AFTER 6 W.
				VOLUMES RED
. Inside diameter of well	<b>2</b> " 'in.			
. Volume of water in <b>His probability</b> well	le.e gal.			_
casing	(-) gal.	Eill in if drilling fluid	is were used and well is a	t solid waste facility:
	A . A .	The men canning man		
V. Volume of water removed from well	34.0 gal.	14. Total suspended	mg	
	Alme gal.	solids		
3. Volume of water added (if any)	NML gal.			
Nono		15. COD	m	л
9. Source of water added		•		
	•	16. Well developed b	y: Person's Name and Fi	m
10. Analysis performed on water added?	Ves No	Tim Ke	nul )	
(If yes, attach results)			/ / \<	ME
(II yes, amon recent)		RICK FE	EDRICIL	
17. Additional comments on development:				
		_	· · · · · · · · · · · · · · · · · · ·	
la WELL UNCUMES R	moved -	THE WELL W	AS STILL S	UGNILY TURK
a well root		APTER 6-WE	u Joumes,	LEMOVED.
le WELL VOLUMES RA PUMP LATE 2 1.0	10			
FUMP LATE 2 1.0	as/m DER	MIN.		•
Facility Address or Owner/Responsible Party	Address	I hereby certify that	t the above information is	s true and correct to the be
		knowledge.		
Name:			•	
		Si		
		Signature:	and the second	
Firm:		-   -		
Firm:				
Firm:	2.4A	Print Name:		

L'Ogfle 55AR	County Bur	ke	Well Name /0/	$T_{\rm eff}$ and $T_{\rm eff}$
Voatle SSAR	- <u></u>	<u>,                                     </u>		
acility License, Permit or Monitoring Number				
	es X No		Before Developmen	t After Developmen
	~ 7~	11. Depth to Water (from top of	. BG.12 A	90.10' A
Well development method:	4.1	well casing)		
surged with banci and bance	41			
surged with baller and pumped	61	Date	b. 6-14-05	6-14-05
surged with block and builde	42	Date	0. 0 77 03	0 17-03
surged with block and pumped	62			
murged with block bailed, and pumped	,70		- aina.	1 3:05 pm
compressed air	20	Time	c. 2:40 pm	i orogen
bailed only	10		turituri	<b>-</b>
pumped only	51	12. Sediment in well	inche	s inche
pumped slowly	50	bottom		
other		13. Water clarity	Clear 🔲 10	Clear 20 20 Turbid L 25
		•	Turbid 1 1 5	and the second
Time ment developing well 2	5 min.		(Describe)	(Describe)
3. Time spent developing well			TUPBID UNT	L WATER CLEAK
	5.0 ft.	the second states and	APPROX I WEL	1 WHEN DEVELON
4. Depth of well (from top of well casing) $\partial 2\partial$	J.O. 12		Vaume Rom	
	?" in.			
5. Inside diameter of well	ε <u>ω</u> .		•	
6. Volume of water in filter pack and well	7 gal.			
casing	. / 5	Eill in if drilling flui	ids were used and well is a	at solid waste facility:
	<b>A</b> A	I'll ll it canning are		
7. Volume of water removed from well Approx	70 gal.	14. Total suspender		
		solids		
8. Volume of water added (if any)	gal.	801108	· · · · · · · · · · · · · · · · · · ·	and the second second
110-		15. COD	m	g/ mg
9. Source of water added _//One	·····	15.000		
			Les Demonte Name and F	
			by: Person's Name and F	una l
10. Analysis performed on water added?	Yes X No	Tim	Kery ) (	SEME
(If yes, attach results)		1		
(,		KICKF	FREDRICK	
17. Additional comments on development:				
	VSING	AIR COMPRE	350R	
WETL WAS DEVELOPED				and the second
WELL WAS DEVELOPED		<b>~</b>		
WELL WAS DEVELOPED	USED.	AT BOTTOM	OF WEL	
WELL WAS DEVELOPED 2 50 PST OF PRESSURE	USED	AT BOTTOM	of well	
WELL WAS DEVELOPED 2 50 PST OF PRESSURE	USED	AT BOTTOM	of wal	
				s true and correct to the best
WELL WAS DEVELOPED 2 50 PST OF PRESSURE Facility Address or Owner/Responsible Party Address		I hereby certify th		s true and correct to the best
Facility Address or Owner/Responsible Party Address				s true and correct to the best
		I hereby certify th		s true and correct to the best
Facility Address or Owner/Responsible Party Address		I hereby certify th		s true and correct to the best
Facility Address or Owner/Responsible Party Address		I hereby certify th knowledge.		s true and correct to the best

Firm:

City/State/Zip:

Facility/Project Name	County Bur	ko	Well Name /0/	2
Varla STAR	Dur	100		
Facility License, Permit or Monitoring Number				
	El Yes X No		Before Development	After Development
1. Can this well be purged dry?		11. Depth to Water (from top of	45.85' R	52.78' ft.
2. Well development method: surged with bailer and bailed	<b>41</b>	well casing)	L. 73,0° A.	
surged with bailer and pumped surged with block and bailed	□ 61 □ 42	Date	b. 6-3-05	6-3-05
surged with block and pumped	□ 62 □ 70			10:35
surged with block, bailed, and pumped compressed air	<b>D</b> 20	Time	c. 9:55 A	(0.3)
bailed only pumped only	□ 10 > 51	12. Sediment in we	ll inches	inches
pumped slowly other	□ 50 ≫⊠ ■	13. Water clarity	Clear 1 0 Turbid 1 5	Clear <b>1</b> 20 Turbid <b>1</b> 25
3. Time spent developing well	40 min.		(Describe) <u>Utary TURBID</u>	
4. Depth of well (from top of well casing)	98.0' fl.		TAN! COLOR	Remarts.
5. Inside diameter of well	2" 'in.			· · · · · · · · · · · · · · · · · · ·
6. Volume of water in filespectrum well casing	8.5 gal.			-
çasıng		Fill in if drilling fl	uids were used and well is at	solid waste facility:
7. Volume of water removed from well	26.0 gal.	14. Total suspend	ed mg/	
8. Volume of water added (if any)	None gal.	solids	mg	n m
9. Source of water added // One		15. COD		
			d by: Person's Name and Fin	m ·
10. Analysis performed on water added? (If yes, attach results)	🛛 Yes 🗶 No		ENGOLICK Sin	16
17. Additional comments on development:		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	NOVED			
3 was voumes con Pump have = 1.0 qu	llon per min.			
				•
The line Address or Owner/Responsible Party	A ddress	Themphy contify	that the above information is	true and correct to the be

Facility	Address or O	wner/Responsible Party	Address		I hereby certify th knowledge.	at the abo	ve informat	ion is true	and correct to t	he best of n
Name:										
Firm:	• •				Signature:					
Street:				<u>2.4A - 17</u> 0	Print Name:					
City/Sta	te/Zip:				Firm:					

Facility/Project Name	County D		Well Name 101	3
Facility License, Permit or Monitoring Number	Bur	ice		
activity License, i children internet				
. Can this well be purged dry?	T Yes X No	11. Depth to Water	Before Development	After Development
. Well development method:		(from top of	a. 54.86 A.	69.96' ft.
surged with bailer and bailed	D 41	well casing)		
surged with bailer and pumped	<b>D</b> 61			
surged with block and bailed	<u> </u>	Date	b. 6-15-05	6-15-05
surged with block and pumped	<b>D</b> 62		· · · · ·	
surged with block, bailed, and pumped	70			<b>A</b> 108
compressed air	20	Time	c. 7/40 min	8:30
bailed only	<b>□</b> 10			
pumped only	51	12. Sediment in wel	l inches	inches
pumped only pumped slowly	<b>D</b> 50	bottom		_ \ <b>1</b>
		13. Water clarity	Clear D 10	Clear 20
other			Turbid 🙀 15	Turbid 🗖 25
	50 min.		(Describe)	(Describe)
3. Time spent developing well			SUGHTW	CLEAR AFTER
•11ina)	10825 ft.		TURBIO	3 WELL VOUM
4. Depth of well (from top of well casing)	108.25 ft.			REMOVED.
5. Inside diameter of well	2" 'm.			
6. Volume of water in filter and well casing	8.7 gal.	Fill in if drilling flu	aids were used and well is at	solid waste facility:
7. Volume of water removed from well	26 gal.	14. Total suspende		· · ·
8. Volume of water added (if any)	None gal.	solids		•
9. Source of water added None		15. COD	mg	
			d by: Person's Name and Fin	m
10. Analysis performed on water added?	I Yes X No	Tim.	Kaly )	1.
(If yes, attach results)			/ / / / / / / / / / / /	ME
(II yes, allacit icsuits)		KICK F	REDRICK (	
17. Additional comments on development:			<b>•</b>	
RAPPEN 3 WELL PUMP LATE AT	Nordants RE	MIVES		
NAPPER O WELL	Values a			
0 0 -	10 . 1/2	DER MIN.		
VUMP LATE AT	1.0 gerion	per min.		•
an a	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	
Facility Address or Owner/Responsible Party	Address	I hereby certify t knowledge.	hat the above information is	true and correct to the best o
Name:		%		
Firm:		Signature:		
Street:		Print Name:		
- <u>Juwi</u>	2.4A -			an a
City / Danta 17 int	1	Firm:		

City/State/Zip:

•.

Facility/Project Name	County Bur	ke	Well Name 1014	
acility License, Permit or Monitoring Number				
. Can this well be purged dry?	Yes X No	11. Depth to Water	Before Development	After Development
		(from top of	a. 1/3.0 ft.	119.51. A.
2. Well development method:		well casing)	a. //3.0 ft.	////.5/
surged with bailer and bailed				1 10 -
surged with bailer and pumped		Date	b. 6-19-05	6-14-05
surged what brock and brance				
surged with block and pumped surged with block, bailed, and pumped				
compressed air	20	Time	c. 1:50 pm	2:15 pm
bailed only	10			
pumped only	51	12. Sediment in we	l inches	inches
pumped slowly		bottom	a <b>D</b> 10	Clear 2 0
other?Z		13. Water clarity	Clear 🔲 10 Turbid 🙀 15	Turbid D 25
			(Describe)	(Describe)
3. Time spent developing well 2	5 min.		WATER CLERK	
			AFTER 10 MIN.	
4. Depth of well (from top of well casing)	05 ft.	1	OF DEVELOPMENT	
	2" in.		<u></u>	
5. Inside diameter of well	<b>~</b> 111.			
6. Volume of water in filer pulses well				
casing	15,0 gal.			
		Fill in if drilling flu	nids were used and well is at a	solid waste facility:
7. Volume of water removed from well	nov 45 gal.			· · · ·
	• * · · · · · · · · · · · · · · · · · ·	14. Total suspende	d mg/l	mg/
8. Volume of water added (if any)	me gal.	solids		
		15. COD	mg/l	mg
9. Source of water added None		15.000	/	
	•	16 Well developer	1 by: Person's Name and Firm	a
	T Ver M No			
IV. Analysis performed on a set	I Yes X No	Tim Ke		ME
(If yes, attach results)		RICK 7	REDRICK	
17. Additional comments on development:				
WELL WAS DEVELOPE	ED USING	AIR COMP	RESSOR	
	11 - A	>	un store	
2 50 PSI OF PRESSUR	E VSED A	Cottom C	of well	
Facility Address or Owner/Responsible Party Address	CSS	I hereby certify t	hat the above information is t	rue and correct to the best
		knowledge.		<u>.</u>
Name:		-		
<b>991</b>	· · · · · · · · · · · · · · · · · · ·	Signature:		
Firm:				
Street:		Print Name:		
Street:	2.4A -	172		
City/State/Zin	-	Firm:		·····

cility/Project Name	County R	rke	Well Name /0/5	
Voatle 55AR acility License, Permit or Monitoring Number	Du	1		
cility License, Fernin of Mennesing				
	El Yes 🙀 No		Before Development	After Development
. Can this well be purged dry?	- <i>Г</i>	11. Depth to Water	a 63.47' ft	70.97' ft
. Well development method:		(from top of well casing)	a. 45.41 ft.	10.71 ft.
surged with bailer and bailed	□ 41	wen casmig)		
surged with bailer and pumped	61		b. 6-3-05	6-3-05
surged with block and bailed	□ 42	Date	D. Q-J-OS	
surged with block and pumped	62			
surged with block, bailed, and pumped	<b>7</b> 0			2:30 pm
compressed air	20	Time	c. 1:30 pm	
bailed only	□ 10		1 inches	inches
pumped only	51	12. Sediment in we	1 menes	шоноз
pumped slowly	<u>□ 50</u>	bottom		Clear 20
other		13. Water clarity	Clear 10 Turbid 15	Turbid D 25
			(Describe)	(Describe)
	60 min.			
3. Time spent developing well			VERY MUDDY	WATER BELAN
	122.40' ft.		THICK BROUND	CLEAR AFTER
4. Depth of well (from top of well casing)	(2017)		IN GLOR	2 JWEL Van
5. Inside diameter of well	2" 'in.			Remives.
5. Inside diameter of wen				
6. Volume of water in fitten and well	A 1			
casing	9.6 gal.			11 1
Casing	•	Fill in if drilling fl	uids were used and well is at	solid waste facility:
a second from Well	30.0 gal.			
7. Volume of water removed from well		14. Total suspend	ed mg/	mg
	None gal.	solids		
8. Volume of water added (if any)	/////		mg/	n mg
None	м	15. COD		
9. Source of water added				
		16. Well develope	d by: Person's Name and Fir	m ·
10. Analysis performed on water added?	I Yes No	Tim K	any Isin	
10. Analysis performed on where				16
(If yes, attach results)		KICK F	KEDMOK )	
17. Additional comments on development:				
	• • • • • • • • • • • • • • • • • • •			
3 War Volumes	Konoved	an a		
PUMP RATE ~ 1.0		· · · · ·		

Facility /	Address or Own	er/Responsible Party Address		I hereby certify knowledge.	that the above	information is t	rue and correct to th	e best of m
Name:					•			· · · · ·
Firm:	<u></u>			Signature:				
Street:			2.4A - 173	Print Name:				· · · · · · · · · · · · · · · · · · ·
City/Sta	te/Zip:			Firm:			<u></u>	

# **APPENDIX H**

# WELL INSPECTION FORMS

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SNC ALWR ESP PROJECT	
EXISTING OBSERVATION WELL INSPECTION F	REPORT

Well Number <u>LT-1B</u>	Well Status	•
Inspected by <u>S.C. Baskic</u>	Date	1605
Company <u>SCS</u>		
Well Surface Description:		
Stickup (ground surface to top of riser casing):	2.61	
Riser casing diameter:	Z"	
Steel surface protective casing:Yes	No	
Protective casing diameter:	0.55	-
Cap: Yes No Locked:	Yes No	
Concrete surface seal: Yes No		
Surface seal condition/integrity:		
Remarks:		
Well Description:		
		(1 71-1
Depth to water (measured from top of riser casing):		<u>66.36'</u> 93.48'
Well depth (measured from top of riser casing to bott Evidence of sediment in bottom of well:Yes	No	
Remarks: O.2' Ked mud		
	in cardone	
Recommended for Development: Yes No		
Notes:		
		1
		la de la companya de

EXISTING OBSERVATION WEL	PROJECT L INSPECTION RE	PORT
Well Number <u>LT -ZA</u>	Well Status	action
Inspected by <u>S.C. BCARC</u>	Date4	0/10/05
Company <u>SCS</u>		
Nell Surface Description:		
Stickup (ground surface to top of riser casing):	1.24'	<b></b>
Riser casing diameter:	<u> </u>	
Steel surface protective casing: Yes	No	
Protective casing diameter:	0.55	
Cap:YesNo Locked:	Yes No	
Concrete surface seal:YesNo		
Surface seal condition/integrity:		
		·
Depth to water (measured from top of riser casing)		64.80'
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be	ottom of well):	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Ye	ottom of well):	
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be	ottom of well):	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Ye	ottom of well):	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Y Remarks:	ottom of well):	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Y Remarks: Recommended for Development:YesY	ottom of well): es <u>No</u>	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Y Remarks: Recommended for Development:YesY	ottom of well): es <u>No</u>	සි9.07
Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Y Remarks:	ottom of well): es <u>No</u>	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Y Remarks: Recommended for Development:YesY	ottom of well): es <u>No</u>	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Y Remarks: Recommended for Development:YesY	ottom of well): es <u>No</u>	සි9.07
Depth to water (measured from top of riser casing) Well depth (measured from top of riser casing to be Evidence of sediment in bottom of well:Y Remarks: Recommended for Development:YesY	ottom of well): es <u>No</u>	සි9.07



ł

SNC ALWR ESP PROJEC	<b>)T</b>	
EXISTING OBSERVATION WELL INSPE	CTION	REPORT

Well Number	Well Status	active
Inspected by <u>S.C. BeARce</u>	Date 🥢	2/16/05
Company <u>SCS</u>		
Well Surface Description:		
Stickup (ground surface to top of riser casing):	D.18	
Riser casing diameter:	2" NO	
Steel surface protective casing: Yes	No	
Protective casing diameter:	0.55	•
Cap: Yes No Locked:	Yes No	
Concrete surface seal:YesNo		
Surface seal condition/integrity:		
	<u> </u>	
Remarks: <u>no Concruze Surr</u>	m	

### Well Description:

		ater (measured	•			<u>61.44</u>
	Evidence of	(measured fror f sediment in b	ottom of well:	Yes	No	Maybe
	Remarks:	LCORding	Sachinan			nesse strer
Reco	mmended for	Development:	Yes	No		
Notes	<u>s:</u>					
			<u></u>			

$j = \frac{1}{\sqrt{2}}$	
Well Number <u>LT-/3</u> Well Stat	us <u>active</u>
Inspected by <u>ScBearce/L.Headland</u> Date Company <u>SCS</u> Becktel	us <u>active</u> 6/16/05
Company 525 Becktel	······································
Well Surface Description:	
Stickup (ground surface to top of riser casing): $2, 26 - 0$	.52
Stickup (ground surface to top of riser casing): $\frac{2,26-0}{4''ND}$ Riser casing diameter: $4''ND$ set 40 $\frac{4''ND}{4''ND}$	ad 40 PVC
Steel surface protective casing: Yes No	
Protective casing diameter; .550.55	
Cap:YesNo Locked: /Yes	No
Concrete surface seal: Yes No	
Surface seal condition/integrity:	
Remarks: difficult positionic becau slevers lovel recorder. In small.	200
slevers lovel secondar. In small.	steel building
	3
Well Description:	
Depth to water (measured from top of riser casing):	64,60
Depth to water (measured from top of riser casing):	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well):	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u>	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks:	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u>	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks: <u>Yes</u> <u>No</u>	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks:	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks: <u>Yes</u> <u>No</u>	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks: <u>Yes</u> <u>No</u>	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks: <u>Yes</u> <u>No</u>	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks: <u>Yes</u> <u>No</u>	90.65
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom of well): Evidence of sediment in bottom of well: <u>V</u> Yes <u>No</u> Remarks: <u>Yes</u> <u>No</u>	90.65

Page 1

Well Numbe	r <del>/ /</del>			s Macjive
Inspected by	/ John J	Pugh	Date	5-18-05
Company	Southern	Contany Services	12	:38 EDT
	Description:			
Stick	up (ground su	rface to top of riser casing	g): <u>1.4 A</u>	
	r casing diame		2"	
		ctive casing:Ye		
	ective casing d		0.7Fr	
		No Locked		lo
		eal:Yes tion/integrity: _ <i>N/A</i>	No	
Outle	ice sear conull		<u> </u>	
Rem	arks:	and the second	an ing a start and a start of the	
Rem	arks:			
Rem	arks:			
Vell Descrip	o <u>tion</u> :	easured from top of riser o		<u>26.40</u> FT
<u>Vell Descrip</u> Dept	<u>otion</u> : h to water (me	asured from top of riser o		<u>26.40</u> FT
<u>Well Descrip</u> Dept Well Evide	<u>otion</u> : h to water (me depth (measu ence of sedime	easured from top of riser of red from top of riser casiment in bottom of well:	casing): // ng to bottom of well): // YesNo	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide	<u>otion</u> : h to water (me depth (measu ence of sedime	easured from top of riser of red from top of riser casiment in bottom of well:	casing): //	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem	<u>otion</u> : h to water (me depth (measu ence of sedime	easured from top of riser of red from top of riser casiment in bottom of well:	casing): // ng to bottom of well): // YesNo	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem <i>こ</i> し	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): <u>/</u> ng to bottom of well): <u>/</u> YesNo <i>YesNo</i>	<u>26.40</u> 55 90.4055 Maybe
Well Descrip Dept Well Evide Rem ろ。	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): // ng to bottom of well): // YesNo	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem <i>こ</i> し	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): <u>/</u> ng to bottom of well): <u>/</u> YesNo <i>YesNo</i>	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem <u>と</u>	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): <u>/</u> ng to bottom of well): <u>/</u> YesNo <i>YesNo</i>	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem <u>と</u>	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): <u>/</u> ng to bottom of well): <u>/</u> YesNo <i>YesNo</i>	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem <u>と</u>	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): <u>/</u> ng to bottom of well): <u>/</u> YesNo <i>YesNo</i>	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem <u>と</u>	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): <u>/</u> ng to bottom of well): <u>/</u> YesNo <i>YesNo</i>	<u>26.40</u> 55 90.4055 Maybe
<u>Well Descrip</u> Dept Well Evide Rem <u>と</u>	otion: h to water (me depth (measurence of sedime arks: <u>NO</u> SEEV S	easured from top of riser of red from top of riser casiment in bottom of well:	casing): <u>/</u> ng to bottom of well): <u>/</u> YesNo <i>YesNo</i>	<u>26.40</u> 55 90.4055 Maybe

	Well Status Inactive
spected by	John Pugh / h. Headlad Date 5/19/05
ompany	SCS Bechtel
ell Surface l	Description:
Sticku	o (ground surface to top of riser casing): $1 - 9 - 0 - 12 = 1 - 78'$
Riser o	asing diameter:
Steel s	urface protective casing:YesNo
Protec	tive casing diameter:0-66
Cap:	Yes No Locked: Yes No (lock on t
	ete surface seal:YesNo
Surfac	e seal condition/integrity: <u> </u>
Hemar	ks:
	<u>»n</u> :
Depth Well de Eviden	on: to water (measured from top of riser casing): $2/(.94)^{\prime}$ opth (measured from top of riser casing to bottom of well): $996^{\prime}$ ce of sediment in bottom of well:YesNoMaybe
Depth Well de Eviden	on: to water (measured from top of riser casing): $\frac{211.94}{5}$ epth (measured from top of riser casing to bottom of well): <u>996'</u>
Depth Well de Eviden Remar	The product of the second sec
Depth Well de Eviden Remar	on: to water (measured from top of riser casing): $2/(.94)^{\prime}$ opth (measured from top of riser casing to bottom of well): $996^{\prime}$ ce of sediment in bottom of well:YesNoMaybe
Depth t Well de Eviden Remari	The product of the second sec
Depth Well de Eviden Remar	The product of the second sec
Depth t Well de Eviden Remari	The product of the second sec
Depth Well de Eviden Remar	The product of the second sec
Depth Well de Eviden Remar	The product of the second sec
Eviden Remar	The product of the second sec

Well Number 142	Well Status Inactive
Inspected by J. Pugh L. Headlad	Date 5 (19 / 05
Company <u>SCS   Beentel</u>	11:55 AM
Well Surface Description:	
Stickup (ground surface to top of riser casing): /-9	$\frac{14-0.58}{1.36} = 1.36$
Riser casing diameter:	2"
Steel surface protective casing: Yes	No
Protective casing diameter:	0.66
Cap: Ves No Locked:	Yes No (hock cut)
Concrete surface seal: Yes No	
Surface seal condition/integrity:N	
a da anti-anti-anti-anti-anti-anti-anti-anti-	
Remarks: <u>Borelde casing diameter Es</u>	
well cousists of :- proceedice casing, bo	relate caring + wiser caring
Well Description:	$\mathcal{U}_{\mathrm{res}}$
Depth to water (measured from top of riser casing):	<u>-70.5</u>
Well depth (measured from top of riser casing to botto	
Evidence of sediment in bottom of well: Yes	No Maybe
Remarks: <u>den tip</u>	
Recommended for Development:YesNo	
steel - protective casing 0.66	dia
Notes:	
Bouchde casing =	33' dùa.
1-94 Riser casing = 2"	
XXX XXX	

	Well Status	mactive
Inspected by VOHN PUGH	Well Status Date//	8/05
Company Souther Company Services	16:4	4
Well Surface Description:		
Stickup (ground surface to top of riser casing):	75 FT	
na shekara ka	1N.	
	No	
	IFT	ara di seria. Nga kaong sa
Cap: Yes No Locked:	/es No	
Concrete surface seal:YesNo		
Surface seal condition/integrity: <u>NA</u>	n an	
Remarks:		
	<u> </u>	
Well Description:		
Weil Description.		
Depth to water (measured from top of riser casing):	127.	73 FT-
Depth to water (measured from top of riser casing):		
	n of well): <u>/32.</u>	62 FT
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves Remarks: <u>PROBE</u> STANCE N	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: <u>V</u> Yes	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves Remarks: <u>PROBE</u> STANCE NO	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves Remarks: <u>PROBE</u> STANCE N	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves Remarks: <u>PROBE</u> STANCE NO	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves Remarks: <u>PROBE</u> STANCE NO	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves Remarks: <u>PROBE</u> STANCE NO	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Ves Remarks: <u>PROBE</u> STANCE NO	n of well): <u>/32-</u> No	62 FT Maybe
Depth to water (measured from top of riser casing):         Well depth (measured from top of riser casing to bottom         Evidence of sediment in bottom of well:       Yes         Remarks:       Image: Start Got M         Recommended for Development:       Yes         Notes:       No	n of well): <u>/32-</u> No	62 FT Maybe

Well Number 802 A	Well Status active
Inspected by Specific / Headland	Well Status Date
CCG /B-IIT	
Company <u>DC7 / Recutal</u>	
Well Surface Description:	
	327-0.49=778'
Stickup (ground surface to top of riser casing): Riser casing diameter:	<u>3,27-0.49 = 2.78</u> <u>4" ND sch 40 PVC</u>
Steel surface protective casing: Yes	<u>- 7 70 5 50</u> 0 907 0 - No
Protective casing diameter:	0,55'
Cap: Yes / No Locked: _/	No
Concrete surface seal:YesNo	
Surface seal condition/integrity:	
Remarks: needs Casing cop	ye
Remarks: <u>meeds Casing cop</u>	
Well Description:	
Depth to water (measured from top of riser casing):	61.01
Well depth (measured from top of riser casing to bo	
Evidence of sediment in bottom of well:	
Remarks: no sediment an pr	
	a da serie de la companya de la comp Esta de la companya de
Recommended for Development:YesN	
Notes:	
	· · · · · · · · · · · · · · · · · · ·

**Page 1** 2.4A - 183

Well Number		803A	·····		Well S	tatus _	Inaction	ne.
Inspected by	•	John Pugh	+ house	Ukadlad	Date	5-1	9-05	· · ·
Company		Southern Co					so am	ES7

#### Well Surface Description:

Stickup (ground surface to top	07			
Riser casing diameter:				
Steel surface protective casing	g: <u>/</u> Yes	No		
Protective casing diameter:	and the second	0.83		
Cap:YesN	No Locked:	Yes	No (co	mestuation
Concrete surface seal:	_Yes _/	No		
Surface seal condition/integrit	Y: NA	ADLAS SDAD	noting p	osts.
Remarks:				

#### Well Description:

Depth to wa	ter (measured from top of rise	r casing):	_6	.0.25
Well depth (	measured from top of riser cas	sing to bottom c	of well):	89-51
Evidence of	sediment in bottom of well: _	Yes	No	Maybe
Remarks:	Soft 2 bottom	silt on	tio a	diputer
		· · · · ·		

Recommended for Development: \_\_\_\_\_ Yes \_\_\_\_\_ No

Notes:	Current reasing 1	puteble	casino un	asurenets	(5-19-05
	SU18/0S)				
	riser	0.42' Ste	et casing		
•	casing	TTT T			
		11 1.2	3 ] 1-11'	· · · · · · · · · · · · · · · · · · ·	
•	AXXX			· · · · · · · · · · · · · · · · · · ·	

Well Number 804	Well Status Inachine
Inspected by John Pugh 14. Hool col	Date <u>5/19/05</u>
Company <u>SC S</u>	9.55 +14
Well Surface Description:	
Stickup (ground surface to top of riser casing):	11 - 0.39 = 1.72'
Riser casing diameter:	<b>2</b> "
Steel surface protective casing: Yes	No
	0.83
Cap:YesNo Locked:	_YesNo
Concrete surface seal:YesNo	
Surface seal condition/integrity: <u>N(A</u>	Four concrete posts
sunoisting well.	
Remarks:	
Well Description:	
Well Description:	
Depth to water (measured from top of riser casing):	<u>62.13</u>
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot	om of well): <u>95.2</u>
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes	om of well): <u>95.2</u> No Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot	om of well): <u>95.2</u> No Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes	om of well): <u>95.2</u> No Maybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes	om of well): <u>95.2'</u> NoMaybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes Remarks:	om of well): <u>95.2'</u> NoMaybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes Remarks:	om of well): <u>95.2'</u> NoMaybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes Remarks:	om of well): <u>95.2'</u> NoMaybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes Remarks:	om of well): <u>95.2'</u> NoMaybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes Remarks:	om of well): <u>95.2'</u> NoMaybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes Remarks:	om of well): <u>95.2'</u> NoMaybe
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bot Evidence of sediment in bottom of well: Yes Remarks:	om of well): <u>95.2'</u> NoMaybe

Well Numb	er <u>80</u>	SA		and and a second se	Well Status	Inactive
Inspected t	by J. Pma	LIL.He	sollard	na series de la composition de	Date $5/19$	105
Company		L   L.He Becute	Q			
Compailly		Vante	<u>^</u>			
Well Surfac	ce Descriptio	<u>n</u> :				
Stic	kup (ground	surface to top	of riser casi	ng): 2 · 0	-0.42 = 1	. 58
	er casing dia			2		
N		otective casing	g: Y	es N	 lo	
	ective casing			0.	83	
		- es1	No Locke	d: <u>/</u> Ye	s No	
		e seal:				en de la compañía de La compañía de la comp
Surl	ace seal cor	ndition/integrity	y:N	14		
Ren	narks:			•		
				n an the second s	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19	
<u>Well Descri</u> Dep		measured fror	n top of riser	casing):	775	12
		and the second second			of well): <u>/28</u>	.55 (
		iment in botto			No	
		oft ~si				
				r .		
		······································	· · · · · · · · · · · · · · · · · · ·			
Recommen	ded for Dev	elopment:	Yes ·	No		
	ма. 1910 година 1910 година					
Notes:			n an		an a	
					· · · ·	
		·				
· · · · ·	<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>			
		······				
· · · · · · · · · · · · · · · · · · ·						
			······································		······································	

Vell Number	8063	Well Status	_action
nspected by <u>5</u>	Bearco	Date	
ompany	SCS		
Vell Surface Des	cription:		
Stickup (g	round surface to top of riser casi	ng): 1.8-0.65	=1.15
Riser casi	ng diameter:	2"ND Sc	h 40 PVC
Steel surfa	ace protective casing:Y	esNo	н ж.
Protective	casing diameter:	0.95	
Cap:	Yes <u>/</u> No Locke	ed:YesNo	
Concrete s	surface seal: Yes	No	
Surface se	eal condition/integrity:		
	······ V · · I		
د مداسم معرض 🗖			
Remarks: 			
/ <u>ell Description</u> : Depth to w	rater (measured from top of riser (measured from top of riser cas	and the Theorem State of the St	60,42 69.35
/ <u>ell Description</u> : Depth to w Well depth	· · · · · · · · · · · · · · · · · · ·	sing to bottom of well):	<u>60,42</u> <u>69.35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c	(measured from top of riser cas	sing to bottom of well):	<u>(60,42</u> <u>69.35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c	(measured from top of riser cas of sediment in bottom of well: 	sing to bottom of well):	<u>60.42</u> <u>69.35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c Remarks: <u>ecommended fo</u>	(measured from top of riser cas of sediment in bottom of well: 	sing to bottom of well):	<u>60,42</u> <u>69.35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c Remarks: <u>ecommended fo</u>	(measured from top of riser cas of sediment in bottom of well: 	sing to bottom of well):	<u>60.42</u> <u>69.35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c Remarks: <u>ecommended fo</u>	(measured from top of riser cas of sediment in bottom of well: 	sing to bottom of well):	<u>60,42</u> <u>69.35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c Remarks:	(measured from top of riser cas of sediment in bottom of well: 	sing to bottom of well):	<u>(60,4</u> 2 <u>69.35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c Remarks: <u>ecommended fo</u>	(measured from top of riser cas of sediment in bottom of well: 	sing to bottom of well):	<u>(60,4/2</u> <u>69,35</u> <u>—</u> Maybe
<u>/ell Description</u> : Depth to w Well depth Evidence c Remarks: <u>ecommended fo</u>	(measured from top of riser cas of sediment in bottom of well: 	sing to bottom of well):	60,42 69.35 — Maybe

Page 1 \_\_\_\_

# SNC ALWR ESP PROJEC

EXISTING OBSERVATION WELL INSPECTION REPORT
Well Number 808 Well Status active
Inspected by SBearce/L Headland Date 6/16/05
Company <u>SCS</u>
0,98
Well Surface Description:
Stickup (ground surface to top of riser casing): <u>.98+.9812=</u> 0.98 Riser casing diameter: <u>.4''ND 5.440 PVC</u>
Riser casing diameter: <u>4"ND 5440 PVC</u>
Steel surface protective casing:YesNo
Protective casing diameter: O, 55 Cap: Yes No Locked: Yes No
Cap:YesNo Locked:YesNo Concrete surface seal:YesNoS
Surface seal condition/integrity:
Remarks: In Steel building
Well Description:
Depth to water (measured from top of riser casing): 57.52
Well depth (measured from top of riser casing to bottom of well): $\sim 25,40$
Evidence of sediment in bottom of well: Yes No Maybe
Remarks: <u>Soft botton</u>
Recommended for Development:YesNo
Notes:

	80		· · · · · · · · · · · · · · · · · · ·	<b></b> `		well S		<u> </u>
Inspected by	John	Pugh		<del></del>		Date _	5-18	ractive 3-05
Company	Souther	n Comj	bary Sc	<u>u</u> vices				
Well Surface	Description	<u>ı</u> :	ng sa	ant An Anna Anna Anna Anna				
Sticku	ıp (ground :	surface to	top of ris	er casing):	1.2	3 Ft		
	casing diar			· · ·	_2'			
Steel	surface pro	tective ca	ising:	Yes		No		
	ctive casing							
and the second	Ye					'es	_No	
	ete surface				No			
Surfa	ce seal con	dition/inte	egrity:					
	<u></u>				· · · · ·			
	al character de la companya de la co						· · · · · · · · · · · · · · · · · · ·	
Rema	.rks:							
Well Descript Depth		neasured	from top	of riser cas			71.4	
<u>Well Descript</u> Depth Well c	<u>ion</u> : to water (n lepth (meas	neasured sured fror	from top n top of ri	of riser cas	to botton	n of well):	94.3	5 <del>Ft-</del>
<u>Well Descript</u> Depth Well c Evide	<u>ion</u> : to water (n lepth (meas	neasured sured fror ment in bo	from top n top of ri ottorn of v	of riser cas ser casing vell:X	to botton Yes	n of well):	<u>94.3</u>	5 <del>f†-</del> _ Maybe
<u>Well Descript</u> Depth Well c Evide	<u>ion</u> : to water (n lepth (meas nce of sedir rks:	neasured sured fror ment in bo	from top n top of ri ottorn of v ನುರಿತ	of riser cas ser casing vell: <u>X</u>	to botton Yes P	n of well):	94.3! 0 f wat	<u>5 ft</u> _Maybe er_leve
<u>Well Descript</u> Depth Well c Evide	ion: to water (n lepth (meas nce of sedir rks: in dic	neasured sured from ment in bo bown ator	from top n top of ri ottorn of v subs when	of riser cas ser casing vell: <u>X</u>	to botton Yes P	n of well): No No	94.3! 0 f wat	<u>5 ft</u> _Maybe er_leve
<u>Well Descript</u> Depth Well c Evider Rema	ion: to water (n lepth (meas nce of sedir rks: in dic	neasured sured from ment in bo bown ator	from top n top of ri ottom of v subs when	of riser cas ser casing vell: <u>X</u> tance bottom	to botton Yes  	n of well): No No	94.3! 0 f wat	<u>5 ft</u> _Maybe er_leve
Well Descript Depth Well o Evide Rema	ion: to water (n lepth (meas nce of sedir rks: in dic	neasured sured from ment in bo bown ator	from top n top of ri ottom of v subs when	of riser cas ser casing vell: <u>X</u> tance bottom	to botton Yes  	n of well): No No	94.3! 0 f wat	<u>5 ft</u> _Maybe er_leve
Well Descript Depth Well o Evide Rema	ion: to water (n lepth (meas nce of sedir rks: in dic	neasured sured from ment in bo bown ator	from top n top of ri ottom of v subs when	of riser cas ser casing vell: <u>X</u> tance bottom	to botton Yes  	n of well): No No	94.3! 0 f wat	<u>5 ft</u> _Maybe er_leve
Well Descript Depth Well o Evide Rema	ion: to water (n lepth (meas nce of sedir rks: in dic	neasured sured from ment in bo bown ator	from top n top of ri ottom of v subs when	of riser cas ser casing vell: <u>X</u> tance bottom	to botton Yes  	n of well): No No	94.3! 0 f wat	<u>5 ft</u> _Maybe er_leve

Well Number Inspected by John Pugh Company Eurineran Company Jerrices	Well St	atus magior
Inspected by John Pugh	Date _	atus <u>inactive</u> <u>5-18-05</u>
Company FUTTHEREN COMPANY SERVICES	•	15:30 85
Well Surface Description:	<ul> <li>A state of the second seco</li></ul>	
Stickup (ground surface to top of riser casing):	1.96 Ft	_
Stickup (ground surface to top of riser casing): Riser casing diameter:		
Steel surface protective casing: Yes	No	
Protective casing diameter:	0.56 ft	
Cap: <u> </u>	Yes	No
Concrete surface seal: Yes		
Surface seal condition/integrity:		
Remarks:		
	to bottom of well):	
<u>Well Description</u> : Depth to water (measured from top of riser cas Well depth (measured from top of riser casing	to bottom of well):	193.68
<u>Well Description</u> : Depth to water (measured from top of riser cas Well depth (measured from top of riser casing Evidence of sediment in bottom of well:	to bottom of well):	193.68
Well Description:         Depth to water (measured from top of riser case         Well depth (measured from top of riser casing         Evidence of sediment in bottom of well:         Remarks:	to bottom of well): YesXNo	193.68
<u>Well Description</u> : Depth to water (measured from top of riser cas Well depth (measured from top of riser casing Evidence of sediment in bottom of well:	to bottom of well):	193.68
Well Description:         Depth to water (measured from top of riser case         Well depth (measured from top of riser casing         Evidence of sediment in bottom of well:         Remarks:	to bottom of well): YesXNo	193.68
Well Description:         Depth to water (measured from top of riser case         Well depth (measured from top of riser casing         Evidence of sediment in bottom of well:         Remarks:	to bottom of well): YesXNo	193.68
Well Description:         Depth to water (measured from top of riser case         Well depth (measured from top of riser casing         Evidence of sediment in bottom of well:         Remarks:	to bottom of well): YesXNo	193.68
Well Description:         Depth to water (measured from top of riser casing         Well depth (measured from top of riser casing         Evidence of sediment in bottom of well:         Remarks:	to bottom of well): YesXNo	193.68
Well Description:         Depth to water (measured from top of riser casing         Well depth (measured from top of riser casing         Evidence of sediment in bottom of well:         Remarks:	to bottom of well): YesXNo	193.68

	EXISTING OBSE	RVATION WELL IN	SPECTION REPOR	<b>14</b>
Vell N	umber <u>85/A</u>			mactive
spec	ted by John RUGH		Date <u>05</u>	118/05 00 EDT
	any Southern Com		s 17-	OO EDT
ompi				
/ell S	urface Description:			
	Stickup (ground surface to	top of ricor opping):	20FT	
	Riser casing diameter:			
	Steel surface protective ca	sina: Ves	<u>2 /N.</u> No	
	Protective casing diameter	· · · · · ·		
	Cap: V Yes			)
	Concrete surface seal:		1	
	Surface seal condition/inte			
	Remarks:			
	Depth to water (measured Well depth (measured from Evidence of sediment in bo	n top of riser casing to	bottom of well): 28	
	Remarks:			
		·····		
000	nmended for Development:	Yes	No	ander Seiner Stationer Ander Stationer Stationer
0001	Interface for Development.			•
otes				
÷ .*				

Well Number	r <u>- 852</u>	Well S	status <u>mac</u>	<u>Fise</u>
Inspected by	John Pugh	Date	5-18-05 13:19 EL	· · · · · · · · · · · · · · · · · · ·
Company	John Pugh Sourseen Con Pany SERVICE	5. <b>S</b> iya ayan ayan ayan Angara ayan ayan ayan ayan ayan ayan ayan a	13:19 EL	>/~
Well Surface	Description:			
Riser Steel Prote Cap: Conc	Yes No Locked:	2 " No <i>c.52 FT</i> Yes 	No	
Hem	arks:			
	h to water (measured from top of riser casir		89.27	
	depth (measured from top of riser casing to ence of sediment in bottom of well:	and the second		
	arks: NO EVIDENCE OF C			
	ded for Development:Yes	_ No		
Notes:				
· · · · · · · · · · · · · · · · · · ·				

Well Number 853	3		
· · · · · · · · · · · · · · · · · · ·		Well	Status <u>macing</u> <u>05/18/05</u> 16:10 ED;
Inspected by bun	10GH	Date	05/18/00
Company Survey	w GMPany Je	ちろんの	16:10 ED;
Well Surface Description:			
Stickup (ground sur	urface to top of riser cas	ing): _1.86 F	
Riser casing diame		212.	
	ective casing:		
Protective casing di	liameter:	0.56 F	<u>~</u>
Cap: 🗹 Yes	No Locke	ed:Yes	No
Concrete surface se		No	
Surface seal conditi	tion/integrity: <u>N/A</u>		
Remarks:	1		
Vell Description:			
	easured from top of riser	=	125.691
Well depth (measure	red from top of riser cas	ing to bottom of well):	<u>ZZO, 86</u> F
Evidence of sedime	ent in bottom of well:	<u>V</u> YesN	lo Maybe
nemarks, 12030	SAND FOR	GANIC MTZ	. ON FROB
Recommended for Develop	pment:Yes	No	
lotes:		n an an Araba an Araba an Araba Araba an Araba an Araba Araba an Araba	
· · · · · · · · · · · · · · · · · · ·			

Page 1 of \_\_\_\_\_ 2.4A - 193

Well Number 854 Well Status magive
Inspected by Journ Poert Date 05/18/05
Company Southern Contrary Serevices The 16:24 EDT
Well Surface Description:
Stickup (ground surface to top of riser casing): <u>1.85 F7</u> Riser casing diameter:
Steel surface protective casing:YesNo Protective casing diameter:O.56 Fr
Cap:YesNo Locked:YesNo Concrete surface seal:YesNo Surface seal condition/integrity:A
Remarks:
Well Description:
Depth to water (measured from top of riser casing): <u>134.24 F</u> Well depth (measured from top of riser casing to bottom of well): <u>222.33</u> Evidence of sediment in bottom of well: <u>Yes</u> No <u>Maybe</u> Remarks: <u>SOFT BOTTOM BELOW SCREENED INTERVAC</u> <u>PROBE CONTRANS OREMNIC &amp; STLT MATERIAC THING</u>
Recommended for Development:YesNo

Well Number855	Well Status	mactive	Na Sana Na Sana
Inspected by John Rich	Date K	- 18-05	
nspected by John Ruch Company <u>Sources</u> Co. SERVICES	12:58	- 18-05 3 EDT	
Vell Surface Description:			e Teran
Stickup (ground surface to top of riser casing):	0 Er		
Riser casing diameter:	11		
Steel surface protective casing:Yes	No		
	52 FT		
	Yes No		: ::
Concrete surface seal:YesNo	····		n en
Surface seal condition/integrity: N/A	andra an Andra andra andr		an an Arresta Arresta
			en e
Remarks:			
	And the second sec		
en Description.			
Depth to water (measured from top of riser casing):			
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottor	n of well): 224	, SOFT	
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Yes	n of well): <u>224</u> No	A. Soft Maybe	
Well depth (measured from top of riser casing to bottom         Evidence of sediment in bottom of well:          Remarks:       NO EVIDENCE OF SET	n of well): <u>224</u> No >1 <i>men</i> /T	4, <i>Soft</i> Maybe	24 <
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom Evidence of sediment in bottom of well:Yes Remarks: <u>NO EVIOGNEE OF SET</u> <u>DESERVED HOWEVER, MED</u> IS LESS THAN DOCUMENTED F	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24, 50 3
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottor Evidence of sediment in bottom of well: Yes Remarks: <u>NO EVIDENCE OF SET</u>	n of well): <u>224</u> No >1 <i>men</i> /T	Maybe Maybe	24, 50 
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Yes Remarks: <u>NO EVIDENCE OF SET</u> <u>DESERVED HOWEVER, MES</u> IS LESS THAN DOCUMENTED F	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24,50
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Yes Remarks: <u>NO EVIDENCE OF SET</u> <u>DESERVED HOWEVER, MES</u> IS LESS THAN DOCUMENTED F	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24,5
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well:Yes Remarks: <u>NO EVIDENCE OF SET</u> <u>DESERVED HOWEVER</u> , <u>MES</u> IS LESS THEM DOCUMENTED F ecommended for Development:YesNo	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24,5
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Yes Remarks: <u>NO EVIDENCE OF SET</u> <u>DESERVED HOWEVER, MES</u> IS LESS THAN DOCUMENTED F	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24,5
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Yes Remarks: <u>NO EVIDENCE OF SET</u> <u>DESERVED HOWEVER, MES</u> IS LESS THAN DOCUMENTED F	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24,5
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to bottom Evidence of sediment in bottom of well:Yes Remarks: <u>NO EVIOGNEE OF SET</u> <u>DESERVED HOWEVER, MED</u> IS LESS THAN DOCUMENTED F	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24,5
Depth to water (measured from top of riser casing): Well depth (measured from top of riser casing to botton Evidence of sediment in bottom of well: Yes Remarks: <u>NO EVIDENCE OF SET</u> <u>DESERVED HOWEVER, MES</u> IS <u>LESS</u> THEN DOCUMENTED F ecommended for Development:Yes No	n of well): 229 No <u>&gt;1 MENT</u> ASURED DE	Maybe Maybe	24,5

# SNC ALWR ESP PROJECT **EXISTING OBSERVATION WELL INSPECTION REPORT** Well Number 856 Well Status mactioe Date 05/18/05 13:47 EDT Inspected by JOHN ROCK Samsteren Company Stevices Company Well Surface Description:

¥.

	Stickup (ground surface to top of riser casing):
	Riser casing diameter:
	Steel surface protective casing:YesNo
•.	Protective casing diameter: 0.52 FT
	Cap:YesNo Locked:YesNo
	Concrete surface seal:YesNo
	Surface seal condition/integrity: N/A
	Remarks:

#### Well Description:

	Depth to w	ater (measured from top of riser	casing):	75	.70FT			
	Well depth	Well depth (measured from top of riser casing to bottom of well): 182.14 FT						
	Evidence o	of sediment in bottom of well:	Yes	No	Maybe			
	Remarks:	MEADURED DEPTH	4 LESS	THAN C	DEIGNAL			
	Born	on of Surcence	INTERV	MAL. A	10 EVIDO	NE		
		EDEMONT OBJER	VED ON	Probl	5			
Rec	ommended for	r Development: Ves	No	÷				

Page 1 of 2.4A - 196

Notes:

Vogtle ALWR ESP Project

## **APPENDIX I**

## LABORATORY DATA

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Date: August 24, 2005

To:Ms. Rhonda TinsleyFrom:Mr. Bobby Williams

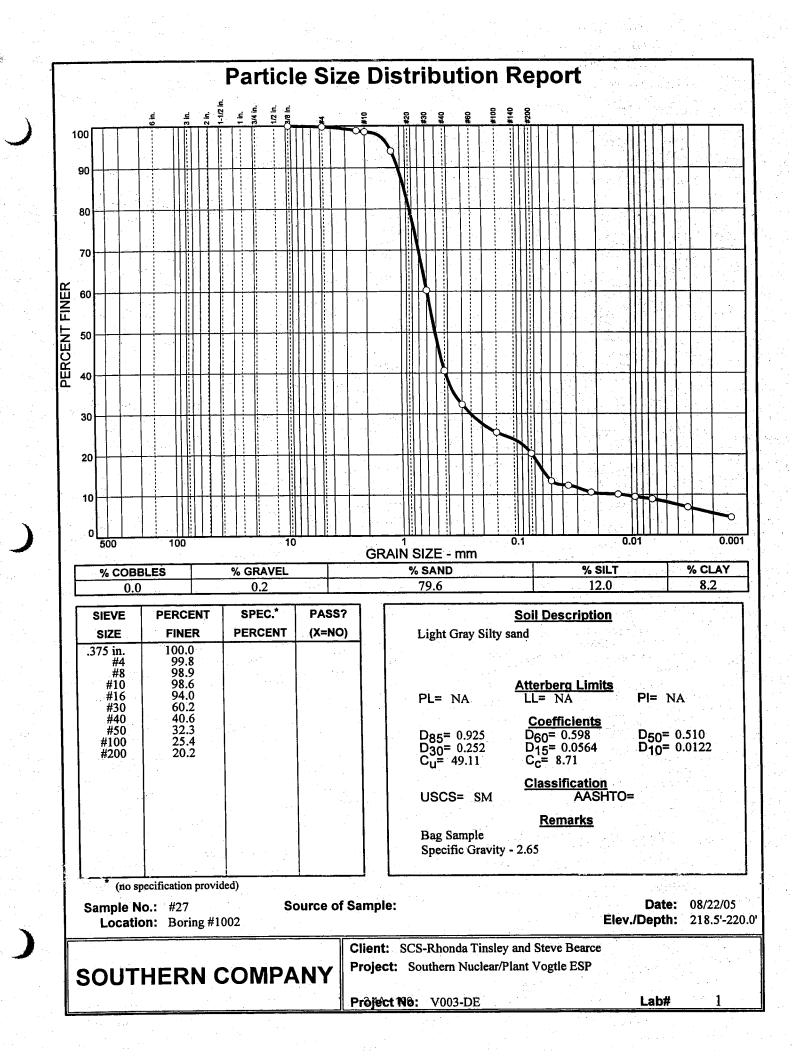
Subject: Plant Vogtle ESP

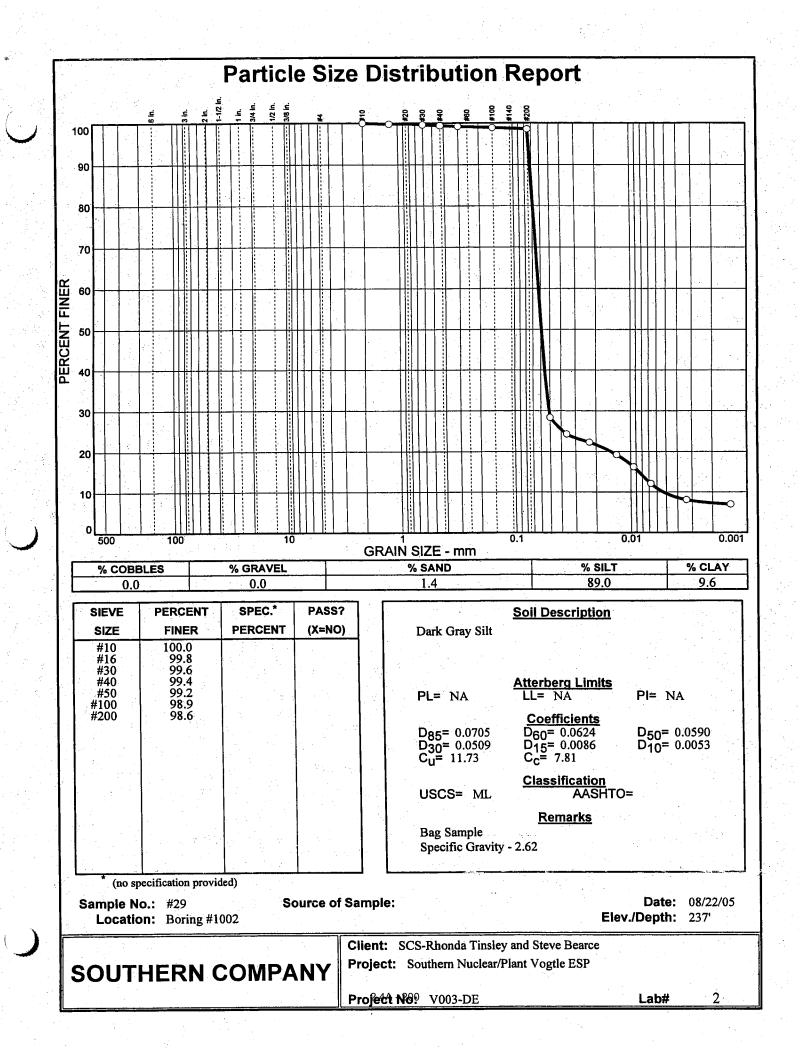
Enclosed are the test results for the Plant Vogtle ESP Project soil samples delivered to the Southern Company Central Laboratory on July 28, 2005. Tests performed include, Soil Particle Size Analysis with Hydrometer (ASTM D-422), and Specific Gravity of Soil (ASTM D-854).

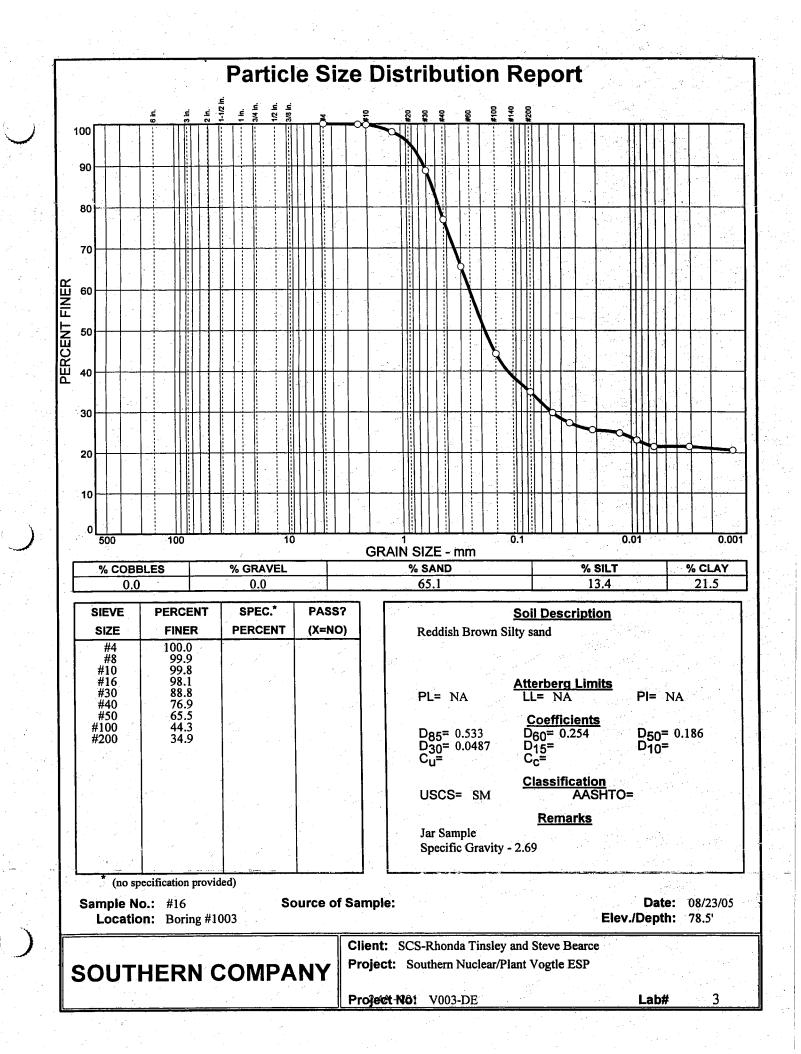
We appreciate the opportunity to assist you on this project. If there are any questions, or if we can be of any further assistance, please call me at 8-255-6508 or Sam Moore at 8-255-6061.

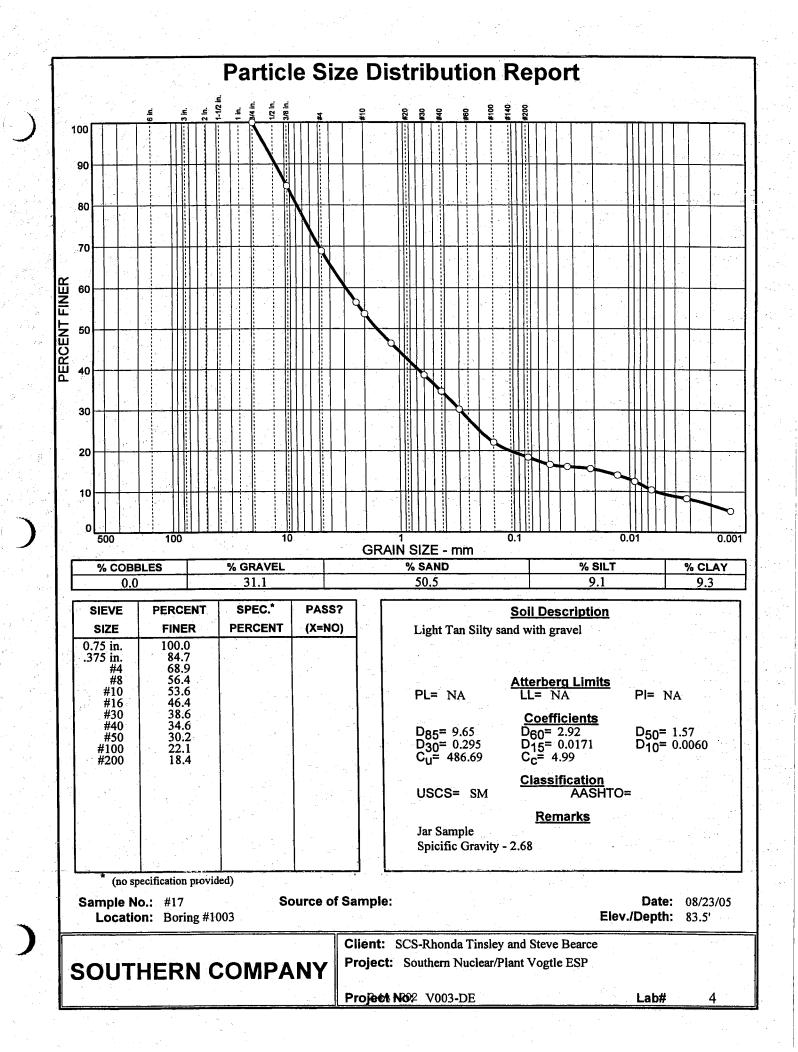
Sincerely,

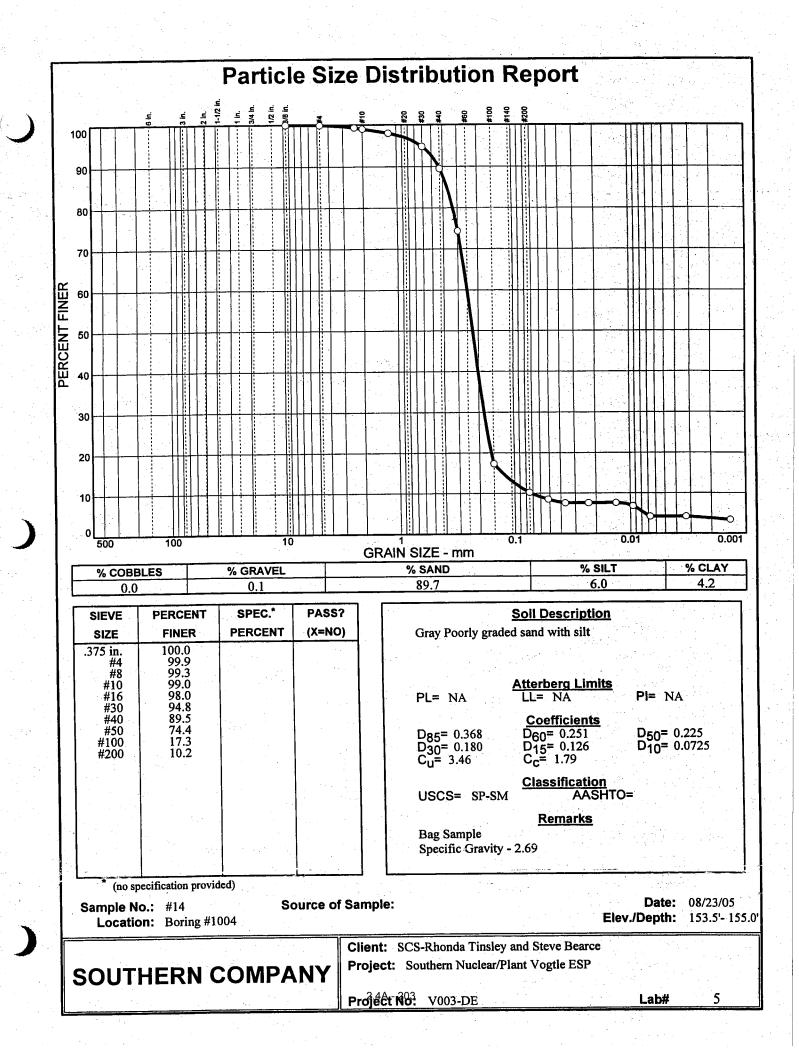
Bobby Williams, PE Geostructural Services

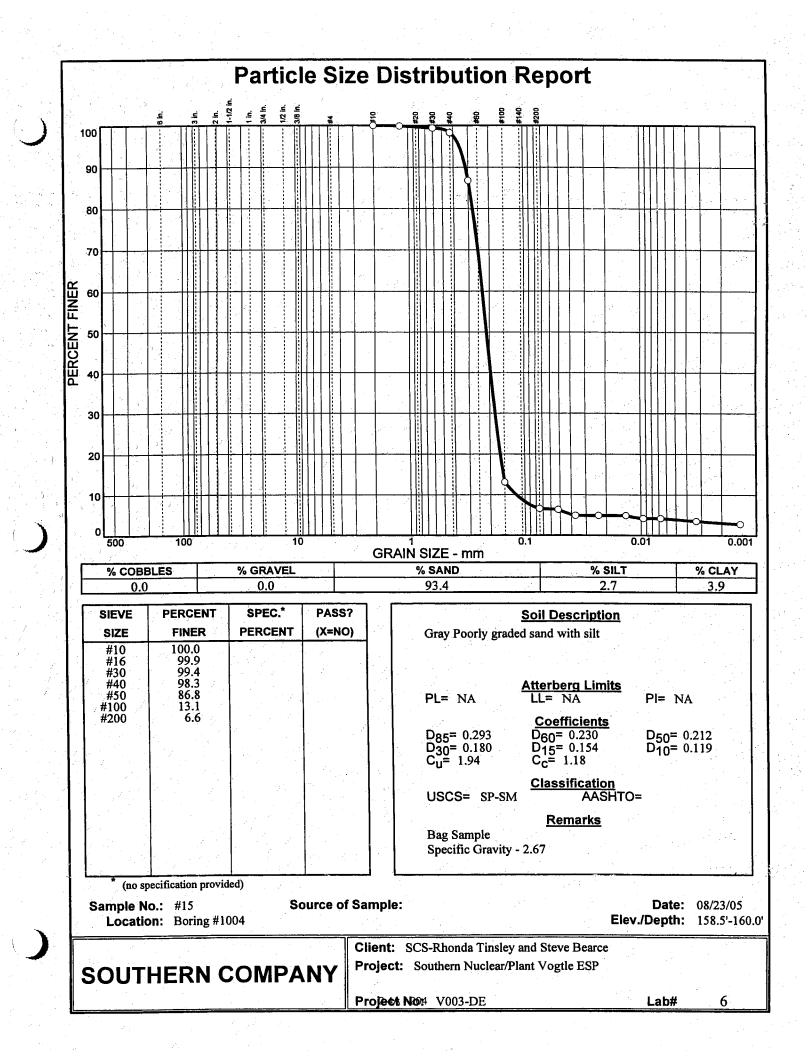


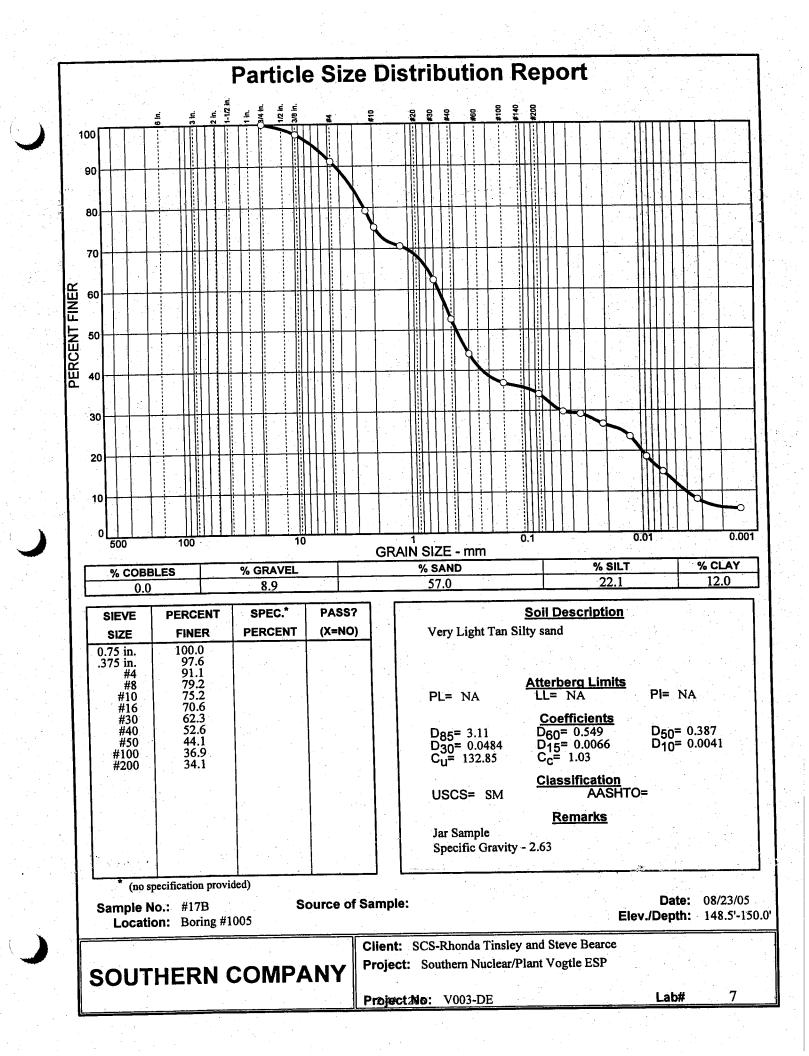


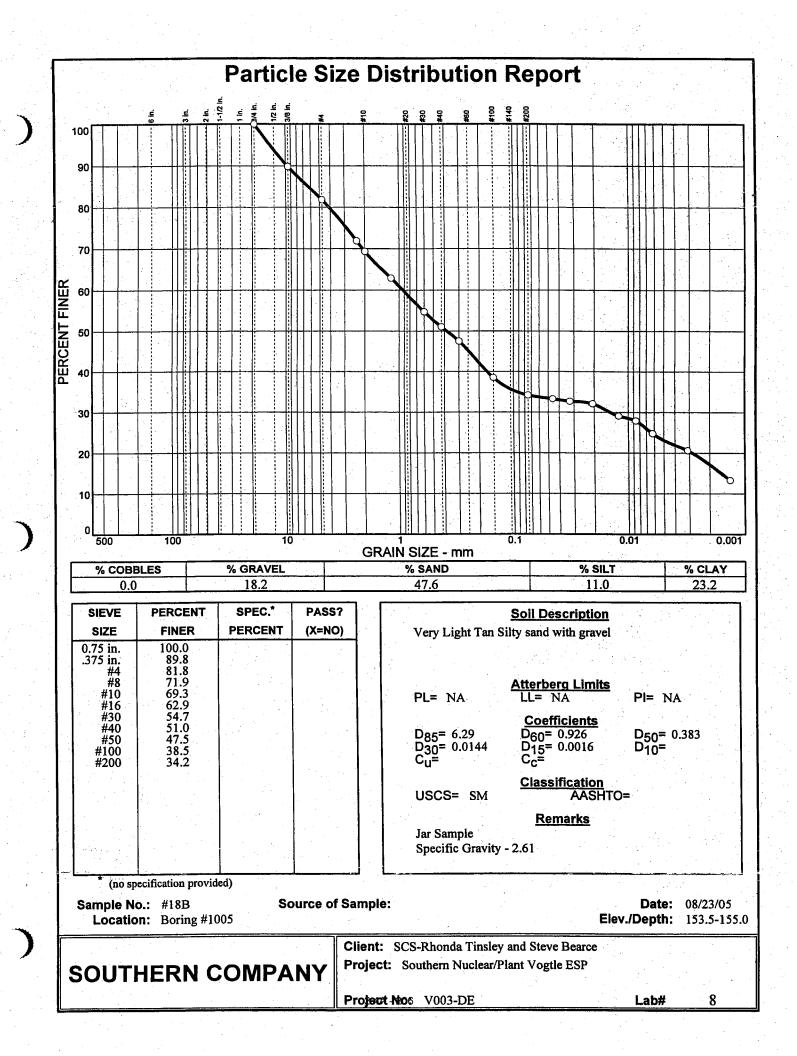


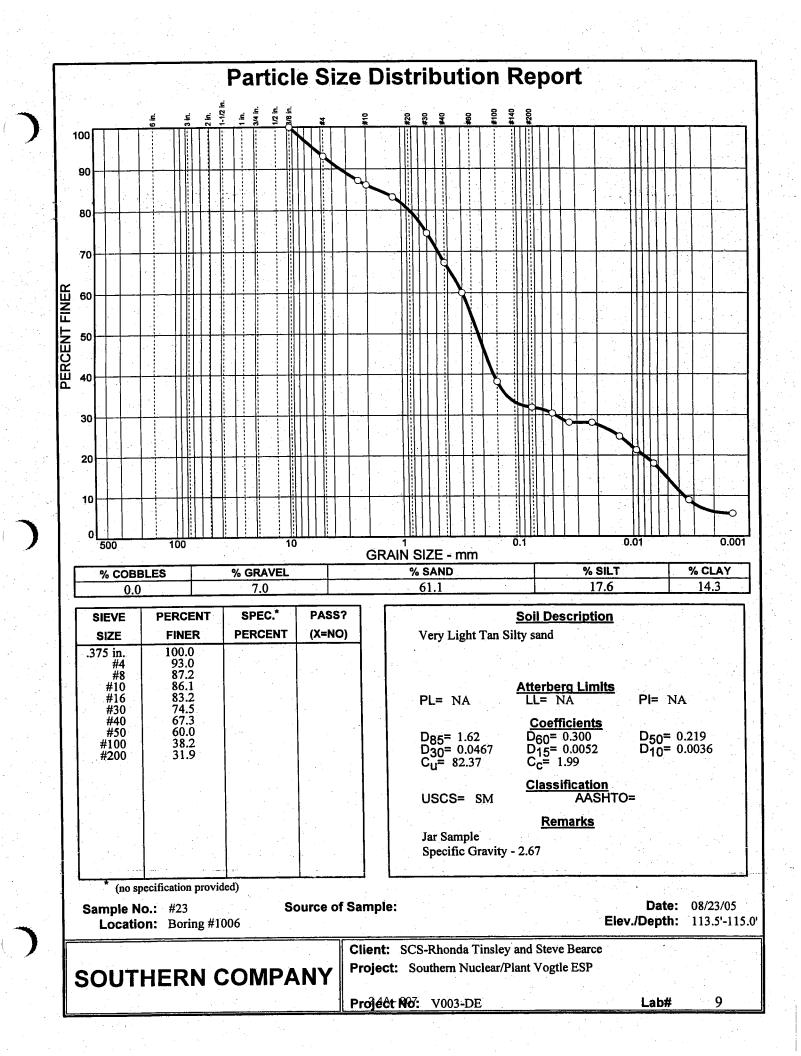


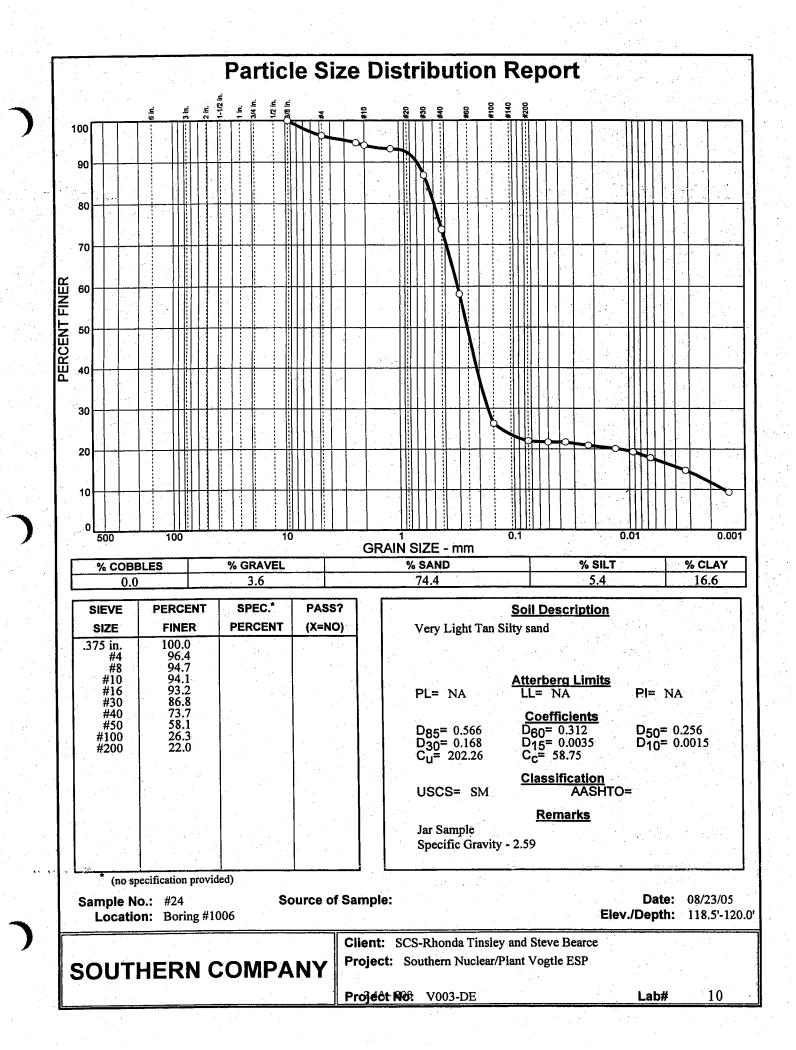


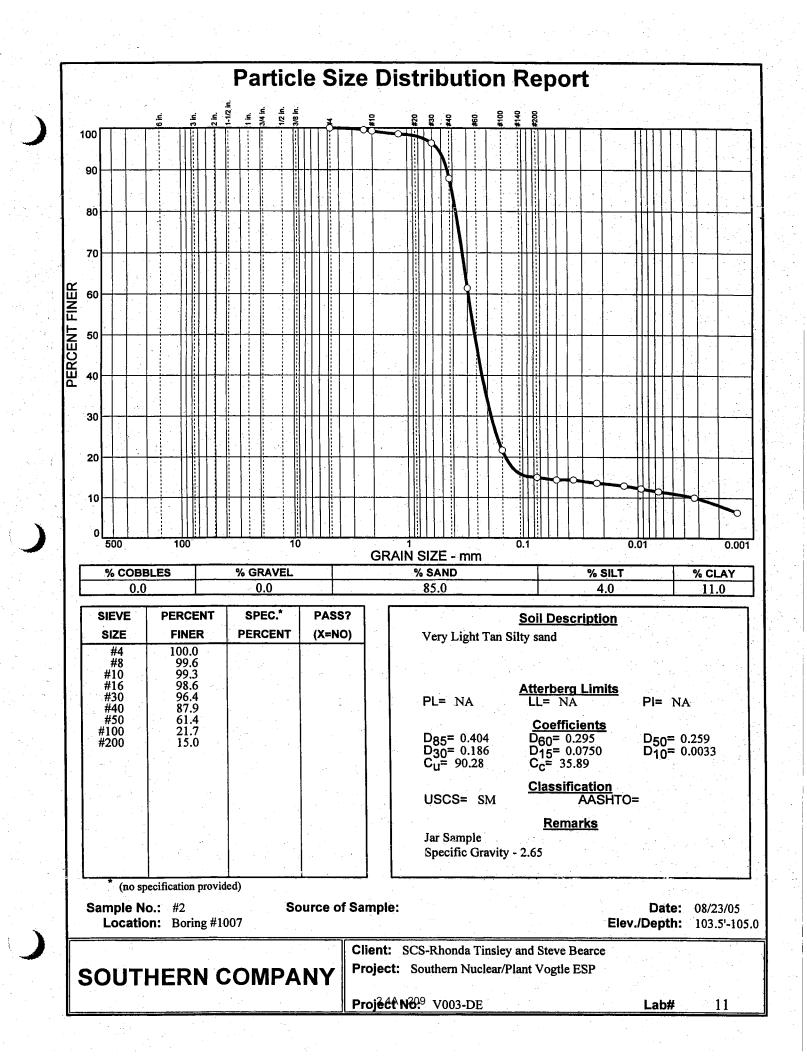


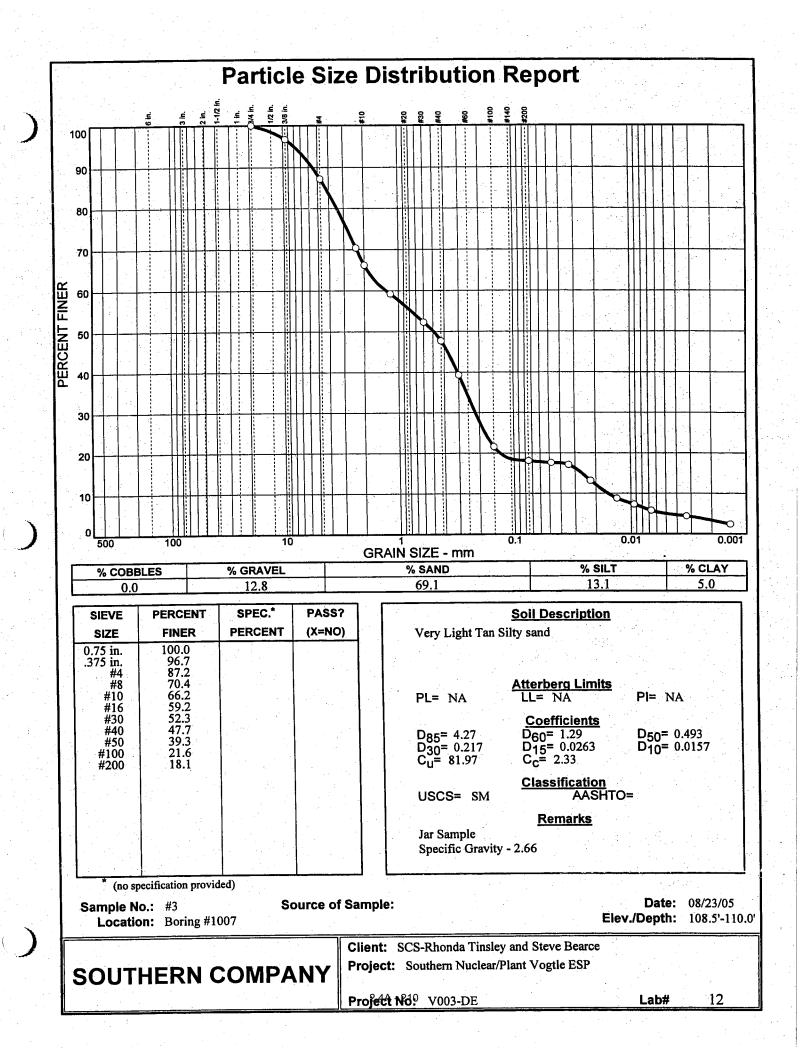


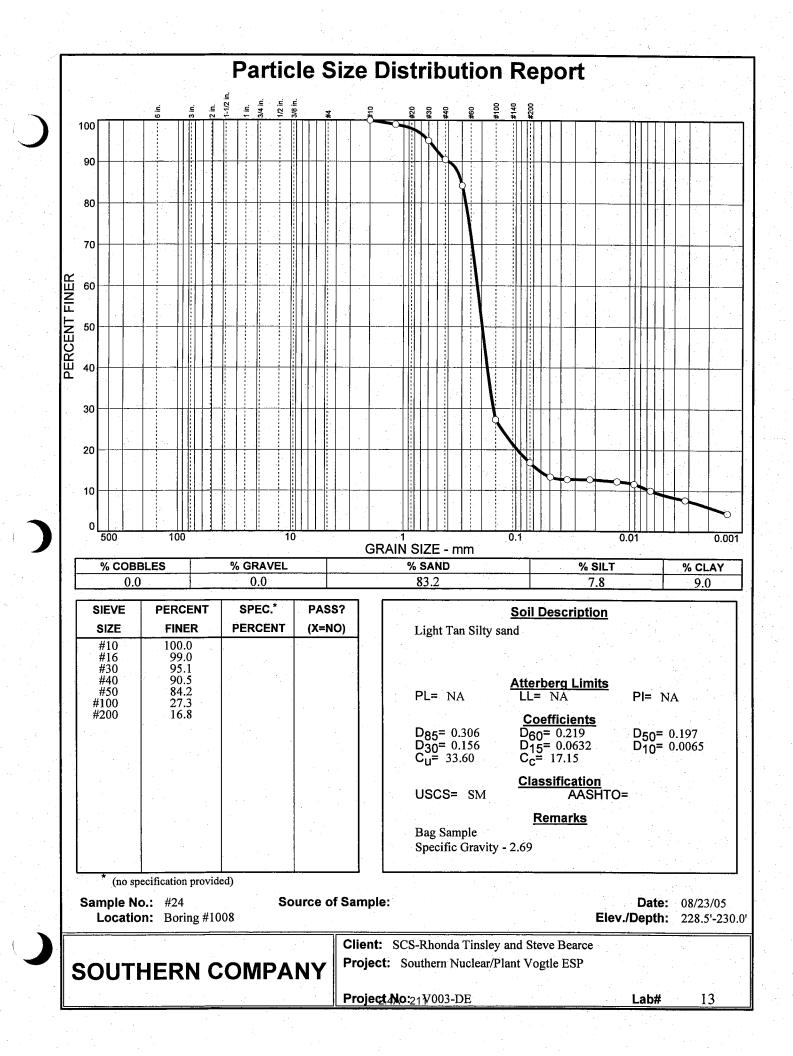


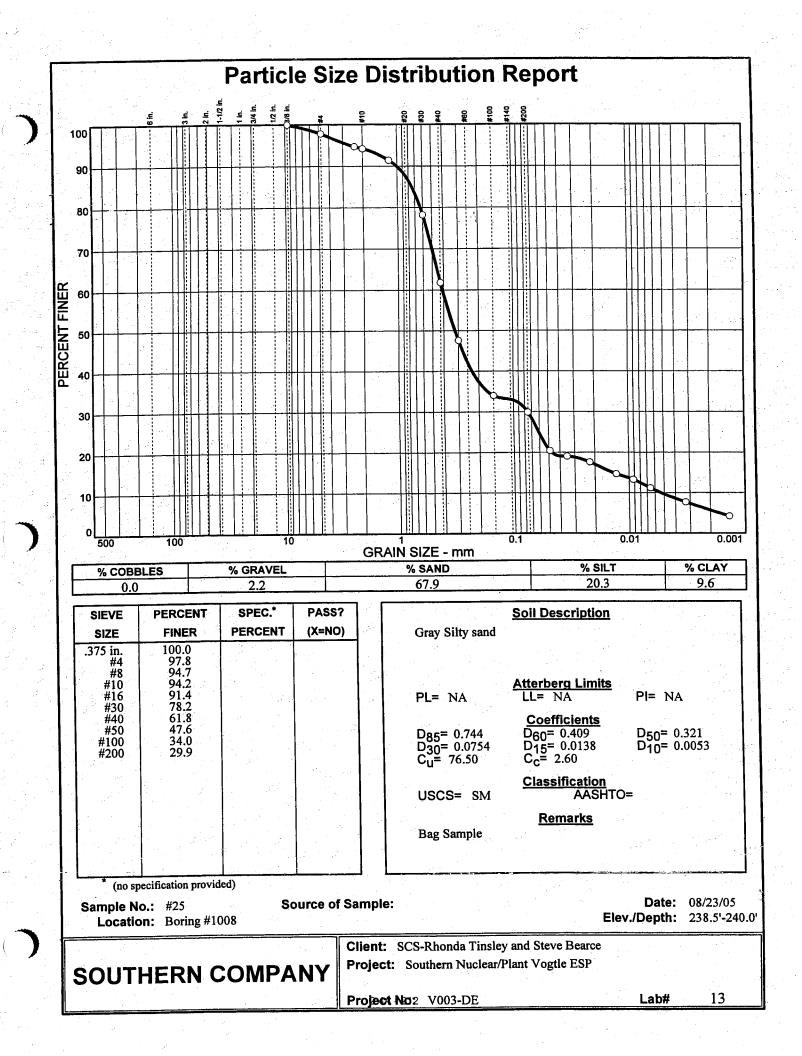


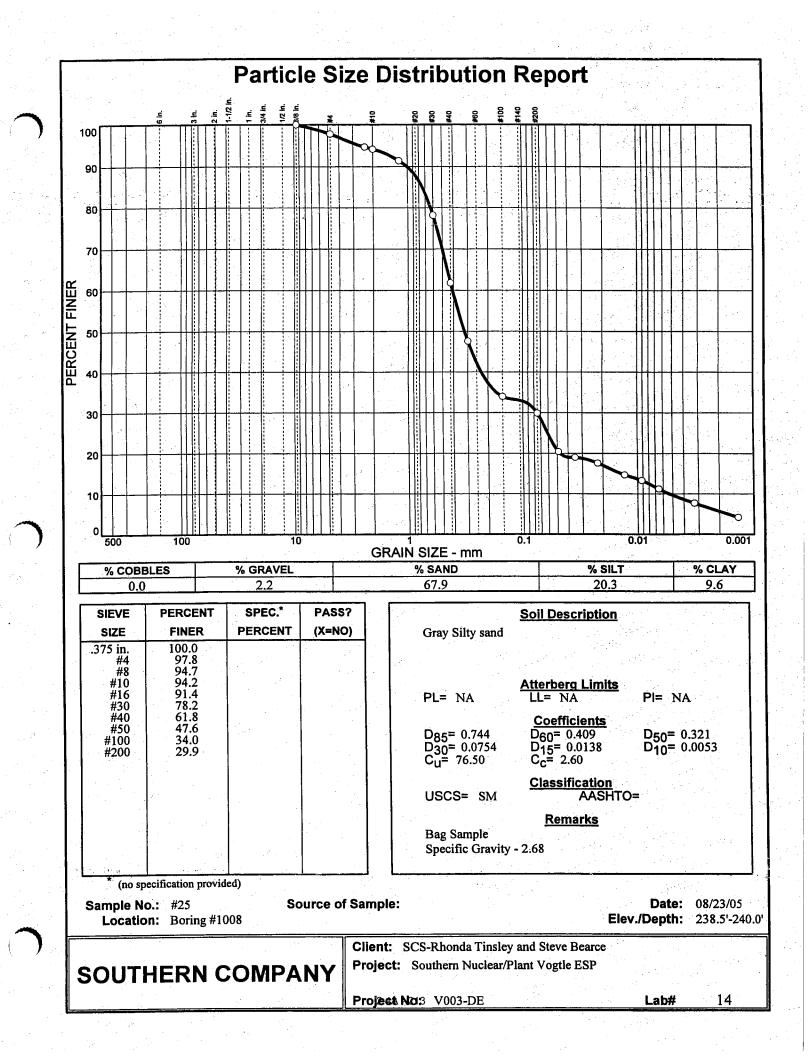


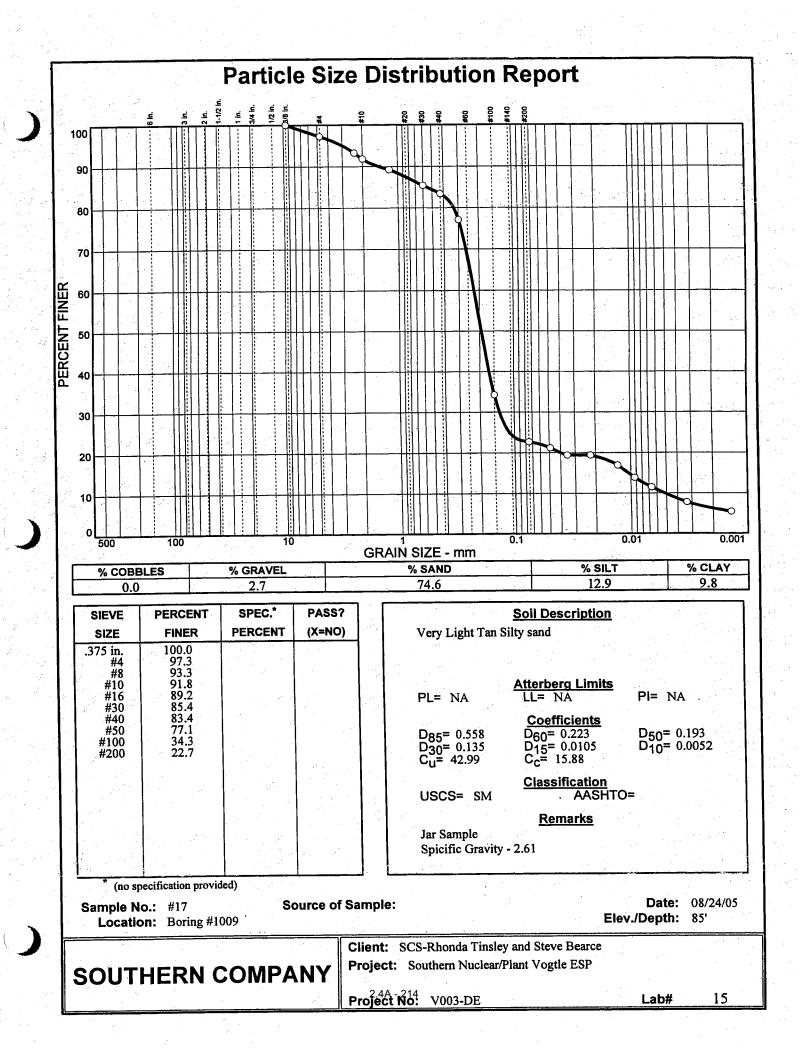


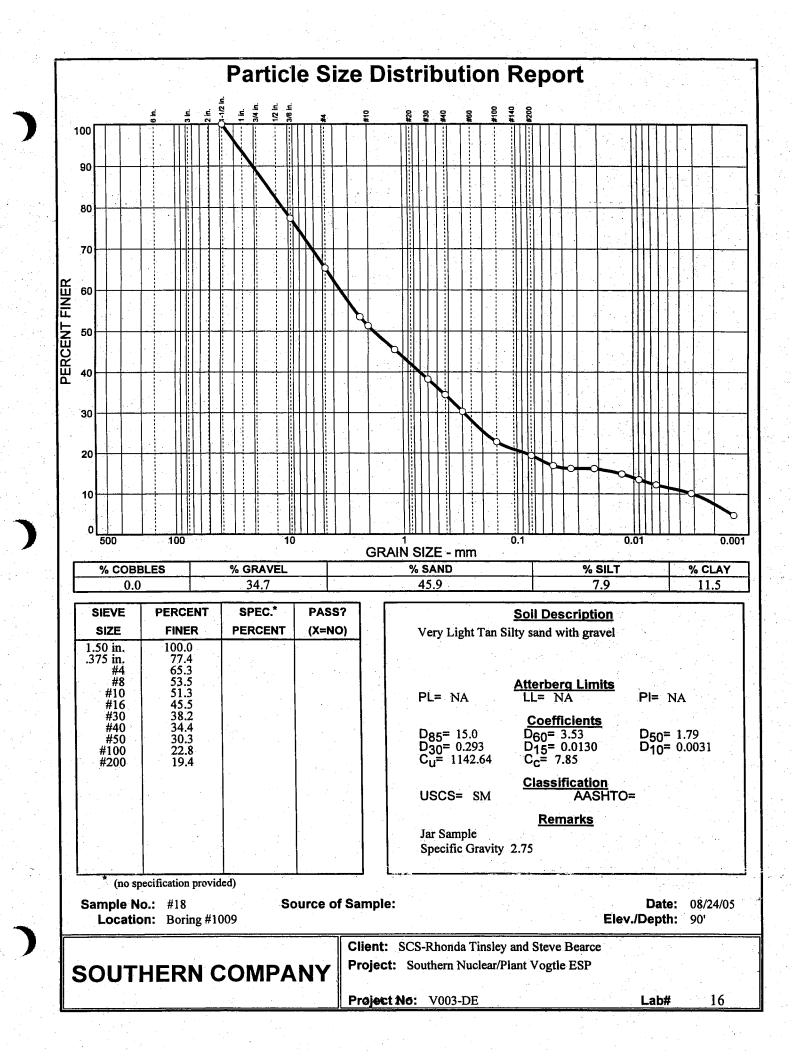


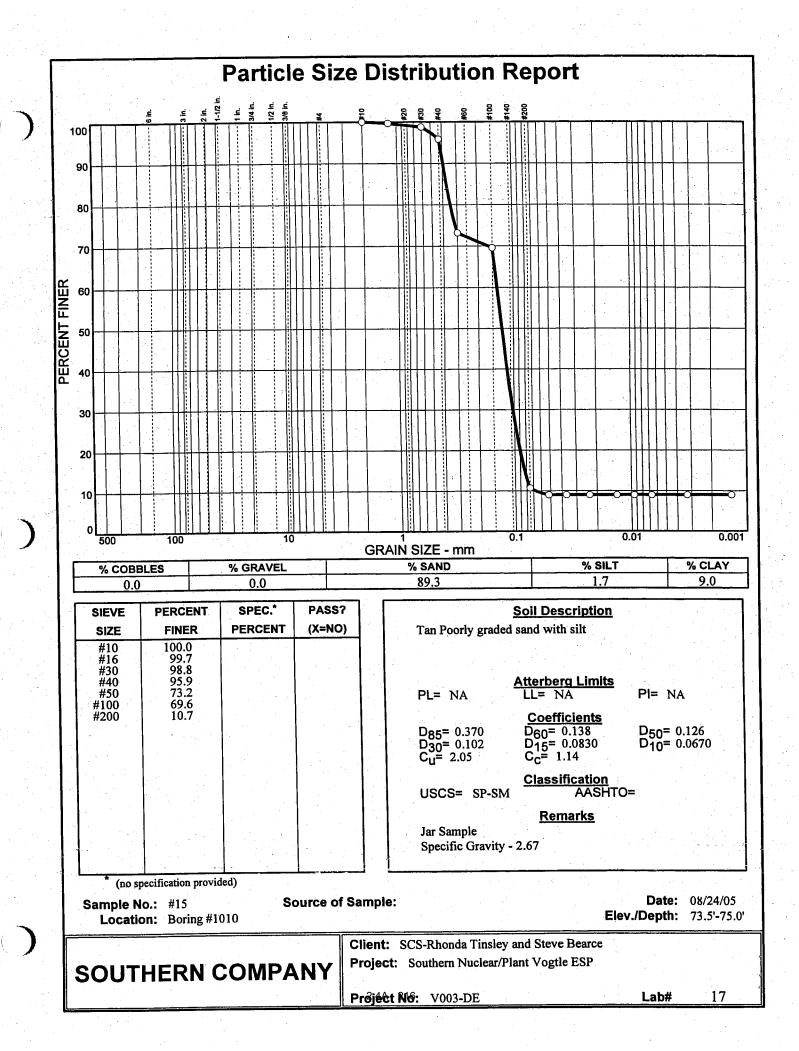


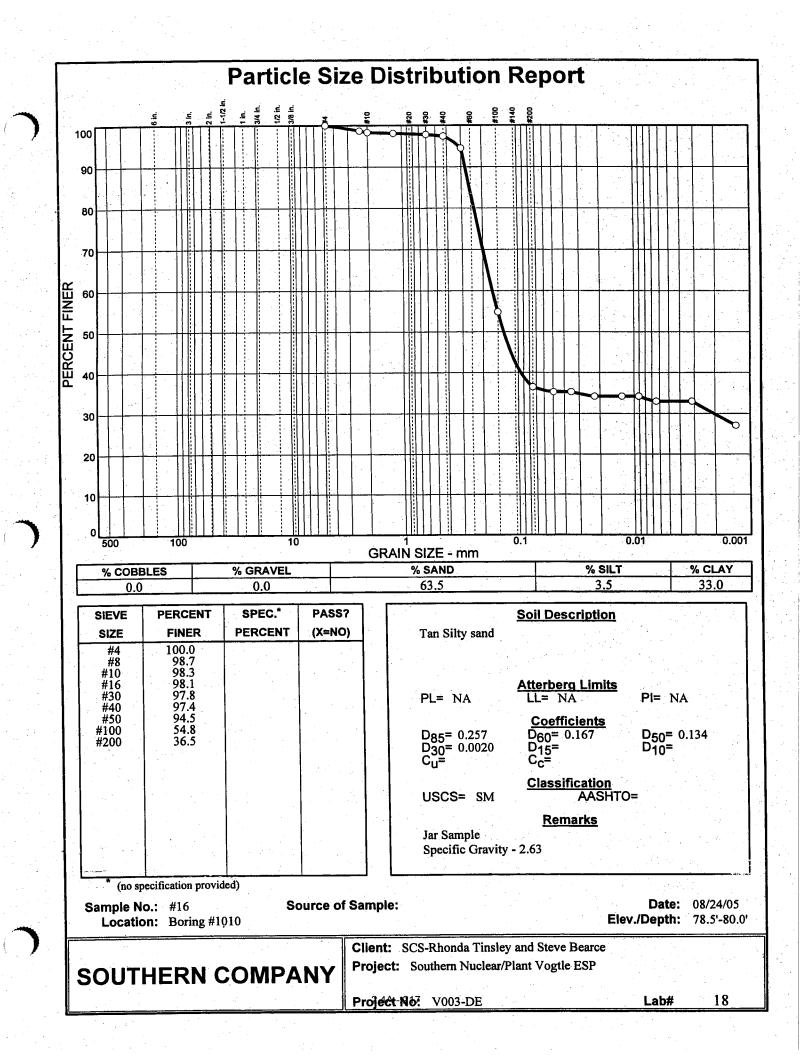


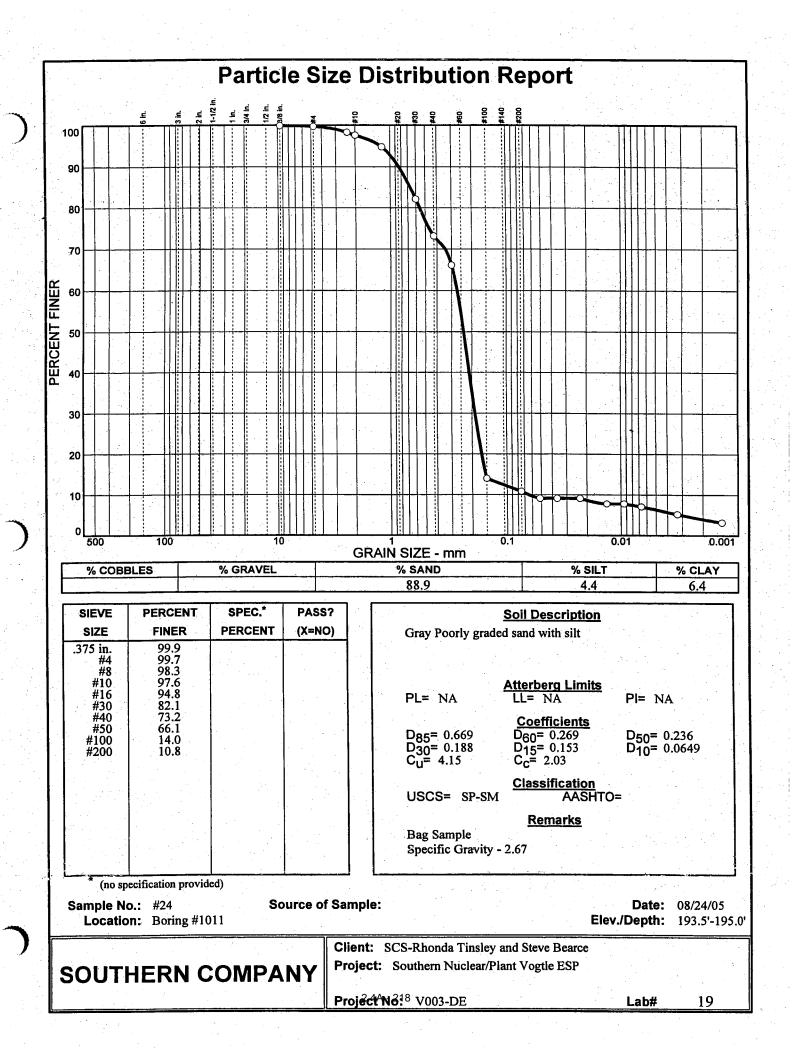


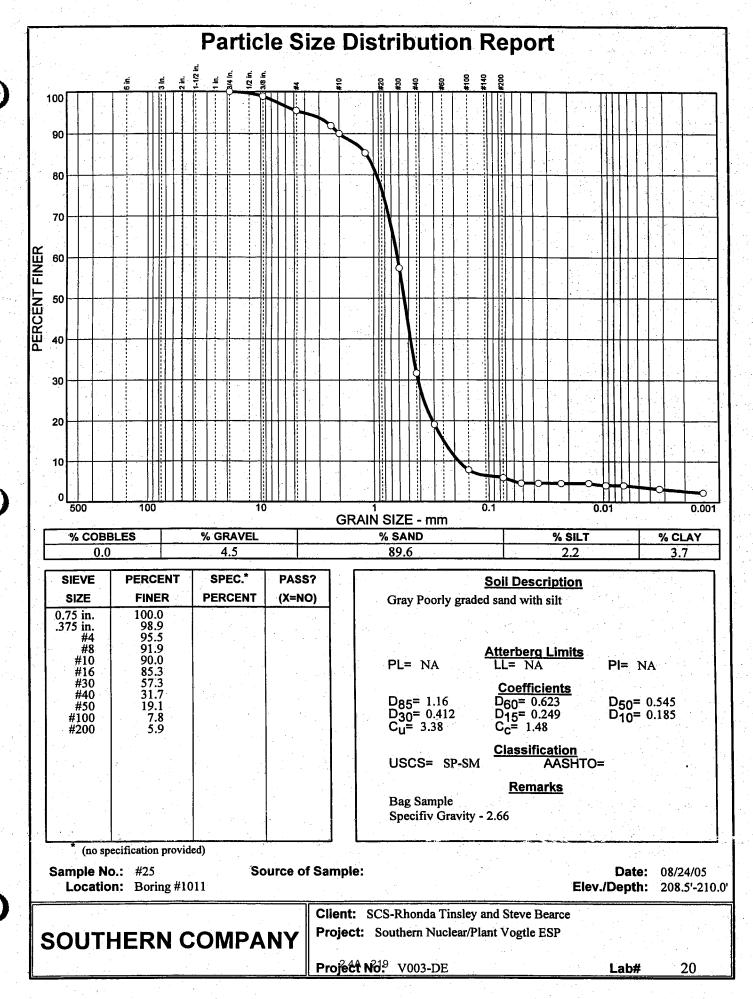




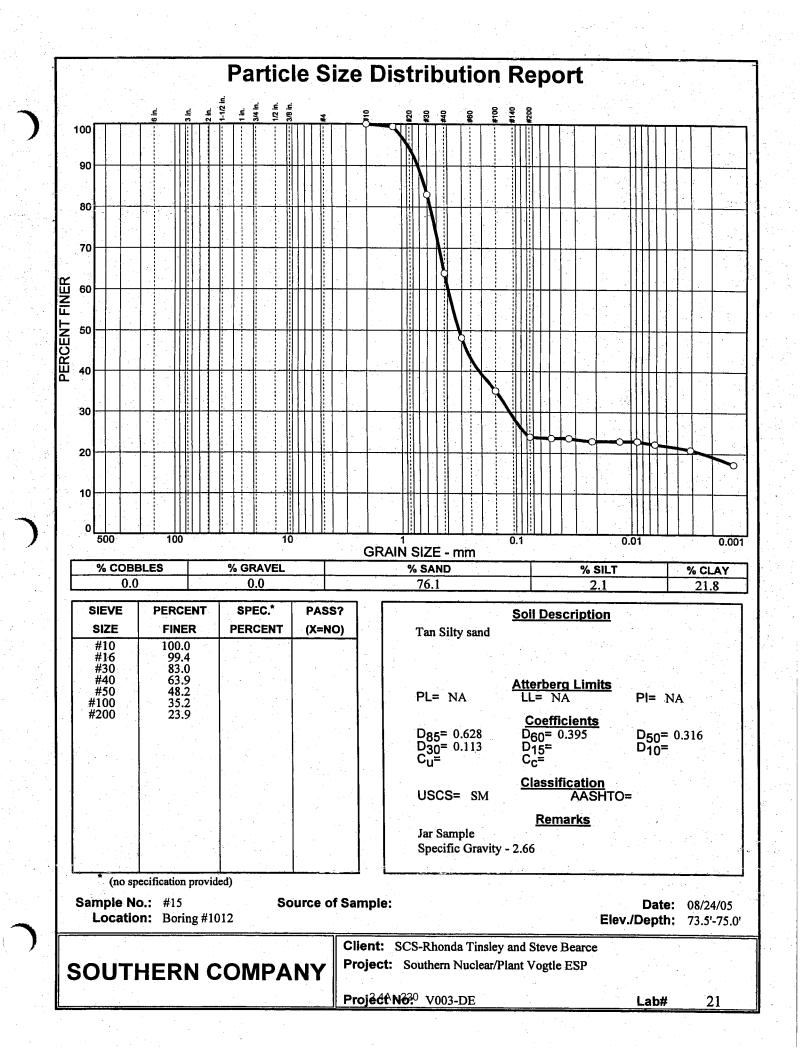


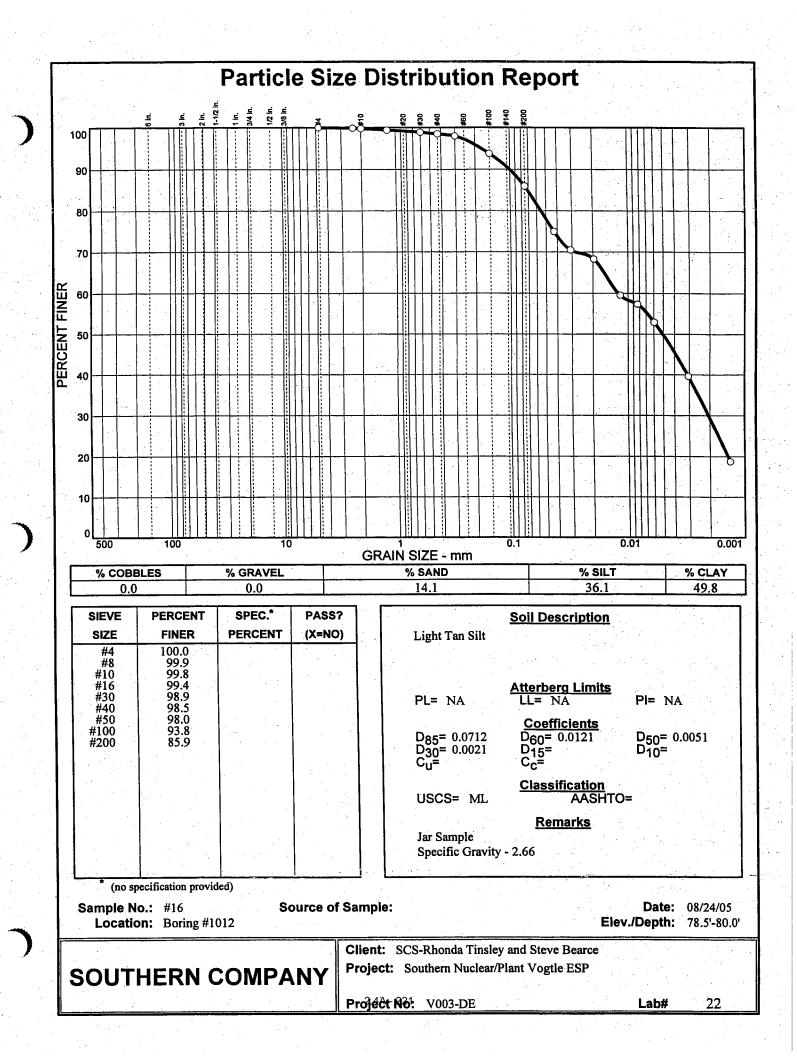


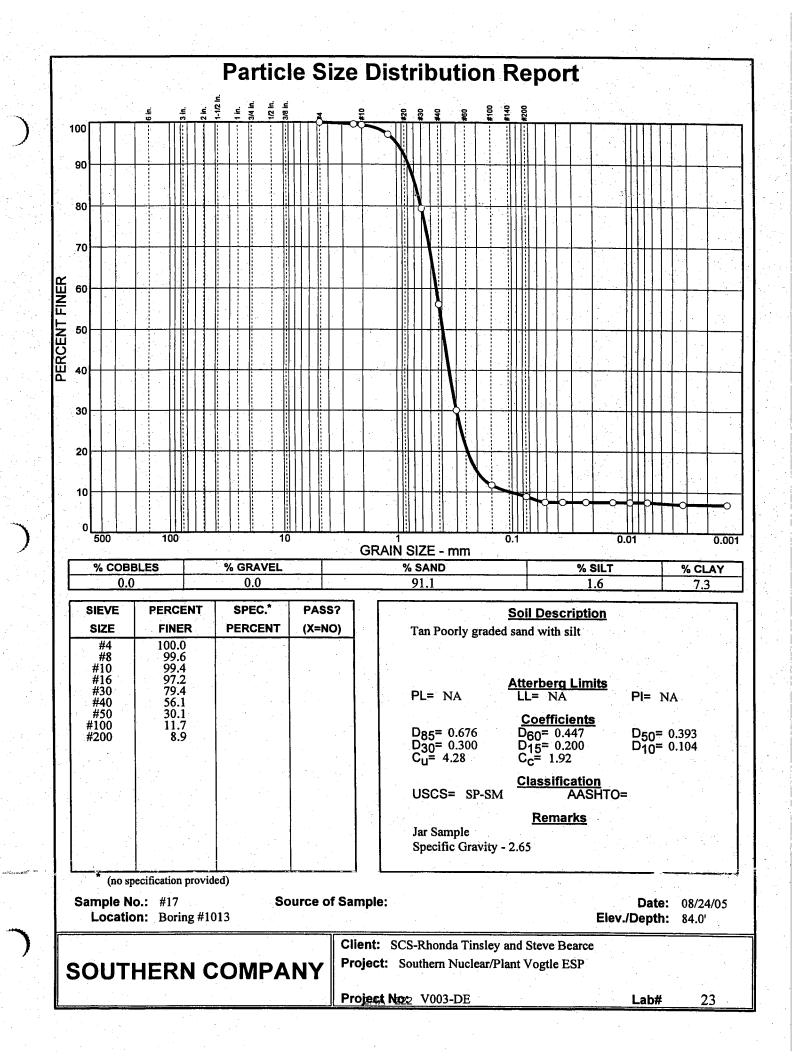


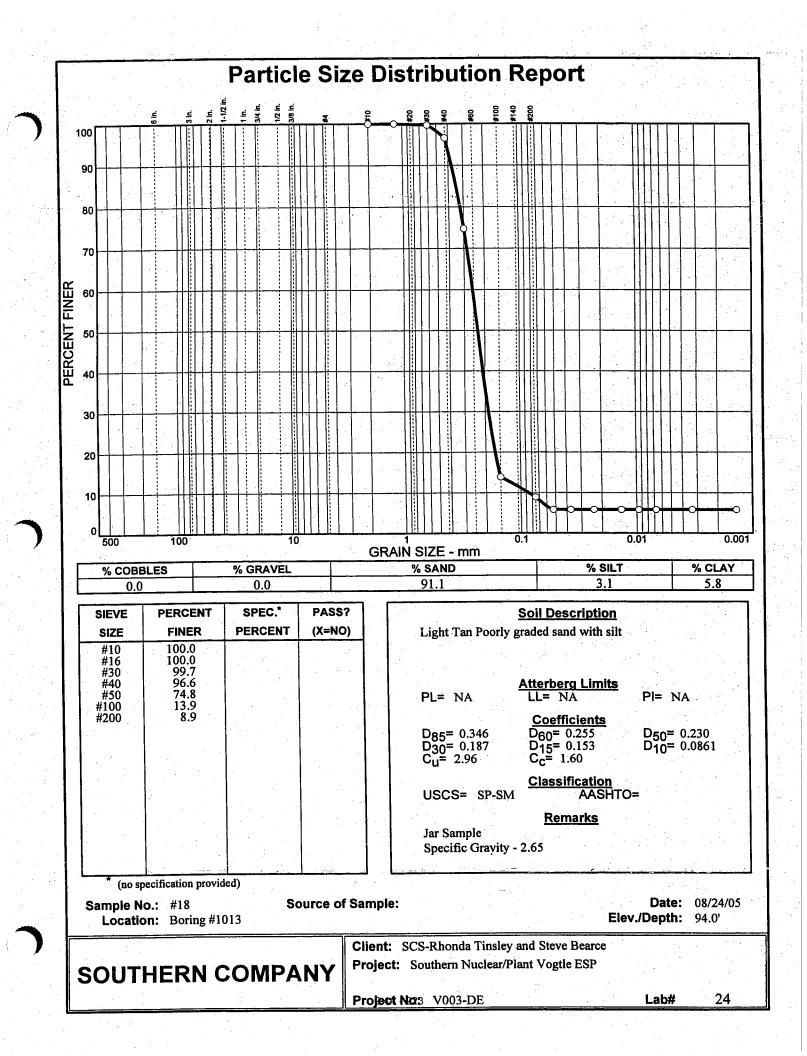


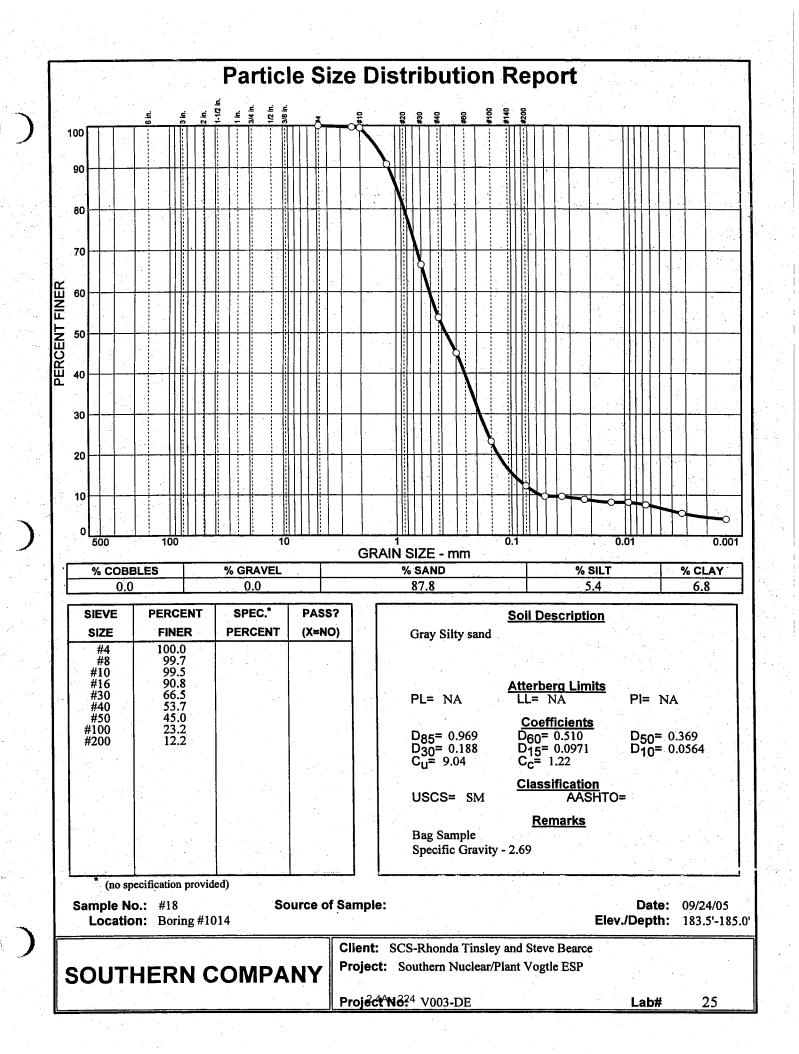
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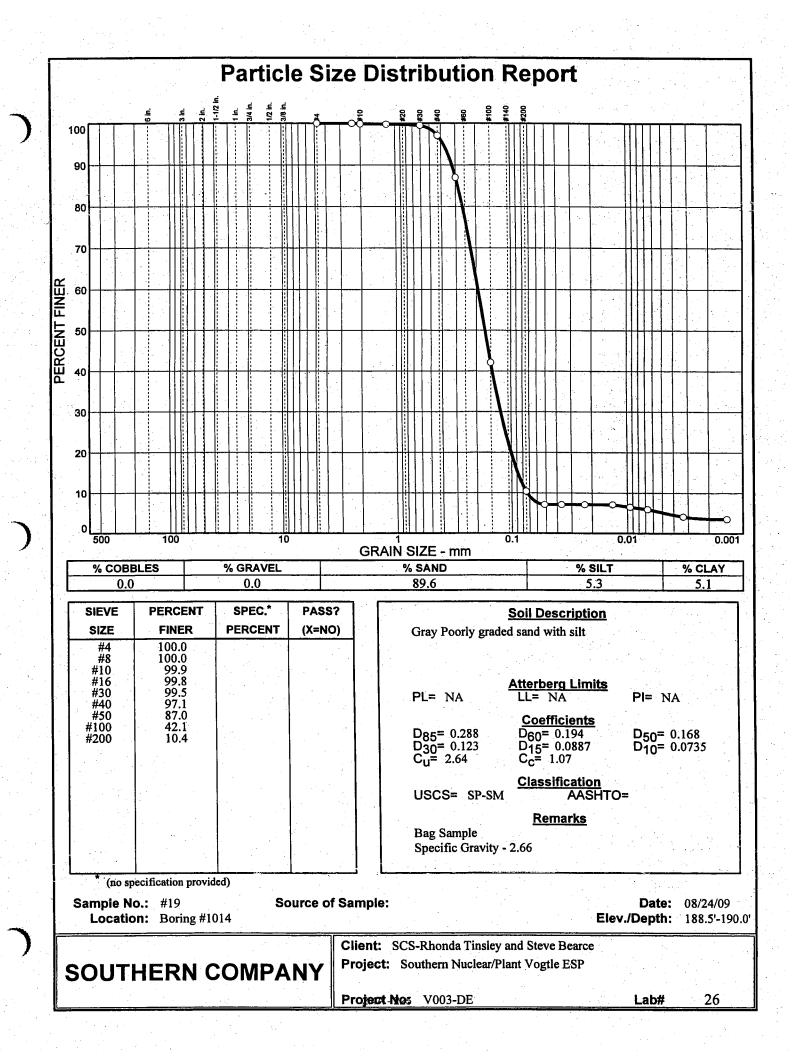


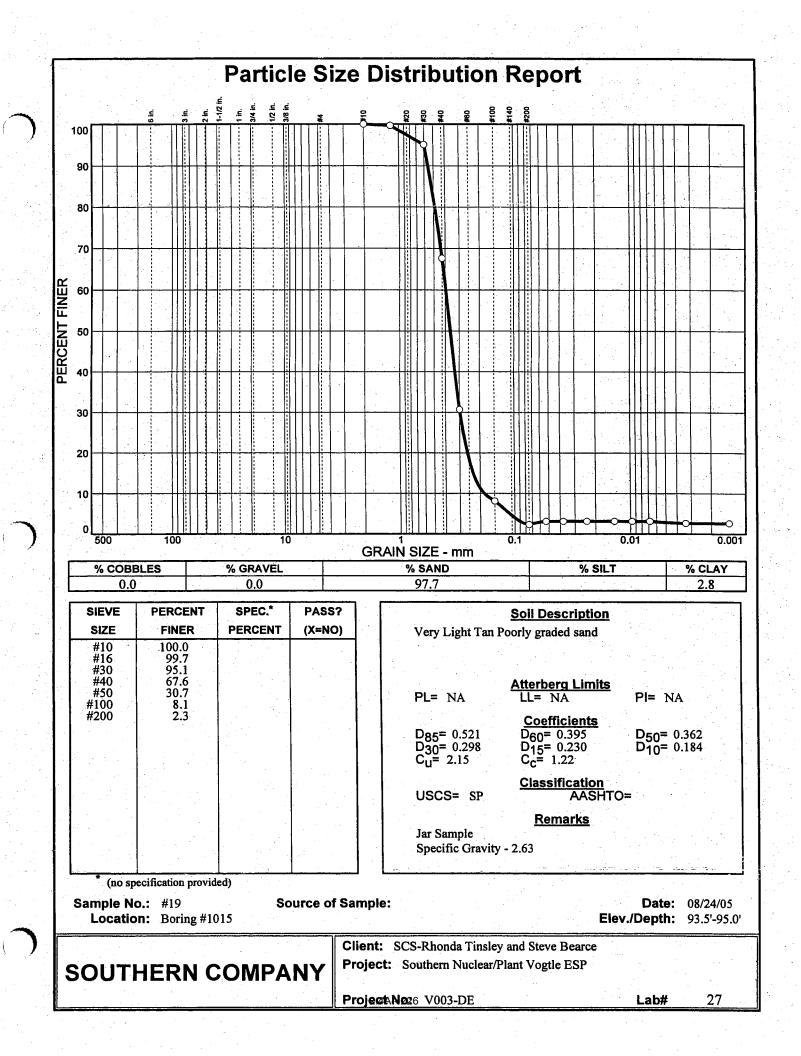


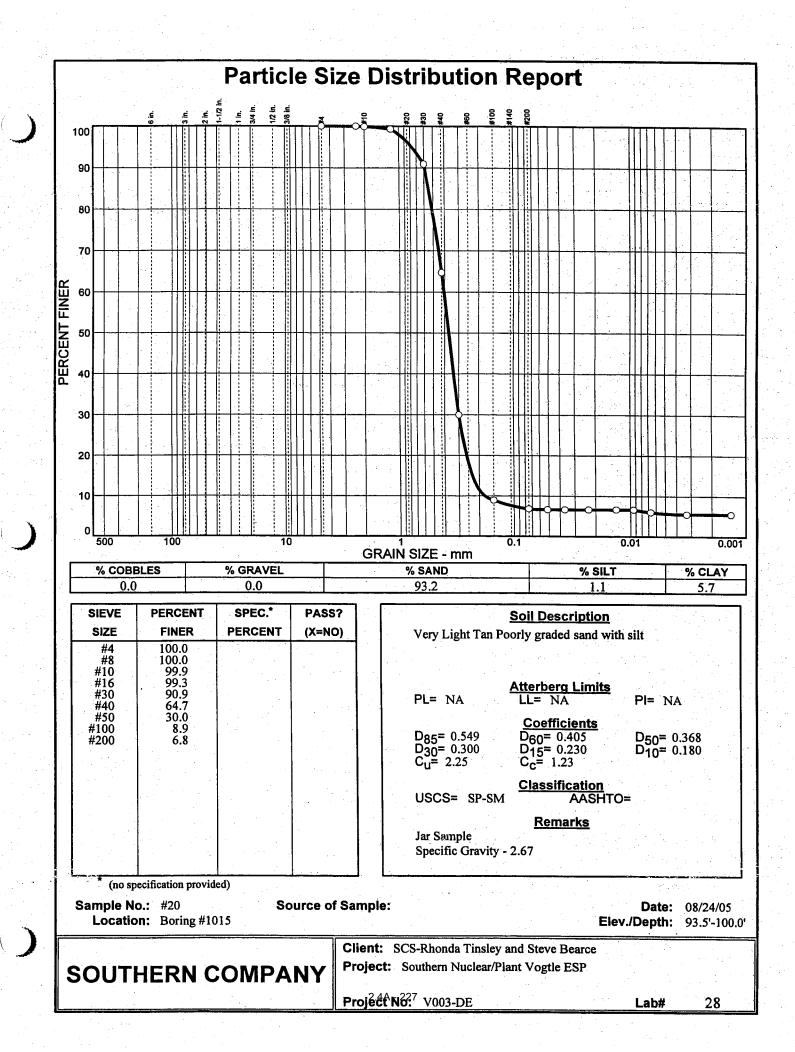












Vogtle ALWR ESP Project

# **APPENDIX J**

#### SITE PHOTOS

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Vogtle ALWR ESP Project

## APPENDIX J

#### SITE PHOTOS

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