Bryan J. Dolan
VP, Nuclear Plant Development

Duke Energy
EC09D/ 526 South Church Street
Charlotte, NC 28201-1006

Mailing Address:
P.O. Box 1006 – EC09D
Charlotte, NC 28201-1006

704-382-0605

bjdolan@duke-energy.com

October 17, 2008

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

Subject: Duke Energy Carolinas, LLC
William States Lee III Nuclear Station - Docket Nos. 52-018 and 52-019
AP1000 Combined License Application for the
William States Lee III Nuclear Station Units 1 and 2
Response to Request for Additional Information
Ltr# WLG2008.10-07

Reference: Letter from J.M. Muir (NRC) to B.J. Dolan (Duke Energy), *Request for Additional Information Regarding the Environmental Review of the Combined License Application for William States Lee III Nuclear Station Units 1 and 2*, dated August 21, 2008

This letter provides the Duke Energy response to the Nuclear Regulatory Commission's (NRC) requests for the following additional information (RAI) items listed in the reference letter:

RAI 5, Hydrology
RAI 6, Hydrology
RAI 7, Hydrology
RAI 8, Hydrology
RAI 15, Hydrology
RAI 16, Hydrology
RAI 19, Hydrology
RAI 28, Socioeconomics
RAI 35, Cost Benefit
RAI 36, Cost Benefit
RAI 52, Meteorology
RAI 58, Aquatic Ecology
RAI 61, Aquatic Ecology
RAI 67, Terrestrial Ecology
RAI 72, Terrestrial Ecology
RAI 75, Terrestrial Ecology
RAI 77, Terrestrial Ecology
RAI 82, Terrestrial Ecology
RAI 84, Terrestrial Ecology
RAI 85, Terrestrial Ecology
RAI 87, Terrestrial Ecology
RAI 88, Terrestrial Ecology
RAI 93, Ecology
RAI 94, Ecology
RAI 97, Ecology

D093
NRO

A response to each NRC request is addressed in an enclosure which also identifies any associated changes that will be made in a future revision of the William States Lee III Nuclear Station application.

If you have any questions or need any additional information, please contact Peter S. Hastings at 980-373-7820.

Bryan J. Dolan
Vice President
Nuclear Plant Development

Enclosures:

1. Response to RAI 5, Hydrology
2. Response to RAI 6, Hydrology
3. Response to RAI 7, Hydrology
4. Response to RAI 8, Hydrology
5. Response to RAI 15, Hydrology
6. Response to RAI 16, Hydrology
7. Response to RAI 19, Hydrology
8. Response to RAI 28, Socioeconomics
9. Response to RAI 35, Cost Benefit
10. Response to RAI 36, Cost Benefit
11. Response to RAI 52, Meteorology
12. Response to RAI 58, Ecology
13. Response to RAI 61, Ecology
14. Response to RAI 67, Ecology
15. Response to RAI 72, Ecology
16. Response to RAI 75, Terrestrial Ecology
17. Response to RAI 77, Terrestrial Ecology
18. Response to RAI 82, Terrestrial Ecology
19. Response to RAI 84, Terrestrial Ecology
20. Response to RAI 85, Terrestrial Ecology
21. Response to RAI 87, Terrestrial Ecology
22. Response to RAI 88, Terrestrial Ecology
23. Response to RAI 93, Aquatic Ecology
24. Response to RAI 94, Regulatory Permitting - Water
25. Response to RAI 97, Regulatory Permitting - Water

AFFIDAVIT OF BRYAN J. DOLAN

Bryan J. Dolan, being duly sworn, states that he is Vice President, Nuclear Plant Development, Duke Energy Carolinas, LLC, that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this supplement to the combined license application for the William States Lee III Nuclear Station and that all the matter and facts set forth herein are true and correct to the best of his knowledge.

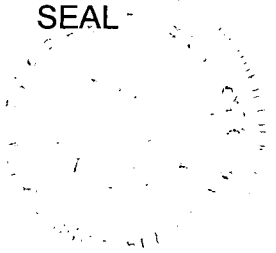
Bryan J. Dolan

Subscribed and sworn to me on October 17, 2008

Notary Public

My commission expires: June 26, 2011

SEAL



xc (wo/enclosures):

Michael Johnson, Director, Office of New Reactors
Gary Holahan, Deputy Director, Office of New Reactors
David Matthews, Director, Division of New Reactor Licensing
Scott Flanders, Director, Division of Site and Environmental Reviews
Glenn Tracy, Director, Division of Construction Inspection and Operational Programs
Luis Reyes, Regional Administrator, Region II
Loren Plisco, Deputy Regional Administrator, Region II
Thomas Bergman, Deputy Division Director, DNRL
Stephanie Coffin, Branch Chief, DNRL

xc (w/enclosures):

Linda Tello, Project Manager, DSER
Brian Hughes, Senior Project Manager, DNRL

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI 5

NRC RAI:

Submit a discussion (and possibly a figure) of prior storm water control structures, such as underground drains and their bedding materials – to clarify their potential to create preferential surface and subsurface flow paths.

Duke Energy Response:

The potential for the Cherokee Nuclear Station stormwater drain piping installations to affect groundwater movement depends upon:

1) contact between the piping corridor and the water table,
2) gradient to allow movement within the piping corridor,
3) a hydraulic conductivity greater than surrounding soils to increase the rate of groundwater movement through the piping corridor, and
4) the position of the piping relative to potential source areas in the event of an accidental release.

The piping corridor that runs from the power block area to Hold-Up Pond A is the only identified Cherokee Nuclear Station stormwater drain piping segment that both intercepts the water table and is in an area downgradient from a potential radioactive source area. The groundwater gradient is relatively steep, and if the hydraulic conductivity of the bedding material is greater than the surrounding materials, the potential exists for this to act as a preferential pathway. A portion of the Cherokee stormwater system plan is shown on the attached figure. Duke Energy expects to mitigate the condition by removing the pipeline or installing engineering controls.

Stormwater systems are designed to control surface water flow paths. Because of the depths of the radwaste sources (radwaste tanks are 33.5 ft. below plant elevation), surface water is not a preferential pathway in the event of an accidental release.

Associated Revision to the Lee Nuclear Station Combined License Application:

Revise COLA Part 3, ER Chapter 2, Subsection 2.3.1.5.7; add the following paragraphs to the end of this subsection:

Based on site observations, a network of storm drains and buried piping was partially installed during construction of Cherokee Units 1, 2, and 3 to manage surface water runoff. While no as-built drawings for the existing storm drain system for the former Cherokee Nuclear Station exist, a review of stormwater plans was conducted to assess the drain system's potential effect on groundwater movement. Storm drains located upgradient (south) of the excavation appear to intercept a high water table and may allow movement of water through the annular fill material towards the make-up ponds. In effect, these upgradient storm drains may serve to divert groundwater away from the plant area. Most of the other identified storm drains appear to be above the rebounded water level and would not affect the movement of groundwater. One exception is a downgradient (north) storm drain line designed to transfer stormwater from the Cherokee power block area to Hold-Up Pond A. The depth of this storm drain pipe appears to be

below the projected water table and, if left as is, could locally affect groundwater movement when groundwater recovers from the dewatering. The potential effect on groundwater movement can be mitigated by engineered controls or by removal of the stormwater drain lines and replacement with less permeable materials. Accordingly, these drain lines are not expected to significantly impact groundwater movement.

Stormwater management plans for the Lee Nuclear Station direct surface water runoff to Make-Up Ponds A and B. The projected impact of the planned stormwater system is to reduce the flow of water into the power block area.

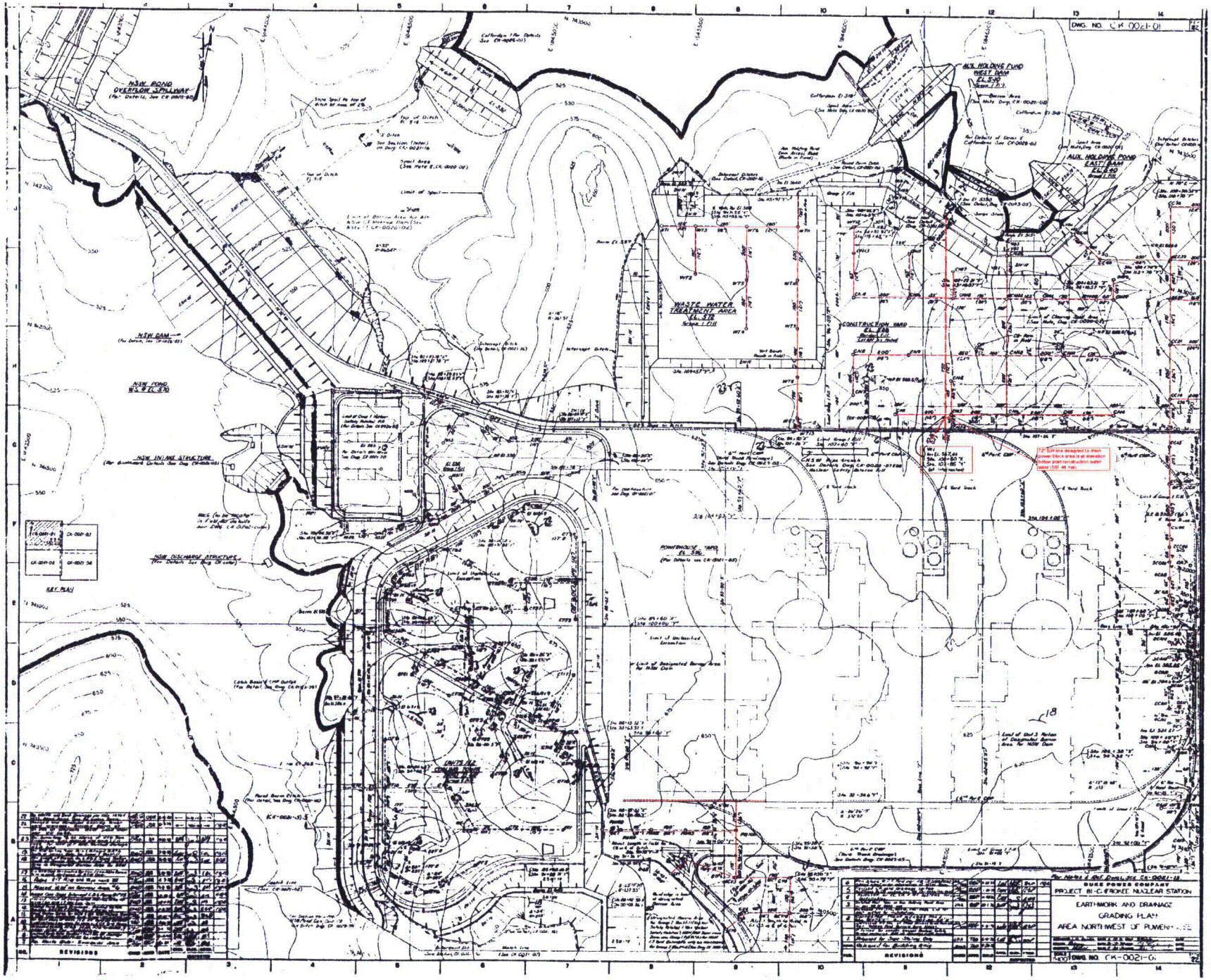
Associated Attachment:

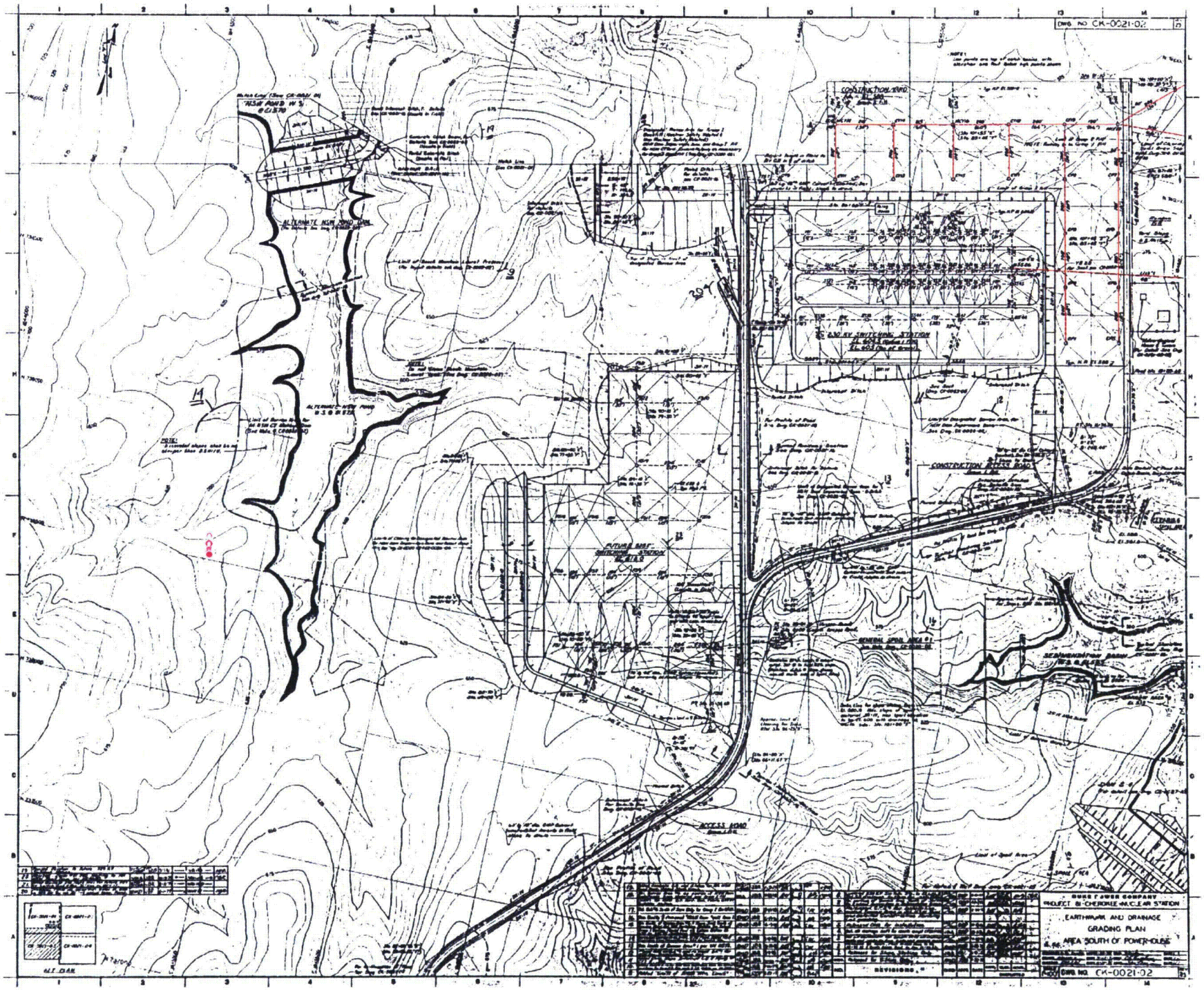
Attachment 5-1 Duke Power Company, Project 81, "Cherokee Nuclear Station, Earthwork and Drainage Grading Plan," Area South of Powerhouse, CK-0021-02 (NW&SWQ), June 3, 1976.

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 5-1 to RAI 5

Duke Power Company, Project 81, "Cherokee Nuclear Station, Earthwork and Drainage Grading Plan," Area South of Powerhouse, CK-0021-02 (NW&SWQ), June 3, 1976.


DWG. NO. CK-0021-01
NSW POND OVERFLOW SPILLWAY
AUX. HOLDING POND WEST DAM EL. 840
AUX. HOLDING POND EAST DAM EL. 840
WASTE WATER TREATMENT AREA EL. 838
CONSTRUCTION YARD EL. 846
NSW DAM
NSW POND W.S. EL. 830
NSW INLAND STRUCTURE
NSW DISCHARGE STRUCTURE
POWERHOUSE YARD EL. 836
KEY PLAN
REVISIONS
DUKE POWER COMPANY
PROJECT 81-C CHEROKEE NUCLEAR STATION
EARTHWORK AND DRAINAGE
GRADING PLAN
AREA NORTHWEST OF POWERHOUSE
DWG. NO. CK-0021-01


DWG NO CK-0021-02
CONSTRUCTION ROAD
ALTERNATE NSM POND DAM
ALTERNATE NSM POND
CONSTRUCTION ACCESS ROAD
FUTURE NSM SWITCHING STATION
GENERAL AREA
SEDIMENTATION BASIN
ACCESS ROAD
DUKE POWER COMPANY
PROJECT 81-CHEROKEE NUCLEAR STATION
EARTHWORK AND DRAINAGE
GRADING PLAN
AREA SOUTH OF POWER HOUSE
DWG NO CK-0021-02

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-6

NRC RAI:

Submit the Cherokee groundwater hydrology data set(s).

Duke Energy Response:

Cherokee groundwater hydrology data sets include those found in the Cherokee ER and PSAR documents, and those documenting the observed water levels through the dewatering and construction activities referenced in FSAR Subsection 2.4.16 (References 215 and 218). These are provided as Attachments 6-1, 6-2, and 6-3.

Associated Revision to the Lee Nuclear Station Combined License Application:

Revise COLA Part 3, ER Chapter 2, Subsection 2.3.1.5.7, Paragraph 4, as follows:

The dewatering activities did not affect observation wells outside the area shown on the figure. In addition, the nearest residential well completed in the Piedmont aquifer, the Mullinax well located approximately 5000 ft. south of the center of the excavation, was not affected by construction dewatering activities. ~~Five wells~~Several wells located ~~on and~~ adjacent to the excavation and around the site were gauged on a monthly basis between 1976 and 1985, providing limited-term historical water-level data. Only wells nearest the excavation, as shown in Figure 2.3-13, appeared to be affected by the dewatering activities. ~~No distinct trends were observed from groundwater data between 1976 and 1985, except for the dewatering activities discussed above.~~

Associated Attachments:

Attachment 6-1	Duke Power Company, "Table 2B-6 – Groundwater Levels in Offsite Observation Wells," In *Project 81 Preliminary Safety Analysis Report*, Volume IV, Appendix 2B, Groundwater Hydrology-Cherokee, no date.
Attachment 6-2	Duke Power Company, Cherokee Groundwater Levels Notebook, Site Groundwater Monitoring Field Observations 1976 -1985, Project 81 Cherokee Nuclear Station, Cherokee County, SC.
Attachment 6-3	Duke Power Company, Lee Nuclear Station Report, Document Number, WLGR-4000.55-03-002, Cherokee Powerhouse Groundwater Control, November 1977 – August 1978, ID Number HRQ-003, Cherokee Nuclear Project Manual, Cherokee Nuclear Station, 2007.

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 6-1 to RAI 6

Duke Power Company, "Table 2B-6 – Groundwater Levels in Offsite Observation Wells," In *Project 81 Preliminary Safety Analysis Report*, Volume IV, Appendix 2B, Groundwater Hydrology-Cherokee, no date.

2B GROUNDWATER HYDROLOGY – CHEROKEE

PROJECT 81

PRELIMINARY SAFETY ANALYSIS REPORT

VOLUME IV

1 OF 2

(One section out of volume IV)

✓ wells monitored beyond mid 1975

TABLE 2B-6
GROUNDWATER LEVELS
IN OFFSITE OBSERVATION WELLS
CHEROKEE NUCLEAR STATION

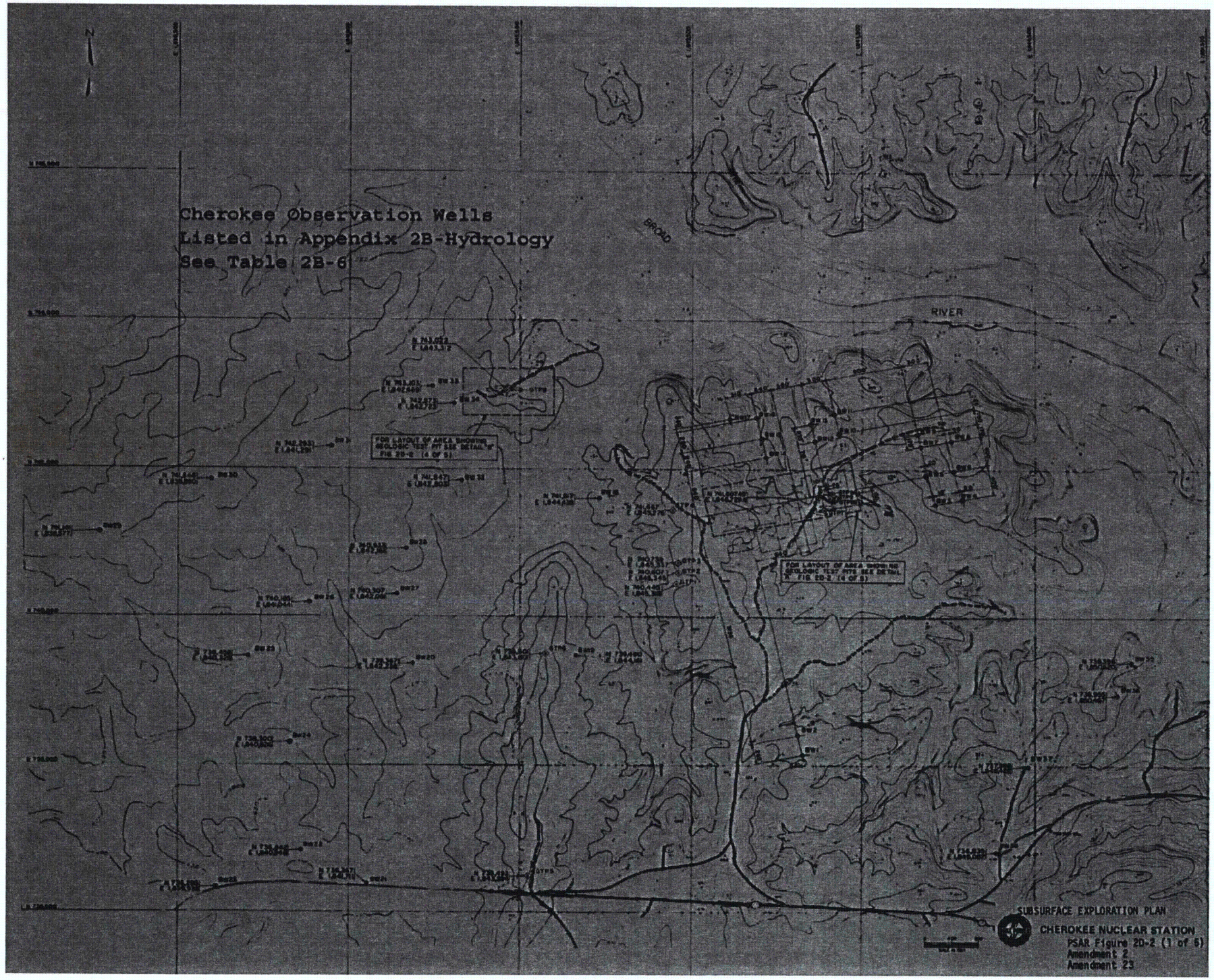
BORING NUMBER	GROUND SURFACE ELEVATION	WATER SURFACE ELEVATION	DATE MEASURED
BW-1	646.4	599	10-2-73
BW-2	621.5	597	10-2-73
BW-3	556.3	531	10-23-73
BW-4	578.7	550	10-23-73
BW-5	572.8	553	10-23-73
BW-6	606.9	558	10-23-73
BW-7	605.9	565	10-23-73
BW-8	622.5	575	10-23-73
BW-9	624.5	567	10-23-73
BW-10	599.5	566	10-23-73
BW-11	573.9	546	10-23-73
BW-12	586.1	556	10-23-73
BW-13	546.0	541	10-23-73
BW-14	584.8	545	10-23-73
BW-15	551.0	545	10-23-73
BW-16	569.5	543	10-23-73
BW-17	585.3	555	10-23-73
BW-18	574	524	11-9-73
BW-19	672	628	11-9-73
BW-20	578	527	11-16-73

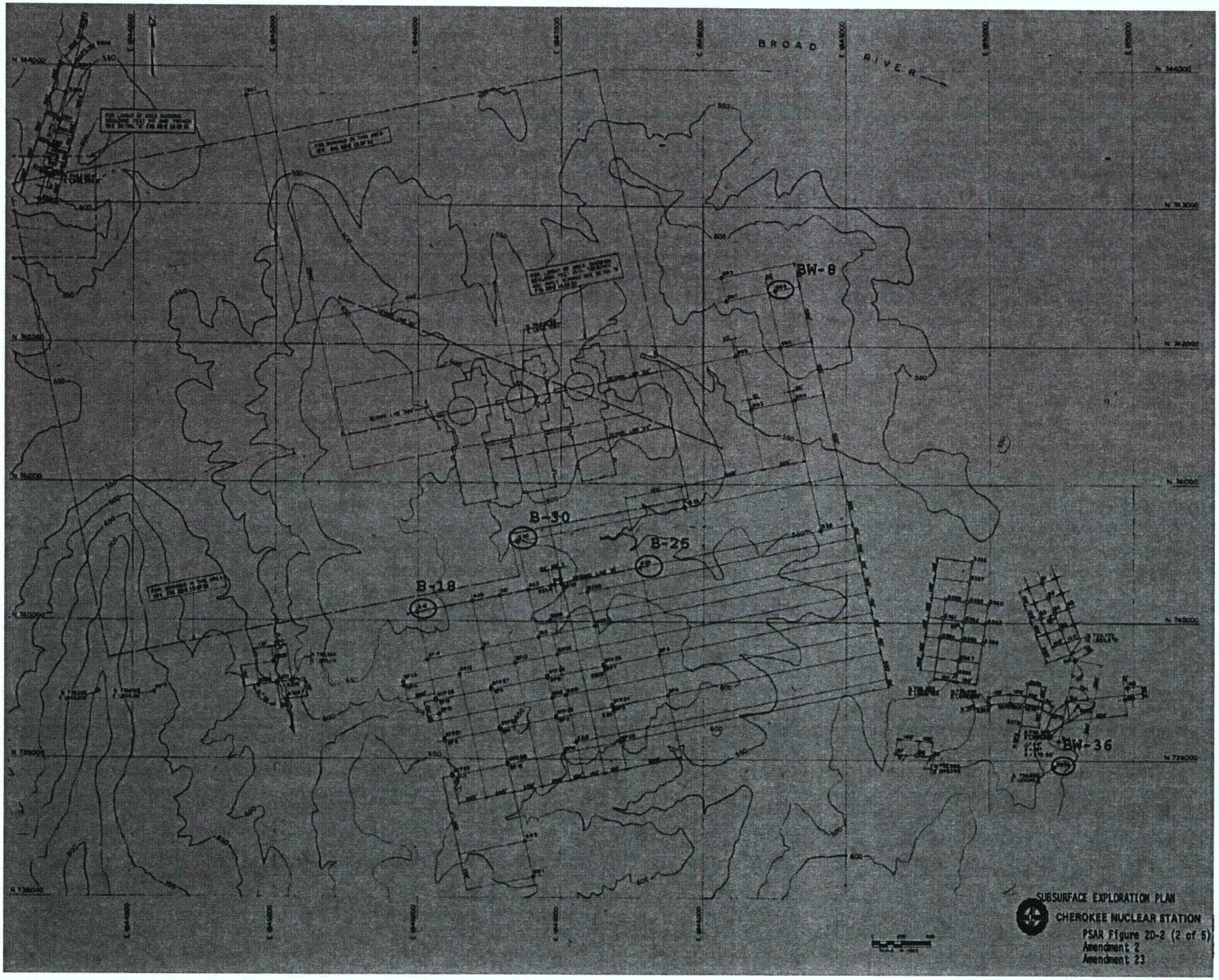
Amendment 2
(Entire page revised)

TABLE 2B-6 (CONT'D.)
GROUNDWATER LEVELS
IN OFFSITE OBSERVATION WELLS
CHEROKEE NUCLEAR STATION

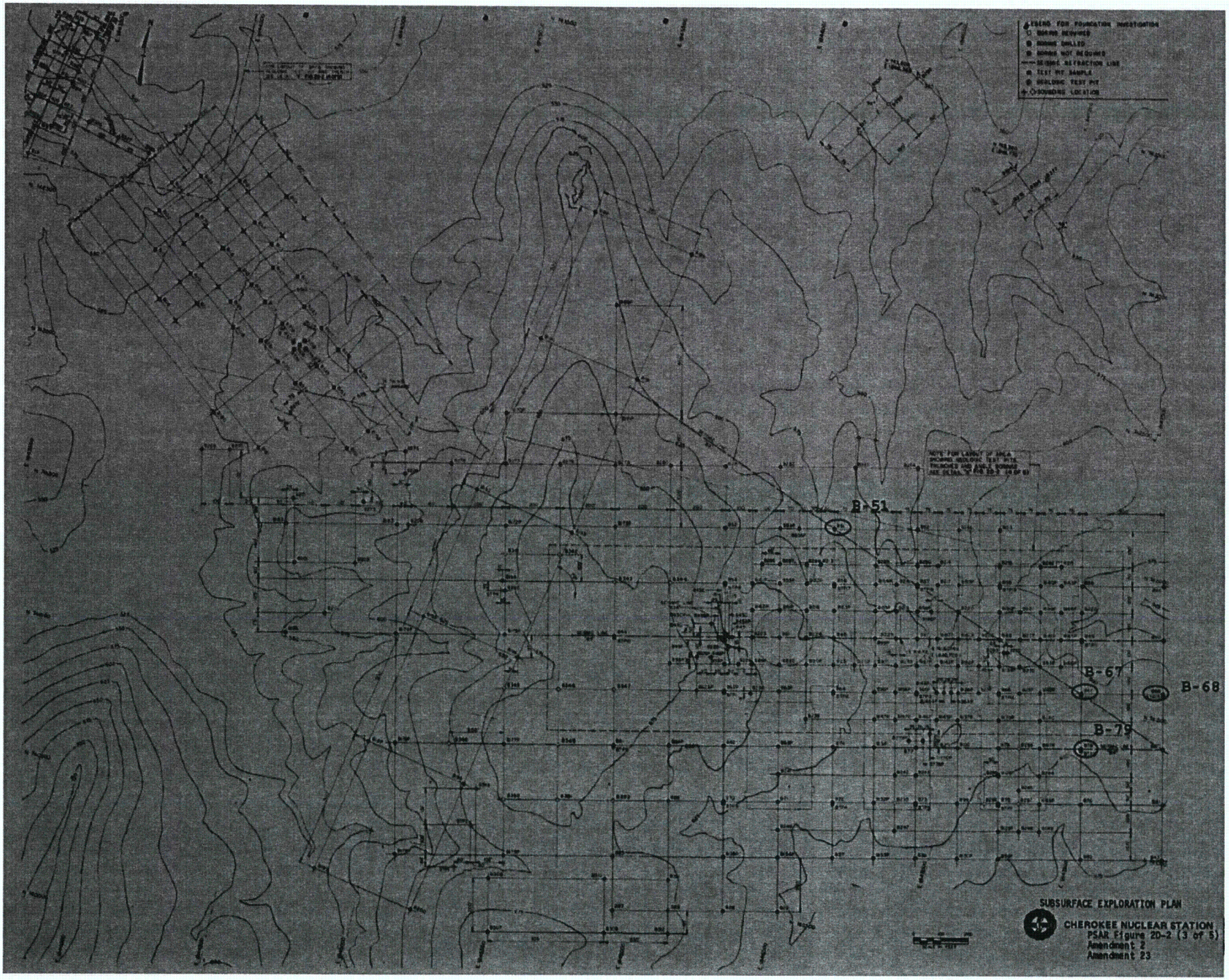
BORING NUMBER	GROUND SURFACE ELEVATION	WATER SURFACE ELEVATION	DATE MEASURED
BW-21	676	639	11-9-73
BW-22	684	635	11-9-73
BW-23	664	633	11-9-73
BW-24	634	574	12-6-73
BW-25	607	562	11-9-73
BW-26	587	552	11-9-73
BW-27	586	546	11-9-73
BW-28	619	584	11-9-73
BW-29	667	641	11-9-73
BW-30	657	633	11-9-73
BW-31	634	586	11-9-73
BW-32	605	558	11-9-73
BW-33	629	588	11-9-73
BW-34	587	577	11-9-73
BW-35	559	521	12-14-73
BW-36	567	517	12-14-73
BW-37	622	572	12-6-73
BW-38	640	603	12-6-73

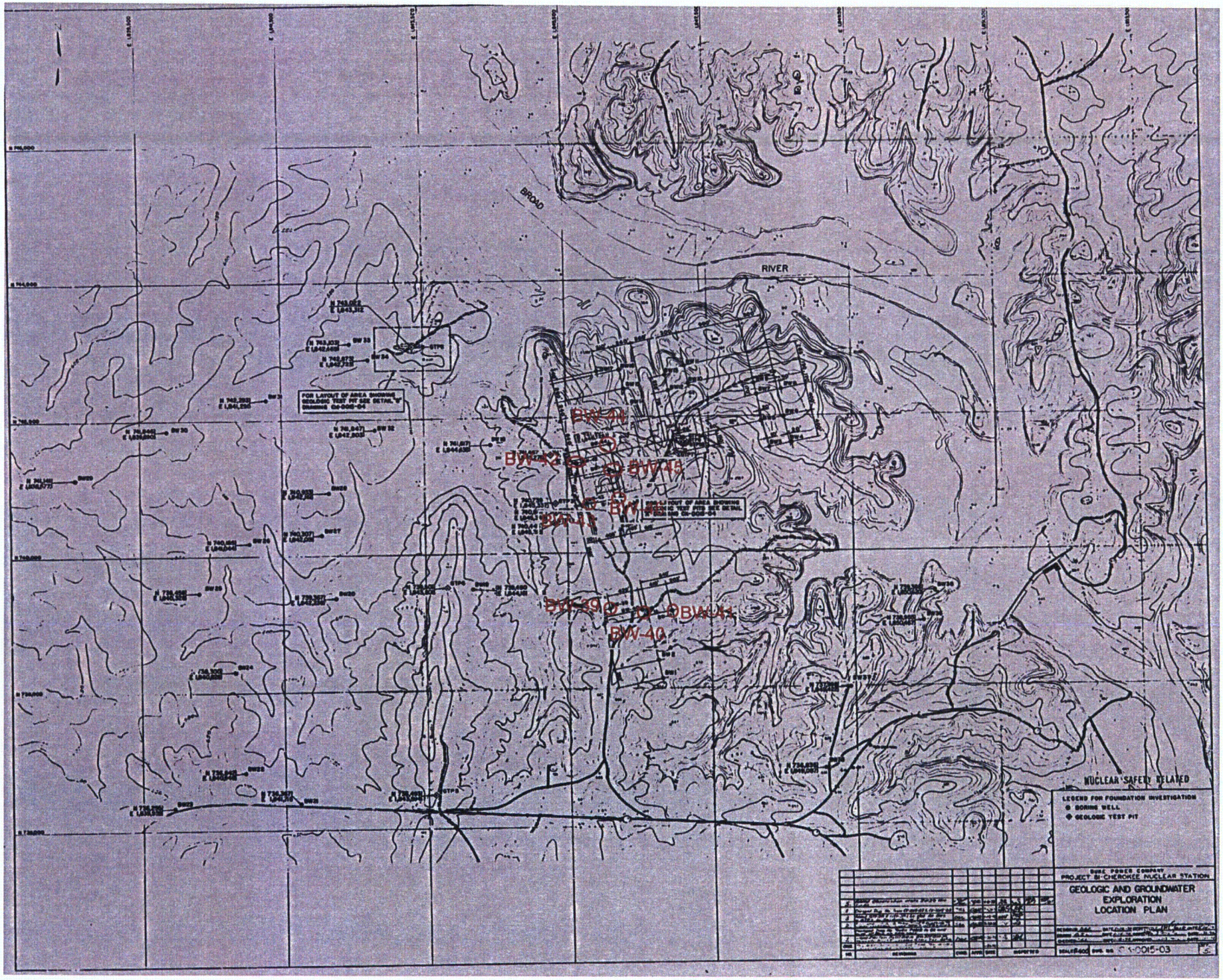
Amendment 2
(Entire page revised)


Cherokee Observation Wells
Listed in Appendix 2B-Hydrology
See Table 2B-6
BROAD
RIVER
SUBSURFACE EXPLORATION PLAN
CHEROKEE NUCLEAR STATION
PSAR Figure 2D-2 (1 of 6)
Amendment 2
Amendment 23



SUBSURFACE EXPLORATION PLAN
CHEROKEE NUCLEAR STATION
PSAR Figure 2D-2 (2 of 6)
Amendment 2
Amendment 23


B-51
B-67
B-68
B-79
SUBSURFACE EXPLORATION PLAN
CHEROKEE NUCLEAR STATION
PSAR Figure 2D-2 (3 of 5)
Amendment 2
Amendment 23


BROAD
RIVER
BW-41
BW-42
BW-43
BW-44
BW-45
BW-39
BW-40
NUCLEAR SAFETY RELATED
LEGEND FOR FOUNDATION INVESTIGATION
BORING WELL
GEOLOGIC TEST PIT
DUKE POWER COMPANY
PROJECT 81-CHEROKEE NUCLEAR STATION
GEOLOGIC AND GROUNDWATER EXPLORATION LOCATION PLAN

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 6-2 to RAI 6

Duke Power Company, Cherokee Groundwater Levels Notebook, Site Groundwater Monitoring Field Observations 1976 -1985, Project 81 Cherokee Nuclear Station, Cherokee County, SC.

Best Available Copy

CHEROKEE GROUNDWATER LEVELS NOTEBOOK

BW-14 (11-15-78)

BW-8 (8-15-78)

B-51 (7-15-78)

B-53 P-10 (4-28-78)

B-53 P-9 (4-28-78

B-25 (5-15-78)

B-53-P-TW (1-11-78)

P-4 (12-22-77) 1-10-78 Back

P-7 (12-22-77) 1-10-78 Back

B-79 (11-15-77)

B-77 (11-15-77)

BW-36

BW-12

BW-21

BW-28

BW-38

BW-39

BW-40

41

42

43

44

46

B-18

30

51

67

68

430

431

432

433

434

435

434

547

438

439

Mullinax

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
SSD-NORTH
CHARLOTTE, N. C. 28242

P. O. BOX 33189

TELEPHONE: AREA 704
875-1361

January 21, 1986

S B Hager

Attention I W Pearce

Re: Cherokee Site
Groundwater Monitoring
File No. 1105.02

Attached are the groundwater readings made October 14 and November 11, 1985.

A R Hollins
Manager, Const & Maint Dept
Northern Division

B E Taylor
Engineering Manager, Const & Maint Dept.
Northern Division

DEW/ssr

xc Clay Sams w/attachment

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11-11-85

Time: Start 9:30 Am

Finish 11:00 Am

Well Meter # D-1

Inspector's Initials R.S. & M.D.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	Dry		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.7		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	41.4		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	26.0		
BW-42	596.61	597.61	31.3		
BW-43	598.07	599.01	20.5		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	29.0		
*B-430	600.50	604.11	Dry		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	Dry		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DESTROYED		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	55.0		

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-14-85
Time: Start 1:30
Finish 3:15

Well Meter # D-1
Inspector's Initials S.B. & J.B.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	Dry		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	52'		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	43.2		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	26.0		
BW-42	596.61	597.61	31.6		
BW-43	598.07	599.01	21.4		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.7		
*B-430	600.50	604.11	Dry		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	Dry		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	? Destroyed		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	55.0		

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
SSD-NORTH
CHARLOTTE, N. C. 28242

TELEPHONE: AREA 704
875-1361

P. O. BOX 33189

October 21, 1985

S B Hager

Attention I W Pearce

Re: Cherokee Site
Groundwater Monitoring
File No. 1105.02

Attached are the groundwater readings made July 12, August 14, and September 13, 1985.

A R Hollins
Manager-SSD

B E Taylor
Engineering Manager-SSD

DEW/ssr

Attachments

xc Clay Sams w/attachment
R B Priory

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7/12/85
Time: Start 12:50
Finish

Well Meter # D-1
Inspector's Initials T S M

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.8		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	41.7		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.0		
BW-42	596.61	597.61	32.2		
BW-43	598.07	599.01	20.8		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.6		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	55.3		

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 8/14/85

Time: Start 8:30 am

Finish 11:00 am

Well Meter # ___ D-1 _____

Inspector's Initials M D

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	52.2		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	44.3		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.7		
BW-42	596.61	597.61	32.4		
BW-43	598.07	599.01	21.5		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.8		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	55.3		

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9/13/85
Time: Start 12:30
Finish 2:15

Well Meter # D-1
Inspector's Initials G G and J W

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	52.0		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	50.7		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.8		
BW-42	596.61	597.61	31.2		
BW-43	598.07	599.01	21.0		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.10		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED			DESTROYED	
*B-433	NOTE:DESTROYED			DESTROYED	
*B-434	599.70	586.65		DESTROYED	
*B-435	603.60	605.21		DESTROYED	
*B-436	608.40	609.32			
*B-437	NOTE:DESTROYED			DESTROYED	
*B-438	591.10	573.00		DESTROYED	
*B-439-A	NOTE:DESTROYED			DESTROYED	
Mullinax	658.14	659.14	55.6		

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
SSD-NORTH
CHARLOTTE, N. C. 28242

P. O. BOX 33189

TELEPHONE: AREA 704
875-1361

July 8, 1985

S B Hager

Attention I W Pearce

Re: Cherokee Site
Groundwater Monitoring
File No. 1105.02

Attached are the groundwater readings made April 4, May 16, and June 5, 1985.

A R Hollins
Manager-SSD

B E Taylor
Engineering Manager-SSD

DEW/ssr

Attachments

xc Clay Sams w/attachments
R B Priory "

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11-4-85
Time: Start 9:53
Finish 11:05

Well Meter # D-1
Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.5		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	43.3		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.0		
BW-42	596.61	597.61	30.7		
BW-43	598.07	599.01	19.1		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.1		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Multinax	658.14	659.14	53.6		

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 5-16-85
Time: Start 12:50
Finish 2:30

Well Meter # D-1
Inspector's Initials TSM

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.6		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	46.5		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	24.11		
BW-42	596.61	597.61	30.11		
BW-43	598.07	599.01	19.4		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.5		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Multinax	658.14	659.14	53.3		

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 6-5-85
Time: Start 8:30
Finish

Well Meter # D-1
Inspector's Initials TSM

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.7		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	45.8		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.0		
BW-42	596.61	597.61	31.8		
BW-43	598.07	599.01	20.7		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.4		
*B-430	00.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	55.4		

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
SSD-NORTH
CHARLOTTE, N. C. 28242

P. O. BOX 33189

TELEPHONE: AREA 704
875-1361

April 4, 1985

S B Hager

Attention I W Pearce

Re: Cherokee
Site Groundwater Monitoring
File No. 1105.02

Attached are the groundwater readings made January 8, February 8, and March 4, 1985.

A R Hollins
Manager-SSD

B E Taylor
Engineering Manager

DEW:ssr

Attachments

cc: Clay Sams (w/attachments)
R B Priory "

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 1-8-85
Time: Start 9:38
Finish 10:48

Well Meter # D-1
Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	Dry		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.35		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	40.00		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.00		
BW-42	596.61	597.61	31.20		
BW-43	598.07	599.01	19.40		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.1		
*B-430	600.50	604.11	Dry		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	Dry		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	Dry		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	53.85		

* PERMANENT INSTALLATION

SGM-1
Revision 19

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-8-85
Time: Start 2:20
Finish 3:30

Well Meter # D-1
Inspector's Initials T.S.H.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.20		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	39.2		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.2		
BW-42	596.61	597.61	30.0		
BW-43	598.07	599.01	18.5		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.2		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	53.9		

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 3-4-85
Time: Start 1:15
Finish 2:30

Well Meter # D-1
Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.1		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	44.3		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.0		
BW-42	596.61	597.61	29.11		
BW-43	598.07	599.01	18.10		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.2		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	53.3		

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
SSD-NORTH
CHARLOTTE, N. C. 28242

P. O. BOX 33189

TELEPHONE: AREA 704
875-1361

January 3, 1985

Rob Smith

S B Hager

Attn: I W Pearce

Re: Cherokee
Site Groundwater Monitoring
File No.: CK-1105.02

Attached are the groundwater readings made November 5 and December 11, 1984.

A R Hollins
Division Manager

B E Taylor
Division Engineer

DEW:sr

Attachments

cc: Clay Sams w/attachments
R B Priory w/attachments

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11-5-84
Time: Start 12:40
Finish 1:30

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATI(
BW-12	589.90	590.11	DRY			*B-431
						*B-432
*BW-28	NOTE: DESTROYED					*B-433
*BW-36	566.92	567.37	51.20			*B-434
BW-38	NOTE: DESTROYED					*B-435
BW-39	630.78	633.80	40.90			*B-436
BW-40	NOTE: DESTROYED					*B-437
BW-41	616.28	618.09	24.2			*B-438
BW-42	596.61	597.61	31.4			*B-439-A
BW-43	598.07	599.01	19.11			Mullina:
*B-18	NOTE: DESTROYED					
B-68	590.00	592.25	27.7			
*B-430	600.50	604.11	DRY			

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-11-84

Time: Start 12:40

Finish 1:37

Well Meter # D-1

Inspector's Initials T.S., W.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
			[redacted]			*B-432	NOTE: DESTROYED		[redacted]		
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.30			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED		[redacted]			*B-435	603.60	605.21			
BW-39	630.78	633.80	40.10			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED		[redacted]			*B-437	NOTE: DESTROYED		[redacted]		
BW-41	616.28	618.09	24.11			*B-438	591.10	573.00			
BW-42	596.61	597.61	31.50			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	19.11			Mullinax	658.14	659.14	51.60		
*B-18	NOTE: DESTROYED		[redacted]								
B-68	590.00	592.25	28.00								
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

Rob- FOR FILES

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
SSD-NORTH
CHARLOTTE, N. C. 28242

P. O. BOX 33189

TELEPHONE: AREA 704
875-1361

October 26, 1984

S B Hager

Attn: I W Pearce

Re: Cherokee
Site Groundwater Monitoring
File No.: CK-1105.02

Attached are the groundwater readings made August 3, September 6, and October 4, 1984.

A R Hollins
Division Manager

B E Taylor
Division Engineer

DEW:sr

Attachments

cc: Clay Sams w/attachments
R B Priory w/attachments

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 8-3-84
Time: Start 8:00 A.M.
Finish 9:30 A.M.

Well Meter # D-1
Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	50.2			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	39.9			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	23.5			*B-438	591.10	573.00			
BW-42	596.61	597.61	29.2			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	17.1			Mullinax	658.14	659.14	62.5		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	27.1								
*B-430	600.50	604.11	DRY								

● PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9-6-84
Time: Start 2:40
Finish 3:30

Well Meter # D-1
Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	50.8			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	39.8			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	23.4			*B-438	591.10	573.00			
BW-42	596.61	597.61	29.8			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	19.0			Mullinax	658.14	659.14	55.1		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	27.3								
*B-430	600.50	604.11	DRY								

● PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-4-84

Time: Start 2:30

Finish 3:30

Well Meter # 0-1

Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.50		
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	40.65		
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	23.6		
BW-42	596.61	597.61	31.2		
BW-43	598.07	599.01	20.0		
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	27.4		
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	54.7		

● PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
P.O. BOX 400 GAFFNEY, S.C. 29342-0400 TELEPHONE: (803) 489-8131

July 3, 1984

S B Hager

Attention: I W Pearce

Re: Cherokee
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made May 9, June 4, and July 3, 1984.

M E Bailey
Site Manager

DEW/fl
Attachments

cc: A R Hollins w/attachments
Clay Sams, LETCo w/attachments
R B Priory w/attachments

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 5-9-84

Time: Start 8:30

Finish

Well Meter # 17-1

Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	49.30			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	42.20			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	23.11			*B-438	591.10	573.00			
BW-42	596.61	597.61	28.60			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	16.30			Mullinax	658.14	659.14	56.50		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	27.60								
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 6-4-84

Time: Start 8:30 A.M.

Finish 10:30 A.M.

Well Meter # D-1

Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	48.30			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	43.00			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	23.60			*B-438	591.10	573.00			
BW-42	596.61	597.61	28.90			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	16.30			Mullinax	658.14	659.14	49.30		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	27.70								
*B-430	600.50	604.11	DRY								

● PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7-3-84

Time: Start 8:30 A.M.

Finish 9:55 A.M.

Well Meter # D-1

Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	50.3			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	44.6			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	23.5			*B-438	591.10	573.00			
BW-42	596.61	597.61	29.7			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	18.3			Mullinax	658.14	659.14	49.5		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	27.6								
*B-430	600.50	604.11	DRY								

*PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
P.O. BOX 400 GAFFNEY, S.C. 29342-0400 TELEPHONE: (803) 489-8131

Rec'd 16 Apr 84

April 12, 1984

S B Hager

Attention: I W Pearce

Re: Cherokee
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made February 2, March 12, and April 6, 1984.

M E Bailey
Site Manager

DEW/fl
Attachments

cc: A R Hollins w/attachments
Clay Sams, LETCo w/attachments
R B Priory w/attachments

SGN-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-2-84
Time: Start 1000AM
Finish 11:30AM

Well Meter # 1
Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.80			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	40.80			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	25.80			*B-438	591.10	573.00			
BW-42	596.61	597.61	39.65			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	18.25			Mullinax	658.14	659.14	52.75		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	28.64								
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 3-12-84
Time: Start 11:07 A.M.
Finish 1:49 P.M.

Well Meter # D-1
Inspector's Initials T.S.M.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.20			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	43.50			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	25.00			*B-438	591.10	573.00			
BW-42	596.61	597.61	28.11			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	27.11			Mullinax	658.14	659.14	53.40		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	28.40								
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 4-6-84
Time: Start 9:20 A.M.
Finish 10:40 A.M.

Well Meter # D-1
Inspector's Initials T.S.H.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	49.11			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	43.10			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	24.50			*B-438	591.10	573.00			
BW-42	596.61	597.61	28.60			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	26.90			Mullinax	658.14	659.14	51.60		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	27.10								
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
P.O. BOX 400
GAFFNEY, S.C. 29342-0400
TELEPHONE: (803) 489-8131

January 16, 1984

S B Hager

Attention: I W Pearce

Re: Cherokee
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made October 28, and December 29, 1983. The November readings were missed.

M E Bailey
Site Manager

DEW/fl
Attachments

cc: A R Hollins w/attachments
Clay Sams, LETCo w/attachments
R B Priory w/attachments

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-28-83

Time: Start 2:00 PM

Finish 3:00 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.30	516.07		*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	48.90	584.90		*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	26.40	591.69		*B-438	591.10	573.00			
BW-42	596.61	597.61	33.42	564.19 ~~564.47~~ JES		*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	22.20	576.81		Mullinax	658.14	659.14	53.10	606.04	
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	28.80	563.45							
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-29-83

Time: Start 2:40 PM

Finish 5:35 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.35			*B-434	599.70	586.65			
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	51.35			*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	26.15			*B-438	591.10	573.00			
BW-42	596.61	597.61	30.10			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	29.55			Mullinax	658.14	659.14	51.25		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	28.80								
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

ROB

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
P.O. BOX 400
GAFFNEY, S.C. 29342-0400
TELEPHONE: (803) 489-8131

October 13, 1983

S B Hager

Attention: I W Pearce

Re: Cherokee
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made July 9, August 30, and September 26, 1983.

M E Bailey
Site Manager

DEW/fl
Attachments

cc: A R Hollins w/attachments
Clay Sams, LETCo w/attachments ✓
R B Priory w/attachments

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7-29-83
Time: Start 1:15 P.M.
Finish 2:00 P.M.

Well Meter # 1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY			*B-431	602.90	583.40	DRY		
			DESTROYED			*B-432	NOTE: DESTROYED			DESTROYED	
*BW-28	NOTE: DESTROYED		DESTROYED			*B-433	NOTE: DESTROYED			DESTROYED	
*BW-36	566.92	567.37	49.30	518.07		*B-434	599.70	586.65		DESTROYED	
BW-38	NOTE: DESTROYED		DESTROYED			*B-435	603.60	605.21		DESTROYED	
BW-39	630.78	633.80	46.40	587.40		*B-436	608.40	609.32	DRY		
BW-40	NOTE: DESTROYED		DESTROYED			*B-437	NOTE: DESTROYED			DESTROYED	
BW-41	616.28	618.09	23.80	594.29		*B-438	591.10	573.00		DESTROYED	
BW-42	596.61	597.61	31.60	566.01		*B-439-A	NOTE: DESTROYED			DESTROYED	
BW-43	598.07	599.01	20.90	578.11		Mullinax	658.14	659.14	55.20	603.94	
*B-18	NOTE: DESTROYED		DESTROYED								
			DESTROYED								
B-68	590.00	592.25	28.10	564.15							
*B-430	600.50	604.11	DRY								

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 8-30-83
Time: Start 1:00 PM
Finish 1:45 PM

Well Meter # 1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.00	516.37	
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	46.30	587.50	
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	24.60	593.49	
BW-42	596.61	597.61	31.90	565.71	
BW-43	598.07	599.01	21.35	577.66	
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.00	564.25	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED		DESTROYED		
*B-433	NOTE:DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED		DESTROYED		
Mullinax	658.14	659.14	55.70	603.44	

PERMANENT INSTALLATION

SCM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9-26-83
Time: Start 1:00 Pm
Finish 1:45 Pm

Well Meter # 1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.85	515.52	
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	48.25	585.55	
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	25.35	592.74	
BW-42	596.61	597.61	33.05	564.56	
BW-43	598.07	599.01	22.60	576.41	
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	28.70	563.55	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		DESTROYED		
*B-433	NOTE: DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE: DESTROYED		DESTROYED		
Mullinax	658.14	659.14	58.60	600.54	

PERMANENT INSTALLATION

DUKE POWER COMPANY

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT

P.O. BOX 400 GAFFNEY, S.C. 29342-0400 TELEPHONE: (803) 489-8131

Rec'd
5 May 83

May 3, 1983

S B Hager

Attention I W Pearce

Re: Cherokee Nuclear Station
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made February 23, March 23, and April 25, 1983.

M E Bailey
Site Manager

DEW/fl

Attachments

cc: A R Hollins w/attachments
Clay Sams, LETCo w/attachments ✓
R B Priory w/attachments

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-23-83

Time: Start 1:00 PM

Finish 2:00 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	49.20	518.17	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	38.20	595.60	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	26.70	591.39	
BW-42	596.61	597.61	29.40	568.21	
BW-43	598.07	599.01	18.53	580.48	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	28.60	563.65	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED				
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED				
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE: DESTROYED				
Mullinax	658.14	659.14	54.40	604.74	

* PERMANENT INSTALLATION

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 3-23-83

Time: Start 1:00 Pm

Finish 2:15 Pm

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	50.10	517.27	
BW-38	NOTE: DESTROYED		[redacted]		
BW-39	630.78	633.80	39.40	594.40	
BW-40	NOTE: DESTROYED		[redacted]		
BW-41	616.28	618.09	27.34	590.75	
BW-42	596.61	597.61	30.65	566.96	
BW-43	598.07	599.01	19.50	579.51	
*B-18	NOTE: DESTROYED		[redacted]		
B-68	590.00	592.25	28.85	563.40	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	55.60	603.54	

* PERMANENT INSTALLATION

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 4-25-83

Time: Start 10:15 AM

Finish 11:15 AM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	49.40	517.97	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	36.43	597.37	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	25.10	592.99	
BW-42	596.61	597.61	29.12	568.49	
BW-43	598.07	599.01	17.31	581.70	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	27.70	564.55	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	52.00	607.14	

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
P.O. BOX 400 GAFFNEY, S.C. 29342-0400 TELEPHONE: (803) 489-8131

July 5, 1983

S B Hager

Attention I W Pearce

Re: Cherokee Nuclear Station
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made May 24 and June 24, 1983.

M E Bailey
Site Manager

DEW/fl
Attachments

cc: A R Hollins w/attachments
Clay Sams, LETCo w/attachments ✓
R B Priory w/attachments

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 5-24-83

Time: Start 1:00 PM

Finish 2:00 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	49.90	517.47	
BW-38	NOTE: DESTROYED		[redacted]		
BW-39	630.78	633.80	36.25	597.55	
BW-40	NOTE: DESTROYED		[redacted]		
BW-41	616.28	618.09	24.80	593.29	
BW-42	596.61	597.61	29.60	568.01	
BW-43	598.07	599.01	18.50	580.51	
*B-18	NOTE: DESTROYED		[redacted]		
B-68	590.00	592.25	27.60	564.65	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	53.40	605.74	

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 6-24-83
Time: Start 8:00 am
Finish 8:45 am

Well Meter # 1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			DESTROYED		
*BW-28	NOTE: DESTROYED		DESTROYED		
*BW-36	566.92	567.37	51.50	515.87	
BW-38	NOTE: DESTROYED		DESTROYED		
BW-39	630.78	633.80	36.60	597.20	
BW-40	NOTE: DESTROYED		DESTROYED		
BW-41	616.28	618.09	24.35	593.74	
BW-42	596.61	597.61	32.00	565.61	
BW-43	598.07	599.01	18.80	580.21	
*B-18	NOTE: DESTROYED		DESTROYED		
			DESTROYED		
B-68	590.00	592.25	27.58	564.67	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		DESTROYED		
*B-433	NOTE: DESTROYED		DESTROYED		
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	DESTROYED		
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		DESTROYED		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE: DESTROYED		DESTROYED		
Mullinax	658.14	659.14	51.50	607.54	

* PERMANENT INSTALLATION

DUKE POWER COMPANY

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

February 7, 1983

S B Hager

Attention I W Pearce

Re: Cherokee Nuclear Station
Site Groundwater Monitoring
File No. Ck-1105.02

Attached are the groundwater readings made November 19, 1982, December 23, 1982, and February 3, 1983.

M E Bailey
Site Manager

DEW/fl

Attachments

cc A R Hollins w/attachments
Clay Sams, LET-Co, w/attachments ✓
R B Priory w/attachments

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-3-83

Time: Start 12:30 PM

Finish 1:30 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	50.90	516.47	
BW-38	NOTE: DESTROYED		[redacted]		
BW-39	630.78	633.80	39.00	594.80	
BW-40	NOTE: DESTROYED		[redacted]		
BW-41	616.28	618.09	26.71	591.38	
BW-42	596.61	597.61	30.00	567.61	
BW-43	598.07	599.01	19.95	579.06	
*B-18	NOTE: DESTROYED		[redacted]		
B-68	590.00	592.25	28.85	563.40	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	54.90	604.24	

* PERMANENT INSTALLATION

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-23-82
Time: Start 1:00 Pm
Finish 2:15 Pm

Well Meter # 1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			[redacted]		
*BW-28	NOTE: DESTROYED		[redacted]		
*BW-36	566.92	567.37	51.18	516.19	
BW-38	NOTE: DESTROYED		[redacted]		
BW-39	630.78	633.80	39.85	593.95	
BW-40	NOTE: DESTROYED		[redacted]		
BW-41	616.28	618.09	27.30	590.79	
BW-42	596.61	597.61	29.60	568.01	
BW-43	598.07	599.01	19.50	579.51	
*B-18	NOTE: DESTROYED		[redacted]		
B-68	590.00	592.25	28.90	563.35	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	55.65	603.49	

* PERMANENT INSTALLATION

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11-19-82
Time: Start 2:00 Pm
Finish 3:20 Pm

Well Meter # 1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	50.55	516.82	
BW-38	NOTE: DESTROYED		[redacted]		
BW-39	630.78	633.80	40.20	593.60	
BW-40	NOTE: DESTROYED		[redacted]		
BW-41	616.28	618.09	28.90	589.19	
BW-42	596.61	597.61	31.00	566.61	
BW-43	598.07	599.01	21.80	577.21	
*B-18	NOTE: DESTROYED		[redacted]		
B-68	590.00	592.25	29.30	562.95	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	56.40	602.74	

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

October 25, 1982

S B Hager

Attention I W Pearce

Re: Cherokee Nuclear Station
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made October 21, 1982.

M E Bailey
Site Manager

DEW/bb

Attachment

cc A R Hollins w/attachment
Clay Sams, LETCo, w/attachment
R B Priory w/attachment

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-21-82

Time: Start 10:15

Finish 11:45

Well Meter # 1

Inspector's Initials JES

WELL NTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	DRY		
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.36	516.01	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	40.89	592.91	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	27.35	590.74	
BW-42	596.61	597.61	31.85	565.76	
BW-43	598.07	599.01	21.97	577.04	
*B-18	NOTE: DESTROYED				
			[redacted]		
B-68	590.00	592.25	30.75	561.50	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	54.70	604.44	

* PERMANENT INSTALLATION

DUKE POWER COMPANY

P. O. BOX 422

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

TELEPHONE: AREA 803
489-8131

October 5, 1982

S B Hager

Attention I W Pearce

Re: Cherokee 1-3
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made July 20, August 20, and September 20, 1982.

M. E Bailey/bw

M E Bailey
Site Manager

DEW/bb

Attachments

cc A B Hollins w/attachments
Clay Sams, LETCo, w/attachments
R B Priory w/attachments

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7-20-82

Time: Start 1:00 PM

Finish 2:15 PM

Well Meter # 1

Inspector's Initials J.E.S.

WELL ENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	34.35	555.76	
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.42	515.95	
BW-38	NOTE: DESTROYED		[redacted]		
BW-39	630.78	633.80	39.90	593.90	
BW-40	NOTE: DESTROYED		[redacted]		
BW-41	616.28	618.09	27.44	590.65	
BW-42	596.61	597.61	29.43	568.18	
BW-43	598.07	599.01	20.10	578.91	
*B-18	NOTE: DESTROYED		[redacted]		
B-68	590.00	592.25	29.10	563.15	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	54.80	604.34	

* PERMANENT INSTALLATION

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 8-20-82

Time: Start 12:30 Pm

Finish 1:30 Pm

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	36.33	553.78	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.38	515.99	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	40.35	593.45	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	27.05	591.04	
BW-42	596.61	597.61	31.15	566.46	
BW-43	598.07	599.01	21.71	577.30	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.00	563.25	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	56.50	602.64	

* PERMANENT INSTALLATION

Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9-20-82

Time: Start 12:45 PM

Finish 1:50 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	35.10	555.01	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.40	515.97	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	39.82	593.98	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	26.94	591.15	
BW-42	596.61	597.61	30.27	567.34	
BW-43	598.07	599.01	20.63	578.38	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.16	563.09	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED				
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED				
*B-438	591.10	573.00	DESTROYED		
*B-439-A	NOTE: DESTROYED				
Mullinax	658.14	659.14	55.30	603.84	

* PERMANENT INSTALLATION

DUKE POWER COMPANY

P. O. BOX 422

CONSTRUCTION DEPARTMENT

CHEROKEE NUCLEAR PROJECT

GAFFNEY, S. C. 29340

TELEPHONE: AREA 803
489-8131

Recd 8-24-81

August 21, 1981

S B Hager

Attention I W Pearce

Re: Cherokee 1-3
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made on August 20, 1981.

K O Patterson

K O Patterson
Resident Cashier

DEW/bb

Attachments

cc J E Grogan w/ attachments
Clay Sams, LETCo, w/attachments

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 8-20-81
Time: Start 1:30
Finish 2:45

Well Meter # D-1
Inspector's Initials E.R.Q

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	40.60	Bottom	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.0		
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	47.10		
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	28.60		
BW-42	596.61	597.61	32.90		
BW-43	598.07	599.01	23.50		
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	30.20		
*B-430	600.50	604.11	39.40	Bottom	

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.40	Bottom	
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	Destroyed		
*B-435	603.60	605.21	"		
*B-436	608.40	609.32	42.0	Bottom	
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	34.10	Bottom	
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	56.50		

* PERMANENT INSTALLATION

DUKE POWER COMPANY

P. O. BOX 422

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

TELEPHONE: AREA 803
489-8131

May 18, 1981

S B Hager

Attention I W Pearce

Re: Cherokee 1-3
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made on May 15, 1981.

K O Patterson
Resident Cashier

DEW/bb

Attachment

cc ~~J E Grogan~~ w/attachment
Clay Sams, LETCo, w/attachment

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 5-15-81

Time: Start 9:15

Finish 10:20

Well Meter # 1

Inspector's Initials EHA

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.9		Bottomed out	*B-431	602.90	583.40	18.3		Bottomed out
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.6			*B-434	599.70	586.65	Destroyed		
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21	Destroyed		
BW-39	630.78	633.80	44.4			*B-436	608.40	609.32	41.4		Bottomed out
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	28.0			*B-438	591.10	573.00	38.7		Bottomed out
BW-42	596.61	597.61	33.2			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	23.0			Mullinax	658.14	659.14	53.7		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	29.8								
*B-430	600.50	604.11	39.5		Bottomed out						

* PERMANENT INSTALLATION

DUKE POWER COMPANY

P. O. BOX 422

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

TELEPHONE: AREA 803
489-8131

May 13, 1981

S B Hager

Attention I W Pearce

Re: Cherokee 1-3
Site Groundwater Monitoring
File No. CK-1105.02

Attached are the groundwater readings made on April 16, 1981.

K O Patterson
Resident Cashier

DEW/bb

Attachments

cc J E Grogan w/attachments
Clay Sams, LETCo, w/attachment

SGM-
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 4-16-81

Time: Start 8:20

Finish 10:25

Well Meter # D-1

Inspector's Initials NH

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	39.90	~~Bottomed out~~ see out	Bottomed OUT	*B-431	602.90	583.40	18.30		Bottomed OUT
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.65			*B-434	599.70	586.65	-		DESTROYED
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			DESTROYED
BW-39	630.78	633.80	40.95			*B-436	608.40	609.32	41.40		Bottomed out
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	27.80			*B-438	591.10	573.00	33.60		Bottomed out
BW-42	596.61	597.61	32.55			*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	22.40			Mullinax	658.14	659.14	54.10		
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	29.75								
*B-430	600.50	604.11	39.40		Bottomed OUT						

*PERMANENT INSTALLATION

Revision

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7-1-82

Time: Start 1:20 pm

Finish 2:30 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	29.10	561.01	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.11	515.26	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	40.93	592.87	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	27.44	590.65	
BW-42	596.61	597.61	30.00	567.61	
BW-43	598.07	599.01	20.16	578.91	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.40	562.85	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	Destroyed		
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	5506	604.08	

* PERMANENT INSTALLATION

Revision

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 5-21-82

Time: Start 1:40 PM

Finish 3:00 PM

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	22.37	567.74	
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.60	515.77	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	40.62	593.18	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	31.00	587.09	
BW-42	596.61	597.61	31.26	566.35	
BW-43	598.07	599.01	21.10	577.91	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.80	562.45	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY		
*B-437	NOTE: DESTROYED		[redacted]		
*B-438	591.10	573.00	DRY		
*B-439-A	NOTE: DESTROYED		[redacted]		
Mullinax	658.14	659.14	54.80	604.34	

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 4-20-82

Time: Start 10:00 a.m.

Finish 11:15 am

Well Meter # 1

Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	16.00	574.11	
			[redacted]		
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.37	516.00	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	40.90	592.90	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	27.70	590.39	
BW-42	596.61	597.61	31.13	566.48	
BW-43	598.07	599.01	20.40	578.61	
*B-18	NOTE: DESTROYED				
			[redacted]		
B-68	590.00	592.25	29.56	562.69	
*B-430	600.50	604.11	DRY	DRY	

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY	DRY	
*B-432	NOTE: DESTROYED		[redacted]		
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65			
*B-435	603.60	605.21			
*B-436	608.40	609.32	DRY	DRY	
*B-437	NOTE: DESTROYED				
*B-438	591.10	573.00	33.65	539.35	
*B-439-A	NOTE: DESTROYED				
Mullinax	658.14	659.14	55.30	603.84	

* PERMANENT INSTALLATION

SGM-1
Revis 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: March 15, 1982
Time: Start 1:30 p.m.
Finish 2:30 P.M.

Well Meter # #1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	4.85	585.26		*B-431	602.90	583.40	DRY	DRY	
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.52	515.85		*B-434	599.70	586.65	DESTROYED		
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21	DESTROYED		
BW-39	630.78	633.80	41.00	592.80		*B-436	608.40	609.32	DRY	DRY	
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	28.20	589.89		*B-438	591.10	573.00	33.10	539.90	
BW-42	596.61	597.61	29.50	568.11		*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	19.25	569.16		Mullinax	658.14	659.14	58.00	601.14	
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	29.85	562.40							
*B-430	600.50	604.11	DRY	DRY							

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-15-82
Time: Start 1:15 PM
Finish 2:20 PM

Well Meter # D-1
Inspector's Initials CBM

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	32.67	557.44	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.50	515.87	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	43.75	590.05	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	28.92	589.17	
BW-42	596.61	597.61	29.50	568.11	
BW-43	598.07	599.01	19.50	579.51	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	30.25	562.00	
*B-430	600.50	604.11	Dry		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	Dry		
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	Destroyed		
*B-435	603.60	605.21	Destroyed		
*B-436	608.40	609.32	Dry		
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	Dry		
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	56.75	602.39	

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 1-18-82
Time: Start 12:40 PM
Finish 2:00 PM

Well Meter # D-1
Inspector's Initials DBM

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	28.85	561.26		*B-431	602.90	583.40	Dry		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.15	515.22		*B-434	599.70	586.65	Destroyed		
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21			
BW-39	630.78	633.80	49.80	584.00		*B-436	608.40	609.32	Dry		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	29.35	588.74		*B-438	591.10	573.00	Dry		
BW-42	596.61	597.61	30.50	567.11		*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	21.40	577.61		Mullinax	658.14	659.14	58.50	600.64	
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	30.80	561.45							
*B-430	600.50	604.11	Dry								

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-18-81
Time: Start 2:00PM
Finish 3:20PM

Well Meter # D-1
Inspector's Initials JES

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	22.00	568.11	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.75	514.62	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	46.00	587.80	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	29.35	588.74	
BW-42	596.61	597.61	31.20	566.41	
BW-43	598.07	599.01	23.20	575.81	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	30.60	561.65	
*B-430	600.50	604.11	DRY	DRY	

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY	DRY	
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	Destroyed		
*B-435	603.60	605.21	Destroyed		
*B-436	608.40	609.32	DRY	DRY	
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	DRY	DRY	
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	59.60	599.54	

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: Nov 16, 1981
Time: Start 1:15 P.M.
Finish 3:15 P.M.

Well Meter # D-1
Inspector's Initials GBM

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	11.00	579.11	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.20	515.17	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	45.30	589.50	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	28.95	589.14	
BW-42	596.61	597.61	32.60	565.01	
BW-43	598.07	599.01	23.20	575.81	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	30.05	562.20	
*B-430	600.50	604.11	DRY		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	DRY		
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	Destroyed		
*B-435	603.60	605.21	Destroyed		
*B-436	608.40	609.32	DRY		
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	DRY		
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	56.03	603.11	

* PERMANENT INSTALLATION

30.90

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-21-81
Time: Start 12:30 PM
Finish 1:30 PM

Well Meter # D-1
Inspector's Initials DSM

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	Dry			*B-431	602.90	583.40	Dry		
						*B-432	NOTE: DESTROYED				
*BW-28	NOTE: DESTROYED					*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.65	514.72		*B-434	599.70	586.65	Destroyed		
BW-38	NOTE: DESTROYED					*B-435	603.60	605.21	Destroyed		
BW-39	630.78	633.80	48.82	584.98		*B-436	608.40	609.32	Dry		
BW-40	NOTE: DESTROYED					*B-437	NOTE: DESTROYED				
BW-41	616.28	618.09	29.00	589.09		*B-438	591.10	573.00	Dry		
BW-42	596.61	597.61	34.00	563.61		*B-439-A	NOTE: DESTROYED				
BW-43	598.07	599.01	22.44	576.57		Mullinax	658.14	659.14	63.95	595.19	
*B-18	NOTE: DESTROYED										
B-68	590.00	592.25	30.90	561.35							
*B-430	600.50	604.11	Dry								

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9-24-81
Time: Start 1:00 PM
Finish 3:00 PM

Well Meter # D-1
Inspector's Initials BSW

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	Dry		
*BW-28	NOTE: DESTROYED				
*BW-36 SP	566.92	567.37	52.30	515.07	
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	48.40	585.40	
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	28.70	589.39	
BW-42	596.61	597.61	32.65	564.96	
BW-43	598.07	599.01	23.40	575.61	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	30.35	561.90	
*B-430	600.50	604.11	Dry		

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	Dry		
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	Destroyed		
*B-435	603.60	605.21	Destroyed		
*B-436	608.40	609.32	Dry		
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	Dry		
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	57.35	601.79	

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7-15-81
Time: Start 10:00 AM
Finish 11:15 PM

Well Meter # D-1
Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.9		Bottomed out
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	52.0		
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	50.7		
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	23.4		
BW-42	596.61	597.61	33.4		
BW-43	598.07	599.01	23.4		
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	30.5		
*B-430	600.50	604.11	39.5		Bottomed out

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.2		Bottomed out
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21	"		
*B-436	608.40	609.32	41.4		Bottomed out
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	33.6		Bottomed out
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	58.0		

* PERMANENT INSTALLATION

SGM-1
Revision 10

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 6-15-81
Time: Start 9:00 AM
Finish 10:35 AM

Well Meter # D-1
Inspector's Initials S.R.C.

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	36.90	STOPPED UP	
*BW-28	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.95		
BW-38	NOTE: DESTROYED				
BW-39	630.78	633.80	41.75		
BW-40	NOTE: DESTROYED				
BW-41	616.28	618.09	29.00		
BW-42	596.61	597.61	33.00		
BW-43	598.07	599.01	27.65		
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	30.00		
*B-430	600.50	604.11	39.45	BOTTOM OF HOLE	

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.25	BOTTOM OF	HOLE
*B-432	NOTE: DESTROYED				
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65	DESTROYED		
*B-435	603.60	605.21		"	
*B-436	608.40	609.32	41.30	BOTTOM OF HOLE	
*B-437	NOTE: DESTROYED				
*B-438	591.10	573.00	33.50	"	" "
*B-439-A	NOTE: DESTROYED				
Mullinax	658.14	659.14	72.40		

* PERMANENT INSTALLATION

SGM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 3-16-81
Time: Start 9:30
Finish 11:10

Well Meter # D-1
Inspector's Initials NA

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	39.50		BOTTOMED OUT
*BW-28	618.60	619.20			DESTROYED
*BW-36	566.92	567.37	51.25		
BW-38	642.20	644.40			DESTROYED
BW-39	630.78	633.80	41.15		
BW-40	646.45	646.24	27.50		
BW-41	616.28	618.09			DESTROYED
BW-42	596.61	597.61	30.10		
BW-43	598.07	599.01	21.90		
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.30		
✓ *B-430	600.50	604.11	39.30		BOTTOMED OUT

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMI
✓ *B-431	602.90	583.40	18.10		BOTTOMED OUT
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	23.25		BOTTOMED OUT
*B-435	603.60	605.21			
✓ *B-436	608.40	609.32	41.33	BOTTOMED OUT	
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	33.50		BOTTOMED OUT
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	58.60		

* PERMANENT INSTALLATION

SCM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-16-81
Time: Start 8:30 AM
Finish 11:45 AM

Well Meter # D-1
Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.80	551.31	Bottom of Hole
*BW-28	618.60	619.20	Destroyed		
*BW-36	566.92	567.37	51.30	516.07	
BW-38	642.20	644.40	Destroyed		
BW-39	630.78	633.80	46.10	587.70	
BW-40	646.45	646.24	Destroyed		
BW-41	616.28	618.09	27.50	590.59	
BW-42	596.61	597.61	31.10	566.51	
BW-43	598.07	599.01	21.80	577.21	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.30	562.95	
*B-430	600.50	604.11	39.40	564.71	Bottom of Hole

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMME
*B-431	602.90	583.40	18.10	565.30	Bottom of Hole
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	23.30	563.35	Bottom of Hole
*B-435	603.60	605.21	41.10	564.11	Bottom of Hole
*B-436	608.40	609.32	41.50	567.82	Bottom of Hole
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	33.50	539.50	Bottom of Hole
*B-439-A	NOTE:DESTROYED				
Multinax	658.14	659.14	53.80	605.34	

* PERMANENT INSTALLATION

SGM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 1-15-81
Time: Start 9:00 AM
Finish 11:45 AM

Well Meter # D-1
Inspector's Initials ERQueen

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.80	551.31	Bottom of Hole
*BW-28	618.60	619.20	Destroyed		
*BW-36	566.92	567.37	51.45	515.92	
BW-38	642.20	644.40	Destroyed		
BW-39	630.78	633.80	47.20	586.60	
BW-40	646.45	646.24	Destroyed		
BW-41	616.28	618.09	27.50	590.59	
BW-42	596.61	597.61	32.00	565.61	
BW-43	598.07	599.01	22.10	576.91	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.10	563.15	
*B-430	600.50	604.11	39.50	564.61	Bottom of Hole

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.20	565.20	Bottom of Hole
*B-432	NOTE: DESTROYED				
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65	23.20	563.45	Bottom of Hole
*B-435	603.60	605.21	41.00	564.21	Bottom of Hole
*B-436	608.40	609.32	41.40	567.92	Bottom of Hole
*B-437	NOTE: DESTROYED				
*B-438	591.10	573.00	33.30	539.70	Bottom of Hole
*B-439-A	NOTE: DESTROYED				
Mullinax	658.14	659.14	53.50	605.64	

* PERMANENT INSTALLATION

SGM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-16-80
Time: Start 7:30 AM
Finish 9:30 AM

Well Meter # D-1
Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.90	551.21	Bottom of Hole
*BW-28	618.60	619.20	Destroyed		
*BW-36	566.92	567.37	51.60	515.77	
BW-38	642.20	644.40	Destroyed		
BW-39	630.78	633.80	41.70	592.10	
BW-40	646.45	646.24	—		
BW-41	616.28	618.09	27.30	590.79	
BW-42	596.61	597.61	30.60	567.01	
BW-43	598.07	599.01	20.30	578.71	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.00	563.25	
*B-430	600.50	604.11	40.55	563.56	Bottom of Hole

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.20	565.20	Bottom of Hole
*B-432	NOTE: DESTROYED				
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65	23.10	563.55	Bottom of Hole
*B-435	603.60	605.21	40.95	564.26	Bottom of Hole
*B-436	608.40	609.32	41.20	568.12	Bottom of Hole
*B-437	NOTE: DESTROYED				
*B-438	591.10	573.00	33.60	539.40	
*B-439-A	NOTE: DESTROYED				
Mullinax	658.14	659.14	52.80	606.34	

* PERMANENT INSTALLATION

SGM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11-14-80
Time: Start 9:30 AM
Finish 11:00 AM

Well Meter # D-1
Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.90	551.21	Bottom of Hole
*BW-28	618.60	619.20	Destroyed		
*BW-36	566.92	567.37	51.35	516.02	
BW-38	642.20	644.40	Destroyed		
BW-39	630.78	633.80	45.35	588.45	
BW-40	646.45	646.24	Destroyed		
BW-41	616.28	618.09	27.25	590.84	
BW-42	596.61	597.61	30.70	566.91	
BW-43	598.07	599.01	20.60	578.41	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	29.00	563.25	
*B-430	600.50	604.11	39.50	564.61	Bottom of Hole

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.30	565.10	Bottom of Hole
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	23.00	563.65	Bottom of Hole
*B-435	603.60	605.21	41.00	564.21	Bottom of Hole
*B-436	608.40	609.32	41.40	567.92	Bottom of Hole
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	33.50	539.50	Bottom of Hole
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	52.60	606.54	

* PERMANENT INSTALLATION

SGM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-15-80
Time: Start 7:30 AM
Finish 9:30 AM

Well Meter # D-1
Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	39.00	551.11	Bottom of Hole
*BW-28	618.60	619.20	51.45	567.75	
*BW-36	566.92	567.37	51.30	516.07	
BW-38	642.20	644.40	41.35	603.05	
BW-39	630.78	633.80	43.70	590.10	
BW-40	646.45	646.24	Destroyed		
BW-41	616.28	618.09	27.25	590.84	
BW-42	596.61	597.61	29.65	567.96	
BW-43	598.07	599.01	20.50	578.51	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	28.90	563.35	
*B-430	600.50	604.11	39.50	564.61	

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.20	565.20	Bottom of Hole
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	23.30	563.35	Bottom of Hole
*B-435	603.60	605.21	41.00	564.21	Bottom of Hole
*B-436	608.40	609.32	41.00	568.32	Bottom of Hole
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	33.35	539.65	
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	52.20	606.94	

* PERMANENT INSTALLATION

SGM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9-4-80
Time: Start 9[11] AM
Finish 11[03] AM

Well Meter # D-1
Inspector's Initials WTM

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	39.00	551.11	Dry Bottom
*BW-28	618.60	619.20	51.00	568.20	
*BW-36	566.92	567.37	51.30	516.07	
BW-38	642.20	644.40	40.60	603.80	
BW-39	630.78	633.80	40.40	593.40	
BW-40	646.45	646.24	Destroyed		
BW-41	616.28	618.09	27.10	590.99	
BW-42	596.61	597.61	27.00	570.61	
BW-43	598.07	599.01	22.10	576.91	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	28.70	563.55	
*B-430	600.50	604.11	39.50	564.61	Bottom Dry

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COM
*B-431	602.90	583.40	18.20	565.20	Bott Dry
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	24.10	562.55	Bott Dry
*B-435	603.60	605.21	41.00	564.21	Bott Dry
*B-436	608.40	609.32	41.40	567.92	Bott Dry
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	33.20	539.80	Bott Dry
*B-439-A	NOTE:DESTROYED				
Hullinax	658.14	659.14	51.60	607.54	

* PERMANENT INSTALLATION

SGM-1
Revision 9

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9-15-80
Time: Start 11:00 AM
Finish 1:30 PM

Well Meter # D-1
Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	39.00	551.11	Bottom of Hole
*BW-28	618.60	619.20	51.05	568.15	
*BW-36	566.92	567.37	51.15	516.22	
BW-38	642.20	644.40	40.60	603.80	
BW-39	630.78	633.80	40.45	593.35	
BW-40	646.45	646.24	Destroyed		
BW-41	616.28	618.09	27.10	590.99	
BW-42	596.61	597.61	30.35	567.26	
BW-43	598.07	599.01	21.55	577.46	
*B-18	NOTE: DESTROYED				
B-68	590.00	592.25	28.50	563.75	
*B-430	600.50	604.11	39.50	564.61	

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMI
*B-431	602.90	583.40	18.00	565.40	Bottom of Hol
*B-432	NOTE:DESTROYED				
*B-433	NOTE:DESTROYED				
*B-434	599.70	586.65	24.00	562.65	Bottom of Ho
*B-435	603.60	605.21	40.60	564.61	Bottom of Hol
*B-436	608.40	609.32	41.00	568.32	Bottom of Ho
*B-437	NOTE:DESTROYED				
*B-438	591.10	573.00	33.30	539.70	
*B-439-A	NOTE:DESTROYED				
Mullinax	658.14	659.14	57.30	601.84	

* PERMANENT INSTALLATION

SGM-1
Revision 8

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 4-15-80
Time: Start 9 30 AM
Finish 10 10 AM

Well Meter # D-1
Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.88	551.23	Bottom of Hole	*B-431	602.90	583.40	18.18	565.22	Bottom of Hole
BW-21	674.20	675.25	Destroyed			*B-432	NOTE:DESTROYED				
*BW-28	618.60	619.20	49.15	570.05		*B-433	NOTE:DESTROYED				
*BW-36	566.92	567.37	50.00	517.37		*B-434	599.70	586.65	24.18	562.47	Bottom of Hole
BW-38	642.20	644.40	40.85	603.55		*B-435	603.60	605.21	21.00	584.21	Bottom of Hole
BW-39	630.78	633.80	38.23	595.57		*B-436	608.40	609.32	41.52	567.80	Bottom of Hole
BW-40	646.45	646.24	40.00	606.24		*B-437	NOTE:DESTROYED				
BW-41	616.28	618.09	26.69	591.40		*B-438	591.10	573.00	30.60	542.40	
BW-42	596.61	597.61	28.60	569.01		*B-439-A	592.42	595.42	Destroyed		
BW-43	598.07	599.01	28.43	570.58		Mullinax	658.14	659.14	52.72	606.42	
*B-18	659.20	660.70	Destroyed								
B-30	583.00	591.30	Destroyed								
B-68	590.00	592.25	27.92	564.33							
*B-430	600.50	604.11	39.45	564.66	Bottom of Hole						

* PERMANENT INSTALLATION

No March Readings

SGM-1
Revision 8

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-19-80 & 2-20-80
Time: Start 7 50 AM (2/19/80)
Finish 11 55 AM (2/20/80

Well Meter # D-2
Inspector's Initials RAG

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.77	551.34	Dry
BW-21	674.20	675.25	Destroyed		
*BW-28	618.60	619.20	50.18	569.02	
*BW-36	566.92	567.37	51.34	516.03	
BW-38	642.20	644.40	41.80	602.60	
BW-39	630.78	633.80	39.41	594.39	
BW-40	646.45	646.24	40.22	606.02	
BW-41	616.28	618.09	26.97	591.12	
BW-42	596.61	597.61	29.64	567.97	
BW-43	598.07	599.01	20.38	578.64	
*B-18	659.20	660.70	Destroyed		
B-30	588.00	591.30	Inaccessible		
B-68	590.00	592.25	70.48	521.77	
*B-430	600.50	604.11	39.27	564.84	Dry

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-431	602.90	583.40	18.07	565.33	Dry
*B-432	NOTE: DESTROYED				
*B-433	NOTE: DESTROYED				
*B-434	599.70	586.65	24.38	562.27	Dry
*B-435	603.60	605.21	40.89	564.32	Dry
*B-436	608.40	609.32	41.23	568.09	Dry
*B-437	NOTE: DESTROYED				
*B-438	591.10	573.00	29.52	543.48	
*B-439-A	592.42	595.42	Inaccessible		
Mullinax	658.14	659.14	54.75	604.39	

* PERMANENT INSTALLATION

SGM-1
Revision 8

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 1-15-80
Time: Start 12:40 PM
Finish 2:45 PM

Well Meter # D-2
Inspector's Initials AEB

WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEV. (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS	WELL IDENTIFICATION	GROUND SURFACE ELEV. (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	Destroyed			*B-431	602.90	583.40	18.15	565.25	
BW-21	674.20	675.25	40.00	635.25		*B-432	NOTE: DESTROYED				
*BW-28	618.60	619.20	50.50	568.70		*B-433	NOTE: DESTROYED				
*BW-36	566.92	567.37	51.75	515.62		*B-434	599.70	586.65	24.20	562.45	
BW-38	642.20	644.40	41.80	602.60		*B-435	603.60	605.21	41.30	563.91	
BW-39	630.78	633.80	39.80	594.00		*B-436	608.40	609.32	41.40	567.92	
BW-40	646.45	646.24	40.40	605.84		*B-547	NOTE: DESTROYED				
BW-41	616.28	618.09	27.60	590.49		*B-438	591.10	573.00	30.10	542.90	
BW-42	596.61	597.61	31.35	566.26		*B-439-A	592.42	595.42			
BW-43	598.07	599.01	21.20	577.81		Mullinax	658.14	659.14	54.40	604.74	
*B-18	659.20	660.70	Destroyed								
B-30	588.00	591.30	26.10	565.20							
B-68	590.00	592.25	27.50	564.75							
*B-430	600.50	604.11	39.50	564.61							

* PERMANENT INSTALLATION

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-14-79

Time: Start 1:00 PM

Finish 3:15 PM

Well Meter # D-2

Inspector's Initials AEB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11			Destroyed
BW-21	674.20	675.25	39.63	635.62	
*BW-28	618.60	619.20	50.27	568.93	
*BW-36	566.92	567.37	51.31	516.06	
BW-38	642.20	644.40	41.55	602.85	
BW-39	630.78	633.80	39.50	594.30	
BW-40	646.45	646.24	39.66	606.58	
BW-41	616.28	618.09	26.81	591.28	
BW-42	596.61	597.61	30.13	567.48	
BW-43	598.07	599.01	20.80	578.21	
*B-18	659.20	660.70			Destroyed
B-30	588.00	591.30	25.90	565.40	
B-68	590.00	592.25	27.50	564.75	
*B-430	600.50	604.11	39.36	564.75	
*B-431	602.90	583.40	18.16	565.24	

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	23.96	562.69	
*B-435	603.60	605.21	41.10	564.11	
*B-436	608.40	609.32	41.38	567.94	
*B-547	Note: Destroyed				
*B-438	591.10	573.00	30.78	542.22	
*B-439-A	592.42	595.42			
Mullinax	658.14	659.14	53.38	605.76	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11-15-79

Time: Start 1:00 PM

Finish 2:40 PM

Well Meter # 1

Inspector's Initials DJA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	39.00	551.11	Bottomed out
BW-21	674.20	675.25	40.00	635.25	
*BW-28	618.60	619.20	54.00	565.20	
*BW-36	566.92	567.37	51.23	516.14	
BW-38	642.20	644.40	41.59	602.81	
BW-39	630.78	633.80	40.00	593.80	
BW-40	646.45	646.24	40.00	606.24	
BW-41	616.28	618.09	27.22	590.87	
BW-42	596.61	597.61	29.10	568.51	
BW-43	598.07	599.01	20.00	579.01	
*B-18	659.20	660.70	27.90	632.80	
B-30	588.00	591.30	25.00	566.30	
B-68	590.00	592.25			
*B-430	600.50	604.11	39.45	564.66	Bottomed out
*B-431	602.90	583.40	18.30	565.10	Bottomed out

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.30	562.35	Bottomed Out
*B-435	603.60	605.21	41.20	564.01	Bottomed Out
*B-436	608.40	609.32	41.70	567.62	Bottomed Out
*B-547	Note: Destroyed				
*B-438	591.10	573.00	33.00	540.00	
*B-439-A	592.42	595.42			
Mullinax	658.14	659.14	53.75	605.39	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-15-79

Time: Start 10:30 AM Well Meter # DP#2

Finish 2:00 PM Inspector's Initials DJA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	39.85	550.26	
BW-21	674.20	675.25	39.50	635.75	
*BW-28	618.60	619.20	51.10	568.10	
*BW-36	566.92	567.37	51.25	516.12	
BW-38	642.20	644.40	41.10	603.30	
BW-39	630.78	633.80	39.00	594.80	
BW-40	646.45	646.24	39.75	606.49	
BW-41	616.28	618.09	36.90	581.19	
BW-42	596.61	597.61	29.80	567.81	
BW-43	598.07	599.01	20.70	578.31	
*B-18	659.20	660.70	—	—	destroyed
B-30	588.00	591.30	25.00	566.30	
B-68	590.00	592.25	27.10	565.15	
*B-430	600.50	604.11	39.50	564.61	
*B-431	602.90	583.40	18.15	565.25	

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-432	Note: Destroyed		—	—	
*B-433	Note: Destroyed		—	—	
*B-434	599.70	586.65	39.00	547.65	
*B-435	603.60	605.21	40.95	564.26	
*B-436	608.40	609.32	41.40	567.92	
*B-547	Note: Destroyed				
*B-438	591.10	573.00	31.25	541.75	
*B-439	592.42	595.42	55.10	540.32	
Mullinax	658.14	659.14	60.30	598.84	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9/15/79

Time: Start 7:30 AM

Finish 10:00 AM

Well Meter # D-2

Inspector's Initials AEB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.90	551.21	
BW-21	674.20	675.25	39.27	635.98	
*BW-28	618.60	619.20	50.47	568.73	
*BW-36	566.92	567.37	51.22	516.15	
BW-38	642.20	644.40	40.29	604.11	
BW-39	630.78	633.80	39.35	594.45	
BW-40	646.45	646.24	39.08	607.16	
BW-41	616.28	618.09	26.50	591.59	
BW-42	596.61	597.61	30.82	566.79	
BW-43	598.07	599.01	20.92	578.09	
*B-18	659.20	660.70			Destroyed
B-30	588.00	591.30	25.16	566.14	
B-68	590.00	592.25	26.82	565.43	
*B-430	600.50	604.11	39.28	564.83	
*B-431	602.90	583.40	17.88	565.52	

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	23.00	563.65	
*B-435	603.60	605.21	41.03	564.18	
*B-436	608.40	609.32	41.40	567.92	
*B-547	Note: Destroyed				
*B-438	591.10	573.00	31.01	541.99	
*B-439	592.42	595.42	83.41	512.01	
Mullinax	658.14	659.14	52.38	606.76	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 8-18-79

Time: Start 8:00 AM

Finish 10:00 PM

Well Meter # D-2

Inspector's Initials AEB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11			Dry
BW-21	674.20	675.25	39.36	635.89	
*BW-28	618.60	619.20	50.38	568.82	
*BW-36	566.92	567.37	51.25	516.12	
BW-38	642.20	644.40	40.33	604.07	
BW-39	630.78	633.80	38.95	594.85	
BW-40	646.45	646.24	39.00	607.24	
BW-41	616.28	618.09	26.50	591.59	
BW-42	596.61	597.61	30.10	567.51	
BW-43	598.07	599.01	20.72	578.29	
*B-18	659.20	660.70			Dry
B-30	588.00	591.30	24.96	566.34	
B-68	590.00	592.25	26.96	565.29	
*B-430	600.50	604.11			Dry
*B-431	602.90	583.40			Dry

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65			Dry
*B-435	603.60	605.21			Dry
*B-436	608.40	609.32			Dry
*B-547	Note: Destroyed				Dry
*B-438	591.10	573.00	31.50	541.50	
*B-439	592.42	595.42			Dry
Mullinax	658.14	659.14	54.11	605.03	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7-16-79

Time: Start 10:00 AM

Finish 2:00 PM

Well Meter # D-1

Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.85	551.26	
BW-21	674.20	675.25	39.30	635.95	
*BW-28	618.60	619.20	49.70	569.50	
*BW-36	566.92	567.37	50.95	516.42	
BW-38	642.20	644.40	40.30	604.10	
BW-39	630.78	633.80	37.74	596.06	
BW-40	646.45	646.24	38.30	607.94	
BW-41	616.28	618.09	26.25	591.84	
BW-42	596.61	597.61	30.00	567.61	
BW-43	598.07	599.01	21.20	577.81	
BW-44	589.87	592.72	Destroyed		
BW-46	590.59	593.42	Destroyed		
*B-18	659.20	660.70	Destroyed		
B-30	588.00	591.30	24.50	566.80	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60		Destroyed	
B-67	609.40	593.00		Destroyed	
B-68	590.00	592.25	26.75	565.50	
*B-430	600.50	604.11	39.40	564.71	Bottom of Hole
*B-431	602.90	583.40	18.20	565.20	Bottom of Hole
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.0	562.65	Bottom of Hole
*B-435	603.60	605.21	40.90	564.31	Bottom of Hole
*B-436	608.40	609.32	41.40	567.92	Bottom of Hole
*B-547	Note: Destroyed				
*B-438	591.10	573.00	30.20	542.80	
*B-439	Note: Destroyed				
Mullinax	658.14	659.14	81.50	577.64	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 6/16/79

Time: Start 8^00 AM

Finish 11^00 AM

Well Meter # D-1

Inspector's Initials AEB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.79	551.32	Dry Hole
BW-21	674.20	675.25	39.55	635.70	
*BW-28	618.60	619.20	49.36	569.84	
*BW-36	566.92	567.37	50.70	516.67	
BW-38	642.20	644.40	40.39	604.01	
BW-39	630.78	633.80	37.41	596.39	
BW-40	646.45	646.24	38.01	608.23	
BW-41	616.28	618.09	26.11	591.98	
BW-42	596.61	597.61	28.82	568.79	
BW-43	598.07	595.01	19.49	579.52	
BW-44	589.87	592.72			Data Not Available
BW-46	590.59	593.42			Destroyed
*B-18	659.20	660.70	73.33	587.37	
B-30	588.00	591.30	23.80	567.50	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	—		Destroyed
B-67	609.40	593.00	—		Destroyed
B-68	590.00	592.25	26.75	565.50	
*B-430	600.50	604.11	—		Dry Hole
*B-431	602.90	583.40	—		Dry Hole
*B-432	Note: Destroyed		—		
*B-433	Note: Destroyed		—		
*B-434	599.70	586.65	—		Dry Hole
*B-435	603.60	605.21	—		Dry Hole
*B-436	608.40	609.32	—		Dry Hole
*B-547	Note: Destroyed		—		
*B-438	591.10	573.00	29.27	543.73	
*B-439	Note: Destroyed		—		
Mullinax	658.14	659.14	58.99	600.15	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 5-15-79

Time: Start 8:30 Well Meter # D-1

Finish 11:15 Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND-WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.75	551.36	
BW-21	674.20	675.25	48.06	627.19	
*BW-28	618.60	619.20	49.25	569.95	
*BW-36	566.92	567.37	50.71	516.66	
BW-38	642.20	644.40	41.15	603.25	
BW-39	630.78	633.80	37.20	596.60	
BW-40	646.45	646.24	38.10	608.14	
BW-41	616.28	618.09	26.18	591.91	
BW-42	596.61	597.61	28.80	568.81	
BW-43	598.07	599.01	19.85	579.16	
BW-44	589.87	592.72	———		Destroyed
BW-46	590.59	593.42	32.25	561.17	
*B-18	659.20	660.70	73.30	587.40	
B-30	588.00	591.30	23.60	567.70	

* Permanent Installation

WELL IDENTIFICATION	CASING SURFACE ELEVATION (FT)	TOP OF CASING ELEVATION (FT) A	WELL SCREEN (FT) B	WATER LEVEL (FT) A B	COMMENTS
B-51	597.50	597.00	—		destroyed
B-67	609.40	593.00	—		destroyed
B-68	590.00	592.25	26.75	565.50	
*B-430	600.50	604.11	39.40	564.71	bottomed out
*B-431	602.90	583.40	18.30	565.10	bottomed out
*B-432	Note: Destroyed		—		
*B-433	Note: Destroyed		—		
*B-434	599.70	586.65	24.05	562.60	bottomed out
*B-435	603.60	605.21	41.10	564.11	bottomed out
*B-436	608.40	609.32	41.40	567.92	bottomed out
*B-547	Note: Destroyed		—		
*B-438	591.10	573.00	29.45	543.55	
*B-439	Note: Destroyed		—		
Pollitax	658.14	659.14	56.35	602.79	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 4-18-29

Time: Start 10:00 A.M. Well Meter # D-1

Finish 1:30 Inspector's Initials E.R.A.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.30	551.81	
BW-21	674.20	675.25	40.35	634.90	
*BW-28	618.60	619.20	48.75	570.45	
*BW-36	566.92	567.37	50.75	516.62	
BW-38	642.20	644.40	40.15	601.25	
BW-39	630.78	633.80	37.00	596.80	
BW-40	646.45	646.24	38.20	608.04	
BW-41	616.28	618.09	24.60	593.49	
BW-42	596.61	597.61	27.60	570.01	
BW-43	598.07	599.01	18.10	580.91	
BW-44	589.87	592.72	41.55	551.17	
BW-46	590.59	593.42	31.60	561.82	
*B-18	659.20	660.70	70.50	590.20	
B-30	588.00	591.30	21.80	569.50	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	DESTROYED		
B-67	609.40	593.00	DESTROYED		
B-68	590.00	592.25	26.60	565.65	
*B-430	600.50	604.11	39.20	564.91	Bottom out
*B-431	602.90	583.40	18.10	565.30	"
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.00	562.65	Bottom
*B-435	603.60	605.21	40.80	564.41	"
*B-436	608.40	609.32	41.35	567.97	Bottom
*B-547	Note: Destroyed				
*B-438	591.10	573.00	28.70	544.30	
*B-439	Note: Destroyed				
Mullinax	658.14	659.14	64.55	594.59	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 3-16-77

Time: Start 8:30 Well Meter # D-1

Finish 11:00 Inspector's Initials AEB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	37.25	552.86	
BW-21	674.20	675.25	41.00	634.25	
*BW-28	618.60	619.20	48.60	570.60	
*BW-36	566.92	567.37	51.20	516.17	
BW-38	642.20	644.40	42.60	601.80	
BW-39	630.78	633.80	37.40	596.40	
BW-40	646.45	646.24	38.80	607.44	
BW-41	616.28	618.09	26.15	591.94	
BW-42	596.61	597.61	27.70	569.91	
BW-43	598.07	599.01	18.35	580.66	
BW-44	589.87	592.72	42.10	550.62	
BW-46	590.59	593.42	30.95	562.47	
*B-18	659.20	660.70	73.68	587.02	
B-30	588.00	591.30	21.85	569.45	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	27.50	570.10	Stopped up
~~B-67~~	~~609.40~~	~~593.00~~			Destroyed
B-68	590.00	592.25	26.90	565.35	
*B-430	600.50	604.11	39.25	564.86	Bottomed out
*B-431	602.90	583.40	18.20	565.20	" "
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.00	562.65	" "
*B-435	603.60	605.21	40.75	564.46	" "
*B-436	608.40	609.32	41.15	568.17	Bottomed out
*B-547	Note: Destroyed				
*B-438	591.10	573.00	28.30	544.70	
*B-439	Note: Destroyed		~~26.50~~		
Mullinax	658.14	659.14	61.50	597.64	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-15-79

Time: Start 8:30 AM Well Meter # D-1

Finish 11:15 Inspector's Initials C.R.Q.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.10	552.01	
BW-21	674.20	675.25	41.15	634.10	
*BW-28	618.60	619.20	49.45	569.75	
*BW-36	566.92	567.37	51.50	515.87	
BW-38	642.20	644.40	42.85	601.55	
BW-39	630.78	633.80	38.05	595.75	
BW-40	646.45	646.24	39.85	606.39	
BW-41	616.28	618.09	26.25	591.84	
BW-42	596.61	597.61	29.30	568.31	
BW-43	598.07	599.01	19.70	579.31	
BW-44	589.87	592.72	43.15	549.57	
BW-46	590.59	593.42	33.20	560.22	
*B-18	659.20	660.70	73.80	586.90	
B-30	588.00	591.30	23.35	567.95	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	55.10	542.50	
B-67	609.40	593.00	destroyed	—	
B-68	590.00	592.25	27.00	565.25	
*B-430	600.50	604.11	BOTTOMED OUT 39.40	564.71	Bottom
*B-431	602.90	583.40	BOTTOMED OUT 18.20	565.20	Bottom
*B-432	Note: Destroyed			—	
*B-433	Note: Destroyed			—	
*B-434	599.70	586.65	BOTTOMED OUT 24.10	562.55	Bottom
*B-435	603.60	605.21	BOTTOMED OUT 40.80	564.41	Bottom
*B-436	608.40	609.32	BOTTOMED OUT 41.45	567.87	Bottom
*B-547	Note: Destroyed				
*B-438	591.10	573.00	29.10	543.90	
*B-439	Note: Destroyed				
Mullinax	658.14	659.14	61.1	598.04	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 1-16-79

Time: Start 1:00 PM

Finish 3:30 PM

Well Meter # D-1

Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.70	551.41	
BW-21	674.20	675.25	40.90	634.35	
*BW-28	618.60	619.20	51.75	567.45	
*BW-36	566.92	567.37	51.70	515.67	
BW-38	642.20	644.40	42.85	601.55	
BW-39	630.78	633.80	41.87	591.93	
BW-40	646.45	646.24	38.93	607.31	
BW-41	616.28	618.09	26.15	591.94	
BW-42	596.61	597.61	29.90	567.71	
BW-43	598.07	599.01	20.40	578.61	
BW-44	589.87	592.72	45.25	547.47	
BW-46	590.59	593.42	34.25	559.17	
*B-18	659.20	660.70	73.65	587.05	
B-30	588.00	591.30	23.80	567.50	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	55.15	542.45	
B-67	609.40	593.00	Destroyed		
B-68	590.00	592.25	27.00	565.25	
*B-430	600.50	604.11	39.35	564.76	Bottom
*B-431	602.90	583.40	18.30	565.10	Bottom
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.10	562.55	Bottom
*B-435	603.60	605.21	40.90	564.31	Bottom
*B-436	608.40	609.32	41.30	568.02	Bottom
*B-547	Note: Destroyed				
*B-438	591.10	573.00	30.00	543.00	
*B-439	Note: Destroyed				
Mullinax	658.14	659.14	55.80	603.34	

* Permanent Installation

DUKE POWER COMPANY

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

December 22, 1978

C Q Reeves

Re: Cherokee 1-3
Site Groundwater Monitoring
File No. CK-1105.02

Enclosed are the Site Groundwater Readings made on December 15, 1978.

Please note that BW-12 has been read in the past few months as BW-14, as there has been some confusion as to which was the surviving monitoring well. However, we have established by survey that BW-12 is indeed the surviving monitoring well.

If you have any further questions, please advise.

J T Moore
Project Manager

LCA/bj

Enclosure

cc: R L Dick w/encl.
Clay Sams, LETCo, w/encl.

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-15-78

Time: Start 2:00 PM

Finish 4:30 PM

Well Meter # D-1

Inspector's Initials E.R. Queen

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-12	589.90	590.11	38.15	551.96	
BW-21	674.20	675.25	37.82	637.43	
*BW-28	618.60	619.20	52.00	567.20	
*BW-36	566.92	567.37	51.69	515.68	
BW-38	642.20	644.40	41.51	602.89	
BW-39	630.78	633.80	37.75	596.05	
BW-40	646.45	646.24	38.61	607.63	
BW-41	616.28	618.09	25.82	592.27	
BW-42	596.61	597.61	30.83	566.78	
BW-43	598.07	599.01	21.25	577.76	
BW-44	589.87	592.72	44.97	547.75	
BW-46	590.59	593.42	34.69	558.73	
*B-18	659.20	660.70	73.65	587.05	
B-30	588.00	591.30	23.97	567.33	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	55.00	542.60	
B-67	609.40	593.00	Destroyed		
B-68	590.00	592.25	26.75	565.50	
*B-430	600.50	604.11	Bottomed Out		
*B-431	602.90	583.40	Bottomed Out		
*B-432	Note: Destroyed		—		
*B-433	Note: Destroyed		—		
*B-434	599.70	586.65	Bottomed Out		
*B-435	603.60	605.21	Bottomed Out		
*B-436	608.40	609.32	Bottomed Out		
*B-547	Note: Destroyed		—		
*B-438	591.10	573.00	30.37	542.63	
*B-439	Note: Destroyed		—		
Mullinax	658.14	659.14	54.77	604.37	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11-15-78

Time: Start 9^30 AM Well Meter # D-1

Finish 4^00 PM Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-14	590.00	590.75	37.52	553.23	
BW-21	674.20	675.25	40.40	634.85	
*BW-28	618.60	619.20	51.68	567.52	
*BW-36	566.92	567.37	51.67	515.70	
BW-38	642.20	644.40	42.00	602.40	
BW-39	630.78	633.80	37.67	596.13	
BW-40	646.45	646.24	41.56	604.68	
BW-41	616.28	618.09	25.60	592.49	
BW-42	596.61	597.61	32.80	564.81	
BW-43	598.07	599.01	23.22	575.79	
BW-44	589.87	592.72	45.76	546.96	
BW-46	590.59	593.42	34.95	558.47	
*B-18	659.20	660.70	73.78	586.92	
B-30	588.00	591.30	24.80	566.50	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	55.27	542.33	
B-67	609.40	593.00	20.22	572.78	
B-68	590.00	592.25	26.60	565.65	
*B-430	600.50	604.11	39.45	564.66	Bottom of well
*B-431	602.90	583.40	18.28	565.12	
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.08	562.57	
*B-435	603.60	605.21	41.15	564.06	
*B-436	608.40	609.32	41.30	568.02	Bottom of well
*B-547	Note: Destroyed				
*B-438	591.10	573.00	30.51	542.49	
*B-439	Note: Destroyed				
Mullinax	658.14	659.14	54.50	604.64	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 10-17-78

Time: Start 9:00 AM

Finish 12:00 PM

Well Meter # D-1

Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-14	590.00	590.75	36.88	553.87	
BW-21	674.20	675.25	40.15	635.10	
*BW-28	618.60	619.20	51.43	567.77	
*BW-36	566.92	567.37	51.48	515.89	
BW-38	642.20	644.40	41.45	602.95	
BW-39	630.78	633.80	37.28	596.52	
BW-40	646.45	646.24	38.05	608.19	
BW-41	616.28	618.09	25.20	592.89	
BW-42	596.61	597.61	31.83	565.78	
BW-43	598.07	599.01	22.35	576.66	
BW-44	589.87	592.72	45.37	547.35	
BW-46	590.59	593.42	34.00	559.42	
*B-18	659.20	660.70	73.55	587.15	
B-30	588.00	591.30	24.00	567.30	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	55.52	542.08	
B-67	609.40	593.00	23.75	569.25	
B-68	590.00	592.25	26.29	565.96	
*B-430	600.50	604.11	39.32	564.79	Bottom of well
*B-431	602.90	583.40	18.15	565.25	Bottom of well
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.10	562.55	Bottom of well
*B-435	603.60	605.21	40.93	564.28	Bottom of well
*B-436	608.40	609.32	41.23	568.09	Bottom of well
*B-547	Note: Destroyed				
*B-438	591.10	573.00	30.00	543.00	
*B-439	Note: Destroyed				
Mullinax	658.14	659.14	54.85	604.29	

* Permanent Installation

DUKE POWER COMPANY

P. O. BOX 422

CONSTRUCTION DEPARTMENT

CHEROKEE NUCLEAR PROJECT

GAFFNEY, S. C. 29340

TELEPHONE: AREA 803
489-8131

September 25, 1978

C Q Reeves

Re: Cherokee 1-3
Site and Powerhouse Groundwater Monitoring Program
File Nos. CK-1105.02, CK-1110.00

Enclosed are the site groundwater readings made on September 15, 1978.

Please note that we have combined the Powerhouse Groundwater Monitoring Program into the latest edition of the Site Groundwater Monitoring form, so we will generate only one report per month. Also, please note that we have removed all of the inactive or destroyed wells except for the ones specifically required in earlier correspondence to be re-established, if possible, after the completion of construction in the specific areas.

J T Moore
Project Manager

LCA/bj

Enclosure

cc: R L Dick w/enclosure
Clay Sams, LETCo, w/enclosure

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 9/15/78

Time: Start 8⁰⁰ AM Well Meter # D-1

Finish 2⁰⁰ PM Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-14	590.00	590.75	36.25	554.50	
BW-21	674.20	675.25	39.80	635.45	
*BW-28	618.60	619.20	51.03	568.17	
*BW-36	566.92	567.37	51.20	516.17	
BW-38	642.20	644.40	40.80	603.60	
BW-39	630.78	633.80	36.46	597.34	
BW-40	646.45	646.24	37.63	608.61	
BW-41	616.28	618.09	24.70	593.39	
BW-42	596.61	597.61	28.75	568.86	
BW-43	598.07	599.01	21.40	577.61	
BW-46	590.59	593.42	33.45	559.97	
*B-18	659.20	660.70	73.35	587.35	
B-30	588.00	591.30	22.93	568.37	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	57.21	540.39	
B-67	609.40	609.30	39.30	570.00	
B-68	590.00	592.25	26.15	566.10	
*B-430	600.50	604.11	39.55	564.56	Bottom of Hole
*B-431	602.90	583.40	18.38	565.02	Bottom of Hole
*B-432	Note: Destroyed		—	—	
*B-433	Note: Destroyed		—	—	
*B-434	599.70	586.65	24.08	562.57	Bottom of Hole
*B-435	603.60	605.21	41.00	564.21	Bottom of Hole
*B-436	608.40	609.32	41.50	567.82	Bottom of Hole
*B-547	Note: Destroyed		—	—	
*B-438	591.10	573.00	28.83	544.17	
*B-439	Note: Destroyed		—	—	
Mullinax	658.14	659.14	57.65	601.49	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 8-15-78

Time: Start 2:15 pm Well Meter # D-1

Finish 4:45 pm Inspector's Initials ERQ

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed				
BW-12	589.81	590.05	35.45	554.60 ~~555.30~~	
BW-14	Note: Destroyed				
BW-21	674.20	675.25	39.40	635.85	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	50.60	568.60	
*BW-36	566.92	567.37	50.95	516.42	
BW-38	642.20	644.40	40.10	604.30	
*B-18	659.20	660.70	73.15	587.55	
B-25	588.74	588.74	–		
B-30	588.00	591.30	22.50	568.80	
B-67	609.40	609.30	38.70	570.60	
B-68	590.00	592.25	26.10	566.15	
B-79	Note: Destroyed				
B-194	Note: Destroyed				

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	57.10	540.50	
B-77	Note: Destroyed				
*B-430	600.50	604.11	39.45	564.66	Bottom of well
*B-431	602.90	583.40	18.30	565.10	Bottom of well
*B-432	Note: Destroyed				
*B-433	Note: Destroyed				
*B-434	599.70	586.65	24.00	562.65	Bottom of well
*B-435	603.60	605.21	40.80	564.41	Bottom of well
*B-436	608.40	609.32	41.35	567.97	Bottom of well
*B-437	Note: Destroyed				
*B-438	591.10	573.00	28.30	544.70	Bottom of well
*B-439	Note: Destroyed				
MULLINAX	658.14	659.14	67.00	592.14	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 7/15-78

Time: Start 8:00 A.M. Well Meter # DW-1

Finish 11:15 A.M. Inspector's Initials W.J.W.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—		
BW-12	589.81	590.05	34.66	555.39	
BW-14	Note: Destroyed		—		
BW-21	674.20	675.25	38.04	637.21	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	50.20	569.	
*BW-36	566.92	567.37	50.82	516.55	
BW-38	642.20	644.40	36.81	607.59	
*B-18	659.20	660.70	71.65	589.05	
~~Forgot out~~	B-25	588.74	588.74	bottomed out	
~~22.14~~	B-30	588.00	591.30	22.14	569.16
	B-67	609.40	609.30	38.45	570.85
	B-68	590.00	592.25	26.00	566.25
	B-79	Note: Destroyed		—	
	B-194	Note: Destroyed		—	

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	56.63	540.97	
B-77	Note: Destroyed		—		
*B-430	600.50	604.11	bottomed out		
*B-431	602.90	583.40	—		
*B-432	Note: Destroyed		—		
*B-433	Note: Destroyed		—		
*B-434	599.70	586.65	bottomed out		
*B-435	603.60	605.21	bottomed out		
*B-436	608.40	609.32	bottomed out		
*B-437	Note: Destroyed		—		
*B-438	591.10	573.00	27.50	545.50	
*B-439	Note: Destroyed		—		
MULLINAX	658.14	659.14	68.39	590.75	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 6-15-78

Time: Start 5:40 P.M Well Meter # 0-1

Finish 7:45 P.M Inspector's Initials E.R.B.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—	—	
BW-12	589.81	590.05	33.65	556.40	
BW-14	590.00	590.75	destroyed	—	
BW-21	674.20	675.25	38.95	636.30	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	49.52	569.68	
*BW-36	566.92	567.37	50.70	516.67	
BW-38	642.20	644.40	38.53	605.87	
*B-18	659.20	660.70	72.18	588.52	
B-25	588.74	588.74	Plugged	—	
B-30	588.00	591.30	20.34	570.96	
B-67	609.40	609.30	38.48	570.82	
B-68	590.00	592.25	26.00	566.25	
B-79	606.30	607.20	destroyed		
B-194	Note: Destroyed		—		

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	57.18	540.42	
B-77	Note: Destroyed		—		
*B-430	600.50	604.11	39.36	564.75	Bottom
*B-431	602.90	583.40	18.22	565.18	
*B-432	600.73	570.35	destroyed —		
*B-433	600.32	569.00	destroyed —		
*B-434	599.70	586.65	24.00	562.65	
*B-435	603.60	605.21	40.88	564.33	Bottomed out into water
*B-436	608.40	609.32	41.28	568.04	
*B-437	589.30	591.57	destroyed		
*B-438	591.10	573.00	25.50	547.50	
*B-439	593.40	594.53	destroyed		
MULLINAX	658.14	659.14	52.77	606.37	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 5-15-78

Time: Start 10:00 A.m. Well Meter # D-1

Finish 3:00 P.m Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—		
BW-12	589.81	590.05	32.11	557.94	
BW-14	590.00	590.75	45.23	545.52	
BW-21	674.20	675.25	40.47	634.78	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	48.06	571.14	
*BW-36	566.92	567.37	50.31	517.06	
BW-38	642.20	644.40	39.75	604.65	
*B-18	659.20	660.70	71.52	589.18	
B-25	588.74	588.74	9.00	579.74	Bottom
B-30	588.00	591.30	19.33	571.97	
B-67	609.40	609.30	38.80	570.50	
B-68	590.00	592.25	26.08	566.17	
B-79	606.30	607.20	—	destroyed	
B-194	Note: Destroyed		—		

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	56.28	541.32	
B-77	Note: Destroyed		—		
*B-430	600.50	604.11	39.42	564.69	Bottom
*B-431	602.90	583.40	18.21	565.19	Bottom
*B-432	600.73	570.35 ~~577.00~~	10.55	559.80	
*B-433	600.32	569.00 ~~581.58~~	11.94	557.06	
*B-434	599.70	586.65	24.00	562.65	Bottom
*B-435	603.60	605.21	40.98	564.23	Bottom
*B-436	608.40	609.32	41.33	567.99	
*B-437	589.30	591.57	Plugged	~~549.82~~	
*B-438	591.10	573.00	23.18	549.82	
*B-439	593.40	594.53	49.03	545.50	
MULLINAX	658.14	659.14	52.68	606.46	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 4-15-78

Time: Start 8:00 A.M. Well Meter # D-1

Finish 12:00 A.M Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—		
BW-12	589.81	590.05	30.00	560.05	
BW-14	590.00	590.75	44.54	546.21	
BW-21	674.20	675.25	40.72	634.53	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	50.00	569.20	
*BW-36	566.92	567.37	50.72	516.65	
BW-38	642.20	644.40	40.19	604.21	
*B-18	659.20	660.70	70.33	590.37	
B-25	588.74	588.74	9.03	579.71	Bottom
B-30	588.00	591.30 ~~593.50~~	20.39	570.91	
B-67	609.40	609.30	39.09	570.21	
B-68	590.00	592.25	26.24	566.01	
B-79	606.30	607.20	—		Destroyed
B-194	Note: Destroyed		—		

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	—		
B-77	Note: Destroyed		—		
*B-430	600.50	604.11	40.24	563.87	Bottom
*B-431	602.90	~~592.05~~ 583.40	18.20	565.20	Bottom
*B-432	600.73	~~589.86~~ 577.00	—		Plugged ← attempt to fix
*B-433	600.32	~~590.26~~ 581.58	22.65	558.93	
*B-434	599.70	~~594.24~~ 586.65	24.03	562.62	Bottom
*B-435	603.60	~~605.25~~ 605.21	40.92	564.29	Bottom
*B-436	608.40	609.32	41.31	568.01	Bottom
*B-437	589.30	591.57	—		Plugged attempt to fix
*B-438	591.10	~~584.46~~ 573.00	21.16	551.84	
*B-439	593.40	~~594.80~~ 594.53	48.55	545.98	
MULLINAX	658.14	659.14	55.00	604.14	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 3-14-78

Time: Start 1:00 P.M. Well Meter # D-1

Finish 3:00 P.M. Inspector's Initials RWH

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—		
BW-12	589.81	590.05	25.60	564.45	
BW-14	590.00	590.75	43.44	547.31	
BW-21	674.20	675.25	40.86	634.39	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	49.81	569.39	
*BW-36	566.92	567.37	50.39	516.98	
BW-38	642.20	644.40	40.61	603.79	
*B-18	659.20	660.70	68.86	591.84	
B-25	588.74	588.74	8.84	579.90	Bottom
B-30	588.00	593.50	25.59	567.91	
B-67	609.40	609.30	41.41	567.89	
B-68	590.00	592.25	26.29	565.96	
B-79	606.30	607.20	destroyed		
B-194	Note: Destroyed		—		

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	54.84	542.76	
B-77	Note: Destroyed		—		
*B-430	600.50	604.11 ~~603.79~~	39.00	565.11	
*B-431	602.90	592.05 ~~603.60~~	27.09	564.96	Bottom
*B-432	600.73	589.86 ~~601.53~~	29.00	560.86	
*B-433	600.32	590.26 ~~601.47~~	30.20	560.06	
*B-434	599.70	594.24 ~~601.30~~	32.12	562.12	Bottom
*B-435	603.60	605.25	40.90	564.35	Bottom
*B-436	608.40	609.32 609.~~45~~	41.31	568.01	
*B-437	589.30	591.57	Plugged		
*B-438	591.10	~~584.46~~ ~~592.48~~	34.36	550.10	
*B-439	593.40	594.80	48.42	546.38 ~~446.38~~	
MULLINAX	658.14	659.14	54.49	604.65	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 2-15-78

Time: Start 2:00 P.M. Well Meter # D-1

Finish 4:00 P.M Inspector's Initials RWA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—		
BW-12	589.81	590.05	18.44	571.61	
BW-14	590.00	590.75	41.78	548.97	
BW-21	674.20	675.25	41.00	634.25	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	48.53	570.67	
*BW-36	566.92	567.37	50.80	516.57	
BW-38	642.20	644.40	41.18	603.22	
*B-18	659.20	660.70	67.25	593.45	
B-25	588.74	588.74	9.08	579.66	Bottom
B-30	588.00	593.50	25.92	567.58	
B-67	609.40	609.30	39.64	569.66	
B-68	590.00	592.25	25.57	566.68	
B-79	606.30	607.20	~~20.74~~	destroyed	
B-194	Note: Destroyed		—		

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	53.05	544.55	
B-77	Note: Destroyed		—		
*B-430	600.50	603.79	38.57	565.22	
*B-431	602.90	603.60	39.52	564.08	Bottom
*B-432	600.73	601.53	40.08	561.45	
*B-433	600.32	601.47	40.79	560.68	
*B-434	599.70	601.30	39.21	562.09	Bottom
*B-435	603.60	605.25	40.92	564.33	Bottom
*B-436	608.40	609.45	41.30	568.15	Bottom
*B-437	589.30	591.57	30.21	561.36	
*B-438	591.10	592.48	41.65	550.83	
*B-439	593.40	594.80	51.77	543.03	
MULLINAX	658.14	659.14	54.93	604.21	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 1-16-78

Time: Start 12:00 Noon Well Meter # D-1

Finish 6:00 P.M. Inspector's Initials RWA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—		
BW-12	589.81	590.05	3.54	586.51	
BW-14	590.00	590.75	41.14	549.61	
BW-21	674.20	675.25	41.14	634.11	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	48.38	570.82	
*BW-36	566.92	567.37	51.03	516.34	
BW-38	642.20	644.40	41.82	602.58	
*B-18	659.20	660.70	65.16	595.54 ~~595.54~~	
B-25	588.74	588.74	9.10	579.64	Bottom
B-30	588.00	593.50	26.06	567.44	
B-67	609.40	609.30	41.06	568.24	
B-68	590.00	592.25	27.09	565.16	
B-79	606.30	607.20	40.00	567.20	
B-194	Note: Destroyed		—		

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	51.45	546.15	
B-77	Note: Destroyed		—		
*B-430	600.50	603.79	39.14	564.65	
*B-431	602.90	603.60	39.93	563.67	Bottom
*B-432	600.73	601.53	40.57	560.96	
*B-433	600.32	601.47	41.32	560.15	
*B-434	599.70	601.30	39.28	562.02	Bottom of hole
*B-435	603.60	605.25	41.11	564.14	Bottom
*B-436	608.40	609.45	41.83	567.62	Bottom
*B-437	589.30	591.57	30.67	560.90	
*B-438	591.10	592.48	38.73	553.75	
*B-439	593.40	594.80	48.19	546.61	
MULLINAX	658.14	659.14	54.52	604.62	

* Permanent Installation

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 12-15-77

Time: Start _____ Well Meter # D-1

Finish _____ Inspector's Initials [signature]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed				
BW-12	589.81	590.05	30.60	559.45	
BW-14	590.00	590.75	39.70	551.05	
BW-21	674.20	675.25	40.90	634.35	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	49.32	569.88	
*BW-36	566.92	567.37	51.15	516.22	
BW-38	642.20	644.40	41.42	602.98	
*B-18	659.20	660.70	62.63	598.07	
B-25	588.74	588.74	9.20	579.54	BOTTOM OF HOLE
B-30	588.00	593.50	24.70	568.80	
B-67	609.40	609.30	39.57	569.73	
B-68	590.00	592.25	27.02	565.23	
B-79	606.30	607.20	DESTROYED BY CCW	PIPE TRENCH	
B-194	Note: Destroyed				

* Permanent Installation

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	48.58	549.02	
B-77	Note: Destroyed				
*B-430	600.50	603.79	39.13	564.66	
*B-431	602.90	603.60	39.50	564.05	BOTTOM OF WELL
*B-432	600.73	601.53	40.29	561.24	
*B-433	600.32	601.47	41.33	560.14	
*B-434	599.70	601.30	39.45	561.85	BOTTOM OF WELL
*B-435	603.60	605.25	40.93	564.32	BOTTOM OF WELL
*B-436	608.40	609.45	41.42	568.03	BOTTOM OF WELL
*B-437	589.30	591.57	30.57	561.00	
*B-438	591.10	592.48	1.68	590.80	CLOGGED @ 168' DEPTH
*B-439	593.40	594.80	47.80	547.00	
MULLINAX	658.14	659.14	54.45	604.69	

* Permanent Installation

MM
10/30/08

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Date: 11/15/77

Time: Start 9:00 A.M. Well Meter # D-1

Finish 1:00 P.M. Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-8	Note: Destroyed		—	—	—
BW-12	589.81	590.05	29.77	560.28	
BW-14	590.00	590.75	38.00	552.75	
BW-21	674.20	675.25	40.55	634.70	
BW-24	Note: Destroyed - Deleted by Design 4-8-77				
*BW-28	618.60	619.20	50.74	568.46	
*BW-36	566.92	567.37	51.05	516.32	
BW-38	642.20	644.40	41.09	603.31	
*B-18	659.20	660.70	60.52	600.18	
B-25	588.74	588.74	9.16	579.58	Bottom of Hole
B-30	588.00	593.50	22.82	570.68	
B-67	609.40	609.30	39.30	570.00	
B-68	590.00	592.25	27.20	565.05	
B-79	606.30	607.20	37.47	569.73	
B-194	Note: Destroyed		—	—	—

* Permanent Installation

2 MM 10/30/08.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
B-51	597.50	597.60	44.59	553.01	
B-77	Note: Destroyed		–	–	–
*B-430	600.50	603.79	39.28	564.51	
*B-431	602.90	603.60	39.58	564.02	Bottom of Hole
*B-432	600.73	601.53	39.97	561.56	
*B-433	600.32	601.47	40.98	560.49	Bottom of Hole
*B-434	599.70	601.30	39.28	562.02	Bottom of Hole
*B-435	603.60	605.25	40.98	564.27	Bottom of Hole
*B-436	608.40	609.45	41.44	568.01	Bottom of Hole
*B-437	589.30	591.57	30.26	561.31	
*B-438	591.10	592.48	38.23	554.25	
*B-439	593.40	594.80	47.59	547.21	
MULLINAX	658.14	659.14	57.52	601.62	

* Permanent Installation

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 10-15-77					
		10-15-77					
BW-8	Note: Destroyed						
BW-12	589.81	563.65					
BW-14	590.00	553.34					
BW-21	674.2	638.50					
BW-24	Note: Destroyed - Deleted by Design Engineering 4-8-77						
* BW-28	618.6	566.45					
* BW-36	566.92	516.34					
BW-38	642.2	605.84					
* B-18	659.2	601.71					
B-25	588.74	578.71					
B-30	588.00	572.87					
B-67	609.4	570.13					
B-68	590.00	564.20					
B-79	606.3	570.09					
B-194	Note: Destroyed						
B-51	597.5	554.14					
B-77	Note: Destroyed						
* B-430	600.5	564.44					
* B-431	602.9	563.94					
* B-432	600.73	562.38					
* B-433	600.32	559.94					
* B-434	599.7	560.45					
* B-435	603.6	564.30					

* Permanent Installations

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 10-15-77					
* B-436	608.4	568.03					
* B-437	589.3	560.72					
* B-438	591.1	554.19					
* B-439	593.4	547.59					
Mulkey Well	652.14	62.93					

* Permanent Installations

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 9-15-77					
W-8	Note: Destroyed						
W-12	589.81	551.23					
W-14	590.00	558.95					
BW-21	674.2	635.30					
BW-24	Note: Destroyed - Deleted by Design Engineering 4-8-77						
BW-28	618.6	566.87					
* BW-36	566.92	516.50					
BW-38	642.2	604.50					
* B-18	659.2	602.85					
B-25	588.74	579.99					
B-30	588.00	573.73					
B-67	609.4	570.07					
B-68	590.00	563.71					
B-79	606.3	570.07					
B-194	Note: Destroyed						
B-51	597.5	555.40					
B-77	Note: Destroyed						
* B-430	600.5	565.01					
* B-431	602.9	564.04					
* B-432	600.73	560.90					
* B-433	600.32	560.32					
* B-434	599.7	562.25					
* B-435	603.6	564.25					

* Permanent Installations

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 9-15-77					
B-436	608.4	568.16					
B-437	589.3	561.08					
* B-438	591.1	554.53					
* B-439	593.4	546.75					
Mullinax Well	658.14	605.29					

* Permanent Installations

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations - Date 8-15-77					
BW-8	Note: Destroyed	—					
BW-12	589.81	558.11					
BW-14	590.00	554.60					
BW-21	674.2	635.79					
BW-24	Note: Destroyed - Deleted by Design Engineering 4-8-77						
* BW-28	618.6	567.31					
* BW-36	566.92	516.74					
BW-38	642.2	605.30					
* B-18	659.2	604.11					
B-25	588.74	580.85					
B-30	588.00	573.91					
B-67	609.4	570.27					
B-68	590.00	562.90					
B-79	606.3	571.40					
B-194	Note: Destroyed	—					
B-51	597.5	556.71					
B-77	Note: Destroyed	—					
* B-430	600.5	566.15					
* B-431	602.9	563.75					
* B-432	600.73	561.26					
* B-433	600.32	560.67					
* B-434	599.7	562.10					
* B-435	603.6	564.05					

* Permanent Installations

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 8-15-77					
* B-436	608.4	568.18					
* B-437	589.3	561.50					
* B-438	591.1	555.36					
* B-439	593.4	548.36					

* Permanent Installations

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

July 25, 1977

C Q Reeves

Re: Cherokee 1-3
Groundwater Readings
File No. CK-1105.02

Enclosed are the groundwater readings for the month of July. Please note that the ground surface elevations for BW-12, BW-14, BW-36, B-30, B-68, B-432 and B-433 have been adjusted slightly to reflect a recent elevation survey. Well B-77 has been destroyed during the month of July. Also, please note that both of the continuous groundwater recorders have been physically removed from the field and stored on site. They have not been operative for some time and were in danger of being destroyed by current construction activities.

J T Moore
Project Manager

LCA/bb

cc w/encl: R L Dick
~~Clay Sams~~, LETCO

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 7/15/77					
BW-8	Note: Destroyed	—					
BW-12	589.81	562.69					
BW-14	590.00	555.15					
BW-21	674.2	636.27					
BW-24	Note: Destroyed - Deleted by Design Engineering 4-8-77						
* BW-28	618.6	567.64					
* BW-36	566.92	516.86					
BW-38	642.2	606.15					
* B-18	659.2	605.20					
B-25	588.74	583.41					
B-30	588.00	575.51					
B-67	609.4	570.43					
B-68	590.00	562.16					
B-79	606.3	570.76					
B-194	Note: Destroyed	—					
B-51	597.5	558.00					
B-77	Note: Destroyed	—					
* B-430	600.5	566.27					
* B-431	602.9	564.09					
* B-432	600.73	561.88					
* B-433	600.32	561.28					
* B-434	599.7	561.90					
* B-435	603.6	564.09					

* Permanent Installations

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 7/15/77					
* B-436	608.4	568.21					
* B-437	589.3	562.26					
* B-438	591.1	555.81					
* B-439	593.4	548.78					

* Permanent Installations

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 6-15-77					
BW-8	622.5	Note: Destroyed					
BW-12	590.22	563.12					
BW-14	590.68	555.55					
BW-21	674.2	635.51					
BW-24	633.6	Note: Destroyed - Deleted by Design Engineering 4-8-77					
BW-28	618.6	567.34					
BW-36	567.1	516.85					
BW-38	642.2	604.55					
B-18	659.2	604.79					
B-25	588.74	586.77					
B-30	595.42	578.56					
B-67	609.4	570.30					
B-68	592.25	560.81					
B-79	606.3	569.87					
B-194	668.2	Note: Destroyed					
* B-51	597.5	560.76					
* B-77	620.8	583.40					
B-430	604.13 ~~600.5~~	566.98					
B-431	602.9	Bottom of Hole 563.39					
B-432	604.0	564.96					
B-433	604.0	564.31					
B-434	599.7	Bottom of Hole 560.30					
B-435	603.6	562.44					

*. Continuous Groundwater Recorder

Remarks and (or)
Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 6-15-77 Bottom of Hole					
B-436	608.4	567.16					
B-437	589.3	561.00					
B-438	591.1	555.23					
B-439	593.4	547.73					

* Continuous Groundwater Recorder

Remarks and (or)
Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 4-16-77	5-17-77			"	
BW-8	622.5	Note: Destroyed					
BW-12	590.22	563.32	563.35				
BW-14	590.68	555.62	555.68				
BW-21	674.2	636.38	635.57				
BW-24	633.6	Note: Destroyed - Deleted by Design Engineering 4-8-77					
BW-28	618.6	568.37	567.85				
BW-36	567.1	517.87	517.24				
BW-38	642.2	604.09	604.35				
B-18	659.2	606.15	605.46				
B-25	588.74	Mud @ 578.74	Mud @ 583.59				
B-30	595.42	580.21	578.41				
B-67	609.4	568.93	570.20				
B-68	592.25	559.10	560.12				
B-79	606.3	569.90	570.00				
B-194	668.2	Note: Destroyed					
* B-51	597.5	567.05	562.15				
* B-77	620.8	585.23	584.23				
B-430	600.5	567.07	563.68				
B-431	602.9	561.78	Bottom of Hole 563.42				
B-432	604.0	562.35	565.17				
B-433	604.0	565.00	564.57				
B-434	599.7	560.62	Bottom of Hole 560.67				
B-435	603.6	Bottom of hole 562.70	Bottom of Hole 562.94				

* Continuous Groundwater Recorder

Remarks and (or)
Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 4-16-77	5-16-77				
B-436	608.4	Bottom of Hole 567.50	Bottom of Hole 567.25				
B-437	589.3	561.95	561.40				
B-438	591.1	555.74	555.64				
B-439	593.4	547.55	547.70				

* Continuous Groundwater Recorder

Remarks and (or)
Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 3-15-77					
BW-8	622.5	Destroyed					
BW-12	590.22 ~~587.1~~	562.06					
BW-14	590.68 ~~584.8~~	554.89					
BW-21	674.2	635.13					
BW-24	633.6	stopped up 21.15					
BW-28	618.6	568.18					
BW-36	567.1	516.80					
BW-38	642.2	603.51					
B-18	659.2	606.81					
B-25	588.74 ~~586.5~~	562.80					
B-30	595.42 ~~602.9~~	579.07					
B-67	609.4	569.52					
B-68	592.25 ~~610.9~~	557.82					
B-79	606.3	569.57					
B-104	668.2	Destroyed					
* B-51	597.5	566.17					
* B-77	620.8	585.69					
B-430	600.5	Full of mud					
B-431	602.9	Bottom of Hole 562.36					
B-432	604.0	Bottom of Hole 559.37					
B-433	604.0	Bottom of Hole 560.80					
B-434	599.7	Bottom of Hole 560.58					
B-435	603.6	Bottom of Hole 562.64					

* Continuous Groundwater Recorder

Remarks and (or)
Revisions

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORINGS

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 3-15-77 Bottom of Hole					
B-436	608.4	569.60					
B-437	589.3	561.22					
B-438	591.1	552.56					
B-439	593.1	547.00					

*Continuous Groundwater Recorder

Remarks and (or) Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 2-15-77					
BW-8	622.5	574.44					
BW-12	587.1	560.80					
BW-14	584.8	549.49					
BW-21	674.2	634.98					
BW-24	633.6	Stopped up 612.45					
BW-28	618.6	567.77					
BW-36	567.1	516.71					
BW-38	642.2	603.34					
B-18	659.2	607.87					
Redrilled B-25	~~586.5~~ 586.16	560.00					
B-30	602.9	586.69					
B-67	609.4	569.50					
B-68	610.9	556.85					
B-79	606.3	569.51					
B-194	668.2	—					
* B-51	597.5	565.96					
* B-77	620.8	586.48					
B-430	600.5	Bottom of Hole 567.60					
B-431	602.9	Bottom of Hole 562.36					
B-432	604.0	565.23					
B-433	604.0	564.53					
B-434	599.7	Bottom of Hole 560.58					
B-435	603.6	Bottom of Hole 562.64					

* Continuous Groundwater Recorder

Remarks and (or)
Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORINGS

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date					
		2-15-77 Bottom of Hole					
B-436	608.4	569.60					
B-437	589.3	561.35					
B-438	591.1	555.21					
B-439	593.4	549.89					

*Continuous Groundwater Recorder

Remarks and (or) Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 1-15-77					
BW-8	622.5	575.70					
BW-12	587.1	561.17					
BW-14	584.8	519.67					
BW-21	674.2	636.00					
BW-24	633.6	STOPPED UP 613.33					
BW-28	618.6	569.09					
BW-36	567.1	517.10					
BW-38	642.2	604.90					
B-18	659.2	609.64					
B-25 Restilled	526.16 ~~586.5~~	562.16					
B-30	602.9	591.00					
B-67	609.4	568.54					
B-68	610.9	556.36					
B-79	606.3	570.20					
B-194	668.2	—					
* B-51	597.5	565.10					
* B-77	620.8	586.80					
B-430	600.5	Bottom of Hole 567.50					
B-431	602.9	565.00					
B-432	604.0	566.90					
B-433	604.0	566.40					
B-434	599.7	Bottom of Hole 562.30					
B-435	603.6	564.00					

* Continuous Groundwater Recorder

Remarks and (or)
Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORINGS

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 1-15-77					
B-436	608.4	568.30					
B-437	589.3	564.30					
B-438	591.1	556.70					
B-439	593.4	548.30					

*Continuous Groundwater Recorder

Remarks and (or) Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 12-15-76					
BW-8	622.5	576.45					
BW-12	587.1	560.50					
BW-14	584.8	555.30					
BW-21	674.2	635.20					
BW-24	633.6	577.20					
BW-28	618.6	568.60					
BW-36	567.1	517.10					
BW-38	642.2	608.60					
B-18	659.2	610.30					
B-25	586.5	*	Destroyed				
B-30	602.9	591.00					
B-67	609.4	568.25					
B-68	610.9	554.65					
B-79	606.3	569.50					
B-194	668.2	*					
* B-51	597.5	563.55					
* B-77	620.8	586.10					
B-430	600.5	567.50	Bottom of Hole				
B-431	602.9	565.20					
B-432	604.0	567.00					
B-433	604.0	595.60	Surface water				
B-434	599.7	562.60	Bottom of Hole				
B-435	603.6	563.49	Bottom of Hole				

* Continuous Groundwater Recorder

Remarks and (or)
Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORINGS

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 12-15-26					
B-436	608.4	568.20	Below	of Hole			
B-437	589.3	564.10					
B-438	591.1	556.55					
B-439	593.4	548.25					

*Continuous Groundwater Recorder

Remarks and (or) Revisions

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 11-15-76					
BW-8	622.5 -.85	576.49					
BW-12	587.1 -.70	557.36					
BW-14	584.8 -.10	550.35					
BW-21	674.2 -1.05	635.89					
BW-24	633.6 -1.00	572.83					
BW-28	618.6 -.60	570.05					
BW-36	567.1 -.45	516.69					
BW-38	642.2 -2.2	664.95					
B-18	659.2 -1.50	611.02					
B-25	586.5 -.50	561.89					
B-30	602.9 -1.0	590.65					
B-67	609.4 -.90	571.40					
B-68	610.9 -.15	554.51					
B-79	606.3 -.90	569.26					
B-194	668.2 -.60	*					
* B-51	597.5 -.15	562.17					
* B-77	620.8 0 1.75	585.91					
✓ B-430	600.5	567.60					
B-431	602.9	565.31					
B-432	604.0	566.76					
✓ B-433	604.0	601.79					
B-434	599.7	561.45					
✓ B-435	603.6	566.29					

* Continuous Groundwater Recorder

Remarks and (or) Revisions * B-194 Well OF MUD to Top of Pipe. FROM RAIN (IN A LOW AREA)

DUKE POWER COMPANY

PROJECT 81

Cherokee

BERRY'S NUCLEAR STATION

SITE GROUNDWATER MONITORINGS

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 11-15-76					
B-436	608.4	567.91					
B-437	589.3	569.58					
B-438	591.1	556.45					
B-439	593.4	548.24					

*Continuous Groundwater Recorder

Remarks and (or) Revisions

1105-02

DUKE POWER COMPANY

PROJECT 81

CHEROKEE NUCLEAR STATION

SITE GROUNDWATER MONITORING

Observation Well No.	Grd. Surface Elev.	Groundwater Elevations Date 10-15 76					
BW-8	622.5	576.35					
BW-12	587.1	556.55					
BW-14	584.8	Full of water					
BW-21	674.2	635.91					
BW-24	633.6	572.94					
BW-28	618.6	568.05					
BW-36	567.1	517.05					
BW-38	642.2	604.90					
B-18	659.2	611.66					
B-25	586.5	561.80					
B-30	602.9	588.81					
B-67	609.4	567.84					
B-68	610.9	554.77					
B-79	606.3	568.64					
B-194	668.2	Dry					
* B-51	597.5	561.35					
* B-77	620.8	586.10					

* Continuous Groundwater Recorder

Remarks and (or) Revisions

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 6-3 to RAI 6

Duke Power Company, Lee Nuclear Station Report, Document Number, WLGR-4000.55-03-002, Cherokee Powerhouse Groundwater Control, November 1977 – August 1978, ID Number HRQ-003, Cherokee Nuclear Project Manual, Cherokee Nuclear Station, 2007.

Best Available Copy

POWERHOUSE GROUNDWATER CONTROL
CHEROKEE NUCLEAR PROJECT
MANUAL

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

August 7, 1978

C Q Reeves

Re: Cherokee 1-3
Powerhouse Groundwater Control
File No. CK-1105.02, CK-1110.00

Enclosed are the Powerhouse Groundwater Control Readings for the period June 1, 1978 through August 1, 1978.

J T Moore

J T Moore
Project Manager

LCA/bb

Enclosure

cc Clay Sams, LETCo w/enclosure
R L Dick

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 6-15-78

Time: Start 5:40 P.M. Well Meter # D-1

Finish 7:45 P.M. Inspector's Initials EAB.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.54	598.26	
BW-40	646.45	646.24	36.65	609.59	
BW-41	616.28	618.09	23.68	594.41	
BW-42	596.61	~~600.86~~ 597.61	27.31	570.24	
BW-43	598.07	599.01	24.85	574.16	
BW-44	589.87	592.72	47.48	545.24	
BW-45	579.46	581.96	——		
BW-46	590.59	593.42	29.50	563.92	
B-51	597.50	597.60	~~57.1~~ 57.18	540.42	
B-53P-TW	591.47	594.14	Silted Up	—	
B-53P-9	590.62	593.72	destroyed	—	
B-53P-10	590.44	592.94	destroyed	—	
B-68	590.00	592.25	26.00	566.25	
P-4	588.39	589.68	——		
P-7	591.28	591.94	——		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 5

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 6-30-78

Time: Start 10:00 A.M. Well Meter # D 1

Finish 2:30 P.M. Inspector's Initials KWA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.87	597.93	
BW-40	646.45	646.24	36.93	~~609.85~~ 609.31	
BW-41	616.28	618.09	23.70	594.39	
BW-42	596.61	597.61	29.61	568.00	
BW-43	598.07	599.01	23.98	575.03	
BW-44	589.87	592.72	47.81	544.91	
BW-45	Note: Destroyed		—	—	
BW-46	590.59	593.42	31.41	562.01	
B-51	597.50	597.60	55.72	541.88	
B-53P-TW	591.47	594.14	~~Silted Up~~	—	
B-53P-9	590.62	593.72	—	—	
B-53P-10	590.44	592.94	—	—	
B-68	590.00	592.25	26.00	566.25	
P-4	Note: Destroyed		—	—	
P-7	Note: Destroyed		—	—	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 7-15-78

Time: Start 8:00 A.M. Well Meter # AW-1

Finish 11:15 A.M. Inspector's Initials w.g.c.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.90	597.90	
BW-40	646.45	646.24	37.14	609.10	
BW-41	616.28	618.09	23.74	594.35	
BW-42	596.61	597.61	30.00	567.61	
BW-43	598.07	599.01	22.69	576.32	
BW-44	589.87	592.72	48.09	544.63	
BW-45	Note: Destroyed		—		
BW-46	590.59	593.42	31.60	561.82	
~~B-51~~	~~597.50~~	~~597.60~~	—		
B-53P-TW	591.47	594.14	Silted Up		
B-53P-9	590.62	593.72	—		
B-53P-10	590.44	592.94	—		
~~B-58~~	~~590.00~~	~~592.15~~	—		
P-4	Note: Destroyed		—		
P-7	Note: Destroyed		—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 6

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 8-1-78

Time: Start 9:00 Well Meter # D-1

Finish 10:30 Inspector's Initials [signature]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	36.60	597.20	
BW-40	646.45	646.24	37.35	608.89	
BW-41	616.28	618.09	21.05	597.04	
BW-42	596.61	597.61	30.26	567.35	
BW-43	598.07	599.01	28.40	570.61	
BW-44	589.87	592.72	48.53	544.19	
			-	-	
BW-46	590.59	593.42	32.63	560.79	
B-51	597.50	597.60	57.03	540.57	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

DUKE POWER COMPANY

P. O. BOX 422

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

TELEPHONE: AREA 803
489-8131

June 5, 1978

C Q Reeves

Re: Cherokee 1-3
Powerhouse Groundwater Control
File Nos. CK-1105.02, CK-1110.00

Enclosed are the Powerhouse Groundwater Control Readings from April 28 through May 31, 1978.

Also, this is to confirm our conversation with T J Coyle on this date, that the destruction of Powerhouse Groundwater Control Well BW-46 to allow for construction of a transformer station is acceptable to Design Engineering. If you have any further questions, please advise.

J T Moore
Project Manager

LCA/bj

Enclosure

cc: Clay Sams, LETCo, w/encl

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 4-28-78

Time: Start 12:30 P.M. Well Meter # D-1

Finish 4:00 P.M. Inspector's Initials LWA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.20	598.60	
BW-40	646.45	646.24	36.67	609.57	
BW-41	616.28	618.09	23.94	594.15	
BW-42	596.61	~~598.21~~ ~~600.86~~ Pipe Broken off	27.30	570.71	
BW-43	598.07	599.01	25.53	573.48	
BW-44	589.87	592.72	47.71	545.01	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	28.02	565.40	
B-51	597.50	597.60	55.82	541.78	
B-53P-TW	591.47	594.14	Silted Up		
B-53P-9	590.62	593.72	29.67	564.05	
B-53P-10	590.44	592.94	29.02	563.92	
B-68	590.00	592.25	26.21	566.04	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 5.15.78

Time: Start 10:00 A.M. Well Meter # D-1

Finish 3:00 P.M Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.92	598.88	
BW-40	646.45	646.24	36.67	609.57	
BW-41	616.28	618.09	23.77	594.32	
BW-42	596.61	~~600.86~~ 597.61	26.00	571.61	
BW-43	598.07	599.01	23.59	575.42	
BW-44	589.87	592.72	47.06	545.66	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	28.45	564.97	
B-51	597.50	597.60	56.28	541.32	
B-53P-TW	591.47	594.14	Silted Up		
B-53P-9	590.62	593.72	29.24	564.48	
B-53P-10	590.44	592.94	Destroyed		
B-68	590.00	592.25	26.08	566.17	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 5-31-78

Time: Start 9:00 AM. Well Meter # D-1

Finish 11:30 A.M Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.45	598.35	
BW-40	646.45	646.24	36.76	609.48	
BW-41	616.28	618.09	23.74	594.35	
BW-42	596.61	~~597.61~~ ~~600.86~~	28.06	~~569.55~~ ~~572.80~~	
BW-43	598.07	599.01	25.19	573.82	
BW-44	589.87	592.72	47.36	545.36	
BW-45	579.46	581.96	——		
BW-46	590.59	593.42	29.55	563.87	
B-51	597.50	597.60	~~56.77~~	540.83	
B-53P-TW	591.47	594.14	Silted Up		
B-53P-9	590.62	593.72	29.74	563.98	
B-53P-10	590.44	592.94	——		Destroyed
B-68	590.00	592.25	26.08	566.17	
P-4	588.39	589.68	——		
P-7	591.28	591.94	——		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

DUKE POWER COMPANY

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

April 20, 1978

C Q Reeves

Re: Cherokee 1-3
Powerhouse Groundwater Control
File No. CK-1105.02, CK-1110.00

Enclosed are the Powerhouse Groundwater Control Readings from March 20, 1978, to April 15, 1978.

Since the water levels in all of the wells have become almost constant, we are reducing our readings to twice per month. If this is not acceptable, please advise.

J T Moore

J T Moore
Project Manager

LCA/bj

Enclosure

cc: LETCo
Attention: C E Sams ✓

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 3-20-78

Time: Start 10:00 A.m Well Meter # D-1

Finish 5:00 P.m Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.68	609.56	
BW-41	616.28	618.09	24.48	593.61	
BW-42	596.61	600.86	28.55	572.31	
BW-43	598.07	599.01	25.74	573.27	
BW-44	589.87	592.72	47.03	545.69	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	28.00	565.42	
B-51	597.50	597.60	57.84	539.76	
B-53P-TW	591.47	594.14	Silted Up		
B-53P-9	590.62	593.72	28.70	565.02	
B-53P-10	590.44	592.94	28.83	564.11	
B-68	590.00	592.25	26.32	565.93	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
3-20-78	4:45	P-2	1163.6	4,507,007		RwA
		P-3				
		P-4				
		P-5				
		P-6				
3-20-78	4:45	P-7	1665.7	1662		RwA

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 3-29-78

Time: Start 10:00 A.m. Well Meter # D-1

Finish 4:00 P.m. Inspector's Initials RWA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.62	599.18	
BW-40	646.45	646.24	36.66	609.58	
BW-41	616.28	618.09	24.39	593.70	
BW-42	596.61	600.86	28.00	572.86	
BW-43	598.07	599.01	24.76	574.25	
BW-44	589.87	592.72	46.86	545.86	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	27.92	565.50	
B-51	597.50	597.60	55.06	542.54	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	28.40	565.32	
B-53P-10	590.44	592.94	28.69	564.25	
B-68	590.00	592.25	27.22	565.03	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
5-29-78		P-2	NOT running			RWD
		P-3				
		P-4				
		P-5				
		P-6				
5-29-78		P-7	1665.1	1672	NOT RUNNING	RWD

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 4-11-78

Time: Start 9:00 A.m. Well Meter # D-1

Finish 11:00 A.m Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.52	609.72	
BW-41	616.28	618.09	24.09	594.00	
BW-42	596.61	600.86	28.62	572.24	
BW-43	598.07	599.01	26.12	572.89	
BW-44	589.87	592.72	47.17	545.55	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	28.72	564.70	
B-51	597.50	597.60	55.27	542.33	
B-53P-TW	591.47	594.14	Silted Up		
B-53P-9	590.62	593.72	~~28.51~~ ~~31.49~~ RWD	565.21	
B-53P-10	590.44	592.94	28.10	564.84	
B-68	590.00	592.25	26.18	566.07	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 4-15-78

Time: Start 8:00 A.M. Well Meter # D-1

Finish 12:00 A.M Inspector's Initials LWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.16	598.64	
BW-40	646.45	646.24	36.59	609.65	
BW-41	616.28	618.09	24.05	594.04	
BW-42	596.61	600.86	29.09	571.77	
BW-43	598.07	599.01	26.41	572.60	
BW-44	589.87	592.72	47.21	545.51	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	29.32	564.10	
B-51	597.50	597.60	55.40	542.20	
B-53P-TW	591.47	594.14	Silted Up		
B-53P-9	590.62	593.72	28.79	564.93	
B-53P-10	590.44	592.94	29.47	564.47	
B-68	590.00	592.25	26.24	566.01	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

March 16, 1978

C Q Reeves

Re: Cherokee 1-3
Powerhouse Groundwater Control
File No. CK-1105.02, CK-1110.00

Enclosed are the Powerhouse Groundwater Control Readings from February 6, 1978, to March 16, 1978.

J T Moore

J T Moore
Project Manager

LCA/bj

Enclosure

cc: LETCo
Attention: C E Sams

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 2-6-78

Time: Start 1:30 P.M. Well Meter # D-1

Finish 3:00 P.M. Inspector's Initials RWH

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.65	599.15	
BW-40	646.45	646.24	36.67	609.57	
BW-41	616.28	618.09	24.78	593.31	
BW-42	596.61	600.86	22.90	577.96	
BW-43	598.07	599.01	22.22	576.79	
BW-44	589.87	592.72	43.36	549.36	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.54	566.88	
B-51	597.50	597.60	52.25	545.35	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	25.60	566.12	
B-53P-10	590.44	592.94	25.67	567.27	
B-68	590.00	592.25	26.44	565.81	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
2-6-82	2:15	P-6	215.6	804,524	120'	RCW
		P-7				

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 2-15-78

Time: Start 9:30 A.M. Well Meter # D-1

Finish 10:30 A.M. Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.09	598.71	
BW-40	646.45	646.24	36.78	609.46	
BW-41	616.28	618.09	24.87	593.22	
BW-42	596.61	600.86	25.37	575.49	
BW-43	598.07	599.01	23.98	575.03	
BW-44	589.87	592.72	44.59	548.13	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.69	566.73	
B-51	597.50	597.60	53.05	544.55	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	26.45	567.27	
B-53P-10	590.44	592.94	26.58	566.36	
B-68	590.00	592.25	25.57	566.68	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1			No pumping wells in operation	KWD
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 2-20-78

Time: Start 12:30 P.M. Well Meter # D-1

Finish 2:30 P.M. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.12	598.68	
BW-40	646.45	646.24	36.68	609.56	
BW-41	616.28	618.09	24.69	593.40	
BW-42	596.61	600.86	26.16	574.70	
BW-43	598.07	599.01	24.13	574.88	
BW-44	589.87	592.72	44.94	547.78	
BW-45	579.46	581.96	———		
BW-46	590.59	593.42	28.44	564.98	
B-51	597.50	597.60	53.61	543.99	
B-53P-TW	591.47	594.14	———		
B-53P-9	590.62	593.72	26.72	567.00	
B-53P-10	590.44	592.94	27.00	565.94	
B-68	590.00	592.25	26.39	565.86	
P-4	588.39	589.68			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1	~~284~~		~~Not Pumping~~ ~~130~~	
2-28-78	2:30	P-2	1106.9	4,454,480	Pumping 150'	KWL
		P-3				
		P-4				
		P-5				
2-28-78	2:30	P-6	335.7	94,550	125'	KWL
		P-7				

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 2-27-78

Time: Start 12:30 P.M. Well Meter # D-1

Finish 3:30 P.M. Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.21	598.59	
BW-40	646.45	646.24	36.74	609.50	
BW-41	616.28	618.09	24.78	593.31	
BW-42	596.61	600.86	27.20	573.66	
BW-43	598.07	599.01	25.37	573.64	
BW-44	589.87	592.72	45.56	547.16	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	28.49	564.93	
B-51	597.50	597.60	53.92	543.68	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	27.55	566.17	
B-53P-10	590.44	592.94	27.75	565.19	
B-68	590.00	592.25	26.42	565.83	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
2-27-78	1:55	P-1	72.5	2233 04	NOT RUNNING 115'	RWH
2-27-78	1:45	P-2	1121.1	4,467,600	NOT RUNNING 150	RWH
		P-3				
2-27-78	1:50	P-4	1755.4	gauge full of water	NOT RUNNING 76	RWH
		P-5				
2-27-78	3:20	P-6	435.7	1016402	NOT RUNNING 60	RWH
2-27-78	2:00	P-7	1665.7	16921	NOT RUNNING 115'	RWH

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 3-8-78

Time: Start 9:00 A.M. Well Meter # D-1

Finish 11:30 A.M. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.27	598.53	
BW-40	646.45	646.24	36.80	609.44	
BW-41	616.28	618.09	24.69	593.40	
BW-42	596.61	600.86	28.26	572.60	
BW-43	598.07	599.01	25.62	573.39	
BW-44	589.87	592.72	46.53	546.19	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	28.05	565.37	
B-51	597.50	597.60	54.54	543.06	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	31.66	562.06	
B-53P-10	590.44	592.94	31.50	561.44	
B-68	590.00	592.25	26.46	565.79	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS tape gauge	INSPECTOR'S INITIALS
		P-1				
3-8-78	9:40	P-2	1138.4	4484690	150'	Rwd
		P-3				
		P-4				
		P-5				
		P-6				
3-8-78	9:30	P-7	1665.1	1,692	120'	Rwd

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 3-16-78

Time: Start 10:00 A.m. Well Meter # D-1

Finish 11:30 A.m. Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.67	609.57	
BW-41	616.28	618.09	24.60	593.49	
BW-42	596.61	600.86	28.38	572.48	
BW-43	598.07	599.01	25.18	573.83	
BW-44	589.87	592.72	46.58	546.14	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	27.12	566.30	
B-51	597.50	597.60	54.89	542.71	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	28.68	565.04	
B-53P-10	590.44	592.94	28.79	564.15	
B-68	590.00	592.25	26.32	565.93	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
3-16-78	11:00	P-2	1154.9	4498365	150'	RWS
		P-3				
		P-4			moisture in gauge	RWS
		P-5				
		P-6				
3-16-78	11:15	P-7	1695.1	1692		RWS

DUKE POWER COMPANY

CONSTRUCTION DEPARTMENT

CHEROKEE NUCLEAR PROJECT

GAFFNEY, S. C. 29340

P. O. BOX 422

TELEPHONE: AREA 803
489-8131

February 6, 1978

C Q Reeves

Re: Cherokee 1-3
Powerhouse Groundwater Control
File No. CK-1105.02, CK-1110.00

Enclosed are the Powerhouse Groundwater Control Reading from January 11, 1978, to January 30, 1978. Please note that the top of pipe elevation used for well B-68 should be corrected to 592.25 on data sheets generated during the period December 16, 1977, to January 10, 1978.

J T Moore

J T Moore
Project Manager

LCA/bj

cc ~~Law Engineering~~ Testing Company
Attention: C E Sams

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

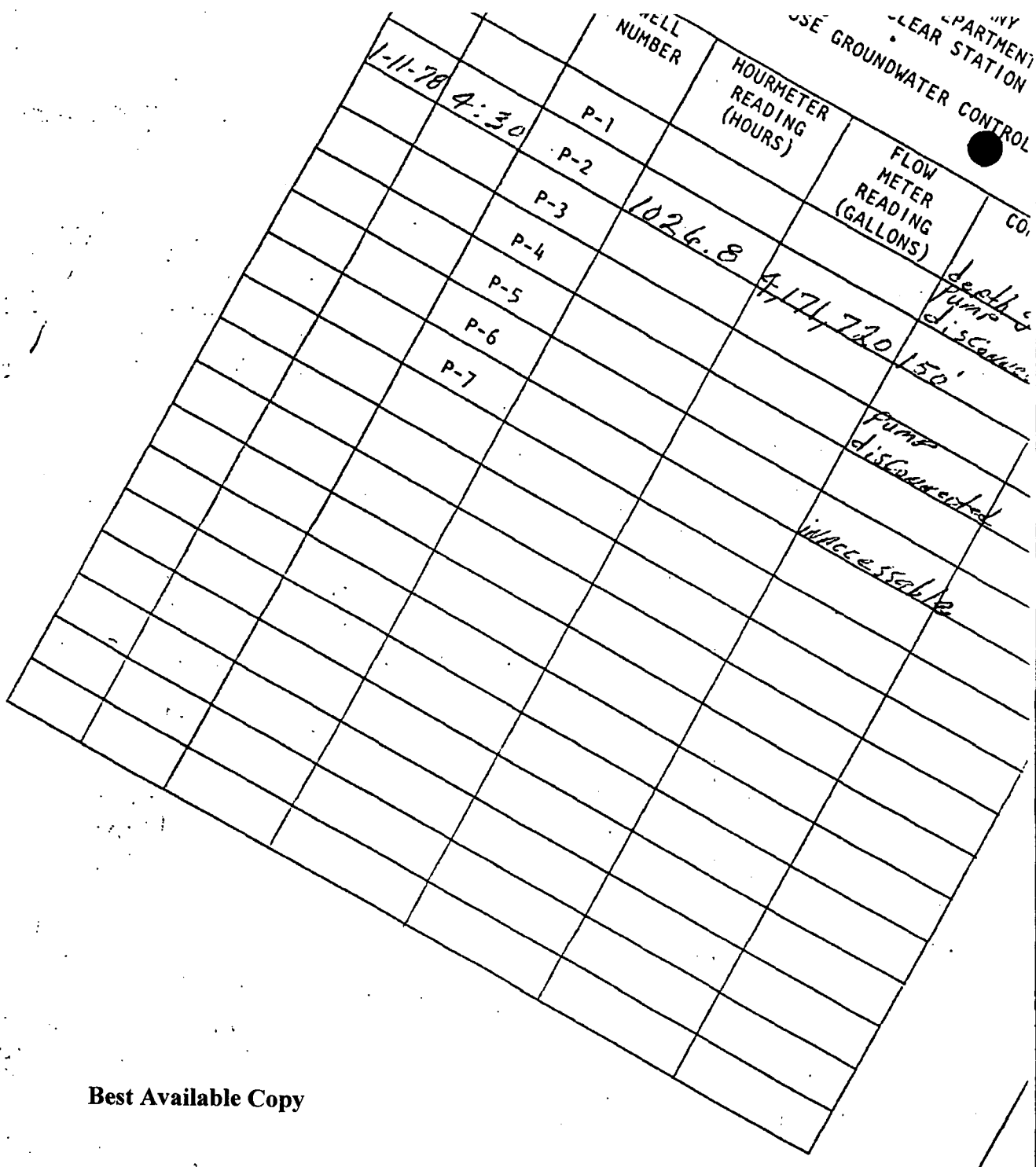
POWERHOUSE GROUNDWATER CONTROL

Date: 1-11-78

Time: Start 4:00 p.m. Well Meter # D-1

Finish 5:00 p.m. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.91	598.89	
BW-40	646.45	646.24	33.18	613.06	
BW-41	616.28	618.09	25.61	592.48	
BW-42	596.61	600.86	26.24	574.62	
BW-43	598.07	599.01	23.80	575.21	
BW-44	589.87	592.72	41.30	551.42	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.21	567.21	
B-51	597.50	597.60	50.95	546.65	
B-53P-TW	591.47	594.14	29.00	565.14	
B-53P-9	590.62	593.72	28.42	565.30	
B-53P-10	590.44	592.94	28.18	564.76	
B-68	590.00	592.25 ~~592.75~~	27.12	565.13 ~~565.63~~	
P-4	588.39	589.68	—		
P-7	591.28	591.94	28.33	563.61	



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PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-12-78

Time: Start 3:30 Well Meter # D-1

Finish 5:00 Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.93	598.87	
BW-40	646.45	646.24	36.82	609.42	
BW-41	616.28	618.09	25.54	592.55	
BW-42	596.61	600.86	26.10	574.76	
BW-43	598.07	599.01	23.77	575.24	
BW-44	589.87	592.72	41.52	551.20	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.13	567.29	
B-51	597.50	597.60	51.06	546.54	
B-53P-TW	591.47	594.14	28.99	565.15	
B-53P-9	590.62	593.72	28.45	565.27	
B-53P-10	590.44	592.94	28.28	564.66	
B-68	590.00	592.25 ~~592.75~~	27.03	565.22 ~~565.72~~	
P-4	588.39	589.68	—		
P-7	591.28	591.94	28.84	563.60	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
					Depth Gauge	
		P-1	Pump disconnected			
1-12-78	4:00	P-2	1040.7	4,227,910	150'	KWL
		P-3				
		P-4	Pump disconnected			
		P-5				
		P-6	Inaccessable			
		P-7	~~Hour disconnected~~			

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Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-16-78

Time: Start 4:00 P.M. Well Meter # D-1

Finish 6:00 P.M Inspector's Initials LWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.12	598.68	
BW-40	646.45	646.24	36.92	609.32	
BW-41	616.28	618.09	25.54	592.55	
BW-42	596.61	600.86	25.54	575.32	
BW-43	598.07	599.01	23.53	575.48	
BW-44	589.87	592.72	41.35	551.37	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.30	567.12	
B-51	597.50	597.60	51.45	546.15	
B-53P-TW	591.47	594.14	27.33	566.81	1.40' cut off pipe 565.41
B-53P-9	590.62	593.72	28.30	565.42	
B-53P-10	590.44	592.94	28.23	564.71	
B-68	590.00	~~592.25~~ 592.75	27.09	~~565.25~~ ~~565.66~~	565.16
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
1-16-78		P-1			Pump disconnected	[signature]
1-16-78		P-2			"	[signature]
		P-3				
1-16-78		P-4			"	[signature]
		P-5				
1-16-78		P-6	Inaccessable			
1-16-78		P-7			"	[signature]

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Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-17-78

Time: Start 1:00 P.M. Well Meter # D-1

Finish 2:30 P.M. Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.80	599.00	
BW-40	646.45	646.24	37.88	608.36	
BW-41	616.28	618.09	25.45	592.64	
BW-42	596.61	600.86	25.58	575.28	
BW-43	598.07	599.01	23.60	575.41	
BW-44	589.87	592.72	41.23	551.49	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.81	567.61	
B-51	597.50	597.60	51.29	546.31	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	28.20	565.52	
B-53P-10	590.44	592.94	28.16	564.78	
B-68	590.00	592.25	26.91	565.34	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
1-17-78		P-1			disconnected	Rwd
"		P-2			disconnected	Rwd
		P-3				
"		P-4			disconnected	Rwd
		P-5				
"		P-6			inaccessable	Rwd
"		P-7			disconnected	Rwd

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Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-18-78

Time: Start 2:00 P.M Well Meter # D-1

Finish 3:00 P.M. Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.75	599.05	
BW-40	646.45	646.24	36.81	609.43	
BW-41	616.28	618.09	25.42	592.67	
BW-42	596.61	600.86	25.35	575.51	
BW-43	598.07	599.01	23.50	575.51	
BW-44	589.87	592.72	41.28	551.44	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.08	568.34	
B-51	597.50	597.60	51.49	546.11	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	28.18	565.54	
B-53P-10	590.44	592.94	28.05	564.89	
B-68	590.00	592.25	26.90	565.35	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

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Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
1-18-78		P-1			disconnected	RWD
		P-2			disconnected	RWD
		P-3				
		P-4			disconnected	RWD
		P-5				
		P-6			inaccessable	RWD
		P-7			disconnected	RWD

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Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-19-78

Time: Start 1:30 P.M. Well Meter # D-1

Finish 2.30 P.M. Inspector's Initials D.C.D

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.58	599.22	DC
BW-40	646.45	646.24	36.70	609.54	
BW-41	616.28	618.09	25.31	592.78	
BW-42	596.61	600.86	25.33	575.53	
BW-43	598.07	599.01	23.35	575.66	
BW-44	589.87	592.72	42.64	550.08	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.85	567.57	
B-51	597.50	597.60	51.32	546.28	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	27.96	565.76	
B-53P-10	590.44	592.94	27.92	565.02 ~~566.19~~	
B-68	590.00	592.25	26.75	565.50	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

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Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-20-78

Time: Start 1:00 P.M. Well Meter # D-1

Finish 2:00 P.M. Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.45	599.35	
BW-40	646.45	646.24	36.75	~~609.45~~ 609.49	*
BW-41	616.28	618.09	25.25	592.84	
BW-42	596.61	600.86	24.90	575.96	
BW-43	598.07	599.01	23.14	575.87	
BW-44	589.87	592.72	40.55	552.17	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	24.75	568.67	
B-51	597.50	597.60	51.55	546.05	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	27.90	565.82	
B-53P-10	590.44	592.94	27.75	565.19	
B-68	590.00	592.25	26.70	565.55	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

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Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-21-78

Time: Start 1:00 p.m. Well Meter # D-1

Finish 2:00 p.m. Inspector's Initials RWL

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.53	599.27	
BW-40	646.45	646.24	36.92	609.32	
BW-41	616.28	618.09	25.40	592.69	
BW-42	596.61	600.86	24.47	576.39	
BW-43	598.07	599.01	23.06	575.95	
BW-44	589.87	592.72	40.60	552.12	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	23.77	569.65	
B-51	597.50	597.60	51.70	545.90	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	27.87	565.85	
B-53P-10	590.44	592.94	27.31	565.63	
B-68	590.00	592.25	26.90	565.35	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

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Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-23-78

Time: Start 3:00 P.M. Well Meter # D-1

Finish 4:00 P.M. Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.63	599.17	
BW-40	646.45	646.24	36.85	609.39	
BW-41	616.28	618.09	25.32	592.77	
BW-42	596.61	600.86	24.17	576.69	
BW-43	598.07	599.01	22.90	576.11	
BW-44	589.87	592.72	40.95	551.77	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.38	567.04	
B-51	597.50	597.60	51.80	545.80	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	27.40	566.32	
B-53P-10	590.44	592.94	27.12	565.82	
B-68	590.00	592.25	26.94	565.31	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 3

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-30-78

Time: Start 1:00 P.M. Well Meter # D-1

Finish 4:00 P.M. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.40	599.40	
BW-40	646.45	646.24	36.87	609.37	
BW-41	616.28	618.09	25.00	593.09	
BW-42	596.61	600.86	21.21	579.65	
BW-43	598.07	599.01	20.70	578.31	
BW-44	589.87	592.72	41.17	551.55	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.10	568.32	
B-51	597.50	597.60	52.29	545.31	
B-53P-TW	591.47	594.14	—		
B-53P-9	590.62	593.72	25.84	567.88	
B-53P-10	590.44	592.94	25.54	567.40	
B-68	590.00	592.25	26.68	565.57	
P-4	588.39	589.68	—		
P-7	591.28	591.94	—		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth Gauge	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
1-30-78	1:15	P-6	208.2	779808	Pump running 125'	RWS
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-22-77

Time: Start 4:00 P.M. Well Meter # D-1

Finish 5:00 P.M. Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.20	598.60	
BW-40	646.45	646.24	36.82	609.42	
BW-41	616.28	618.09	25.59	592.50	
BW-42	596.61	600.86	27.00	573.86	
BW-43	598.07	599.01	28.30	570.71	
BW-44	589.87	592.72	39.58	553.14	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.22	568.20	
B-51	597.50	597.60	49.10	548.50	
B-53P-TW	591.47	594.14	28.53	565.61	
B-53P-9	590.62	593.72	28.02	565.70	
B-53P-10	590.44	592.94	28.10	564.84	
B-68	590.00	592.75	27.22	565.53	
P-4	588.39	589.68	26.58	563.10	
P-7	591.28	591.94	26.63	565.31	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-22-77	5:00	P-1	38.8	219,906	90'	[signature]
12-22-77	5:00	P-2	739.1	3,007,509	150'	[signature]
		P-3				
		P-4				
		P-5				
12-22-77	5:00	P-6	99.9	446,099	90'	[signature]
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-27-77

Time: Start 1:30 PM Well Meter # D-1

Finish 2:30 PM Inspector's Initials KB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.0'	598.80	
BW-40	646.45	646.24	36.66	609.58	
BW-41	616.28	618.09	25.31'	592.78	
BW-42	596.61	600.86	23.58'	577.28	
BW-43	598.07	599.01	27.25'	571.76	
BW-44	589.87	592.72	39.64'	553.08	
BW-45	579.46	581.96	Destroyed		
BW-46	590.59	593.42	25.25'	568.17	
B-51	597.50	597.60	49.35'	548.25	
B-53P-TW	591.47	594.14	29.02'	565.12	
B-53P-9	590.62	593.72	28.54'	565.18	
B-53P-10	590.44	592.94	28.54	564.40	
B-68	590.00	592.75	27.08	565.67	
P-4	588.39	589.68	27.06	562.62	
P-7	591.28	591.94	27.10	564.84	

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Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
12-27-77	2:30	P-1	38.8	219,907	Pump Not Running 90' Depth	JBB
12-27-77	2:20	P-2	811.5	3,301,200	Pump Not Running 145' Depth	JBB
		P-3				
		P-4				
		P-5				
12-27-77	2:10	P-6	114.1	490,141	Pump Not Running 120' Depth	JBB
		P-7				

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Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-28-77

Time: Start 3:05 Well Meter # D-1

Finish 3:55 Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.08	598.72	
BW-40	646.45	646.24	36.66	609.58	
BW-41	616.28	618.09	25.46	592.63	
BW-42	596.61	600.86	27.22	573.64	
BW-43	598.07	599.01	23.90	575.11	
BW-44	589.87	592.72	39.79	552.93	
BW-45	579.46	581.96	Destroyed		
BW-46	590.59	593.42	25.96	567.46	
B-51	597.50	597.60	49.45	548.15	
B-53P-TW	591.47	594.14	29.08	565.06	
B-53P-9	590.62	593.72	28.59	565.13	
B-53P-10	590.44	592.94	28.61	564.33	
B-68	590.00	592.75	27.10	565.65	
P-4	588.39	589.68	27.15	562.53	
P-7	591.28	591.94	27.22	564.72	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
	3:45	P-1	38.8	219970.	Pump Not Running 95' Depth	JBB
	3:40	P-2	826.7	3362800 ~~3328.00~~	Running 150 Depth	JBB
		P-3				
		P-4				
		P-5				
	3:17	P-6	117 ~~499.387~~	~~499.387~~ Running ~~125' Depth~~	Pump Not Running 125' Depth	JBB
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12/29/77

Time: Start 3:10 Well Meter # D-1

Finish 3:50 Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.08	598.72	
BW-40	646.45	646.24	36.77	~~509.47~~ 609.47 #	
BW-41	616.28	618.09	~~25.40~~ 25.40	592.69	
BW-42	596.61	600.86	27.29	573.57	
BW-43	598.07	599.01	24.14	574.87	
BW-44	589.87	592.72	39.84	552.88	
BW-45	579.46	581.96	Destroyed		—
BW-46	590.59	593.42	26.08	567.34	
B-51	597.50	597.60	49.53	~~548.07~~	
B-53P-TW	591.47	594.14	29.20	~~564.94~~ 564.94 #	
B-53P-9	590.62	593.72	28.61	~~563.11~~ 565.11 #	
B-53P-10	590.44	592.94	28.75	564.19	
B-68	590.00	592.75	27.14	565.61 #	
P-4	588.39	589.68	Co		Could not check well Capped w/ flowmeter
P-7	591.28	591.94	27.32	564.62	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1			Working Pump in Well Cou Wdrlock	JRB
		P-2	840	3420511	Pump Not Running 150' Depth	JRB
		P-3				
		P-4				
		P-5				
12/29/77	3:18 PM	P-6	119	508,444	Pumping Running 110' Depth	JRB
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-30-77

Time: Start 2:00 Well Meter # 0-1

Finish 3:25 Inspector's Initials EEB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.10	594.70	
BW-40	646.45	646.24	36.75	609.49	
BW-41	616.28	618.09	25.60	592.49	
BW-42	596.61	600.86	27.43	573.43	
BW-43	598.07	599.01	24.37	574.64	
BW-44	589.87	592.72	39.92	552.80	
BW-45	579.46	581.96	Destroyed		
BW-46	590.59	593.42	26.00	567.42	
B-51	597.50	597.60	49.53	548.07	
B-53P-TW	591.47	594.14	29.22	564.92	
B-53P-9	590.62	593.72	28.75	564.97	
B-53P-10	590.44	592.94	28.75	564.19	
B-68	590.00	592.75	27.08	565.67	
P-4	588.39	589.68			Could not check until capped w/flow meter working on well w/drill truck
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				Working on well EKP
12-30-77	2:15	P-2	9547	3476280	Running @ 145' Depth	EKP
		P-3				
		P-4				
		P-5		3		
12-31-77	2:05	P-6	122.8	517,222	Not Running 125' Depth	EKP
		P-7				
			1			

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-3-78

Time: Start 3:00 P.M. Well Meter # D-1

Finish 4:30 P.M. Inspector's Initials RWH

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.21	598.59	
BW-40	646.45	646.24	36.89	609.35	
BW-41	616.28	618.09	25.76	592.33	
BW-42	596.61	600.86	27.68	573.18	
BW-43	598.07	599.01	24.50	574.51	
BW-44	589.87	592.72	40.13	552.59	
BW-45	579.46	581.96	—		—
BW-46	590.59	593.42	26.39	567.03	
B-51	597.50	597.60	50.00	547.60	
B-53P-TW	591.47	594.14	29.38	564.76	
B-53P-9	590.62	593.72	28.92	564.80	
B-53P-10	590.44	592.94	29.10	563.84	
B-68	590.00	592.75	27.20	565.55	
P-4	588.39	589.68	Pump in but not wired		
P-7	591.28	591.94	Well being redrilled		

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1	Pump not wired			
1-3-78	4:30	P-2	913.0	3,711,850	145'	[illegible]
		P-3				
		P-4				
		P-5				
1-3-78	4:30	P-6	134.4	552,989	125'	[illegible]
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-4-78

Time: Start 3:00 P.M. Well Meter # D-1

Finish 4:30 P.M. Inspector's Initials RLG

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.15	598.65	
BW-40	646.45	646.24	36.91	609.33	
BW-41	616.28	618.09	25.67	592.42	
BW-42	596.61	600.86	27.75	573.11	
BW-43	598.07	599.01	24.60	574.41	
BW-44	589.87	592.72	40.23	552.49	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.21	567.21	
B-51	597.50	597.60	50.00	547.60	
B-53P-TW	591.47	594.14	29.55	564.59	
B-53P-9	590.62	593.72	29.09	564.63	
B-53P-10	590.44	592.94	29.04	563.90	
B-68	590.00	592.75	27.24	565.51	
P-4	588.39	589.68	—		
P-7	591.28	591.94	28.03	563.91	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
1-4-78	3:00	P-1			Pump disassembled	RWD
1-4-78	3:00	P-2	926.5	3,766,387	150'	RWD
		P-3				
1-4-78	3:00	P-4			PUMP NOT Running	RWD
		P-5				
1-4-78	3:00	P-6	137.9	562,718	120'	RWD
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-5-78

Time: Start 2:30 Well Meter # D-1

Finish 3:30 Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	30.25	598.55	
BW-40	646.45	646.24	36.80	609.44	
BW-41	616.28	618.09	25.62	592.47	
BW-42	596.61	600.86	27.80	573.06	
BW-43	598.07	599.01	24.69	574.32	
BW-44	589.87	592.72	40.34	552.38	
BW-45	579.46	581.96	—		—
BW-46	590.59	593.42	23.46	569.96	
B-51	597.50	597.60	50.06	547.54	
B-53P-TW	591.47	594.14	29.53	564.61	
B-53P-9	590.62	593.72	29.02	564.70	
B-53P-10	590.44	592.94	29.05	563.89	
B-68	590.00	592.75	27.14	565.61	
P-4	588.39	589.68	—		
P-7	591.28	591.94	28.04	563.90	

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
					depth gauge	
1-5-78	2:30	P-1			Pump disconnected	RWA
1-5-78	2:30	P-2	940.7	3823640	145'	RWA
		P-3				
1-5-78	2:30	P-4			Power not connected	RWA
		P-5				
1-5-78	2:30	P-6	140.8	571,349	120'	RWA
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-6-88

Time: Start 2:00 P.M. Well Meter # D-1

Finish 3:00 P.M. Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.20	598.60	
BW-40	646.45	646.24	36.73	609.51	
BW-41	616.28	618.09	25.58	592.51	
BW-42	596.61	600.86	27.74	573.12	
BW-43	598.07	599.01	24.65	574.36	
BW-44	589.87	592.72	40.65	552.07	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.70	566.72	
B-51	597.50	597.60	50.10	547.50	
B-53P-TW	591.47	594.14	29.50	564.64	
B-53P-9	590.62	593.72	28.95	564.77	
B-53P-10	590.44	592.94	29.05	563.89	
B-68	590.00	592.75	~~29.01~~ 27.07	565.74	
P-4	588.39	589.68			
P-7	591.28	591.94	28.03	563.91	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
					depth gauge	
1-6-78	3:00	P-1			Pump disconnected	[signature]
1-6-78	3:00	P-2	954.9	3,881,200	140'	[signature]
		P-3				
1-6-78	3:00	P-4			Power not Connected	[signature]
		P-5				
1-6-78	3:00	P-6	144.3	580,849	120'	[signature]
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-7-78

Time: Start 2:00 P.M Well Meter # D-1

Finish 3:15 P.M. Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.25	598.55	
BW-40	646.45	646.24	36.90	609.34	
BW-41	616.28	618.09	25.67	592.42	
BW-42	596.61	600.86	27.86	573.00	
BW-43	598.07	599.01	24.82	574.19	
BW-44	589.87	592.72	41.05	551.67	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	26.84	566.58	
B-51	597.50	597.60	50.38	547.22	
B-53P-TW	591.47	594.14	29.46	564.68	
B-53P-9	590.62	593.72	29.00	564.72	
B-53P-10	590.44	592.94	29.05	563.89	
B-68	590.00	592.75	27.12	565.63	
P-4	588.39	589.68	—		
P-7	591.28	591.94	28.14	563.80	

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
					depth gauge	
1-7-78	3:00	P-1			Pump disconnected	RWB
1-7-78	3:00	P-2	969.0	3,938,300	150'	RWB
		P-3				
1-7-78	3:00	P-4			Power Not Connected	RWB
		P-5				
1-7-78	2:30	P-6	147.5	589,792	120'	RWB
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-9-78

Time: Start 2:00 P.M Well Meter # D-1

Finish 3:30 P.M Inspector's Initials [signature]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.83	609.41	
BW-41	616.28	618.09	25.53	592.56	
BW-42	596.61	600.86	26.97	573.89	
BW-43	598.07	599.01	24.27	574.74	
BW-44	589.87	592.72	40.93	551.79	
BW-45	579.46	581.96	—	—	—
BW-46	590.59	593.42	24.85	568.57	
B-51	597.50	597.60	50.55	547.05	
B-53P-TW	591.47	594.14	29.30	564.84	
B-53P-9	590.62	593.72	28.75	564.97	
B-53P-10	590.44	592.94	28.30	564.64	
B-68	590.00	592.75	26.98	565.77	
P-4	588.39	589.68	—		
P-7	591.28	591.94	28.30	563.64	
Lamar	658.14	659.14	60.45	598.69	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1			Depth gauge. Pump disconnected	
1-9-78	3:00	P-2	997.0	4,051,500	150'	[illegible]
		P-3				
		P-4			Pump disconnected	
		P-5				
		P-6			inaccessable.	
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 1-10-78

Time: Start 3:30 P.M. Well Meter # D-1

Finish 5:00 P.M Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.80	599.00	
BW-40	646.45	646.24	36.90	609.34	
BW-41	616.28	618.09	25.62	592.47	
BW-42	596.61	600.86	26.40	574.46	
BW-43	598.07	599.01	23.80	575.21	
BW-44	589.87	592.72	41.13	551.59	
BW-45	579.46	581.96	—		—
BW-46	590.59	593.42	26.13	567.29	
B-51	597.50	597.60	50.73	546.87	
B-53P-TW	591.47	594.14	29.10	565.04	
B-53P-9	590.62	593.72	28.63	565.09	
B-53P-10	590.44	592.94	28.13	564.81	
B-68	590.00	592.75	27.15	565.60	
P-4	588.39	589.68	—		
P-7	591.28	591.94	28.28	563.66	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1			depth gauge pump disconnected	
1-10-78	4:00	P-2	1011.9	4,111,630	150'	RWB
		P-3				
		P-4			pump disconnected	
		P-5				
		P-6			inaccessible	
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-12-77

Time: Start 2:30 Well Meter # D-1

Finish 3:30 Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.05	598.75	
BW-40	646.45	646.24	36.25	609.99	
BW-41	616.28	618.09	25.37	592.72	
BW-42	596.61	600.86	26.22	574.64	
BW-43	598.07	599.01	22.67	576.34	
BW-44	589.87	592.72	38.52	554.20	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.39	568.03	
B-51	597.50	597.60	48.25	549.35	
B-53P-TW	591.47	594.14	26.94	567.20	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	25.61	564.79	
P-6	588.75	590.20			
P-7	591.28	591.94	25.47	566.47	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
12-12-77	3:30	P-1	37.4	212,350	125'	[signature]
12-12-77	3:30	P-2	579.1	2,374,224	150'	[signature]
		P-3				
		P-4				
		P-5				
12-12-77	3:30	P-6	73.3	356,501	125'	[signature]
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-13-77

Time: Start 2:00 Well Meter # D-1

Finish 2:45 Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.03	598.77	
BW-40	646.45	646.24	36.58	609.66	
BW-41	616.28	618.09	25.37	592.72	
BW-42	596.61	600.86	26.34	574.52	
BW-43	598.07	599.01	22.56	576.45	
BW-44	589.87	592.72	39.17	553.55	
BW-45	579.46	581.96			
BW-46	590.59	593.42	25.40	568.02	
B-51	597.50	597.60	48.40	549.20	
B-53P-TW	591.47	594.14	27.13	567.01	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	25.71	564.69	
P-6	588.75	590.20			
P-7	591.28	591.94	25.58	566.36	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
12-12-77	2:45	P-1	38.8	219,907	90'	[signature]
12-12-77	2:45	P-2	595.9	2,437,280	150'	[signature]
		P-3				
		P-4				
		P-5				
12-13-77	2:45	P-6	76.1	365,627	120	[signature]
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-14-27

Time: Start 4:00 P.m. Well Meter # D-1

Finish 5:00 P.m. Inspector's Initials RwD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.18	598.62	
BW-40	646.45	646.24	36.52	609.72	
BW-41	616.28	618.09	25.30	592.79	
BW-42	596.61	600.86	26.32	574.54	
BW-43	598.07	599.01	22.44	576.57	
BW-44	589.87	592.72	39.25	553.47	
~~BW-45~~ B-68	~~590.00~~ ~~579.46~~	~~592.75~~ ~~581.96~~	26.89	565.86	
BW-46	590.59	593.42	25.05	568.37	
B-51	597.50	597.60	48.32	549.28	
B-53P-TW	591.47	594.14	27.34	566.80	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	25.73	564.67	
P-6	588.75	590.20			
P-7	591.28	591.94	25.83	566.11	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
12/14/77	4:45	P-1	38.8	219,906	Pump Not Running Depth 85'	W.J.W.
12/14/77	4:49	P-2	614.8	2,511,900	Depth 150'	W.J.W.
		P-3				
		P-4				
		P-5				
12/14/77	4:55	P-6	79.0	375,301	125'	R.W.D.
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-15-77

Time: Start 3:00 Well Meter # D-1

Finish 5:17 Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.07	598.73	
BW-40	646.45	646.24	36.63	609.61	
BW-41	616.28	618.09	25.38	592.71	
BW-42	596.61	600.86	26.50	574.36	
BW-43	598.07	599.01	22.50	576.51	
BW-44	589.87	592.72	39.35	553.37	
BW-45	579.46	581.96	Destroyed 12-	8-77	
BW-46	590.59	593.42	25.06	568.36	
B-51	597.50	597.60	48.58	549.02	
B-53P-TW	591.47	594.14	27.48	566.66	
P-1	591.78	592.09			
P-2	588.39	589.68			
✓P-4	589.36	590.40	25.73	564.67	
P-6	588.75	590.20			
✓P-7	591.28	591.94	25.97	565.97	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
	5:15	✓ P-1	38.8	219906	PUMP NOT RUNNING 85'	LEW
	5:17	✓ P-2	631.7	2578700	PUMP STARTED RUNNING, 145' WATER HEAD	LEW
		P-3				
		P-4				
		P-5				
	4:20	✓ P-6	81.7	384457	PUMP NOT RUNNING 120'	LEW
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-16-77

Time: Start 2:00 P.M. Well Meter # D-1

Finish 5:00 P.M. Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.12	598.68	
BW-40	646.45	646.24	36.59	609.65	
BW-41	616.28	618.09	25.38	592.71	
BW-42	596.61	600.86	26.56	574.30	
BW-43	598.07	599.01	23.22	575.79	
BW-44	589.87	592.72	39.42	553.30	
BW-45	579.46	581.96	———		
BW-46	590.59	593.42	25.20	568.22	
B-51	597.50	597.60	48.64	548.96	
B-53P-TW	591.47	594.14	27.64	566.50	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	25.78	564.62	
P-6	588.75	590.20			
P-7	591.28	591.94	Pump being installed		
B-68	590.00	592.25	27.02	565.23	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1	38.8	217,905	85'	
		P-2	646.1	2,634,480	150'	
		P-3				
		P-4				
		P-5				
		P-6	84.0	392,493	125'	
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-17-77

Time: Start 2:00 p.m. Well Meter # D-1

Finish 3:00 p.m. Inspector's Initials RWD

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.04	598.76	
BW-40	646.45	646.24	36.57	609.67	
BW-41	616.28	618.09	25.35	592.74	
BW-42	596.61	600.86	26.66	574.20	
BW-43	598.07	599.01	23.48	575.53	
BW-44	589.87	592.72	39.51	553.21	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.51	567.91	
B-51	597.50	597.60	48.64	548.96	
B-53P-TW	591.47	594.14	27.84	566.30	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	25.98	564.42	
P-6	588.75	590.20			
P-7	591.28	591.94	26.01	565.93	
B-68	590.00	592.75	27.02	565.93	

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
12/17/77	5:00 P.M.	P-1	38.8	219,907	Pump not pumping Depth 85'	W.J.W.
12/17/77	3:00 P.M.	P-2	662.0	2,697,230	Depth 150'	W.J.W.
		P-3				
		P-4				
		P-5				
12/17/77	3:00 P.M.	P-6	86.6	401,332	125'	W.J.W.
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-19-77

Time: Start 4:00 Well Meter # D-1

Finish 5:15 Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.14	598.66	
BW-40	646.45	646.24	36.65	609.59	
BW-41	616.28	618.09	25.42	592.67	
BW-42	596.61	600.86	26.85	574.01	
BW-43	598.07	599.01	23.22	575.79	
BW-44	589.87	592.72	39.69	553.03	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.03	568.39	
B-51	597.50	597.60	48.87	548.73	
B-53P-TW	591.47	594.14	28.20	565.94	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	26.22	564.18	
P-6	588.75	590.20			
P-7	591.28	591.94	26.23	565.71	
B-68	590.00	592.75	27.00	565.75	

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gage	INSPECTOR'S INITIALS
12-19-77	4:00	P-1	38.8	219,907	90'	RWD
12-19-77	4:00	P-2	693.3	2,022,920	145'	RWD
		P-3				
		P-4				
		P-5				
12-19-77	5:00	P-6	92.1	420,026	150'	RWD
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-20-77

Time: Start 2:30 Well Meter # D 1

Finish 3:30 Inspector's Initials [signature]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.06	598.74	
BW-40	646.45	646.24	36.63	609.61	
BW-41	616.28	618.09	25.40	592.69	
BW-42	596.61	600.86	26.90	573.96	
BW-43	598.07	599.01	23.15	575.86	
BW-44	589.87	592.72	39.54	553.18	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.11	568.31	
B-51	597.50	597.60	49.00	548.60	
B-53P-TW	591.47	594.14	28.33	565.81	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	Drilling		
P-6	588.75	590.20			
P-7	591.28	591.94	30.00	561.94	
B-68	590.00	592.75	27.02	565.73	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-20-77	2:30	P-1	38.8	219,906	85.0	Pump Run Not running
12-20-77	2:30	P-2	707.8	2,881,488	145'	Run
		P-3				
		P-4				
		P-5				
12-20-77	2:30	P-6	94.4	427,850	120'	Run
		P-7				

PGC-1
Revision 2

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-21-77

Time: Start 2:30 Well Meter # D-1

Finish 4:45 Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.14	598.66	
BW-40	646.45	646.24	36.70	609.54	
BW-41	616.28	618.09	25.50	592.59	
BW-42	596.61	600.86	27.05	573.81	
BW-43	598.07	599.01	23.27	575.74	
BW-44	589.87	592.72	39.67	553.05	
BW-45	579.46	581.96	—		
BW-46	590.59	593.42	25.08	568.34	
B-51	597.50	597.60	49.08	548.52	
B-53P-TW	591.47	594.14	28.34	565.80	
B-53P-9	590.62	593.72	27.91	565.81	
B-53P-10	590.44	592.94	28.18	564.76	
B-68	590.00	592.75	27.00	565.75	
P-4	588.39	589.68	26.51	563.17	
P-7	591.28	591.94	26.46	565.48	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
12-21-77	4:00	P-1	38.8	219,906	90'	Pump Not Running
12-21-77	4:00	P-2	723.7	2,945,600	150'	
		P-3				
		P-4				
		P-5				
12-21-77	2:30	P-6	97.1	436,796	125'	
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-5-77

Time: Start 4:00 P.M Well Meter # D-1

Finish 5:15 P.M Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.58	609.66	
BW-41	616.28	618.09	25.38	592.71	
BW-42	596.61	600.86	25.80	575.06	
BW-43	598.07	599.01	20.92	578.09	
BW-44	589.87	592.72	38.08	554.64	
BW-45	579.46	581.96	18.97	562.99	
BW-46	590.59	593.42	24.08	569.34	
B-53P-TW ~~BW-47~~	591.47 ~~Deleted per~~	594.14 ~~Design (DGC)~~	25.65	568.49	
B-51 ~~P-1~~	597.50 ~~591.78~~	597.60 ~~592.09~~	47.30	550.30	
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-5-77	5:15	P-1	27.6	149,732	125'	[signature]
12-5-77	5:15	P-2	457.6	1,909,750	145'	[signature]
		P-3				
		P-4				
		P-5				
12-5-77	5:15	P-6	55.1	292,791	120'	[signature]
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-6-77

Time: Start 2:00 P.M. Well Meter # D-1

Finish 3:15 P.M. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.69	609.55	
BW-41	616.28	618.09	26.84	591.25	
BW-42	596.61	600.86	26.39	574.47	
BW-43	598.07	599.01	20.62	578.39	
BW-44	589.87	592.72	38.67	554.05	
BW-45	579.46	581.96	19.08	562.88	
BW-46	590.59	593.42	25.03	568.39	
B-51	597.50	597.60	48.19	549.41	
B-53P-TW	591.47	594.14	25.83	568.31	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40			
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-6-77	3:15	P-1	29.6	158,400	130'	RWD
12-6-77	3:15	P-2	473.0	1,977,570	140'	RWD
		P-3				
		P-4				
		P-5				
12-6-77	3:15	P-6	57.5	301,271	100'	RWD
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-7-77

Time: Start 2:15 P.M. Well Meter # D-1

Finish 3:15 P.M. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.58	609.66	
BW-41	616.28	618.09	25.35	592.74	
BW-42	596.61	600.86	25.76	575.10	
BW-43	598.07	599.01	21.07	577.94	
BW-44	589.87	592.72	36.40	559.32	
BW-45	579.46	581.96	19.29	562.67	
BW-46	590.59	593.42	24.32	569.10	
B-51	597.50	597.60	47.57	550.03	
B-53P-TW	591.47	594.14	25.74	568.40	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40			
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-7-77	3:15	P-1	31.2	169,272	120'	R.W.C
12-7-77	3:15	P-2	489.8	2,039,035	150'	R.W.C
		P-3				
		P-4				
		P-5				
12-7-77	3:15	P-6	60.1	310,604	120'	R.W.C
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-8-77

Time: Start 2:00 P.M. Well Meter # D-1

Finish 3:00 P.M. Inspector's Initials R.W.A

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.52	609.72	
BW-41	616.28	618.09	25.37	592.72	
BW-42	596.61	600.86	25.84	575.02	
BW-43	598.07	599.01	21.22	577.79	
BW-44	589.87	592.72	38.65	554.07	
BW-45	579.46	581.96	19.30	562.66	
BW-46	590.59	593.42	24.52	568.90	
B-51	597.50	597.60	47.82	549.78	
B-53P-TW	591.47	594.14	25.80	568.39	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40			
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-8-77	3:00	P-1	32.6	178,712	125'	RWA
12-8-77	3:00	P-2	506.7	2,105,790	150'	RWA
		P-3				
		P-4				
		P-5				
12-8-77	3:00	P-6	62.6	319,572	125'	RWA
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-9-77

Time: Start 2:00 Well Meter # D-1

Finish 3:00 Inspector's Initials KWA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.51	609.73	
BW-41	616.28	618.09	25.33	592.76	
BW-42	596.61	600.86	25.90	574.96	
BW-43	598.07	599.01	21.22	577.79	
BW-44	589.87	592.72	33.68	559.04	
BW-45	579.46	581.96	Destroyed 12-8-77		
BW-46	590.59	593.42	24.62	568.80	
B-51	597.50	597.60	48.00	549.60	
B-53P-TW	591.47	594.14	25.99	568.15	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	25.00	565.40	
P-6	588.75	590.20			
P-7	591.28	591.94	35.11	566.83	

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-9-77	3:00	P-1	33.7	187,718	125'	[illegible]
12-9-77	3:00	P-2	525.4	2,171,910	150'	[illegible]
		P-3				
		P-4				
		P-5				
12-9-77	3:00	P-6	65.2	328,671	130'	[illegible]
		P-7				

PGC-1
Revision 1

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-10-77

Time: Start 1:30 P.M. Well Meter # D-1

Finish 2:30 P.M. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.06	598.74	
BW-40	646.45	646.24	36.61	609.63	
BW-41	616.28	618.09	25.42	592.67	
BW-42	596.61	600.86	26.02	574.84	
BW-43	598.07	599.01	22.00	577.01	
BW-44	589.87	592.72	38.92	553.80	
BW-45	579.46	581.96	——		
BW-46	590.59	593.42	25.04	568.38	
B-51	597.50	597.60	48.05	549.55	
B-53P-TW	591.47	594.14	26.45	567.69	
P-1	591.78	592.09			
P-2	588.39	589.68			
P-4	589.36	590.40	25.30	565.10	
P-6	588.75	590.20			
P-7	591.28	591.94	25.28	566.66	

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
12-10-77	2:30	P-2	543.6	1,238,860	Depth Gauge 150'	[illegible]
12-10-77	2:30	P-1	35.1	196,394	125'	[illegible]
		P-3				
		P-4				
		P-5				
12-10-77	2:30	P-6	67.7	337,432	125'	[illegible]
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-22-77

Time: Start 4:15 P.M. Well Meter # D-1

Finish 5:00 P.M. Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.10	598.70	
BW-40	646.45	646.24	36.45	~~609.79~~ 609.71	#
BW-41	616.28	618.09	25.25	592.84	
BW-42	596.61	600.86	24.92	575.94	
BW-43	598.07	599.01	19.92	579.09	
BW-44	589.87	592.72	36.85	555.87	
BW-45	579.46	581.96	17.54	564.42	
BW-46	590.59	593.42	23.37	570.05	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-21-77	5:00	P-1	11.6	33,387	depth Gauge 210	RWS
		P-2	221.5	970,666	depth Gauge 150	RWS
		P-3				
		P-4				
		P-5				
11-22-77	5:00	P-6	21.2	167,576	depth gauge 120'	RWS
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-23-77

Time: Start 1:20 p.m. Well Meter # D-1

Finish 2:00 p.m. Inspector's Initials W. J. W.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.16	598.64	
BW-40	646.45	646.24	36.53	609.71	
BW-41	616.28	618.09	25.21	592.88	
BW-42	596.61	600.86	25.15	575.71	
BW-43	598.07	599.01	19.40	579.61	
BW-44	589.87	592.72	37.00	555.72	
BW-45	579.46	581.96	17.64	564.32	
BW-46	590.59	593.42	23.49	569.93	
BW-47	Deleted per	Design (DGC)			
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per	RWB (Construction)			
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11/23/77	1:55	P-1	12.0	35,895	Pump not pumping Depth 80'	W.J.W.
11/23/77	1:57	P-2	238.6	1,038,200	Depth 145	W.J.W
11/23/77	2:00	P-3	23.7	176,750	Depth 118	W.J.W.
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-25-77

Time: Start 2:30 Well Meter # D-1

Finish 3:15 Inspector's Initials GwA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.35	609.89	
BW-41	616.28	618.09	25.18	592.91	
BW-42	596.61	600.86	25.22	575.64	
BW-43	598.07	599.01	19.29	579.72	
BW-44	589.87	592.72	36.51	556.21	
BW-45	579.46	581.96	17.88	564.08	
BW-46	590.59	593.42	23.45	569.97	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-25-77	3:15	P-1	12.1	36,980	depth gage 80'	[illegible]
11-25-77	3:15	P-2	276.6	1,188,900	depth gage 150'	[illegible]
		P-3				
		P-4				
		P-5				
11-25-77	2:30	P-6	29.4	197,736	depth gage 125'	[illegible]
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-26-77

Time: Start 3:30 Well Meter # D-1

Finish 4:30 Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.06	598.74	
BW-40	646.45	646.24	36.51	~~610.73~~ 609.73	#
BW-41	616.28	618.09	25.35	592.74	
BW-42	596.61	600.86	25.31	575.55	
BW-43	598.07	599.01	19.01	580.00	
BW-44	589.87	592.72	36.58	556.14	
BW-45	579.46	581.96	19.29	562.67	
BW-46	590.59	593.42	23.70	569.72	
BW-47	Deleted per	Design (DGC)			
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per	RWB (Construction)			
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-26-77	4:30	P-1	12.1	36,981	depth gauge = 80'	[signature]
11-26-77	4:30	P-2	296.3	1,267,225	depth gauge = 14.5	[signature]
		P-3				
		P-4				
		P-5				
11-26-77	4:30	P-6	32.4	208,511	depth gauge = 12.5'	[signature]
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-28-77

Time: Start 2:15 Well Meter # D-1

Finish 3:00 Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.13	598.67	
BW-40	646.45	646.24	34.54	609.70	
BW-41	616.28	618.09	25.55	592.54	
BW-42	596.61	600.86	25.45	575.41	
BW-43	598.07	599.01	19.43	579.58	
BW-44	589.87	592.72	36.70	556.02	
BW-45	579.46	581.96	18.42	563.54	
BW-46	590.59	593.42	24.16	569.26	
BW-47	Deleted per Design (DGC)				
B-53P-TW ~~P-1~~	591.47 ~~591.78~~	594.14 ~~592.09~~	25.43	568.71	
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-26-77	3:00	P-1	12.5	40,000	~~depth gauge~~ 100'	[illegible]
11-26-77	3:00	P-2	322.5	1,410,500	145'	[illegible]
		P-3				
		P-4				
		P-5				
11-28-77	3:00	P-6	37.5	227036	120'	[illegible]
		P-7				
		~~D-53F-FW~~				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-29-77

Time: Start 2:30 Well Meter # D-1

Finish 3:15 Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.10	598.70	
BW-40	646.45	646.24	36.48	609.76	
BW-41	616.28	618.09	25.40	592.69	
BW-42	596.61	600.86	25.57	575.29	
BW-43	598.07	599.01	20.23	578.78	
BW-44	589.87	592.72	36.71	556.01	
BW-45	579.46	581.96	18.47	563.49	
BW-46	590.59	593.42	24.00	569.42	
BW-47	Deleted per Design (DGC)				
B-53P-TW ~~P-1~~	591.47 ~~591.78~~	594.14 ~~592.09~~	25.46	568.68	
BW-51 ~~P-2~~	597.50 ~~588.39~~	597.60 ~~589.68~~	46.52	551.08	
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-29-77	3:15	P-1	12.6	22,900	depth gauge 120'	RWL
11-29-77	3:15	P-2	352.0	1,483,700	140'	RWL
		P-3				
		P-4				
		P-5				
11-29-77	3:15	P-6	40.1	236,606	115'	RWL
		P-7				

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-30-77

Time: Start 2:00 Well Meter # D-1

Finish 3:00 Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.06	598.74	
BW-40	646.45	646.24	36.51	609.73	
BW-41	616.28	618.09	25.27	592.82	
BW-42	596.61	600.86	25.65	575.21	
BW-43	598.07	599.01	22.97	576.04	
BW-44	589.87	592.72	37.00	555.72	
BW-45	579.46	581.96	18.61	563.35	
BW-46	590.59	593.42	24.16	569.26	
BW-47	Deleted per Design (DGC)				
BW-51 ~~P-1~~	597.50 ~~591.78~~	597.60 ~~592.09~~	46.57	551.03	
B-531-TW ~~P-2~~	591.47 ~~588.39~~	594.14 ~~589.68~~	25.87	568.27	
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
11-30-77	3:00	P-1	15.6	61,882	120'	RwA
11-30-77	3:00	P-2	368.5	1,553,700	142'	RwA
		P-3				
		P-4				
		P-5				
11-30-77	3:00	P-6	42.6	245,950	121'	RwA
		P-7				

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Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-1-77

Time: Start 2:00 Well Meter # D-1

Finish 3:00 Inspector's Initials LwA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.50	609.74	
BW-41	616.28	618.09	25.30	592.79	
BW-42	596.61	600.86	25.70	575.16	
BW-43	598.07	599.01	20.44	578.57	
BW-44	589.87	592.72	38.15	554.57	
BW-45	579.46	581.96	18.58	563.38	
BW-46	590.59	593.42	24.07	569.35	
BW-~~47~~ 51	597.50 ~~Deleted per Design (DGG)~~	597.60	47.15	550.45	
~~B-53P-TW~~ ~~P-1~~	~~591.47~~ ~~591.78~~	~~594.14~~ ~~592.09~~	25.47	568.67	
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-1-77	3:00	P-1	18.4	81,060	105'	[illegible]
12-1-77	3:00	P-2	386.3	1,624,590	145'	[illegible]
		P-3				
		P-4				
		P-5				
12-1-77	3:00	P-6	45.1	255322	100'	[illegible]
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 12-2-77

Time: Start 2:00 Well Meter # D-1

Finish 3:00 Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.54	609.70	
BW-41	616.28	618.09	25.35	592.74	
BW-42	596.61	600.86	25.71	575.15	
BW-43	598.07	599.01	20.42	578.59	
BW-44	589.87	592.72	37.19	555.53	
BW-45	579.46	581.96	18.70	563.26	
BW-46	590.59	593.42	24.00	569.42	
B-53 P-7W ~~BW-47~~	591.47 ~~Deleted per~~	594.14 ~~Design (DGC).~~	25.47	568.67	
B-51 ~~P-1~~	597.50 ~~591.78~~	597.60 ~~592.09~~	46.82	550.78	
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS depth gauge	INSPECTOR'S INITIALS
12-2-77	3:00	P-1	20.4	94,720	130'	[signature]
12-2-77	3:00	P-2	404.0	1,694,906	140'	[signature]
		P-3				
		P-4				
		P-5				
12-2-77	3:00	P-6	47.5	264,461	120'	[signature]
		P-7				

Rob – Please take action.

DUKE POWER COMPANY

P. O. BOX 422

CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR PROJECT
GAFFNEY, S. C. 29340

TELEPHONE: AREA 803
489-8131

November 21, 1977

C Q Reeves

Re Cherokee 1-3
Powerhouse Groundwater Control
File No CK-1105.02, CK-1110.00

Enclosed are the Powerhouse Groundwater Control Readings to date.

J T Moore

J T Moore
Project Manager

LCA/bj

cc ~~Law~~ Engineering Testing Company
Attention C E Sams

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-3-77

Time: Start 3:40 pm Well Meter # D-1

Finish 4:20 pm Inspector's Initials RwA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.94	598.86 ~~588.86~~	
BW-40	646.45	646.24	36.21	610.03	
BW-41	616.28	618.09	26.75	591.34	Just installed
BW-42	596.61	600.86	23.19	577.67	
BW-43	598.07	599.01	9.60	589.41	
BW-44	589.87	592.72	34.80	557.92	
BW-45	579.46	581.96	14.31	567.65	
BW-46	590.59	593.42	20.65	572.77	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-4-77

Time: Start 10:30 A.m Well Meter # D-1

Finish 11:30 A.m Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.04	598.76	
BW-40	646.45	646.24	36.23	610.01	
BW-41	616.28	618.09	25.21	592.88	
BW-42	596.61	600.86	23.38	~~577.48~~ 577.38	
BW-43	598.07	599.01	10.06	588.95	
BW-44	589.87	592.72	34.80	557.92	
BW-45	579.46	581.96	14.45	567.51	
BW-46	590.59	593.42	21.03	572.39	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-8-77

Time: Start 1:00 P.M. Well Meter # D-1

Finish 2:00 PM Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.27	609.97	
BW-41	616.28	618.09	25.12	592.97	
BW-42	596.61	600.86	22.50	578.36	
BW-43	598.07	599.01	9.74	589.27	
BW-44	589.87	592.72	34.90	557.82	
BW-45	579.46	581.96	13.80	568.16	
BW-46	590.59	593.42	19.22	574.20	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-9-77

Time: Start 2:30 PM Well Meter # D-1

Finish 3:00 PM Inspector's Initials BWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.25	609.99	
BW-41	616.28	618.09	25.15	592.94	
BW-42	596.61	600.86	22.34	578.52	
BW-43	598.07	599.01	11.04	587.97	
BW-44	589.87	592.72	35.27	557.45	
BW-45	579.46	581.96	14.75	567.21	
BW-46	590.59	593.42	18.95	574.47	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-10-77

Time: Start 8:00 A.M. Well Meter # D-1

Finish 8:45 A.M. Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.90	598.90	
BW-40	646.45	646.24	36.71	609.53	
BW-41	616.28	618.09	25.11 ~~35.11~~	592.98 ~~582.98~~	
BW-42	596.61	600.86	22.35	578.51	
BW-43	598.07	599.01	10.83	588.18	
BW-44	589.87	592.72	35.42	557.30	
BW-45	579.46	581.96	14.63	567.33	
BW-46	590.59	593.42	21.50	571.92	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-11-77

Time: Start 8:00 A.M. Well Meter # D-1

Finish 8:30 A.M. Inspector's Initials RwA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.07	598.73	only P-2 Pumping
BW-40	646.45	646.24	36.36	609.88	
BW-41	616.28	618.09	25.39	592.70	
BW-42	596.61	600.86	22.42	578.44	
BW-43	598.07	599.01	11.85	587.16	
BW-44	589.87	592.72	35.58	557.14	
BW-45	579.46	581.96	15.08	566.88	
BW-46	590.59	593.42	22.00	571.42	only P-2 Pumping
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
		P-2				
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-11-77

Time: Start 6:15 p.m. Well Meter # D-1

Finish 6:45 p.m. Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.31	609.93	
BW-41	616.28	618.09	25.17	592.92	
BW-42	596.61	600.86	20.85	580.01	
BW-43	598.07	599.01	14.15	584.86	
BW-44	589.87	592.72	35.69	557.03	
BW-45	579.46	581.96	15.35	566.61	
BW-46	590.59	593.42	22.12	571.30	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
11-11-77	6:45	P-2	3.8	106292	Pump started at 6:45 depth 152'	
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-12-77

Time: Start 7:10 A.M. Well Meter # P-1

Finish 8:05 A.M. Inspector's Initials W.J.W.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.01	598.79	
BW-40	646.45	646.24	36.42	609.82	
BW-41	616.28	618.09	25.40	592.69	
BW-42	596.61	600.86	22.66	578.20	
BW-43	598.07	599.01	17.61	581.40	
BW-44	589.87	592.72	35.88	556.84	
BW-45	579.46	581.96	15.55	566.41	
BW-46	590.59	593.42	22.29	571.13	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
	~~[illegible]~~	P-1				
11-12-91	9:M 8:05	P-2	15.5	152725	Depth 146'	W J W.
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

146'

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-12-77

Time: Start 7:40 P.M. Well Meter # D-1

Finish 8:22 P.M. Inspector's Initials W.J.W.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.18	598.62	
BW-40	646.45	646.24	36.52	609.72	
BW-41	616.28	618.09	25.35	592.74	
BW-42	596.61	600.86	22.72	578.14	
BW-43	598.07	599.01	18.05	580.96	
BW-44	589.87	592.72	35.95	556.77	
BW-45	579.46	581.96	15.42	566.54	
BW-46	590.59	593.42	22.48	570.94	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
11/12/77	8:22 AM	P-2	25.9	194,550	147' Depth	W. J. N.
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-!
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-13-77

Time: Start 7:15 A.M. Well Meter # D-1

Finish 7:50 A.M. Inspector's Initials W.J.W.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.01	598.79	
BW-40	646.45	646.24	36.47	609.77	
BW-41	616.28	618.09	25.41	592.68	
BW-42	596.61	600.86	23.06	577.80	
BW-43	598.07	599.01	18.09	580.92	
BW-44	589.87	592.72	36.03	556.69	
BW-45	579.46	581.96	15.51	566.45	
BW-46	590.59	593.42	22.48	570.94	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
11/13/17	7:50AM	P-2	35.8	233,975	Depth 150'	W.J.W.
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-13-77

Time: Start 7:08 P.M. Well Meter # D-1

Finish 7:43 P.M. Inspector's Initials W.J.W.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.12	598.68	~~P5~~
BW-40	646.45	646.24	36.40	609.84	
BW-41	616.28	618.09	25.27	592.82	
BW-42	596.61	600.86	23.06	577.80	
BW-43	598.07	599.01	18.01	581.00	
BW-44	589.87	592.72	35.93	556.79 ~~[illegible]~~	
BW-45	579.46	581.96	15.62	566.34	
BW-46	590.59	593.42	22.57	570.85	
BW-47	Deleted per	Design (DGC)			
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per	RWB (Construction)			
P-6	588.75	590.20			
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
11/3/77	7:45 P.M.	P-2	46.0	279,400	Depth 150'	W. J. W.
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-14-77

Time: Start 7:25 A.M. Well Meter # D-1

Finish 7:51 A.M. Inspector's Initials W.J.W.

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.13	598.67	
BW-40	646.45	646.24	36.39	609.85	
BW-41	616.28	618.09	25.28	592.81	
BW-42	596.61	600.86	23.15	577.71	
BW-43	598.07	599.01	17.90	581.11	
BW-44	589.87	592.72	35.91	556.81	
BW-45	579.46	581.96	15.66	566.30	
BW-46	590.59	593.42	22.58	570.84	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
11/14/77	9:51 A.M.	P-2	56.4	315,500	Depth 150'	
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-14-77

Time: Start ~~6:15~~ 6:20 P.M. Well Meter # P-2

Finish 6:50 P.M. Inspector's Initials W.J.W

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	34.88	598.92	
BW-40	646.45	646.24	36.42	609.82	
BW-41	616.28	618.09	25.22	592.87	
BW-42	596.61	600.86	23.22	577.64	
BW-43	598.07	599.01	18.80	580.21	
BW-44	589.87	592.72	36.00	556.72	
BW-45	579.46	581.96	15.94	566.02	
BW-46	590.59	593.42	22.15	571.27	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
		P-1				
11/14/77	6:50 P.M.	P-2	65.6	352,300	Depth ~~145~~ 146'	W.J.W.
11/14/77	6:55 P.M.	P-3	2.5	99,620	Pump not running Depth 65'	W.J.W.
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-15-77

Time: Start 7:45 A.M Well Meter # D-1

Finish 8:20 AM Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.32	609.92	
BW-41	616.28	618.09	25.21	592.88	
BW-42	596.61	600.86	23.49	577.37	
BW-43	598.07	599.01	18.69	580.32	
BW-44	589.87	592.72	36.05	556.67	
BW-45	579.46	581.96	15.88	566.08	
BW-46	590.59	593.42	22.68	570.74	
BW-47	Deleted per	Design (DGC)			
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per	RWB (Construction)			
P-6	588.75	590.20			
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-15-78	8:20AM.	P-1	2.5	9920	depth gage 65'	[illegible]
11-15-78	8:20AM.	P-2	76.9	397,130	depth gage 14.5'	[illegible]
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-15-77

Time: Start 6:00 P.m. Well Meter # D-1

Finish 7:00 PM Inspector's Initials [signature]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.30	609.94	
BW-41	616.28	618.09	25.17	592.92	
BW-42	596.61	600.86	23.49	577.37	
BW-43	598.07	599.01	20.55	578.46	
BW-44	589.87	592.72	36.01	556.71	
BW-45	579.46	581.96	16.11	565.85	
BW-46	590.59	593.42	22.82	570.60	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS Depth Gauge	INSPECTOR'S INITIALS
11-15-77	7:00PM	P-1	3.90	16,406.00	70.00Ft.	
11-15-77	7:00PM	P-2	85.60	431,907.00	Pump Running 140.00 Ft.	
		P-3				
		P-4				
		P-5				
		P-6				
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-16-77

Time: Start 7:20 A.M. Well Meter # D-1

Finish 7:50 A.M. Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.32	609.92	
BW-41	616.28	618.09	25.20	592.89	
BW-42	596.61	600.86	23.60	577.26	
BW-43	598.07	599.01	20.74	578.27	
BW-44	589.87	592.72	36.05	556.67	
BW-45	579.46	581.96	16.14	565.82	
BW-46	590.59	593.42	22.88	570.54	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-16-77	7:50	P-1	3.9	16406	Depth Gauge 125'	[signature]
11-16-77	7:50	P-2	96.1	Pump running 474,074	Depth Gauge 140'	[signature]
		P-3				
		P-4				
		P-5				
11-16-77	7:50	P-6	0.0	Pump not running 85,422	Depth Gauge 125'	[signature]
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-16-77

Time: Start 6:00 P.M. Well Meter # D-1

Finish 6:40 P.M Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.26	609.98	
BW-41	616.28	618.09	25.13	592.96	
BW-42	596.61	600.86	23.71	577.15	
BW-43	598.07	599.01	~~30.35~~	~~568.66~~	Reading Deleted to Erroneous Reading
BW-44	589.87	592.72	36.09	556.63	
BW-45	579.46	581.96	16.35	565.61	
BW-46	590.59	593.42	23.05	570.37	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-16-77	6:40	P-1	8.7	not running 24,355	depth gauge 75'	Rwk
11-16-77	6:40	P-2	104.4	pump running 507,210	depth gauge 145'	Rwk
		P-3				
		P-4				
		P-5				
11-16-77	6:40	P-6	2.6	not running 95,442	depth gauge 120'	Rwk
		P-7				

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-17-77

Time: Start 7:10 A.M Well Meter # D-1

Finish 8:00 A.M Inspector's Initials RWS

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	35.40	610.84	
BW-41	616.28	618.09	25.20	592.89	
BW-42	596.61	600.86	23.87	576.99	
BW-43	598.07	599.01	20.05	578.96	
BW-44	589.87	592.72	36.07	556.65	
BW-45	579.46	581.96	16.50	565.46	
BW-46	590.59	593.42	23.13	570.29	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-17-77	8:00	P-1	8.7	Not running 24,355	depth gauge 75'	[signature]
11-17-77	8:00	P-2	115.6	Pump running 551,465	depth gauge 145'	[signature]
		P-3				
		P-4				
		P-5				
11-17-77	7:10 A.M.	P-6	4.9	Not running 104,344	depth gauge 120'	[signature]
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-17-77

Time: Start 6:00 P.m Well Meter # D-1

Finish 6:50 P.m Inspector's Initials RWA

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.	598.80	
BW-40	646.45	646.24	36.37	609.87	
BW-41	616.28	618.09	25.25	592.84	
BW-42	596.61	600.86	23.97	576.89	
BW-43	598.07	599.01	20.42	578.59	
BW-44	589.87	592.72	36.20	556.52	
BW-45	579.46	581.96	16.63	565.33	
BW-46	590.59	593.42	23.33	570.09	
BW-47	Deleted per	Design (DGC)			
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per	RWB (Construction)			
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-17-77	6:50	P-1	—	—	Pump Out	RwA
11-17-77	6:50	P-2	125.0	587,900	Pump Running depth gauge 150'	RwA
		P-3				
		P-4				
		P-5				
11-17-77	6:50	P-6	6.5	110,615	depth gauge pump not Running	RwA
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-18-77

Time: Start 7:15 A.M. Well Meter # D-1

Finish 8:00 A.M. Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.00	598.80	
BW-40	646.45	646.24	36.38	609.86	
BW-41	616.28	618.09	25.30	592.79	
BW-42	596.61	600.86	24.12	576.74	
BW-43	598.07	599.01	19.95	579.06	
BW-44	589.87	592.72	36.36	556.36	
BW-45	579.46	581.96	16.80	565.16	
BW-46	590.59	593.42	23.34	570.08	
BW-47	Deleted per	Design (DGC)			
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per	RWB (Construction)			
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-18-77	8:00	P-1			Pump out	[illegible]
11-18-77	8:00	P-2	135.9	Pump running 631,300	depth gauge 150'	[illegible]
		P-3				
		P-4				
		P-5				
11-18-77	7:15	P-6	8.4	Pump running 117,940	depth gauge 125'	[illegible]
		P-7				

PGC-1
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-19-77

Time: Start 7:30 A.M. Well Meter # D-1

Finish 8:10 A.M. Inspector's Initials [illegible]

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.08	598.72	
BW-40	646.45	646.24	36.48	609.76	
BW-41	616.28	618.09	25.34	592.75	
BW-42	596.61	600.86	24.35	576.51	
BW-43	598.07	599.01	20.04	578.97	
BW-44	589.87	592.72	36.53	556.19	
BW-45	579.46	581.96	17.05	564.91	
BW-46	590.59	593.42	23.22	570.20	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-19-77	8:10	P-1	10.8	Not running 30 425	depth gauge 75'	Rwd
11-19-77	8:10	P-2	156.7	Pump running 713,530	depth gauge 160'	Rwd
		P-3				
		P-4				
		P-5				
11-19-77	8:10	P-6	11.6	Pump running 130,548	depth gauge 120'	Rwd
		P-7				

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-19-77

Time: Start 3:15 P.M Well Meter # D-1

Finish 3:50 P.M Inspector's Initials RWB

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.08	598.72	
BW-40	646.45	646.24	36.38	609.86	
BW-41	616.28	618.09	25.29	592.80	
BW-42	596.61	600.86	24.37	576.49	
BW-43	598.07	599.01	19.95	579.06	
BW-44	589.87	592.72	36.56	556.16	
BW-45	579.46	581.96	17.06	564.90	
BW-46	590.59	593.42	23.24	570.18	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-19-77	3:50	P-1	10.8	30,425	depth gauge 75'	Rwd
11-19-77	3:50	P-2	162.1	734,570	depth gauge 145'	Rwd
		P-3				
		P-4				
		P-5				
11-19-77	3:50	P-6	12.5	133,914	depth gauge 125'	Rwd
		P-7				

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

Date: 11-24-77

Time: Start 8:30 A.M Well Meter # D-1

Finish 9:00 A.M Inspector's Initials

WELL IDENTIFICATION	GROUND SURFACE ELEVATION (FT)	TOP OF PIPE ELEVATION (FT) A	WELL READING (FT) B	GROUND WATER ELEVATION (FT) A-B	COMMENTS
BW-39	630.78	633.80	35.10	598.70	
BW-40	646.45	646.24	36.42	609.82	
BW-41	616.28	618.09	25.25	592.84	
BW-42	596.61	600.86	24.81	576.05	
BW-43	598.07	599.01	19.98	579.03	
BW-44	589.87	592.72	36.68	556.04	
BW-45	579.46	581.96	17.30	564.66	
BW-46	590.59	593.42	23.29	570.13	
BW-47	Deleted per Design (DGC)				
P-1	591.78	592.09			
P-2	588.39	589.68			
P-3	Deleted - Dry well				
P-4	589.36	590.40			
P-5	Deleted per RWB (Construction)				
P-6	588.75	590.20			
P-7	591.28	591.94			

PGC-2
Revision 0

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
CHEROKEE NUCLEAR STATION

POWERHOUSE GROUNDWATER CONTROL

DATE	TIME	WELL NUMBER	HOURMETER READING (HOURS)	FLOW METER READING (GALLONS)	COMMENTS	INSPECTOR'S INITIALS
11-21-77	8:50	P-1	10.8	30,425	depth Gauge Not Running 77'	DCD
11-21-77	8:55	P-2	195.7	868,415	depth Gauge Pump Running 140'	DCD
		P-3				
		P-4				
		P-5				
11-21-77	8:30	P-6	17.5	153,443	Depth Gauge Not Running 118'	DCD
		P-7				

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-7

NRC RAI:

Submit a summary of the process followed to develop, discard and adopt plausible alternative conceptual models of the groundwater system, and plausible alternative groundwater pathways.

Duke Energy Response:

The response to this RAI is described below in the revised ER text and addition of the attached new FSAR figure (Attachment 7-1).

Associated Revision to the Lee Nuclear Station Combined License Application:

Revise COLA Part 3, ER Chapter 2, Subsection 2.3.1.5.9, as follows:

Within the preferential flow pathway that extends northward from the reactor buildings toward the Hold-Up Pond A and the Broad River (Figure 2.3-16, Sheet 3), groundwater appears to flow through each of the aquifer materials referenced above. The depth of groundwater circulation in the Piedmont area is difficult to define and may be erratic, dependent upon the presence of interconnected rock fractures and gradient. However, based on analysis of groundwater levels at the cluster well locations, vertical gradients are generally in the downward direction, consistent with the topographic slope to the Broad River, indicating that groundwater recharge is occurring and groundwater movement generally parallels topography. Groundwater in storage moves from areas of recharge (impoundments, ridges, mounds, and cooling tower pads) to areas of discharge (impoundments, creeks, and, ultimately, the Broad River).

The projected groundwater movement in the vicinity of the Lee Nuclear Station power block was assessed to evaluate potential contaminant migration for the postulated release scenario (see FSAR, Subsection 2.4.13). For the release scenario, radwaste contaminant sources include the Units 1 and 2 radwaste storage tanks, located 33.5 ft. below plant grade (elevation 556.5 ft. above msl). For the assessment of alternative pathways, five locations were assumed to be plausible points of exposure (i.e., locations at which groundwater would be discharged to the surface and allow human contact or facilitate transport). These points of exposure are as follows:

- Hold-Up Pond A
- Broad River
- Make-Up Pond A
- One Non-jurisdictional wetland located northwest of Unit 1
- Make-Up Pond B

The rate of flow (i.e., the velocity) of groundwater depends on (1) the permeability and effective porosity of the medium through which it is moving and (2) the hydraulic gradient. Average interstitial groundwater velocity within the water table aquifer was determined using a form of the Darcy equation as follows:

$V = K(dh/dl)/ \eta_e$

Where: V = average groundwater velocity (ft. per year [ft/yr])

K = hydraulic conductivity (cm/s converted to ft/yr)

dh/dl = groundwater gradient (ft/ft)

η_e = effective porosity

~~During the current construction dewatering and site investigation, groundwater is drawn toward the excavation as shown on the potentiometric surface maps (Figure 2.3-15). Following the completion of construction dewatering and the return to static conditions, the potentiometric surface beneath the reactor buildings is expected to rebound to a maximum elevation of approximately 579 ft. above msl, the maximum operational groundwater level.~~

~~The projected groundwater flow direction is to the north with an average gradient projected to be approximately 0.034 ft/ft along a preferential flow path from the reactor buildings to the Hold-Up Pond A (Figure 2.3-15, Sheet 8 and Figure 2.3-16, Sheet 3). This groundwater flow path represents the shortest travel distance to a potential exposure point, a distance of 1340 ft. An alternative travel path from the reactor buildings to the Broad River through the partially weathered rock was also evaluated. This alternative flow path, though greater in distance at 1935 ft., results in faster travel time to the point of exposure due to a slightly greater groundwater gradient (0.036 ft/ft) and a greater hydraulic conductivity. Groundwater velocities calculated for the soil and saprolite zone, partially weathered rock zone, and fill material of the surficial hydrogeologic unit at the Lee Nuclear Site are listed in Table 2.3-6. Velocities ranged from 56 ft. per year (ft/yr) in the saprolite/soil zone to 290 ft/yr in the partially weathered rock. The flow velocity within the fill material was found to be 70 ft/yr. As such, travel times for water to migrate from the reactor areas to points of exposure are 6.7 years and greater for the alternative flow path from the reactor building to the Broad River through the bedrock.~~

After construction dewatering and the return to static conditions, the potentiometric surface beneath the reactor buildings is expected to rebound to a maximum elevation of approximately 584 ft. above msl, the maximum anticipated groundwater level during operations. Based on the preceding discussion of hydraulic conductivity (Subsection 2.3.1.5.8), effective porosity (Subsection 2.3.1.5.3), hydraulic gradients (derived from Figure 2.3-15, Sheet 8), and groundwater velocities were determined for multiple flow paths. For example, one projected groundwater flow path (Pathway 1) is to the north from the Unit 2 reactor building to Hold-Up Pond A, with an average projected gradient of approximately 0.040 ft/ft and a distance to a potential exposure point of 1250 ft., which is the shortest of the flow paths evaluated. Another flow path (Pathway 2) from the Unit 2 reactor building to the Broad River, through partially weathered rock, had a faster travel time to the point of exposure because of greater hydraulic conductivity, even though it has a greater distance of 1935 ft. These two pathways are shown in Table 2.3-6.

Three additional pathways were evaluated to determine the most conservative travel pathway from potential points of release to exposure points, based on hydrogeologic conditions. The distances through the various aquifer materials in which groundwater movement occurs were estimated from cross-sections, allowing travel times for each alternative flow path to be determined. In summary, the estimated travel times for the alternative groundwater pathways are as follows:

- Pathway 1: Groundwater travels from Unit 2 to Hold-Up Pond A in approximately 7.2 years.
- Pathway 2: From Unit 2 to the Broad River in approximately 2.8 years.
- Pathway 3: From Unit 2 to Make-Up Pond A in approximately 23 years.
- Pathway 4: From Unit 1 to the non-jurisdictional wetland area in approximately 53 years.
- Pathway 5: From Unit 1 to Make-Up Pond B in approximately 9.8 years.

These pathways are represented on FSAR Figure 2.4.12-208. The results of the analysis identified the conservative flow path for a postulated release to be from the Unit 2 radwaste storage tank to the Broad River (Pathway 2, Figure 2.3-16, Sheet 3).

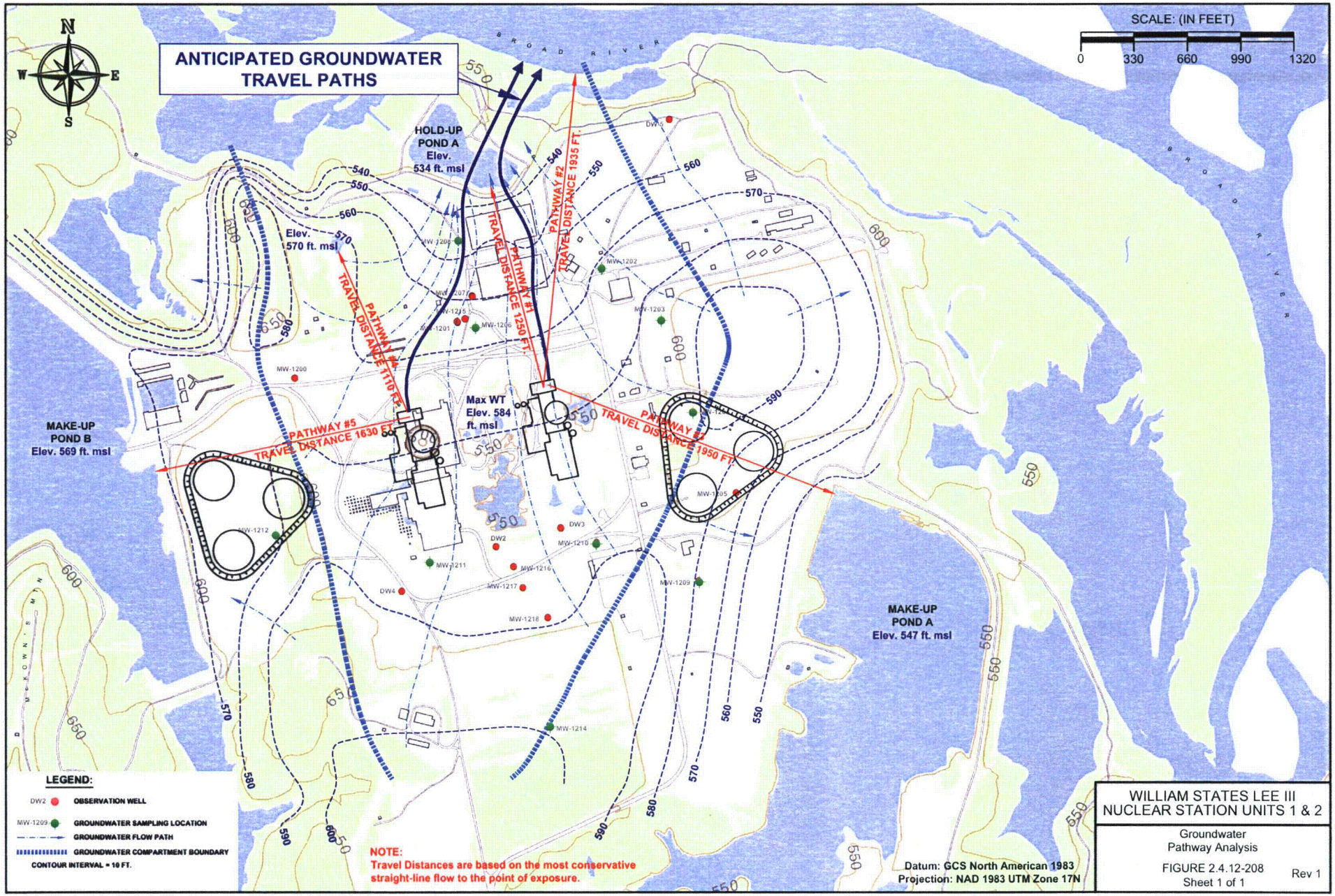
Associated Attachment:

Attachment 7-1 FSAR Figure 2.4.12-208 (new)

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 7-1 to RAI 7

FSAR Figure 2.4.12-208 (new)



WILLIAM STATES LEE III NUCLEAR STATION UNITS 1 & 2

Groundwater Pathway Analysis

FIGURE 2.4.12-208
Sheet 1 of 1

Rev 1

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-8

NRC RAI:

Submit the calculation package for groundwater movement. Identify in Tables 2.3 - 4 and 2.3 - 6 which parameters were measured and which were estimated. Note, where possible, the corroboration of values determined for the Lee Nuclear Station with published values used to represent similar settings elsewhere in the Piedmont region.

Duke Energy Response:

The calculation package for groundwater movement is available for review in the Duke Energy Charlotte office or our contractor offices in Richland, WA or Bethesda, MD. ER Tables 2.3-4 and 2.3-6 are being revised based on information obtained from FSAR Table 2.5.4-211 (ER Table 2.3-4) and revisions to effective porosity and groundwater gradient values (ER Table 2.3-6).

Measured parameters used in Table 2.3-4 include the following:

- Grain size distribution (sieve + hydrometer and sieve), ASTM D 422-63 (2002) and ASTM D 6913-04.
- Specific gravity, ASTM D 854-06.
- Unit weight of soil, ASTM D 5084 -03 (Sections 5.7 – 5.9 and 8.1; Subsection 11.3.2).
- Hydraulic conductivity, ASTM D 5084-03.

Derived (estimated) parameters in Table 2.3-4 include:

- Total porosity, which was calculated using the measured dry unit weight and specific gravity of soil and the standard unit weight of water.
- Effective porosity, which was assumed to be equivalent to the specific yield of the sample. Effective porosity was estimated for samples that had measured grain-size distribution data for sand, silt, and clay fractions. The grain-size distribution data were used to estimate the effective porosity by interpolation of the sample data using trilinear graphs.
- Effective porosity for partially weathered rock (PWR), which was estimated based on the assumption that the difference between the saturated and wet unit weights of the sample represents the loss of water due to natural gravity drainage.

Parameters calculated/estimated in Table 2.3-6 include:

- Hydraulic conductivities (K) (including the various statistical values related to K values shown in Table 2.3-6), which were calculated based on 1) direct measurements of changing water levels during pumping from a well at a known rate or 2) direct measurements of water levels prior to the removal of water and during the return of water into the well.
- Effective porosities (n_e), which were estimated using trilinear graphs and soil properties.
- Groundwater gradients (I), which were calculated using measurements of distance between geographical positions and the difference between the projected water table elevations at those locations.

- Groundwater velocities, which were calculated based on each of the estimates of K, n_e, and I above.

Duke Energy has investigated subsurface materials encountered in the Piedmont province at other sites, including the Catawba Nuclear Station Site, located approximately 35 miles east-northeast of the Lee Nuclear Site. The information presented below allows comparison of the mean hydraulic conductivity and mean effective porosity values determined for soil/saprolite and PWR at the Catawba Nuclear Site and Lee Nuclear Site.

	Mean Hydraulic Conductivity (cm/sec)	Mean Effective Porosity
Catawba Nuclear Site		
Soil/Saprolite	3.27E-4	26%
PWR/Fractured Rock	1.48E-4	5.5%
Lee Nuclear Site		
Soil/Saprolite	2.73E-4	20%
PWR	8.09E-4	8%

Associated Revisions to the Lee Nuclear Station Combined License Application:

1. Revise COLA Part 3, ER Chapter 2, by replacing ER Table 2.3-4 with Attachment 8-1.
2. Revise COLA Part 3, ER Chapter 2, ER Table 2.3-6, as shown on Attachment 8-2.
3. Revise COLA Part 2, FSAR Chapter 2, by replacing FSAR Table 2.4.12-203 with Attachment 8-3.
4. Revise COLA Part 2, FSAR Chapter 2, by replacing FSAR Table 2.4.12-204 with Attachment 8-4.

Associated Attachments:

Attachment 8-1 ER Table 2.3-4, Soil Characteristics at the Lee Nuclear Site.

Attachment 8-2 ER Table 2.3-6, Aquifer Characteristics.

Attachment 8-3 FSAR Table 2.4.12-203, Soil Characteristics at the Lee Nuclear Site.

Attachment 8-4 FSAR Table 2.4.12-204, Aquifer Characteristics.

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 8-1 to RAI 8

ER Table 2.3-4, Soil Characteristics at the Lee Nuclear Site

TABLE 2.3-4
SOIL CHARACTERISTICS AT THE LEE NUCLEAR SITE

		All Fill Samples(a)			Test Fill Only	Remolded Fill(b)	Residual Soil			Saprolite			PWR
		N60 ≤ 10 (N ≤ 8)(c)	11 < N60 ≤ 30 (8 < N ≤ 23)(c)	31 < N60 ≤ 100 (23 < N ≤ 75)(c)	10 < N60 ≤ 30 (8 < N ≤ 23)(c)	N/A (N/A)	N60 ≤ 10 (N ≤ 8)(c)	11 < N60 ≤ 30 (8 < N ≤ 23)(c)	31 < N60 ≤ 100 (23 < N ≤ 75)(c)	N60 ≤ 10 (N ≤ 8)(c)	11 < N60 ≤ 30 (8 < N ≤ 23)(c)	31 < N60 ≤ 100 (23 < N ≤ 75)(c)	N60 > 100 (N > 75)(c)
Percent gravel(d)	%	0(e) [1]	4 ± 6 [36]	6 ± 8 [6]	10 ± 7 [6]	3 ± 7 [9]	0 [1]	0 [4]	0 [1]	3 ± 3 [8]	3 ± 7 [20]	1 ± 1 [11]	9 ± 14 [8]
Percent sand(d)	%	42(e) [1]	34 ± 8 [36]	47 ± 19 [6]	33 ± 11 [6]	34 ± 12 [9]	57(e) [1]	46 ± 15 [4]	40(e) [1]	44 ± 11 [8]	52 ± 12 [20]	52 ± 13 [11]	55 ± 19 [8]
Percent fines (<#200 sieve)(d)	%	58(e)[1]	62 ± 11 [36]	47 ± 21 [6]	57 ± 15 [6]	64 ± 12 [9]	43(e) [1]	54 ± 14 [4]	60(e) [1]	54 ± 13 [8]	46 ± 15 [20]	47 ± 13 [11]	36 ± 22 [8]
Percent silt	%	-	41 ± 9 [13]	42(e) [1]	37 ± 8 [6]	-	-	55(e) [1]	56(e) [1]	53(e) [2]	41 ± 10 [3]	34(e) [1]	-
Percent clay (<5μm)	%	-	18 ± 9 [13]	19(e) [1]	20 ± 11 [6]	-	-	19(e) [1]	4(e) [1]	6(e) [2]	5 ± 2 [3]	8(e) [1]	-
Specific gravity, *Gs*		-	2.71 ± .06 [20]	2.68(e) [1]	2.72 ± .09 [6]	2.72 ± 0.02 [9]	-	2.72(e) [2]	2.70(e) [1]	2.72 ± 0.04 [6]	2.71 ± .04 [11]	2.69 ± .04 [4]	-
Dry unit weight, γ*dry*	pcf	-	101 ± 8 [13]	-	101 ± 2 [6]	90 ± 5 [5]	-	88(e) [2]	-	93 ± 11 [4]	94 ± 15 [8]	93(e) [2]	-
Wet unit weight, γ*t*	pcf	-	122 ± 5 [13]	-	122 ± 3 [6]	110 ± 3 [5]	-	113(e) [2]	-	116 ± 11 [4]	117 ± 7 [8]	114(e) [2]	135(f)
Saturated unit weight, γ*sat*	pcf	-	125 ± 5 [13]	-	126 ± 2 [6]	119 ± 3 [5]	-	118(e) [2]	-	121 ± 7 [4]	124 ± 7 [7]	121(e) [2]	140(f)
Hydraulic conductivity (g), k	ft/yr	-	-	-	-	29 ± 11 [5]	-	-	-	-	-	-	-
Total Porosity	%	-	40	-	40	47	-	48	-	45	44	45	-
Effective Porosity	%	-	9 ± 2 (h)	12 ± 2 (h)	7 ± 2 (h)	-	-	15 ± 6 (h)	19	20 ± 1 (h)	22 ± 1 (h)	18 ± 2 (h)	8

a) All fill includes samples classified as fill on boring logs, including test fill samples, but does not include remolded fill samples.
b) Remolded soil samples compacted to 95% of Standard Proctor maximum dry density at optimum moisture content.
c) Field standard penetration test blowcount number (SPT-N) values to correlate to N60-values are computed using the average energy transfer ratio (ETR) of 80.0%. N=N60(60/80.0).
d) Three samples of alluvium were tested for moisture content and two underwent grain-size analysis; the results are not shown in this table.
e) Insufficient data to determine standard deviation.
f) These values are from PSAR, Table 2D-3 and Table 2A-1 (Reference 201 in the PSAR).
g) 1 ft/year * 9.67 x 10-7 = 1 cm/sec.
h) Range of values.
i) Minimum effective porosity based on estimate from saturated and wet unit weights.
Note: The number in brackets is the count, [Number].
Weighted Average dependent upon the limiting number of samples for each result.

	Weighted Average
Fill Samples (in place)	
Total Porosity	40%
Effective Porosity	9%
Residual Soil and Saprolite	
Total Porosity	45%
Effective Porosity	20%
Partially Weathered Rock (PWR)	
Total Porosity	NM
Effective Porosity	8%

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 8-2 to RAI 8

ER Table 2.3-6, Aquifer Characteristics

TABLE 2.3-6
AQUIFER CHARACTERISTICS

Material	Hydraulic Conductivity (K) Minimum	Geometric Mean	Median	Conservative Estimate	Maximum	Source
Saprolite/Soil Kv	2.45×10^{-8}	2.91×10^{-6}	2.10×10^{-6}	4.4×10^{-5}	2.55×10^{-4}	1973 investigation laboratory analyses.
Saprolite/Soil K_h	9.67×10^{-7}	5.52×10^{-5}	6.38×10^{-5}	3.2×10^{-4}	2.26×10^{-3}	1973 investigation field tests and 2006 slug tests.
Bedrock – PWR K_h	9.67×10^{-7}	9.36×10^{-5}	1.54×10^{-4}	1.4×10^{-3}	9.89×10^{-3}	1973 investigation packer tests and 2006 slug, aquifer, and packer tests.
Unconsolidated Material	2.21×10^{-4}	8.61×10^{-4}	4.10×10^{-4}	2.6×10^{-3}	3.90×10^{-3}	1973 aquifer tests and 2006 pumping well.
Fill Material	4.22×10^{-5}	2.26×10^{-4}	1.81×10^{-4}	6.2×10^{-4}	1.03×10^{-3}	2006 slug tests.

Units are in centimeters per second (cm/s).

PWR - Partially weathered rock.

K_v - Vertical hydraulic conductivity.

K_h - Horizontial hydraulic conductivity.

Conservative Estimate - The geometric mean of samples exceeding the median.

Conservative Estimate for Bedrock K_h was obtained from results of 2006 pump test.

Bold Conservative Estimates - These numbers were used below to calculate the groundwater velocity.

Unconsolidated mMaterial-fFill material, soil, saprolite, and partially weathered rock

Material	Hydraulic Conductivity K (cm/s)	Effective Porosity n_e (%)	Groundwater Gradient dh/dl (ft/ft)	Groundwater Velocity V ft/yr	Groundwater Exposure Travel Time
Fill Material	6.2×10^{-4}	319	0.0340	70285	A release at the base of the Liquid Radwaste Tank #2 containment structure (elevation 556.5 ft. above msl) preferentially migrates through the layer of partially weathered rock is the pathway with the shortest travel time to as it exhibits the shortest travel time (2.8 years) to a point of exposure (i.e., the Broad River at a distance of 1935 ft.). of 6.7 years. Other likely pathways through solid and saprolite and fill are shorter, (1340 ft. to the Hold-Up Pond A), but take a longer travel time of 20.3 years. Four other analyzed pathways suggested travel times ranging from 7.2 to 53 years to a point of exposure.
Saprolite/Soil	3.2×10^{-4}	20	0.0340	566	
Bedrock - PWR	1.4×10^{-3}	18	0.0386	290692	

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 8-3 to RAI 8

FSAR Table 2.4.12-203, Soil Characteristics at the Lee Nuclear Site

WLS COL 2.4-4

TABLE 2.4.12-203
SOIL CHARACTERISTICS AT THE LEE NUCLEAR SITE

		All Fill Samples(a)			Test Fill Only	Remolded Fill(b)	Residual Soil			Saprolite			PWR
		N60 ≤ 10 (N ≤ 8)(c)	11 < N60 ≤ 30 (8 < N ≤ 23)(c)	31 < N60 ≤ 100 (23 < N ≤ 75)(c)	10 < N60 ≤ 30 (8 < N ≤ 23)(c)	N/A (N/A)	N60 ≤ 10 (N ≤ 8)(c)	11 < N60 ≤ 30 (8 < N ≤ 23)(c)	31 < N60 ≤ 100 (23 < N ≤ 75)(c)	N60 ≤ 10 (N ≤ 8)(c)	11 < N60 ≤ 30 (8 < N ≤ 23)(c)	31 < N60 ≤ 100 (23 < N ≤ 75)(c)	N60 > 100 (N > 75)(c)
Percent gravel(d)	%	0(e) [1]	4 ± 6 [36]	6 ± 8 [6]	10 ± 7 [6]	3 ± 7 [9]	0 [1]	0 [4]	0 [1]	3 ± 3 [8]	3 ± 7 [20]	1 ± 1 [11]	9 ± 14 [8]
Percent sand(d)	%	42(e) [1]	34 ± 8 [36]	47 ± 19 [6]	33 ± 11 [6]	34 ± 12 [9]	57(e) [1]	46 ± 15 [4]	40(e) [1]	44 ± 11 [8]	52 ± 12 [20]	52 ± 13 [11]	55 ± 19 [8]
Percent fines (<#200 sieve)(d)	%	58(e)[1]	62 ± 11 [36]	47 ± 21 [6]	57 ± 15 [6]	64 ± 12 [9]	43(e) [1]	54 ± 14 [4]	60(e) [1]	54 ± 13 [8]	46 ± 15 [20]	47 ± 13 [11]	36 ± 22 [8]
Percent silt	%	-	41 ± 9 [13]	42(e) [1]	37 ± 8 [6]	-	-	55(e) [1]	56(e) [1]	53(e) [2]	41 ± 10 [3]	34(e) [1]	-
Percent clay (<5μm)	%	-	18 ± 9 [13]	19(e) [1]	20 ± 11 [6]	-	-	19(e) [1]	4(e) [1]	6(e) [2]	5 ± 2 [3]	8(e) [1]	-
Specific gravity, *Gs*		-	2.71 ± .06 [20]	2.68(e) [1]	2.72 ± .09 [6]	2.72 ± 0.02 [9]	-	2.72(e) [2]	2.70(e) [1]	2.72 ± 0.04 [6]	2.71 ± .04 [11]	2.69 ± .04 [4]	-
Dry unit weight, γdry	pcf	-	101 ± 8 [13]	-	101 ± 2 [6]	90 ± 5 [5]	-	88(e) [2]	-	93 ± 11 [4]	94 ± 15 [8]	93(e) [2]	-
Wet unit weight, γt	pcf	-	122 ± 5 [13]	-	122 ± 3 [6]	110 ± 3 [5]	-	113(e) [2]	-	116 ± 11 [4]	117 ± 7 [8]	114(e) [2]	135(f)
Saturated unit weight, γsat	pcf	-	125 ± 5 [13]	-	126 ± 2 [6]	119 ± 3 [5]	-	118(e) [2]	-	121 ± 7 [4]	124 ± 7 [7]	121(e) [2]	140(f)
Hydraulic conductivity (g), k	ft/yr	-	-	-	-	29 ± 11 [5]	-	-	-	-	-	-	-
Total Porosity	%	-	40	-	40	47	-	48	-	45	44	45	-
Effective Porosity	%	-	9 ± 2 (h)	12 ± 2 (h)	7 ± 2 (h)	-	-	15 ± 6 (h)	19	20 ± 1 (h)	22 ± 1 (h)	18 ± 2 (h)	8

a) All fill includes samples classified as fill on boring logs, including test fill samples, but does not include remolded fill samples.
b) Remolded soil samples compacted to 95% of Standard Proctor maximum dry density at optimum moisture content.
c) Field standard penetration test blowcount number (SPT-N) values to correlate to N60-values are computed using the average energy transfer ratio (ETR) of 80.0%. N=N60(60/80.0).
d) Three samples of alluvium were tested for moisture content and two underwent grain-size analysis; the results are not shown in this table.
e) Insufficient data to determine standard deviation.
f) These values are from PSAR, Table 2D-3 and Table 2A-1 (Reference 201 in the PSAR).
g) 1 ft/year * 9.67 x 10-7 = 1 cm/sec.
h) Range of values.
i) Minimum effective porosity based on estimate from saturated and wet unit weights.
Note: The number in brackets is the count, [Number].
Weighted Average dependent upon the limiting number of samples for each result.

	Weighted Average
Fill Samples (in place)	
Total Porosity	40%
Effective Porosity	9%
Residual Soil and Saprolite	
Total Porosity	45%
Effective Porosity	20%
Partially Weathered Rock (PWR)	
Total Porosity	NM
Effective Porosity	8%

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 8-4 to RAI 8

FSAR Table 2.4.12-204, Aquifer Characteristics

COL 2.4-4

TABLE 2.4.12-204 (Sheet 1 of 2)
AQUIFER CHARACTERISTICS

	Hydraulic Conductivity (K)					
Material	Minimum	Geometric Mean	Median	Conservative Estimate	Maximum	Source
Saprolite/ Soil K_v	2.45×10^{-8}	2.91×10^{-6}	2.10×10^{-6}	4.4×10^{-5}	2.55×10^{-4}	1973 ~~I~~investigation laboratory analyses.
Saprolite/ Soil K_h	9.67×10^{-7}	5.52×10^{-6}	6.38×10^{-6}	3.2×10^{-4}	2.26×10^{-3}	1973 Investigation field tests and 2006 slug tests.
Bedrock - PWR K_h	9.67×10^{-7}	9.36×10^{-5}	1.54×10^{-4}	1.4×10^{-3}	9.89×10^{-3}	1973 Investigation packer tests and 2006 slug, aquifer, and packer tests.
Unconsolidated Material	2.21×10^{-4}	8.61×10^{-4}	4.10×10^{-4}	2.6×10^{-3}	3.90×10^{-3}	1973 aquifer tests and 2006 pumping well.
Fill Material	4.22×10^{-5}	2.26×10^{-4}	1.81×10^{-4}	6.2×10^{-4}	1.03×10^{-3}	2006 slug tests.

Units are in centimeters per second (cm/sec).
PWR – Partially weathered rock.
K_v - Vertical hydraulic conductivity.
K_h - ~~Horizontal~~Horizontal hydraulic conductivity.

Conservative Estimate - The geometric mean of samples exceeding the median used to calculate groundwater velocities below (Sheet 2 of 2).
Conservative Estimate for Bedrock K_h was obtained from results of 2006 pump test.
Unconsolidated ~~material~~Material – ~~fill~~Fill material, soil, saprolite, and partially weathered rock.

TABLE 2.4.12-204 (Sheet 2 of 2)
AQUIFER CHARACTERISTICS

Material	Hydraulic Conductivity K (cm/s)	Effective Porosity n_e (%)	Groundwater Gradient dh/dl (ft/ft)	Groundwater Velocity V (ft/yr)	Groundwater Exposure Travel Time
Fill Material	6.2×10^{-4}	~~3~~19	~~0.034~~0.040	70	A release at the base of the Liquid Radwaste Tank #2 containment structure (elevation 556.5 ft. above msl) preferentially migrates through the layer of partially weathered rock ~~is the pathway with~~ as it exhibits the shortest travel time (2.8 years) to the point
Saprolite/Soil	3.2×10^{-4}	20	~~0.034~~0.040	~~56~~66	
Bedrock - PWR	1.4×10^{-3}	~~1~~8	~~0.036~~0.038	~~290~~692	

					of exposure (i.e., the Broad River at a distance of 1935 ft.)~~, of 6.7 years. Other likely pathways~~ Four other analyzed pathways ~~through soil and saprolite and fill are shorter, (1340 ft. to Hold Up Pond A), but take a longer travel time of 20.3 years~~have suggested travel times ranging from 7.2 to 53 years to a point of exposure.

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-15

NRC RAI:

Submit a letter from the Gaffney Board of Public Works stating that existing capacity for treating drinking water and wastewater is sufficient to meet the needs of the proposed Lee Plant.

Duke Energy Response:

Duke Energy is currently re-evaluating the drinking water and wastewater capacity needs for construction and operation of the proposed Lee Plant. Upon completion, information will be provided to the Gaffney Board of Public Works for their evaluation to determine if the current systems are sufficient. It is expected that the Board of Public Works will complete their evaluation by December 31, 2008.

The results of this evaluation will be submitted to the NRC within two (2) weeks after its receipt from the Board of Public Works.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-16

NRC RAI:

Submit a high level description of prior, current and proposed dewatering efforts.

Duke Energy Response:

Description of Historical Dewatering Activities

Based on historical information regarding drawdowns of water levels in observation wells placed at the Cherokee Nuclear Station construction site, construction dewatering from the site excavation appears to have begun around January 1977. From November 1977 to March 1978, groundwater was pumped from dewatering wells with total withdrawals reported at approximately 5.74 million gallons of water over the 5-month period. These wells were intermittently pumped at average rates ranging from 38 to 65 gpm with well depths from 200 to 280 ft. below ground surface. Maintenance dewatering is expected to have continued throughout the Cherokee construction project activities. The apparent drawdown of water levels in the Cherokee observation wells caused by the cumulative dewatering activities resulted in a lateral area of influence as shown in ER Figure 2.3-13. Water levels were monitored through 1985. While the 1985 aerial photograph showed little water in the excavations, the 1994 historical aerial photograph of the site shows the excavation to be near full of water, suggesting the return to static conditions.

Description of Current Dewatering Activities

On December 19, 2005, following notice to SCDHEC of Duke Energy's intent to transfer water from the excavation to Make-Up Pond B, and receiving SCDHEC authorization to proceed, dewatering of the existing excavation began at Lee Nuclear Station. The purpose of the action was to allow subsurface investigation and geologic mapping of the bedrock materials at the floor of the existing excavation. The dewatering generally occurred in three stages: dewatering the impoundment, de-mucking the excavation, and maintenance dewatering. The first two stages were completed around March 2006, and the third stage will be ongoing throughout the Lee Nuclear Station construction period. Water was and continues to be transferred from the excavation via production piping to the Make-Up Pond B and discharged below the stage level. Cumulative water production from December 19, 2005, to April 4, 2007, was approximately 795 million gallons, which is around 3.3 times the volume of water originally held within the excavation prior to dewatering. Based on the most recent water production report in April 2007, maintenance dewatering from the excavation was using four pumps and averaging approximately 250,000 gallons per day total water production (Attachment 16-1). For comparison, the average precipitation falling within the approximately 26.6 acre excavation was around 79,000 gallons per day based on total precipitation of 39.72 inches from December 2005 to December 2006.

Description of Planned Construction Dewatering Systems

Dewatering the main excavation

The proposed dewatering plan will use the existing sump pit in the original Cherokee Unit 2 reactor building rock excavation (now the intervening space between Lee Units 1 and 2).. A pumping station will be established here while the excavation is backfilled. As the backfill rises, this pumping station will be raised and relocated. These pumps will discharge water into a collector tank at the top of the excavation. This tank is 590 feet above mean sea level (msl). Water in this collector tank will be discharged eventually by pumping it to existing Hold-Up Pond A north of the excavation. (This pond was used for this purpose during the previous Cherokee construction.)

When the excavation has been backfilled, the annular space inside the Mechanically Stabilized Earth (MSE) walls of Units 1 and 2 will be the locations for collection of water. Sumps with submersible pumps will be located in various corners of the Units 1 and 2 excavations. These pumps will pump water into the collector tank. When the nuclear islands have been constructed above the 590 feet above msl grade, the annular space will be backfilled. The sumps and pumps will be removed.

This will complete most of the dewatering in the nuclear islands excavation. At various times, small excavations will occur outside of the nuclear island, which will require the removal of casual water (water not related to construction activities). Water collected in these excavations will be evaluated for water quality on a case-by-case basis.

The amount of water that will be pumped from this location (or any other location) is unknown at this time.

Dewatering the intake structures in Make-Up Ponds A and B

A cofferdam will be built in each of the Make-Up Ponds for construction of intake and related structures. Dewatering within the cofferdams will occur prior to construction activities. The water within the cofferdams will be pumped back into the adjacent pond.

Dewatering the Broad River intake structure

A cofferdam will be built in the Broad River for construction of the raw water intake. The water within the cofferdam will be pumped back into the Broad River as long as the turbidity does not exceed the limits set by the federal and state permits. If this occurs, the discharge will be cleaned up at the intake site using various best management practices (BMPs) (frac. tanks, silt bags, etc.), or will be pumped to Hold-Up Pond A.

Permits Required

Federal law and the South Carolina Department of health and Environmental Control (SCDHEC) require the filing of a Notice of Intent (NOI) to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Large and Small Construction activities. This form will be filed at least 20 business days prior to the start of construction. It will allow stormwater discharges during construction of the facility, but it will not permit industrial or wastewater discharges after construction is completed. A construction NPDES permit will regulate the discharge flows from project excavations. The NOI will be filed and the requisite erosion and sedimentation controls for construction (as well as dewatering activities) will be included in the Stormwater Pollution Prevention Plan, which is to be reviewed and approved by SCDHEC.

Associated Revision to the Lee Nuclear Station Combined License Application:

1. Revise COLA Part 3, ER Chapter 2, Subsection 2.3.1.5.7, Paragraph 4, as follows:

   As discussed previously, construction activities on the site in the late 1970s resulted in significant alterations to site topography. Because of the relationship between topography and depth to water, changes to the potentiometric surface were monitored with a network of observation wells across the site. A review of historical data identified groundwater levels in observation wells prior to and during the construction. Based on well data, construction dewatering from the site excavation was initiated around January 1977. Between November 1977 and March 1978, approximately 5.74 million gal. of water were reportedly pumped from the water table aquifer through dewatering wells over the 5-month period. These wells were intermittently pumped at average rates ranging from 38 to 65 gpm with well depths from 200 to 280 ft. below ground surface. Maintenance dewatering is believed to have continued throughout the Cherokee construction project activities. The effect of construction dewatering was assessed on the basis of historical groundwater measurements collected across the site during construction dewatering activities. The apparent drawdown in the observation wells, caused by the cumulative dewatering activities, is shown on in Figure 2.3-13. The dewatering activities did not affect observation wells outside the area shown on the figure. In addition, the nearest residential well completed in the Piedmont aquifer, the Mullinax well located approximately 5000 ft. south of the center of the excavation, was not affected by construction dewatering activities. Several wells located adjacent to excavation and around the site were gauged on a monthly basis between 1976 and 1985, providing limited-term historical water-level data. Only wells nearest the excavation, as shown in Figure 2.3-13, appeared to be affected by the dewatering activities.

2. Revise COLA Part 3, ER Chapter 4, Subsection 4.2.3.3, Paragraph 2, as follows:

   Dewatering of the excavation during construction and the resultant cone of depression due to pumping are expected to~~could~~ temporarily affect groundwater flow in the vicinity of the excavation. The dewatering associated with the removal of Cherokee Unit 1 provides an experience based example of the impacts to groundwater from excavation dewatering. This ongoing experience at the on-site demolition project has shown that the dewatering has had a minor impact on groundwater in the immediate vicinity of the excavation. Once the dewatering drawdown was achieved for site characterization and demolition, maintenance dewatering flow was the result of rainwater collecting in the excavation and groundwater inflow. These low groundwater inflows are expected to be similar for other excavations on the Lee Station site because ~~of~~ the soils on site generally have very low permeability. Therefore the extent of dewatering impacts on groundwater resources is anticipated to be SMALL and limited to the immediate area around the excavation.

3. Revise COLA Part 3, ER Chapter 4, Subsection 4.2.2, Paragraph 3, as follows:

   Dewatering of the excavation during construction and the resultant cone of depression due to pumping are expected to~~could~~ temporarily affect groundwater flow in the vicinity of the excavation.

4. Revise COLA Part 3, ER Chapter 4, Subsection 4.2.4.3, Paragraph 1, as follows:

   Groundwater is anticipated to be encountered during construction activities inside of the excavation. Dewatering during construction ~~will~~would cause ~~reversal of groundwater flow in some areas~~ temporary changes in the groundwater gradient to direct flow within the lateral area of influence towards the excavation. ~~because water is drawn into the excavation.~~ Water

quality within the aquifer should not be impacted since the water would flow from the aquifer into ~~is drawn toward~~ the excavation ~~and not into the aquifer~~.

Associated Attachment:

Attachment 16-1 Water Production During Lee Nuclear Station Dewatering Activities.

Lee Nuclear Station Response to Request for Additional Information (RAI)

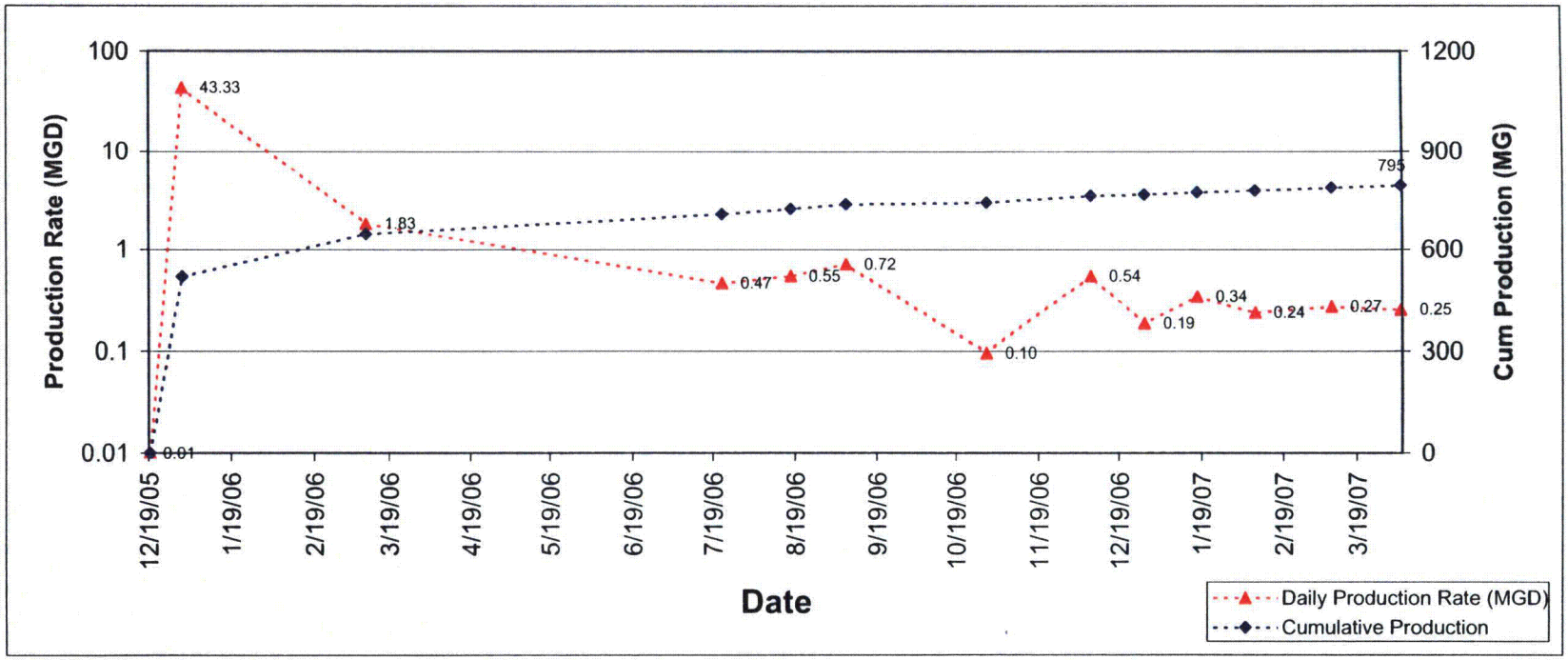
Attachment 16-1 to RAI 16

Water Production During Lee Nuclear Station Dewatering Activities

Water Production During Lee Nuclear Station Dewatering Activities

	12/19/2005	12/31/2005	3/10/2006	7/22/2006	8/17/2006	9/7/2006	10/30/2006	12/8/2006	12/28/2006	1/17/2007	2/8/2007	3/9/2007	4/4/2007	
Pump 1		130,000,000	22,500,000	15,057,000	2,142,000	1,788,000	1,773,000	5,160,000	1,725,000	2,448,000	1,857,000	2,979,000	2,742,000	
Pump 2		130,000,000	22,500,000	10,638,000	3,036,000	4,074,000	690,000	4,266,000	90,000	90,000	366,000	303,000	843,000	
Pump 3		130,000,000	16,065,000	9,297,000	3,495,000	735,000	1,020,000	2,943,000	486,000	867,000	876,000	1,416,000	468,000	
Pump 4		130,000,000	17,118,000	10,872,000	5,616,000	8,514,000	1,554,000	8,832,000	1,422,000	3,423,000	2,139,000	3,189,000	2,517,000	
Pump 5			25,875,000	6,849,000										
Pump 6			22,500,000	9,900,000										
	0	520,000,000	126,558,000	62,613,000	14,289,000	15,111,000	5,037,000	21,201,000	3,723,000	6,828,000	5,238,000	7,887,000	6,570,000	**Gallons to MUPB**
	0	520.00	126.56	62.61	14.29	15.11	5.04	21.20	3.72	6.83	5.24	7.89	6.57	**MG**
	0	520.00	646.56	709.17	723.46	738.57	743.61	764.81	768.53	775.36	780.60	788.49	795.06	**Cum MG**
	0.01	43.33	1.83	0.47	0.55	0.72	0.10	0.54	0.19	0.34	0.24	0.27	0.25	**MGD**

795 MG **Cumulative Production through 4/4/07**



Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-19

NRC RAI:

Submit a description of the objectives to be met by the monitoring system design (as implemented at other Duke facilities), and, in general, how they are met.

Duke Energy Response:

The groundwater monitoring system will mirror the NRC reviewed and approved Groundwater Protection Initiative Systems implemented at Duke Energy's other nuclear sites: McGuire, Oconee and Catawba per the requirements of NEI Guidance 07-07 (Industry Ground Water Protection Initiative). The goals for the Groundwater Protection Initiative will be to provide a hydrologic characterization of the constructed plant and a monitoring well network capable of providing early detection of releases through the use of near-field wells and verification of no off-site migration through the use of far-field wells.

Well locations will be selected based on proximity to plant systems which may be a source of radiological releases and/or in nearby projected down-gradient groundwater flow direction from such sources. Shallow wells will be utilized where shallow groundwater is expected to be present as first detection monitoring locations. Deeper wells will be utilized where plant systems are deep. Wells will be installed such that the well screen is located near the potential release location. Deep wells may be located on top of rock or into rock as appropriate. Wells may be paired (shallow/deep) to evaluate the vertical component of groundwater flow.

Associated Revision to the Lee Nuclear Station Combined License Application:

COLA Part 3, ER Chapter 5, Section 5.2.3.5 will be revised to read:

There are two sources for radiological impacts to groundwater: (1) leaks from radioactive waste tanks and (2) leaks from the spent fuel pool. To minimize the potential for contact of radioactive material with groundwater, the Lee Nuclear Site is equipped with a water barrier around the building foundation up to 1 ft. above grade. The water barrier is installed to prevent water from seeping into the auxiliary building that holds the liquid radioactive waste (LRW) tanks. In addition, groundwater sampling is anticipated to be conducted at the Lee Nuclear Site. The groundwater program will follow applicable and appropriate groundwater monitoring program recommendations in NEI 07-07.. The program will include a network of wells for early detection (near-field wells) and for verification of no off-site migration (far-field wells). Wells will be installed in proximity to plant systems that may be a source of radiological releases, and/or in nearby projected down-gradient flow direction from such sources. Both shallow and deep wells will be utilized as needed to monitor the location closest to the potential release area. The analyses of groundwater samples include gamma isotopes and tritium as discussed in Section 6.2.

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-28

NRC RAI:

List commitments to reduce traffic impacts of construction

Does a traffic mitigation plan exist?

Duke Energy Response:

A Lee Nuclear Site transportation study was conducted in 2007, and a draft report entitled *Lee Nuclear Station Transportation Assessment* (LNSTA) has been made available to the NRC in Duke's consultant's office in Richland, Washington and Bethesda, Maryland. Because of the magnitude of directional trips entering and exiting the Lee Nuclear site during the peak construction period in 2011, various traffic mitigation options have been suggested. These options may be used to address potential impacts on the community from construction-related congestion. The following transportation access strategies have been identified:

- Capacity improvements – adding lanes and widening existing roads.
- Staggering dayshift work hours with capacity improvements.
- Park & Ride – Van and bus transportation to and from satellite parking lots.
- Rail Transportation – adding service to a proposed parking lot.
- Construction of a new road to the site.
- Construction of a new bridge over the Broad River.

These strategies were refined based upon traffic analyses, peak-hour employment levels, costs associated with off-site roadway improvements, and a broad review of the various alternatives. The options currently under consideration are as follows:

- Staggering day shifts – having two day shifts with a 1-hour offset.
- Park & Ride shuttle service.
- A combination of staggered day shifts and shuttle services.

At this time, Duke Energy has not made a decision on which options to implement.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments: None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-35

NRC RAI:

Incorporate unplanned outages on expected generating capacity.

Duke Energy Response:
The plant average annual electrical-energy generation figure listed in Subsection 10.4.1.2.1 already includes unplanned outages in the capacity factor. This number will be revised to reflect more recent information for the expected capacity factor for the AP1000.

Associated Revision to the Lee Nuclear Station Combined License Application:

Revise COLA Part 3, ER Chapter 10, Subsection 10.4.1.2.1, paragraph one as follows:

Lee Nuclear Station generates approximately 2234 megawatts electric (MWe). Assuming an average capacity factor of 93 ~~90~~ percent, the plant average annual electrical-energy generation is approximately 18.2 million ~~17,600,000~~ megawatt hours (MWh).

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-36

NRC RAI:

Provide information on construction costs.

Duke Energy Response:

The Keystone study was given more weight than other cost studies because it is more recent and incorporates more recent information than the other referenced studies. According to the Keystone study, an annual 3 percent real escalation rate was used to escalate costs to 2007 dollars. Financing cost assumptions listed in the Keystone study included an 8 percent interest on debt and 15 percent interest on equity on a 50/50 debt to equity ratio. The study also included a 15-year accelerated depreciation schedule in the capital costs calculations.

Should any of these costs significantly change as a result of new information, NRC will be notified appropriately.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-52

NRC RAI:

How large are the SWS cooling towers?

Duke Energy Response:

The physical dimensions of the Service Water System (SWS) cooling towers are not known at this time because the final design of the towers has not been completed. The physical dimensions will be provided when the design is complete.

The performance parameters for design heat load and water flow rates for the SWS cooling towers for various modes of plant operation are given in Table 9.2.1-1 of the DCD, Rev 16. Make-up, evaporation, and drift-flow rates are given in Environmental Report Table 3.3-1.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachment:

Attachment 52-1 Table 9.2.1-1 of the DCD, Rev 16

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 52-1 to RAI 52

Table 9.2.1-1 of the DCD, Rev. 16

Table 9.2.1-1

NOMINAL SERVICE WATER FLOWS AND HEAT LOADS AT DIFFERENT OPERATING MODES

	CCS Pumps and Heat Exchangers	SWS Pumps and Cooling Tower Cells (Number Normally is Service)	Flow (gpm)	Heat Transferred (Btu/hr)
Normal Operation (Full Load)	1	1	10,500	103×10^6
Cooldown	2	2	21,000	346×10^6 (173×10^6 per cell)
Refueling (Full Core Offload)	1	1	10,500	74.9×10^6
Plant Startup	2	2	21,000	75.8×10^6
Minimum to Support Shutdown Cooling and Spent Fuel Cooling	1	1	10,000	170×10^6

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-58

NRC RAI:

Explain how plant operations would or would not be likely to impede the up - or downstream migrations of diadromous fish (especially the American eel, American shad, and blueback herring, but also the Atlantic sturgeon and shortnose sturgeon). Also describe how plant operations would or would not be likely to negatively impact these diadromous fish populations during the life stages when they would likely be present near the proposed Lee site (i.e., in Broad River immediately below the Ninety-Nine Islands Dam or in the Ninety-Nine Islands Reservoir).

Supporting Information - The Santee River Basin Accord was recently signed by Duke Energy, South Carolina Electric & Gas, South Carolina Department of Natural Resources, North Carolina Wildlife Resources Commission, and U.S. Fish and Wildlife Service. Based on this agreement, construction of a fish passage facility at Neal Shoals could occur as early as 2016. If fish passage is successful at Neal Shoals, it is possible that fish passage facilities will then be constructed at Lockhart Dam, and possibly even at the Ninety-Nine Islands Dam during the lifetime of a Lee Operational Permit. American eel, American shad, and blueback herring are historically known to have ascended South Carolina rivers inland of the fall line and into North Carolina. The Atlantic sturgeon and shortnose sturgeon may have been stopped in their upstream migrations at the fall line, but the evidence is not clear regarding how far upstream they might migrate.

Duke Energy Response:

Diadromous fish issues at the Ninety-Nine Islands Hydroelectric Project should only involve a maximum of two species: American shad and American eel. While American shad were present in this region of the Broad River historically, their future presence is doubtful based on the long upstream journey and the numerous obstacles that must be passed during the upstream migration and prior to the senescence of eggs in female shad. American eel should be the first diadromous fish species to reach the Ninety-Nine Islands Dam and require fish passage activities. Passage activities for both species, if applicable, will be handled as part of the Ninety-Nine Islands Hydroelectric Project FERC license and via the Accord. There are no issues related to Lee Nuclear Station operation that should impair diadromous fish restoration activities.

Duke Energy (Duke) is an ardent supporter of diadromous fish restoration in the Santee River Basin. Duke has been significantly invested, both financially and through in-kind support, in the implementation and execution of the Santee River Basin Accord (Accord) since its inception. The Accord promotes basin-wide research and fish management activities as ways to protect, enhance, and restore diadromous fish populations to regions of the Santee Basin where they previously occurred.

The historical occurrence of the Santee Basin diadromous fish species in question has been reviewed by the United States Fish and Wildlife Service, the National Marine Fisheries Service, and the SC Department of Natural Resources and was summarized in The Santee-Cooper Basin Diadromous Fish Passage Restoration Plan (USFWS 2001). This plan was submitted to the FERC as a Comprehensive Management Plan and provides much of the historical background material for this RAI response.

Historical blueback herring catches were confirmed in the lower portions of the Santee Basin near the coast but not near the Fall Line or into the Piedmont, where records are only anecdotal (USFWS 2001). Based on the historical distribution map provided in the Santee-Cooper Basin Diadromous Fish Passage Restoration Plan, blueback herring did not occur in the Piedmont of SC and should not constitute a fish passage issue in the upper reaches of the Broad River near the Lee Nuclear Station. Accordingly, they are not discussed further in this RAI response.

Historically, American eels were found throughout the Santee Basin and their present day distribution is severely limited by the presence of dams. The American eel will be a subject of Federal Energy Regulatory Commission (FERC) concern should fish passage activities move this fish upstream to the vicinity of the Ninety-Nine Islands Hydroelectric Dam and Reservoir.

Atlantic and shortnose sturgeon historical accounts were summarized in the Santee-Cooper Basin Diadromous Fish Passage Restoration Plan (the Plan) (USFWS 2001) and in Collins and Smith (1997). The Plan utilized many types of historic information while Collins and Smith (1997) employed documented historical and scientific collections dating only as far back as 1896. Both sources report upstream movement to areas just upstream of the Fall Line. These movements typically occurred in winter and early spring in association with spawning. However, neither report indicates that either sturgeon species moved further upstream than the area of Fairfield County, SC, and these collections occurred during times of unhindered fish passage. As Fairfield County, SC is well downstream of Cherokee County, SC, and migration delays at fish passage structures might be expected to decrease migration distances somewhat, the future presence of sturgeon in the vicinity of Ninety-Nine Islands Dam and Reservoir is not expected. They are not discussed further in this RAI response.

American shad have been shown to have had a widespread historical distribution in the Santee Basin and would have ascended the Broad River upstream of the location of the proposed Lee Nuclear Station. The distribution of this species has been severely impacted by overfishing and human construction activities in the Santee-Cooper Basin. One of the most influential activities was the construction of the Santee-Cooper project.The American shad will be a subject of FERC concern should fish passage issues move this fish upstream to the vicinity of the Ninety-Nine Islands Hydroelectric Dam and Reservoir.

After creation of the Santee-Cooper lakes (Marion and Moultrie) in the 1940's, diadromous fish access to the upper reaches of the Santee River Basin was severely hindered but not totally stopped. Navigation lock activities at the Pinopolis Dam (forming Lake Moultrie) allowed anadromous blueback herring to enter the lakes and provide additional nutritional support for the first landlocked population of striped bass in the United States. While American shad may have gained access to the lakes via this navigation lock route, little is known because early anadromous fish research efforts concentrated principally on blueback herring. Numerous reports of American eels (elvers and larger individuals) at the Wateree Dam in the 1970's and 1980's attest to their ability to negotiate the Pinopolis Navigation Lock and move upstream.

Reconfiguration of the Santee-Cooper system in 1985 provided another means of diadromous fish access to Lakes Marion and Moultrie and the upper Santee Basin via the St. Stephen fish lock on the Santee River Rediversion Canal. Throughout this recent period of increased fish passage (1985 – 2008), viable commercial fisheries for both the American shad and blueback herring have been maintained downstream of the Santee-Cooper lakes. Despite an active gill net fishery in the Santee River, some of the highest adult American shad passage numbers on the East Coast of the United States occur each year at the St. Stephen Fish Lock. The average annual American shad passage from 1991 – 2007 numbers 295,000 fish, although the long-term trend has a slope that does not differ significantly from zero (i.e., 17 years of fish passage indicates no increasing trend). While data indicate high fish passage numbers and a viable and sustainable alosine fishery downstream, limited usage of the upstream river reaches (i.e., Wateree and Broad rivers) by American shad has been documented. The mechanism(s) associated with this lack of usage are unknown but have been surmised to be linked to pollution in upstream rivers, warmer temperature regimes in the Santee-Cooper reservoirs, and ambiguous migration routes (leading to delayed migration) in these same large shallow reservoirs.

The Accord was formulated to encourage research and initiate management actions to address these uncharacteristic anadromous fish distributions. Larval American shad stocking, new FERC-mandated re-licensing flows, and upstream transport of spawning adult shad will be evaluated as ways to move American shad (and their progeny) upstream. Currently very few American shad have been observed at the base of the Columbia Diversion Dam on the Broad River, despite the lack of any physical obstructions between this dam and the fishway entrances to the Santee-Cooper lakes. In the spring of 2007, the Columbia Diversion Dam fishway was opened and American shad passage numbers were 186 and 75 in 2007 and 2008, respectively. These numbers amount to < 0.1% of the current long term average passage at the St. Stephen fish lock.

Fish movement into the Broad River Basin is anticipated to be extremely slow and 69,600 adult American shad (or almost 24% of the current long term passage number at St. Stephen) must pass the Columbia Diversion Dam facility (in three out of five consecutive years) before fish passage construction would begin at the Parr Dam. Fish migration delays at each project (e.g., locating attraction flows, navigating the passage structure, etc.) will limit the time and distance that upstream migrating fish can move while maintaining viable gonads. Fish counting at Parr Dam (after a construction period)

would have to exceed 96,112 American shad (or almost 33% of the current long-term passage number in three out of five consecutive years) before construction of a fish passage facility would begin at the upstream Neal Shoals Dam. Neal Shoals Dam passage numbers would then have to exceed 28,050 (in three out of five consecutive years) before construction activities would potentially begin at Lockhart Dam (which is not a party to the Accord). The number of American shad required to be passed at Lockhart were not listed in the Accord, but would probably have to be passed in three out of five consecutive years were Lockhart to join the Accord and an active fish passage structure be installed. While the Supporting Information for this RAI indicates that passage above Lockhart (and then subsequent passage above Ninety-Nine Islands Dam) is possible, the probability that passage will occur within the next fifty years is remote. Further, basin-wide American shad gains resulting from fish passage at Ninety-Nine Islands Dam would be minimal, based on the amount of available upstream habitat between this dam and the next upstream project.

Upstream passage of American eels is anticipated to progress more swiftly, assuming downstream barriers at the Santee-Cooper dams are retrofitted for eel passage. Eel passage studies at Parr Dam are currently expected to commence in 2016. Upstream movement of eels through the Broad River Basin should proceed in step with American shad passage, if fish ladders are used to pass shad (i.e., American eels will swim or crawl up these structures). In cases where shad passage is to occur by 'trap and truck' or a 'fish lift', other means for eel passage would be required. American eels will eventually make the upstream journey to Ninety-Nine Islands Dam and passage will be handled via the FERC license and the Santee Basin Cooperative Accord.

Regarding the potential impacts of the Lee Nuclear Station on American shad and American eel migration, assuming that these species are eventually discovered downstream or upstream of Ninety-Nine Islands Dam, the operation of the Lee Nuclear Station would result in no observable impedance to the upstream/downstream migration of these species. Potential impacts from the Lee Nuclear Station could be classified into two categories: 1) impacts related to the low ΔT of the cooling tower blowdown discharge and 2) fish entrainment/impingement associated with the project intake within the Ninety-Nine Islands Reservoir. These two potential impacts will be discussed separately for American shad and American eels. It should be noted that shad and eels that arrive in the vicinity of the WS Lee Station should be considered true aquatic warriors as they will have, in their journey from the ocean, passed numerous water intakes and outfalls associated with coal-fired power plants, a nuclear station/pumped storage hydroelectric facility, hydroelectric projects, chemical processing plants, municipal drinking water operations, municipal wastewater treatment facilities, naval facilities, quarry operations, and an assortment of agricultural water withdrawals.

American shad could occur in the vicinity of the Lee Nuclear Station as mature adults on their upstream spawning migration. Adults in the Broad River, downstream of the Ninety-Nine Islands Dam, might be attracted to the slightly warmer waters associated with the cooling tower blowdown as American shad adults have an affinity for heated discharges. This attraction could concentrate shad and allow low numbers of fish to find

each other for spawning. Flows below the Ninety-Nine Islands Dam could also help to aggregate fish should numbers ever get high enough to warrant some type of upstream passage. American shad passage at the Ninety-Nine Islands Hydroelectric Project would be handled though the FERC license and the Santee Basin Cooperative Accord. Once upstream of the dam, adult American shad would have no difficulty with Lee Nuclear Station intake flows (velocities < 0.5 ft/sec) and migrate to riverine reaches upstream of the Ninety-Nine Islands Reservoir to spawn.

American shad eggs, larvae, and juveniles could also occur in Ninety-Nine Islands Reservoir as a result of upstream spawning. Low intake velocities (< 0.5 ft/sec and in compliance with Clean Water Act Section 316b) would lead to no measurable entrainment of eggs and larvae (see RAI 61 for discussion concerning entrainment). Downstream passage of juvenile shad could occur by spillage at the Ninety-Nine Islands Dam or turbine passage; both methods are currently used throughout the Southeast to pass juvenile shad downstream of hydroelectric projects.

American eel could occur in the vicinity of the Lee Nuclear Station as upstream migrating immature yellow eels. This would occur after eels eventually pass successive downstream Broad River dams and make the upstream journey to Ninety-Nine Islands Dam. It is anticipated that eel passage there will be handled through the Ninety-Nine Islands Hydroelectric Project FERC license and the Santee Basin Cooperative Accord if sufficient numbers show up during trapping studies. Cooling tower blowdown discharges and Lee Nuclear Station intake flows should pose no impacts to this eel life stage.

American eel could also occur in the vicinity of the Lee Nuclear Station as downstream migrating adult silver eels. Downstream migration issues are not as straightforward as those for upstream migration and will be the focus of considerable Accord-related activities. Passage could occur by spillage, turbine passage, or some other, as yet undetermined method. It is anticipated that downstream eel passage there will be handled through the Ninety-Nine Islands Hydroelectric Project FERC license and the Santee Basin Cooperative Accord. Again, cooling tower blowdown discharges and Lee Nuclear Station intake flows should pose no danger to this eel life stage.

References –

Collins, M.R. and T.I.J. Smith. 1997. Distributions of shortnose and Atlantic sturgeons in South Carolina. North American Journal of Fisheries Management 17:995-1000.

United States Fish and Wildlife Service, National Marine Fisheries Service, and South Carolina Department of Natural Resources (USFWS). 2001. Santee-Cooper Basin diadromous fish passage restoration plan. USFWS, NMFS, and SCDNR, Charleston, SC.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-61

NRC RAI:

To adequately assess the magnitude of potential impacts associated with entrainment, we would like to see data generated from an ichthyoplankton survey in the vicinity of the proposed cooling water intake structure that is more recent than 30 years. This may require further data collection efforts by the Applicant.

Duke Energy Response:

NUREG-1555, Section 2.4.2 Aquatic Ecology, outlines the general information requirements concerning the aquatic environment and associated biota in the vicinity of the proposed project. The Data and Information Needs section requires information concerning [...the temporal and spatial (including depth) distribution and abundance of "important" aquatic species, especially in the discharge area and receiving water body...]. However, neither the applicable regulation (10CFR 51) nor the NUREG mentions or specifically calls for ichthyoplankton data or a requirement to collect such data.

As a new facility the proposed Lee Nuclear Station will be subject to the Clean Water Act Section §316(b), as a Phase I facility under compliance Track 1. Although pre-construction biological monitoring for §316(b) would be required for a facility using Track 2 compliance standards, under Track 1, biological monitoring for impingement/entrainment impacts assessment is not required prior to facility construction, but is required once the facility begins operation. Track 1 standards, as outlined in 40 CFR §125.84 (b) and (c) include requirements to "Reduce intake flow, at a minimum, to a level commensurate with that which can be attained by a closed-cycle recirculating cooling water system" and to "Design and construct each cooling water intake structure to a maximum design velocity of 0.5 ft/sec." These requirements represent Best Technology Available and are designed to minimize impingement/entrainment impacts of cooling water intakes. Facilities built under these Phase I Compliance Track 1 standards would be considered compliant with Clean Water Act Section §316(b) requirements. As noted in the Statement of Consideration for the Phase I rule (66 FR 65277), USEPA selected the proportional flow requirement to provide protection of aquatic species from entrainment. "The 5% [proportional flow] value for rivers and streams reflects an estimate that this would entrain approximately 5% of the river or streams entrainable organisms..." Consequently, based on compliance with the Clean Water Act § 316(b) proportional flow requirement, it can be conservatively assumed that the Lee Nuclear Station operations could impact up to 5% of the entrainable organisms.

Under 40 CFR §125.86 (b) Track I application requirements, applicants must demonstrate compliance with Track 1 requirements as outlined in §125.84(b). The information required under this section includes:

1. Flow reduction information to verify the applicant has reduced flow sufficiently to meet Track 1 requirements;

2. Velocity information to verify the intake velocity will not exceed 0.5 ft/sec through screen velocity;
3. Source waterbody flow information which for a new facility on a river must provide the annual mean flow and any supporting documentation and engineering calculations to document that the cooling water intake structure meets the flow requirements, and
4. A Design and Construction Technology Plan is required if additional technologies are required for impingement as a result of threatened and endangered species, issues related to migratory and/or sport or commercial species passing through the zone of hydraulic influence, or if the Director or fishery management agencies determine that there may still be unacceptable stress to protected species or critical habitat for species of concern. This plan could also be required for entrainment in the presence of threatened and endangered species in the zone of hydraulic influence, undesirable cumulative stress of species of concern, or the Director or fishery management agencies determine additional measures are required to protect species of concern.

Track 1 application requirements for a new NPDES permit include source water baseline biological data as outlined in 40 CFR, Section 122.21(r)(4). This section states "This supporting information must include existing data (if they are available). However, you may supplement the data using newly conducted field studies if you choose to do so." This language clearly indicates, through the use of the terms "may supplement" and "if you choose to do so" that collection of new data is optional and not mandatory.

However, as previously mentioned, a facility constructed and permitted under Clean Water Act Section §316(b) Track 1 will be required to conduct impingement/entrainment studies after the facility begins operation. The biological monitoring requirements that apply after the facility begins operation are specified in 40 CFR §125.87 (a) Biological monitoring. This section states that a permit holder must monitor both impingement and entrainment of the commercial, recreational, and forage base fish and shellfish species identified in the source water baseline biological characterization required in 40 CFR, Section 122.21(r)(4). This section requires a minimum of two years of monitoring after which a reduction in monitoring frequency can be requested. The monitoring includes impingement sampling to collect impingement rate data over a 24-hr period once per month when the cooling water intake structure is in operation. Entrainment sampling must also be conducted to collect entrainment rate data over a 24-hr period biweekly during the primary period of reproduction, larval recruitment, and peak abundance when the facility is in operation.

Since impingement/entrainment studies will be required once the Lee Nuclear Station begins operation, Duke Energy does not believe that conducting an ichthyoplankton survey prior to construction to assess potential entrainment impacts is necessary. Once the facility begins operation, studies that are designed to directly estimate impingement and entrainment will provide empirical data for assessing actual entrainment resulting from project operations. Results from these studies will provide much more reliable data than predictive studies conducted at this time.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments: None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-67

NRC RAI:

Provide documentation of clean-up of site contaminants that resulted from former site uses.

Duke Energy Response:

In June 2006 Duke Energy conducted a Phase I survey of the former Cherokee site to confirm Phase I surveys performed by previous owners conducted in 2005. Subsequent to this assessment a site clean up plan was developed and a contract was issued to Clean Harbors Environmental Services to perform clean-up of hazardous materials, suspected hazardous materials and contaminated soil on the site. Clean-up commenced in October 2006 and was completed in January 2007. A total of 44 tons of non-hazardous solid waste was transported and disposed in the Palmetto Landfill Facility. In addition, 492 tons of stained soil was disposed of at the Palmetto Landfill Facility. The following hazardous wastes were removed and transported to the Clean Harbors Facility in Reidsville, North Carolina for subsequent disposal in approved facilities:

a. one drum of waste aerosols
b. one drum of flammable liquids (xylene, toluene)
c. two drums of tetrachloroethylene
d. four drums of corrosive liquid (sodium hydroxide)
e. one drum of waste mercury (thermometers)
f. one drum of batteries
g. eight drums of PCB containing light ballasts
h. eleven cardboard containers of fluorescent lamps
i. one cardboard container of solid mercury (lights)
j. one drum of waste oxidizing solid (sodium hypochlorite)
k. two drums of waste nitrocellulose (film)
l. six drums of lead paint solids (blasting grit)

Other non-hazardous materials removed included 17 drums of oily water, 3 drums of silica desiccant, and 4 cardboard containers of latex paint debris.

In addition to the removal of hazardous material, non-hazardous solid waste and stained soil, Duke Energy contracted with Applied Building Sciences to develop a plan for removal of all asbestos containing material on the site. Permits were issued by the South Carolina Department of Health and Environmental Control and the removal was performed by Sunbelt, Inc. under the supervision of Applied Building Sciences. All asbestos containing material removed from the site was disposed of in the Duke Energy Marshall Steam Station landfill, which is approved for asbestos disposal.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-72

NRC RAI:

Provide documentation of specific construction best management practices for the intake and discharge structures.

Duke Energy Response:

A cofferdam will be constructed in the Broad River to enable the construction of the River Water Intake. The construction of the cofferdam is expected to be timed to occur during the summer-fall low-flow and should be completed prior to the spring spawning. Once the cofferdam is constructed, impacts to the river from the construction of the intake should be minimal. During construction of the intake all soil and sediment removed from within the cofferdam will be stockpiled in the spoils area at the south side of the site (Refer to ER Figure 4.1-1). During construction activities, silt fences and sediment traps will be utilized to prevent introduction of runoff and sediment to the river and nearby wetland areas. Once the construction of the intake is complete the cofferdam will be dismantled using a silt skirt to protect the river environment from sediment during the dismantling.

The discharge pipe and diffuser will be assembled on shore and moved in place using a barge with a crane and divers. Divers will attach the discharge pipe and diffuser to the Ninety-Nine Islands Dam. No dredging or other disturbance of the environment is anticipated.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-75

NRC RAI:

What guidelines will be followed for transmission lines associated with the Lee Nuclear Site as regards minimizing avian electrocutions and collisions?

Duke Energy Response:

The guidelines Duke will follow for minimizing avian electrocutions and collisions on transmission lines associated with Lee Nuclear Station are based on the Edison Electric Institute's Avian Power Line Interaction Committee's 2006 publication, "Suggested Practices for Avian Protection on Power Lines. Specifically, Duke will:

1. Provide for a minimum of a 60-inch separation between phase conductors or between a phase conductor and grounded hardware/conductor. This 60-in separation is the accepted industry practice based on the wingspan (wrist to wrist) of the bald eagle, the largest bird known from the vicinity of Lee Nuclear Station. A vertical separation between conductors or conductor and ground of 48 inches will be provided which will accommodate for long-legged wading birds like great blue herons which are common along the Broad River area.
2. Transmission towers offer nesting opportunities for raptors, in particular ospreys. If ospreys (or other large birds) establish nests on transmission towers, and the nests do not interfere with the well-being of the osprey or the reliable supply of electricity to Duke customers, the nests will be left in place. If the nests pose a risk to ospreys or to the power system, artificial nesting platforms will be installed near the affected transmission towers so nest materials and excrement will not contaminate the lines. If artificial nest platforms cannot be installed because of rights-of-way restrictions or access limitations, nest discouragers and other exclusion techniques will be deployed.
3. If there are areas of the transmission line where, because of topography or habitat type the lines may not be especially visible to birds or if there are sections of the line where birds tend to cross more frequently, Duke will analyze the situation and where necessary install bird flight diverters or other marking devices on the static or neutral wires to increase their visibility.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-77

NRC RAI:

Provide information as to Duke's commitment to and methods of regulating the population size of large mammals onsite once the site perimeter fence is repaired and maintained for the new plant (fencing may restrict or preclude animal movements to offsite locations and regulation [culling] may prevent possible large-scale habitat damage onsite due to overpopulation and possible animal die-offs).

Duke Energy Response:

The requested summary is attached below and will be inserted into the Lee ER.

Associated Revision to the Lee Nuclear Station Combined License Application:

Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.3.6; replace existing paragraphs 2 and 3 with the following six paragraphs:

~~Once the fence at the Lee Nuclear Site is completely repaired, large and medium size mammals such as deer and beaver are essentially captured within the site. Unless controlled, populations of both can cause substantial damage, not only to ornamental plants but also to the habitat. Deer reproduce rapidly and can over-browse shrub and herb layers. Field reconnaissance in 2006 suggests that isolated forest stands at the site may now be subject to minor over-browsing.~~

~~Beaver naturally dam flowing waterways and wetlands to create ponds in which they build lodges for over-wintering and breeding. In so doing, they plug culverts and can cause localized damage and roadway flooding. Should beaver and deer populations on site show substantial increases in the near future, control of these species may then become necessary.~~

Once the fence at the Lee Nuclear Site is completely repaired, large and medium size mammals such as deer and beaver are essentially captured within the site. Unless controlled, populations of both can cause substantial damage, not only to ornamental plants but also to the habitat. Beaver naturally dam flowing waterways and wetlands to create ponds in which they build lodges for over-wintering and breeding. In so doing, they plug culverts and can cause localized damage and roadway flooding. Beaver occur in smaller numbers than deer and are relatively easy to trap.

Deer numbers can potentially increase rapidly under certain scenarios resulting in large increases in the local population. They can over-browse shrub and herb layers. Over-browsing may eventually reduce the available food supply and in extreme cases even induce starvation. The population eventually declines to the level of the carrying capacity of the habitat. Unfortunately, the process is cyclical and repeats after the habitat regenerates. Field reconnaissance in 2006 suggests that isolated forest stands at the site may now be subject to minor over-browsing.

Duke Energy has never experienced a situation where deer have over-populated any of its power station properties to the extent that serious habitat depletion resulted in deer die-off. Should such a situation occur at some future time at the Lee Nuclear Site, population control options to be considered include both lethal and non-lethal measures.

Lethal measures currently employed effectively on properties elsewhere are (1) removal of deer from the population by hiring sharpshooters to harvest the deer with the venison donated to local food banks, and (2) inviting employees or members of the general public to bowhunt for deer on the property. Bowhunting is a cost-effective, publicly well-received, and relatively safe means for reducing deer populations when compared with firearms and other tactics. In such a scenario, hunters are required to harvest does rather than bucks.

Non-lethal options currently employed by others include (1) trapping deer and relocating them from a site and (2) deer contraception. Relocation can be effective on small sites with low numbers of deer, but is very expensive. It must also be employed continuously as the remaining deer continue to reproduce and rapidly replenish their numbers. Isolated populations, such as those found on islands or in large fenced-in grounds like the Lee Nuclear Site, probably offer the greatest potential for successful population control by contraceptives. Contraceptives are more difficult to administer to populations that range freely over larger tracts. However, the use of deer contraceptives is now in an experimental stage. Additionally, the cost of administering anti-fertility agents is as high or even higher per animal than relocation expenses. Unless contraceptives that work through the digestive system and can be added to food are developed in the future, the cost of inoculating females would likely remain very high. Despite these important current limitations, Duke Energy would consider all of the options then available should the need for deer population control become a significant issue in the future.

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-82

NRC RAI:

For the "Future Water Use" analysis in Environmental Report section 5.2.2.2.1 (based on an 81-year period-of-record from 1926 to 2006), provide the response of Make-Up Pond B, in terms of surface water elevation (or volume with a stage relationship so that surface water elevations can be calculated) over time (use a daily time step) during the following periods:

1) partial alignment to Make-Up Pond B for an actual 7-day period in 1.5 years plus the time required to subsequently refill Pond B;
2) partial alignment to Make-Up Pond B for an actual one-month period in 6.4 years plus the time required to subsequently refill Make-Up Pond B;
3) complete alignment to Make-Up Pond B for an actual one-month in 10.3 years plus the time required to subsequently refill make-Up Pond B;
4) partial alignment to Make-Up Pond B for 90 consecutive days in 12.2 years plus the time required to subsequently refill Make-up Pond B; and,
5) for the 42 days of curtailment during June-September 2002 including any preceding period of partial and/or complete alignment prior to curtailment and the time required to subsequently refill Make-up Pond B.

   Also provide the response of Make-up Pond A, in terms of surface water elevation (or volume with a stage relationship so that surface water elevations can be calculated) over time (use a daily time step) during the above periods. This is in relation to evaluating impacts to wetlands.

Duke Energy Response:

Duration and frequency of drawdown of Make-Up Pond B is predicated on future meteorological conditions and river flow, thereby rendering prospective drawdown frequency and duration information requested in this RAI difficult to predict. The attached report, however, contains a histogram-based retrospective analysis of drawdown duration and frequency that would have occurred at Make-Up Pond B using the 82-year period-of-record dataset. In this Report, Pond stage and effective capacity level, as associated with riverine flow requirements and historical riverine stage records, was analyzed.

There are no plans to routinely draw down Make-Up Pond A.

Associated Revision to the Lee Nuclear Station Combined License Application: None

Associated Attachment:

Attachment 82-1 Proposed Lee Nuclear Station Make Up Pond B Histogram Report. Prepared by Devine Tarbell & Associates, Inc. August 4, 2008.

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 82-1 to RAI 82

Proposed Lee Nuclear Station Make Up Pond B Histogram Report.
Prepared by Devine Tarbell & Associates, Inc.
August 4, 2008

Devine Tarbell & Associates, Inc.
Consulting Engineers, Scientists, & Regulatory Specialists

John J. Devine, P.E. President
John C. Tarbell, P.E. Sr. Vice President
Richard R. Miller, P.E. CEO
Edwin C. Luttrell, P.E. COO
James M. Lynch, Sr. Vice President

August 4, 2008

Mr. Dale Smith
Nuclear Special Projects
Duke Energy Carolinas, LLC
526 S. Church Street
Charlotte, NC 28202

Subject: **Proposed Lee Nuclear Station Make Up Pond B Histogram Report**

Dear Mr. Smith:

The proposed William States Lee III Nuclear Station (LNS) is located on the Broad River in Cherokee County, North Carolina. Under normal station operations, LNS will withdraw cooling water directly from the Broad River. However, under low river flow conditions, cooling water will be provided by the existing on-site Make Up Ponds A and B. Devine Tarbell & Associates, Inc. (DTA) was commissioned by Duke Energy Carolinas, LLC (Duke) to analyze hydrology data regarding low flow conditions and the frequency of drawdown occurrences in Make Up Pond B.

1.0 Hydrology Database

The U.S. Geological Survey (USGS) streamflow gauge used for this study was the Broad River at Gaffney, SC (Gauge No. 2153500). This gauge was chosen due to its proximity to LNS located near Gaffney, South Carolina, along the west bank of Ninety-Nine Islands Reservoir. Daily average flows for this gauge were compiled using a combination of actual data from the gauge at Gaffney (1938–1971, 1986–1990) and pro-rated flow data from two upstream USGS gauges on the main stem of the Broad River. The two upstream gauges used were the Broad River near Blacksburg, SC (No. 2153200, 3.1 river miles upstream from the Gaffney gauge), and the Broad River near Boiling Springs, NC (No. 2151500, 16.2 river miles upstream from the Gaffney gauge). During periods where data was not available from the Gaffney USGS gauge, the preference was to use pro-rated data from the Blacksburg gauge. If Blacksburg gauge data was not available, the Boiling Springs gauge was used. Drainage area ratios for the two upstream gauges were used to calculate pro-rated flows, based on drainage area ratios, at the Gaffney gauge for the time periods where flow data was not available. This resulted in an 82-year period of record for the Broad River at the Gaffney gauge location (1926–2007).

2.0 Flow Thresholds

During the Federal Energy Regulatory Commission (FERC) relicensing effort in 1996, a minimum continuous flow of 483 cfs was established for Ninety-Nine Islands Hydroelectric Station for the months of July through November, which are typically low flow months. LNS will withdraw 78 cfs from the Broad River, with 55 cfs consumed through evaporation and 23 cfs used for screen washing and cooling tower blowdown before returning to the river. Based on the required minimum continuous flow of 483 cfs, the hydrology record developed for this study was analyzed as if LNS had already been built and been in operation from 1926 through 2007. In addition, estimated future water demands in the Broad River basin were included in this analysis. When the daily average flows in the Broad River drop below 588 cfs (483 cfs + 55 cfs consumptive use at LNS + 23 cfs future NC withdrawal + 17 cfs Cliffside Steam Station additional consumptive use + 10 cfs city of Shelby, NC future withdrawal), LNS would stop withdrawing water directly from the Broad River and instead align to existing on-site Make Up Ponds A and B.

3.0 Make Up Pond B Analysis

DTA developed an Excel-based spreadsheet model to analyze the impact that low river flow conditions have on the frequency and duration of aligning to the existing Make Up Ponds A and B for supplemental make up water needs at LNS. The spreadsheet model was used to determine Make Up Pond B reservoir elevations over the 82-year period of record assuming that pumping directly from the Broad River would be limited to days where the river flow was above 588 cfs, as described above in Section 2.0. In addition, it was assumed that the maximum pumping capacity from the Broad River was 127 cfs. Figure 1 (see attachments) illustrates the predicted daily reservoir elevations for Make Up Pond B during the 82-year period of record.

Based on the modeling results, DTA determined the number of times that Make Up Pond B was used to supplement consumptive water use needs at LNS. DTA analyzed the extent of each drawdown and the number of days that it took to refill Make Up Pond B during each drawdown event. Figures 2 and 3 are histograms that show the number and magnitude of all drawdown events that occurred during the 82-year period of record. Table 1 provides details of the largest and longest duration drawdown events including the number of days to reach the maximum drawdown and the number of days it took to refill Make Up Pond B from the maximum drawdown. In all, there were 111 predicted drawdown events from 1926 to 2007. The majority of the events (71) were less than one foot in magnitude. Four of the events were 50-foot drawdowns, which completely emptied Make Up Pond B of all usable storage. The most severe drawdown event was during 2007, lasting a total of 204 days. During this event, Make Up Pond B was empty for 100 consecutive days. Once Broad River flows increased to the point where pumping from the river could resume, it took a total of 42 days for Make Up Pond B to fully recover from this drawdown event.

This report provides the results of DTA's analysis regarding low-flow conditions in the Broad River and the predicted affect these low flows have on the frequency, magnitude, and duration of drawdown events at LNS's Make Up Pond B. Should you have any questions or require further information, please contact me at (704) 342-7994, liz.gilchrest@devinetarbell.com; or Ty Ziegler at (704) 342-7381, ty.ziegler@devinetarbell.com.

Sincerely,

DEVINE TARBELL & ASSOCIATES, INC.

Liz Gilchrest, E.I.T.
Associate Engineer

Carey Fraser
Technical Editor

for Ty Ziegler, P.E.
Environmental Engineering Manager

ESG/cef
Attachments

cc: T. Ziegler, DTA
T. Bowling, Duke Energy
J. Thrasher, Duke Energy
File

ATTACHMENTS

FIGURE 1

Lee Nuclear Station Reservoir Water Surface Elevations with Broad River Pumping (82-year record)
With Future Water Demands Included

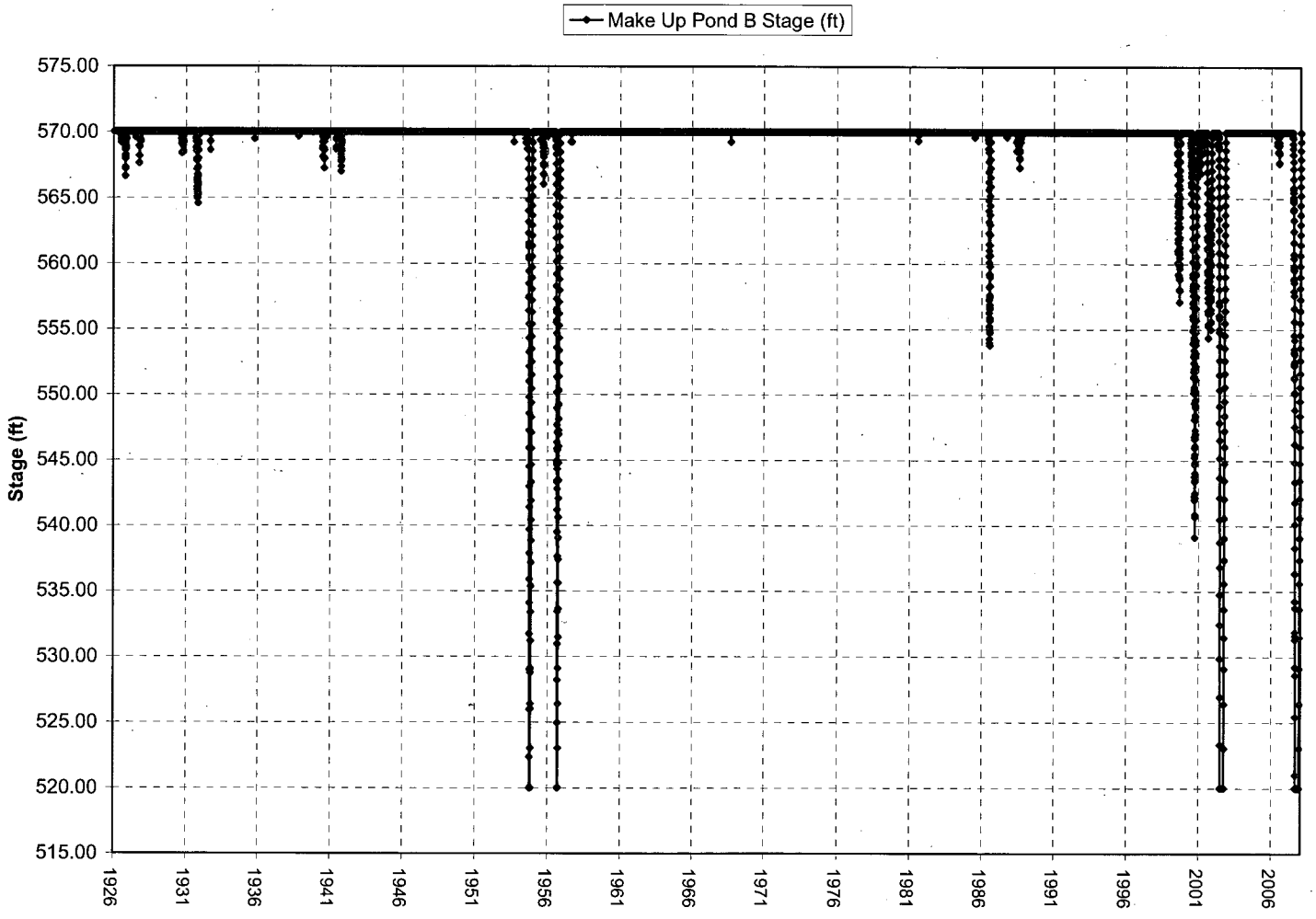


FIGURE 2

LNS Make Up Pond B Drawdown Occurrences (1926 - 2007: 82-year record)

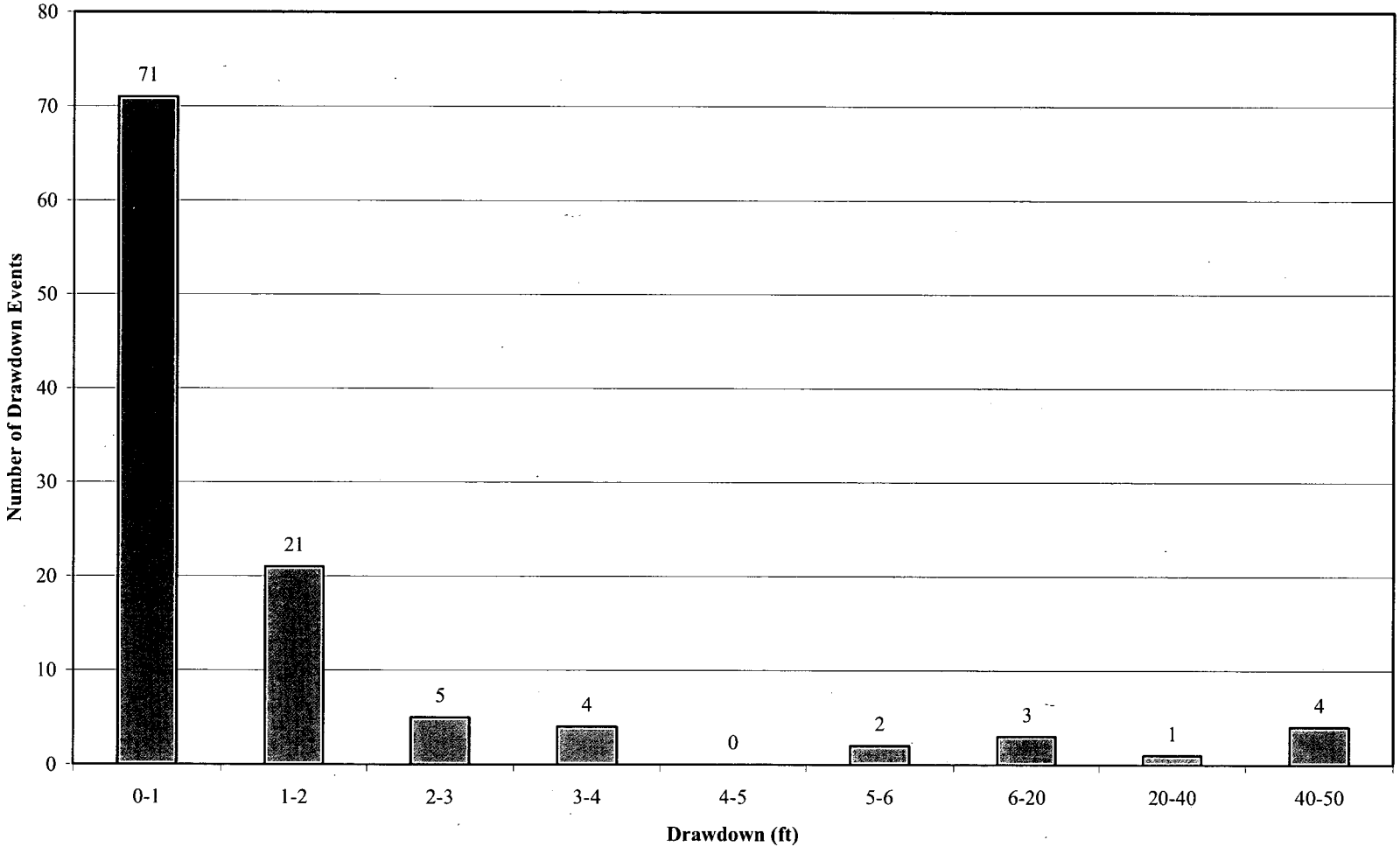


FIGURE 3

LNS Make Up Pond B Drawdown Occurrences (1926 - 2007: 82-year record)

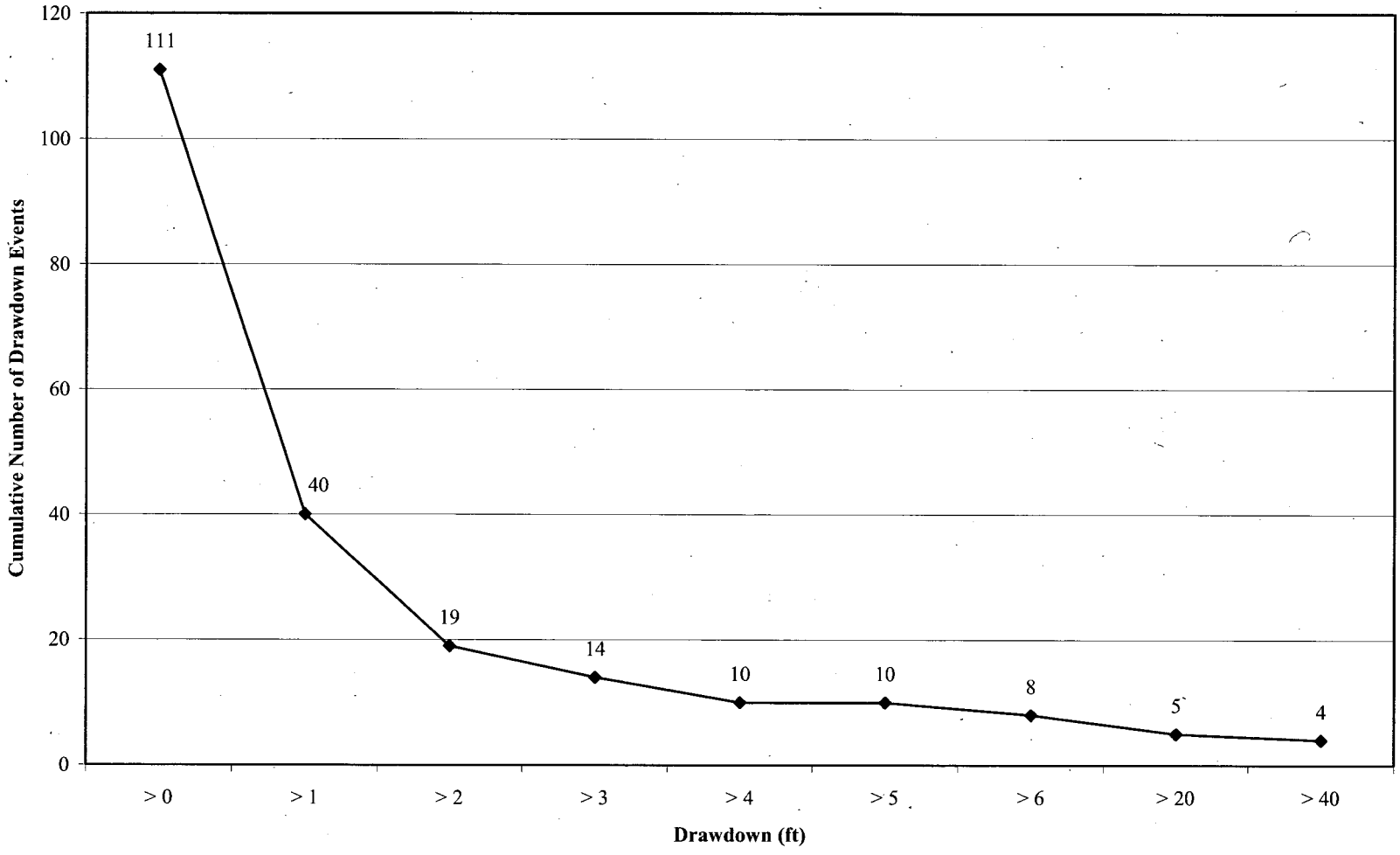


TABLE 1

LNS Make UP Pond B
Drawdown Occurrences

Histogram Breakouts	Maximum Drawdown (ft)	# Days to Maximum Drawdown[2]	# Days at Maximum Drawdown	# Days to Refill Pond B from Maximum Drawdown[3]	Total # Days in Drawdown Event	Start Date	End Date
0 - 1 ft[1]	1.0	3	1	2	5	6/18/2006	6/22/2006
1 - 2 ft[1]	1.9	3	1	4	7	6/30/1940	7/6/1940
2 - 3 ft[1]	2.8	4	1	5	9	8/3/1940	8/11/1940
3 - 4 ft	3.0	4	1	10	14	10/12/1941	10/25/1941
3 - 4 ft	3.1	6	1	5	11	3/6/2001	3/16/2001
3 - 4 ft	3.4	10	1	9	19	10/8/1926	10/26/1926
3 - 4 ft	4.0	13	1	8	21	9/12/1955	10/2/1955
5 - 6 ft	5.4	7	1	13	20	7/17/2000	8/5/2000
5 - 6 ft	5.5	37	1	11	48	9/20/1931	11/6/1931
6 - 20 ft	12.9	54	1	18	72	8/5/1999	10/15/1999
6 - 20 ft	15.7	29	1	92	121	8/21/2001	12/19/2001
6 - 20 ft	16.2	30	1	23	53	7/6/1986	8/27/1986
20 - 40 ft	30.9	72	1	48	120	8/12/2000	12/9/2000
40 - 50 ft	50.0	43	22	44	108	9/8/1954	12/24/1954
40 - 50 ft	50.0	52	12	43	106	7/31/1956	11/13/1956
40 - 50 ft	50.0	41	91	42	173	6/11/2002	11/30/2002
40 - 50 ft[4]	50.0	63	100	42	204	7/21/2007	2/9/2008

Notes:

1 Only the largest drawdown in the individual histogram breakout shown.

2 # Days to maximum drawdown includes the first day of maximum drawdown which results in this day being counted twice, therefore the three individual numbers do not add up to the total.

3 # Days to refill Make Up Pond B from maximum drawdown begins on the first day that water can be pumped from the Broad River into Make Up Pond B.

4 2008 provisional USGS data was included because the last drawdown event in 2007 extended to 2/9/2008.

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-84

NRC RAI:

Provide information on any stormwater basins, settling ponds, lagoons, or other such storage facilities, their potential on migratory birds (including waterfowl), and any design modifications in place to reduce such impacts.

Duke Energy Response:

The plans for the Lee Nuclear Station site include five water basins. Three of these five basins [Make-up Pond A (68 acres), Make-up Pond B (154 acres) and Holding Pond A (4 acres)] were created in the early 1970's during the construction activities associated with the Cherokee Nuclear Station. The two new basins that will be built are wastewater treatment basins.

It is not anticipated that any of the basins, or operations associated with the basins, will pose any negative impact to resident or migratory birds. As mentioned above, the three basins have been in existence since the 1970s and have provided, and continue to provide, such essential requirements as shelter, nesting habitat, feeding areas, and wintering areas for a variety of birds. It is Duke Energy's intent that these three water bodies will be managed so they continue to provide these ecological functions for birds and waterfowl as well as other wildlife. Rather than being viewed as areas that would potentially be detrimental to birds, it is anticipated that such programs as installing nest boxes for wood ducks, owls, kestrels (a federal species of concern), and bluebirds will be initiated to build/enhance these populations.

The two wastewater treatment basins will be much smaller in size than the three previously mentioned basins and will be constructed to provide treatment of plant waste streams. As such, they will be purposely designed, constructed, and operated in such a way that they will not provide the habitat, riparian zone, vegetation, or the surface acreage that would readily attract most birds. However, in the unlikely event that some birds would be drawn to these two basins, and if the basins would potentially be detrimental to their health or to the effective operation of the basins, Duke Energy biologists would assess the situation and implement bird exclusion devices (e.g., propane cannons, methyl anthranilate dispersion systems, netting, etc.) to dissuade the bird(s) in question from frequenting the basins.

Related to Duke Energy's response to this RAI, it is relevant to note that Duke Energy has both a Corporate Policy on Avian Protection as well as an Avian Protection Plan. Both of these documents were written to ensure corporate compliance with requirements of the Migratory Bird Treaty Act of 1918 and all other bird protection regulations and laws. In addition to protecting migratory birds it is the corporation's intent to manage bird interactions with power structures, facilities, equipment, and generating facilities and thereby reduce system interruptions that are caused by birds. Specifically it is Duke's expectation that we will:

- Ensure that our operations comply with migratory bird laws, regulations, permits, and guidelines.
- Document bird mortalities, bird injuries, and disturbances of active nests through the Migratory Bird Depredation Permit (DPRD-000257) as well as state-issued avian permits.

- Provide information, resources, and training to improve employee and contractor awareness of our responsibilities under bird protection laws.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-85

NRC RAI:

Provide information on any night time security lighting that will be in place at the site during construction and operation.

Duke Energy Response:

The nighttime security lighting system for construction and operation has not been designed yet. However, the system will conform to the requirements of 10 CFR 73.50 and 10 CFR 73.55. Light pole height for stadium lighting is expected to be 80 feet. Light pole height along roadways and parking is expected to be 35 feet. Lighting requirements are not less than 0.2 foot-candles measured horizontally at ground level.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-87

NRC RAI:

If one is available provide the management plan for the southern adder's tongue fern population on site.

Duke Energy Response:

A small population of approximately twenty-five Southern adder's tongue fern (*Ophioglossum vulgatum*) was found in a rich, cut-over, beech-mixed hardwood forest upslope from north-west side of Make-Up Pond B. This population is in a remote and secluded section of the site and is not expected to be disturbed by construction or operational activities. Although the Southern adder's tongue fern has not previously been reported for Cherokee County, SC, field surveys by Duke Energy scientists on properties in vicinity to the Lee Nuclear Station site have revealed several other populations in this section of the county. It is likely that this small, atypical-looking fern is much more common than reported.

Because the Southern adder's tongue fern is not a state or federally listed rare, threatened, or endangered species (it is classified as a Species of Concern in SC) there is no management plan required for this species.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-88

NRC RAI:

Provide a general description of terrestrial species associated with each alternative site.

Duke Energy Response:

A general description of the terrestrial species associated with the Lee Nuclear Site and the Perkins, Keowee, and Middleton Shoals sites is provided in the following revisions to the Environmental Report for the Lee Nuclear Site.

Associated Revision to the Lee Nuclear Station Combined License Application:

1. Revise COLA Part 3, ER Chapter 9, Subsection 9.3.2.3, as follows:

   The objective of this criterion is to evaluate the candidate sites with respect to potential construction and operations-related impacts on important terrestrial species and ecology. Data were obtained from the South Carolina Rare, Threatened & Endangered Species Inventory (Reference 1) and North Carolina Natural Heritage Program (Reference 2), listing of rare plant and animal species. Wetland information was obtained from the National Wetlands Inventory (NWI) maps published by the U.S. Fish and Wildlife Service or other existing environmental documentation for the candidate sites.

   In addition to the above, aerial photographs were obtained for the Lee Nuclear Site and the Perkins, Keowee, and Middleton Shoals candidate sites. The aerial photographs were subjected to image interpretation to identify cover or habitat types within a core area of the central portion of each site. This core area is described by a circle with a radius of 2500 ft. centered on the coordinates for the proposed reactor units. A circle with a radius of 2500 ft defines an area of about 450 ac. (Table 9.3-4).

   Undisturbed temperate broadleaf and mixed forests like the MH, MHP, and PMH types on the candidate sites generally constitute high-quality wildlife habitat. In addition to high species diversity in the plant community, these forests typically develop vertical structure that includes four layers. The uppermost layer is the canopy, which is composed of tall mature trees. Below the canopy is the three-layered, shade tolerant understory. The top layer of the understory is the subcanopy which is composed of smaller mature trees, saplings, and suppressed juveniles awaiting an opening in the canopy. Below the subcanopy is the shrub layer, composed of low-growing woody plants. Typically the lowest growing (and most diverse) stratum is the ground cover or herbaceous layer.

   Species diversity and structural diversity in forests increase the number of ecological niches available for occupation by a correspondingly larger number of more diverse animal species. Niche is a term describing the relational position of a species or population in its ecosystem. It describes how an organism or population responds to the distribution of resources and competitors (e. g., by growing when resources are abundant and predators, parasites and pathogens are scarce) and how it in turn alters those same factors (e.g., by limiting access to resources by other organisms, by acting as a food source for predators, or as a consumer of prey). The abundant and varied animal community occupying upland hardwood and mixed forests includes a large number of common bird, mammal, and herptile species, as well as members of "important" groups as defined in NUREG-1555. Lesser

numbers of these species occupy cover types of lower habitat value, including monotypic Pine plantations and less stratified shrub-forb-herb habitats like the USC and OFM types.

Sixty-four percent, 66 percent, and 59 percent of the cover in the core area at the Perkins, Keowee, and Middleton Shoals sites, respectively, consist of high-quality deciduous and mixed forest habitat (Table 9.4-3). This compares to only 14 percent at the Lee Nuclear Site. In contrast, the lower quality Pine, USC, and OFM habitat types comprise 36 percent, 30 percent, and 39 percent, respectively, at the Perkins, Keowee, and Middleton Shoals sites but almost 70 percent of the habitat at the Lee Nuclear Site. These data reflect the relative lack of previous disturbance at the Perkins, Keowee, and Middleton Shoals sites and the high degree of prior disturbance at the Lee Nuclear Site. The core area of the Lee Nuclear Site was extensively cleared and graded for the Cherokee Project but was cancelled in the 1980s.

Selecting the Lee Nuclear Site greatly reduces the adverse impact from additional clearing of upland forest habitat in comparison to the other three candidate sites. Accordingly, the Lee Nuclear Site is the preferred alternate site when considering the impact of the project on high quality terrestrial resources.

Lee Nuclear Site

There are no documented rare, threatened, or endangered (RTE) species on the Lee Nuclear Site, according to References 1 and 2. There are no documented occurrences of RTE in the vicinity of the site. However, field reconnaissance at the site revealed the presence of habitat suitable for several state and federally listed species outside of the core area. Field reconnaissance also revealed a small population of adder's tongue fern (*Ophioglossum vulgatum*), a state-listed species of concern, also outside the core area (Subsection 2.4.1.3.1).

NWI maps did not reveal significant wetland acreage on the ~~Lee Site~~Lee Nuclear Site, although, wetlands identified through interpretation of aerial photographs total about 35 ac. (Table 9.3-4). Only about 2.5 ac. of these wetlands are under the regulatory jurisdiction of the U.S. Army Corps of Engineers. ~~Because the Lee site~~The Lee Nuclear Site is already partially cleared~~and it~~. It was determined that using 65 ac. of high quality habitat (Table 9.3-4) for plant facilities in the 450-ac. core area of the site~~400 ac~~ would have minimal impacts on terrestrial ecosystems.

In NUREG-1437, the NRC concludes potential adverse impacts from cooling tower drift on surrounding plants, primarily trees in this case, are minor. These potential impacts can be minimized with the use of drift eliminators on the cooling towers.

Impacts to terrestrial ecological resources at the Lee Nuclear Site are estimated to be SMALL.

Keowee Site

There are no documented RTE species on the Keowee ~~Site~~site. The federally listed endangered peregrine falcon (*Falco peregrinus*) has been occasionally sighted near the Oconee Nuclear Station (which is located next to the Keowee site). There are four state-listed plant species (Species of Concern) in the vicinity of Lake Keowee: *Nestronia umbellula* (Indian olive), *Viola tripartitea* (three-parted violet), *Carex laxiflora* (loose-flowered sedge), and *Carex prasina* (drooping sedge). The NWI maps and aerial photograph interpretation did not reveal significant wetland acreage on the Keowee ~~Site~~site. The site is mostly wooded. Using ~~and 400~~450 ac. in the core area of the site for the plant facilities would require removal of 297~~400~~ ac. of high quality wooded habitat (Table 9.3-4).

In NUREG-1437, the NRC concludes potential adverse impacts from cooling tower drift on surrounding plants, primarily trees in this case, are minor. These potential impacts can be minimized with the use of drift eliminators on the cooling towers.

Impacts to terrestrial ecological resources at the Keowee ~~Site~~site are estimated to be MODERATE.

Perkins Site

There are no documented RTE species at the Perkins ~~Site~~site. There are no documented occurrences of RTE species in the vicinity of the site. NWI maps and aerial photo interpretation did not reveal significant wetland acreage on the Perkins ~~Site~~site. The site is mostly wooded. ~~and uf~~Using~~400~~450 ac. for the plant facilities in the core area of the site would require removal of 288~~400~~ ac. of high quality wooded habitat (Table 9.3-4).

In NUREG-1437, the NRC concludes potential adverse impacts from cooling tower drift on surrounding plants, primarily trees in this case, are minor. These potential impacts can be minimized with the use of drift eliminators on the cooling towers.

Impacts to terrestrial ecological resources at the Perkins ~~Site~~site are estimated to be SMALL to MODERATE.

Middleton Shoals Site

There are no documented RTE species on the Middleton Shoals site. There are no documented occurrences of RTE species in the vicinity of the site. NWI maps and aerial photograph interpretation did not reveal significant wetland acreage on the Middleton Shoals ~~Site~~site. The site is mostly wooded. Using 450 ac. ~~and locating 400 ac~~ in the core area of the site for the plant facilities would require removal of 265~~400~~ ac. of high quality wooded habitat (Table 9.3-4).

In NUREG-1437, the NRC concludes potential adverse impacts from cooling tower drift on surrounding plants, primarily trees in this case, are minor. These potential impacts can be minimized with the use of drift eliminators on the cooling towers.

Impacts to terrestrial ecological resources at the Middleton Shoals ~~Site~~site are estimated to be SMALL to MODERATE.

2. Revise COLA Part 3, ER Chapter 9, Subsection 9.3.2, by adding Table 9.3-4, as follows:

Table 9.3-4
Cover (Habitat) Types Present on the Perkins, Keowee, Middleton Shoals, and Lee Nuclear Candidate Sites*

	Name of Candidate Site							
	Perkins		**Keowee**		**Middleton Shoals**		**Lee Nuclear Site**	
Cover or Habitat Type	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**	**Acres**	**%**
Mixed Hardwood (MH) - Stands dominated by mixed hardwoods with little or no pine in the canopy.	0	0.0	212	47.0	99	22.1	38	8.6
Mixed Hardwood Pine (MHP) - Stands dominated by mixed hardwood with pine in the canopy.	177	39.3	46	10.2	21	4.7	12	2.6
Pine Mixed Hardwood (PMH) - Stands dominated by pine with mixed hardwood in the canopy and understory.	111	24.7	39	8.7	144	31.9	14	3.2
Pine - Young to mid-aged pine	3	0.7	122	27.1	58	13.0	0	0.0

stands or plantations with no hardwoods in canopy.								
Upland Scrub (USC) - Partially forested early successional, scrubby areas.	79	17.6	0	0.0	104	23.1	29	6.3
Open/Field/Meadow (OFM) – Non-forested areas dominated by grasses, herbs, or bare soil maintained by cattle grazing and/or mowing.	80	17.7	13	2.9	13	2.8	280	62.3
Wetland	0	0.0	0	0.0	0	0.0	35	7.7
Open Water	0	0.0	18	4.1	11	2.4	42	9.3
Total	450	100.0	450	100.0	450	100.0	450	100.0

* Based on cover type analysis within a circle with a radius of 2500 ft. centered on the coordinates of the proposed reactor units.

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-93

NRC RAI:

Provide any correspondence with the SC Department of Natural Resources regarding the paper pondshell mussel.

Are there plans for mitigation of potential impacts to the mussel?

Duke Energy Response:

On April 2, 2007, a Duke Energy ecologist consulted with Ms. J. Price of South Carolina Department of Natural Resources. Ms. Price indicated that:

1. The paper pondshell (*Utterbackia*) was a common mussel.
2. She was not sure how the paper pondshell got onto the State Species of Concern List.
3. South Carolina Department of Natural Resources was not concerned about any impact the Lee Nuclear Station project may have on the paper pondshell populations in the ponds.

A copy of the e-mail documenting these consultations is attached to this response.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachment:

Attachment 93-1 E-mail correspondence with South Carolina Department of Natural Resources concerning the paper pondshell mussel.

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 93-1 to RAI 93

E-mail correspondence with South Carolina Department of Natural Resources concerning the paper pondshell mussel

From: Vaughan, Gene E
Sent: Tuesday, April 03, 2007 8:53 AM
To: Bowling, Theodore J
Cc: Harrell, Raymond D
Subject: FW: Let's Postpone
Ted:

I called Jennifer Price of SCDNR yesterday to discuss the mussel issue in the Sedimentation Pond at Lee Nuclear Station. I explained to her that there were two major species in the pond (*Utterbackia* and *Pyganodon*) and in my opinion both were common species in SC. I did remind her that *Utterbackia* was listed as a Species of Concern in SC, but that I felt with the next iteration of the official SC listing of Endangered, Threatened, and Species of Concern that *Utterback*ia would likely be removed from the list. She agreed with my assessment.

We discussed several of the specifics of dredging, but in particular where the dredge spoil would end up. I assured her it would not be deposited near the river or in the riparian zone. Jennifer seemed fine with our conversation and said she did not see any problem with the dredging.

Below is Jennifer's official response and wanted you to have this for your files.

Please let me know if you have any questions or comments.

Gene

From: Jennifer Price [mailto:PriceJ@dnr.sc.gov]
Sent: Monday, April 02, 2007 3:27 PM
To: Bob Perry
Cc: Dick Christie; Vaughan, Gene E
Subject: RE: Let's Postpone

Hi Bob,

I just talked to Gene Vaughn. Because Pyganodon and Utterbackia are relatively common mussel species (I'm not really sure how they got onto the special concern list) and these populations are cutoff from other water bodies, I am not particularly concerned about the effect of this project on the populations of mussels in this pond. Gene assures me that the project won't result in the removed sediment reaching the river, which is a bigger concern in the long run, though I have not investigated the potential for this in detail.

Jennifer Price

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-94

NRC RAI:

Provide a summary of the status and the proposed timing of the submission of applications for the following permits:

- USACE Section 404 Dredge and Fill Permit
- SCDHEC Permit for Construction in Navigable Waters
- FERC Water Use Permit
- SCDHEC Water Withdrawal Registration
- SCDHEC NPDES discharge permit
- SCDHEC storm water permit
- SCDHEC Section 401 Permit

Also provide the status of and/or the time frame for beginning consultation with the following agencies regarding the proposed transmission routes.

- USFWS
- SCDNR

Duke Energy Response:

Current status of the listed permits is addressed below:

Section 404 Dredge and Fill Permit

Duke Energy met with the U.S. Army, Corps of Engineers (USACE), Columbia Field Office, in July 2008. The USACE advised Duke not to submit the 404 permit application for the Lee Nuclear Station until after the NRC has published the Final Environmental Impact Statement. The USACE also advised that they would be in contact with the NRC Environmental Program Manager to ensure that the Final Environmental Impact Statement included sufficient information for the USACE to use for the 404 permit application. Consequently, Duke Energy anticipates submitting a 404 permit application once the NRC issues the Final Environmental Impact Statement for the Lee Nuclear Station in 2010.

Duke Energy recently marked and surveyed all wetlands on site in order to submit a request for wetlands delineation from the Corps of Engineers.

Permit for Construction in Navigable Waters

In accordance with South Carolina Department of Health and Environmental Control (SCDHEC) Regulation 19-450.3(G), "No permit is required for any activity which requires another Department permit or certification, including but not limited to 401 Water Quality Certifications, water supply permits, National Pollutant Discharge Elimination System permits, wastewater

construction permits, and mining permits." Since the Lee Nuclear Station will require a 401 Water Quality Certification, National Pollutant Discharge Elimination System (NPDES) permit and wastewater construction permit, a separate permit for construction in navigable waters is not required.

Federal Energy Regulatory Commission (FERC) Water Withdrawal Permit

The FERC water withdrawal permit requires that the appropriate NPDES and 404 permits be filed prior to filing with FERC for the water withdrawal. Consequently, Duke Energy anticipates filing for the FERC water withdrawal permit after the NRC issues the Final Environmental Impact Statement in 2010.

NPDES Discharge Permit

Duke Energy consulted with the SCDHEC in 2006 concerning this permit. Duke Energy continues consultation with the agency on the contents of the permit application and permit conditions. Duke Energy anticipates submitting an application for the permit in early 2009.

Storm Water Permit

Duke Energy currently has two active storm water permits for (1) land disturbing activities associated with demolition of legacy structures and (2) land disturbing activities associated with installation of a meteorological tower. Duke Energy anticipates issuing Notice of Termination (NOT) for each of these permits in the next few weeks. Duke Energy anticipates submitting an application for a storm water permit for construction activities in late 2009.

Section 401 Water Quality Certification

Duke Energy consulted with SCDHEC in 2006 concerning this permit. SCDHEC advised that 401 Water Quality Certifications are issued in association with Section 404 Dredge and Fill Permits. Consequently, we anticipate submitting the application for the 401 Water Quality Certification at the same time as we submit the application for the 404 Dredge and Fill Permit, once the NRC issues the Final Environmental Impact Statement for the Lee Nuclear Station in 2010. Duke Energy is exploring the possibility of obtaining a 401 Water Quality certification in conjunction with the NPDES permit or the possibility of obtaining a conditional 401 Water Quality Certification prior to issuance of the Final Environmental Impact Statement.

Consultations with U.S. Fish and Wildlife Service and South Carolina Department of Natural Resources Concerning the Transmission Lines

Once the centerline of the transmission lines have been surveyed, Duke Energy will initiate consultation with both the U.S. Fish and Wildlife Service and the South Carolina Department of Natural Resources concerning rare, threatened and endangered species along the proposed transmission lines. This should occur in early 2009.

Associated Revision to the Lee Nuclear Station Combined License Application:

None

Associated Attachments:

None

Lee Nuclear Station Response to Request for Additional Information (RAI)

RAI Letter Dated: August 21, 2008

Reference NRC RAI Number: ER RAI-97

NRC RAI:

Provide figure depicting wetlands, stream channels, and waters of US under the jurisdiction of the Army Corps of Engineers.

Clarify if Make-up Ponds A and B are regulated the Army Corps of Engineers.

Duke Energy Response:

The attached figures (Attachments 97-1 and 97-2) provide the requested information. The U S Army corps of Engineers letter provided in Appendix b of the ER states that Make-Up Ponds A and B are jurisdictional waters. The following revisions provide clarification that Make-up Ponds A and B are regulated by the U.S. Army Corps of Engineers (USACE).

Associated Revision to the Lee Nuclear Station Combined License Application:

1. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.1.1, beginning at Paragraph 4, as follows:

   At the Lee Nuclear Site, wetlands occupy a total of 46.4~~42.8~~ ac. or 2.4~~2.3~~ percent of the site (Figure 2.4-2 ~~Figure 2.4.1~~). They are currently represented by Alluvial Wetland, Nonalluvial Wetland, and Nonjurisdictional Wetland that total 3.2~~2.3~~ ac. (0.2~~12~~ percent), 10.8~~8.1~~ ac. (0.6~~43~~ percent), and 32.4 ac. (1.7 percent) of the total site area, respectively (Table 2.4-1).

   Alluvial Wetlands (AW). Alluvial wetlands are associated with waterways. As mentioned earlier, the Lee Nuclear Site is bordered to the north and east by the Broad River but now supports little alluvial wetland. Alluvial wetlands that existed earlier in the southern portion of the site were inundated in the 1970s by impounding a backwater of the river to form the existing Make-Up Pond A.

   Two~~One~~ small areas~~areas~~ of alluvial wetland currently exists on the northern border of the site (Figure 2.4-2 ~~Figure 2.4.1~~). The first is about 2.5 ac. in area and is located immediately upstream of ~~near~~ the proposed water intake structure on the river. The second, about 0.8 ac. in area, is located further upstream at the bottom of a spillway channel that drains overflow water from Make-Up Pond B. At both locations, ~~Here~~ cottonwood, sycamore, sugarberry, sweet gum, and green ash form the canopy. Box elder, black willow, and buttonbush are found in the understory. False nettle, river oats, and cane occupy the shaded herbaceous layer of these~~is~~ wetlands~~wetland~~.

   Sedges, common needlerush, arrow-arrum, and floating aquatics such as the exotic Uraguayan primrose occur in open backwaters of the river adjacent to these alluvial wetlands.

   Nonalluvial Wetlands (NAW). Seven~~ral~~ small nonalluvial wetlands occur on the site (Figure 2.4-2). These wetlands are associated with springs, small streams channels, backwaters of impoundments, and other man-made and natural depressions. Alluvial and nonalluvial wetlands~~Most~~ are jurisdictional wetlands, meaning that they are wetlands under the regulatory jurisdiction of USACE. The USACE regulates dredging, filling, or any other

physical alteration of such wetlands pursuant to the Section 404 permit program under the federal Clean Water Act (Reference 15).

Wetlands not under the regulatory jurisdiction of USACE are discussed below as Nonjurisdictional Wetlands.

Nonalluvial wetlands on the Lee Site were dominated primarily by red maple, tulip poplar, sweet gum, black willow with ironwood, and tag alder often in the understory and shrub layer. Cottonwood, box elder, buttonbush, swamp dogwood, and elderberry were also seen in nonalluvial wetlands at the Lee Nuclear Site. Common needlerush, sedges, and false nettle are the dominant species in the herb/grass layer.

Nonjurisdictional Wetland (NJW). Two nonalluvial wetlands are mapped as "nonjurisdictional" on Figure 2.4-2 ~~Figure 2.4.1~~. Both were created as a result of construction activities at the site in the early 1970s and are not wetlands under the regulatory jurisdiction of USACE.

One nonjurisdictional wetland is a 30.7-ac. depression surrounding the planned locations of the original reactors in the central portion of the core construction area. From the time it was excavated to the present, the depression accumulated rainwater and runoff from the surrounding microwatershed and appears as a flooded depression on available aerial photography. Duke Energy dewatered the depression in order to further explore subsurface foundation conditions and facilitate demolition of the old containment structure. Dewatering to remove seasonal rainwater continues.

The other nonjurisdictional wetland area is a small 1.7-ac. depression north of the previous Cherokee Unit 1 ~~existing~~ containment structure that is dominated by cottonwood, black willow, and common needlerush. Examination of soil borings from this area revealed it to be nonhydrophytic clay more typical of upland soil than wetland soil. The latter is typically darker in color and often contains oxidized plant rhizomes and other wetland indicators.

2. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.1.2, Paragraph 1, as follows:

   The mixed hardwood cover type is the richest, most biologically diverse plant community at the Lee Nuclear Site. As listed in Table 2.4-1, this community occupies a total of 406.1~~410.3~~ ac. or 21.4~~6~~ percent of the site. Figure 2.4-1 shows the distribution of this and other upland cover types on the Lee Nuclear Site, as discussed below.

3. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.1.3, Paragraph 1, as follows:

   The mixed hardwood-pine cover type occupies 307.3 ac. or 16.2 ~~16.18~~ percent of the Lee Nuclear Site (Table 2.4-1). In particular, the northwestern portion of the site is occupied by a large expanse of cut-over mixed hardwood-pine with a diverse mixture of hardwood species along creeks. Here, tulip poplar, white ash, and white oak are the dominant species. All are approximately less than 1 ft. DBH.

4. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.1.4, Paragraph 2, as follows:

   Found elsewhere on the property are old abandoned agricultural fields and fescue pastures. Fescue, a tufted grass introduced from Europe, is commonly planted to supplement native grass in pastures. In total, the open areas, fields and meadows cover type now occupies 421.6 ac. or 22.2 ~~22.19~~ percent of the Lee Nuclear Site (Table 2.4-1). It is the largest single cover type on the property.

5. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.1.5, as follows:

   The open pine-mixed hardwood cover type occupies about 65.3 ac. or 3.4~~3.44~~ percent of the Lee Nuclear Site (Table 2.4-1). It occurs primarily in the southwestern portion of the site. Reconnaissance in 2006 indicates that relatively large stands of the pine-mixed hardwood cover type (see Subsection 2.4.1.1.7) appear to have had most of the hardwoods and some of the canopy pines removed by selective logging. The resulting community is dominated by widely spaced loblolly pine, 1 - 2 ft. DBH, with an open understory only partially vegetated by mixed hardwood species such as white oak, sweet gum, and red maple. The shrub and herbaceous layers in this type are sparse.

6. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.1.6, as follows:

   The pine cover type consists of stands of pure pine occupying about 16 ac. or 0.8~~0.84~~ percent of the Lee Nuclear Site (Table 2.4-1). Most of these stands are dominated by introduced loblolly pine with scattered shortleaf and Virginia pine. The pine stands are young to mid-aged. Some of the loblolly stands appear to have been planted.

7. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.1.1.7, as follows:

   Unlike pure pine stands, the pine-mixed hardwood cover type is widespread at the Lee Nuclear Site as scattered stands and occupies about 227.1 ac. or about ~~almost~~ 12 percent of the site (Table 2.4-1). Loblolly and shortleaf pine dominate this cover type with a mixture of hardwood species also in the canopy, depending mainly on local soil moisture conditions.

8. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.2.6, beginning with Paragraph 3, as follows:

   The Broad River is classified as "waters of the United States" and is under the regulatory jurisdiction of USACE, which regulates discharges into such waters. Additionally, eight on-site stream channels with hydrologic connections to the river, the alluvial and nonalluvial wetlands, and the open water areas (including Make-Up Ponds A and B) shown on Figure 2.4-2 are also under USACE's regulatory jurisdiction. The channels total approximately 1.5 mi. in length and occupy about 2.8 ac. or 0.1~~0.15~~ percent of the total area of the site. The alluvial and nonalluvial wetlands total approximately 14.0 ac. in area (about 0.7 percent of the site), and open water occupies about 250 ac. (or 13.2 percent of the site) (see Figures~~Figure~~2.4-1 and 2.4-2 and Table 2.4-1).

   Based on discussions during a June 26, 2006, visit to the site by representatives of USACE, Duke Energy requested USACE review of Figure 2.4-2 ~~Figure 2.4.1~~and Table 2.4-1 and solicited a letter from the agency (August 14, 2006) stating USACE's agreement with the extent of jurisdictional wetlands and waters of the United States at the Lee Nuclear Site, as depicted on Figure 2.4-2 ~~Figure 2.4.1~~. Written confirmation of this determination was provided by USACE on September 24, 2007.

9. Revise COLA Part 3, ER Chapter 4, Subsection 4.3.1.1.2, as follows:

   At the Lee Nuclear Site, jurisdictional wetlands and waters of the United States occupy about 14 ~~2.3~~percent of the site but do not occur within ~~jurisdictional wetlands constitute less than 1 percent of~~ the footprint of new construction (see Figure 4.3-1 and Table 4.3-1). In addition, the largest nonjurisdictional wetland ~~NJW~~ area to be reused is a once-flooded but now dewatered excavation created during construction of the containment structure for Cherokee Unit 1. Demolition of this structure is complete. ~~underway~~ The other nonjurisdictional

wetland occupies an area also disturbed during Cherokee Unit 1 construction. ~~and~~ Reuse of these areas~~the area~~ has a negligible effect on wetlands.

Alluvial wetlands are normally forested and associated with waterways. As mentioned earlier, the Lee Nuclear Site now supports little alluvial wetland along the Broad River. Alluvial wetlands that existed earlier in the southern portion of the site were inundated in the 1970s by impounding a backwater of the river to form the existing Make-Up Pond A.

Two ~~One~~ small areas ~~area~~ of alluvial wetland exists on the northern border of the site west (or upstream) of the proposed raw water intake structure. These wetlands are not ~~This wetland is not~~ within the construction footprint. The primary effect to the~~this~~ wetland closest to the intake structure, as a result of constructing the ~~intake~~ structure, is probably slightly increased turbidity associated with installing the cofferdam to isolate the intake construction site and settling of some suspended material within the wetland or downstream. Heavy siltation can harm wetland vegetation. Water movement into the wetland should not be impeded or altered and the cofferdam should contain most of the suspended silt that might otherwise enter the wetland. As discussed below, construction in the area is also conducted in accordance with permit conditions designed to mitigate adverse impacts on wetlands~~wetland~~.

Seven~~Several~~ small, nonalluvial wetlands also occur on the site. These partially forested wetlands are associated with small streams, backwaters of ponds, and man-made and natural depressions. Examination of Figures 4.3-1 and 4.3-2 suggests that none of the nonalluvial wetlands on the site currently fall within the construction footprint. However, like the stream channels and open water areas shown on Figure 2.4-2, the~~most~~ alluvial and nonalluvial wetlands are ~~jurisdictional wetlands, meaning that they are wetlands~~ under the legal jurisdiction of the U.S. Army Corps of Engineers (USACE). The USACE regulates dredging, filling, or any other physical alteration of such areas~~wetlands~~ under its Section 404 permit program pursuant to the federal Clean Water Act. Duke Energy's standard practices prohibit all dredge and fill activities that result in discharge of sediment into jurisdictional waters or wetlands without first obtaining the USACE permit. All work in regulated areas will be done according to BMPs or other conditions included in the permit. Although each permit is site-specific, BMPs typically require the following when construction occurs in proximity to waterways or wetlands:

10. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.2.2.1, Paragraphs 1, 5, and 9, as follows:

In addition to fish collections made by others and discussed in the literature, the results of electrofishing and gillnetting in the river and Ninety-Nine Islands Reservoir near the site by Duke Energy in 2006 are described. The fish species collected during these efforts are listed in Table 2.4-7. ~~Figure 2.4-2~~Figure 2.4-3 shows the proximity to the site of each sampling station where recent and earlier fish collections were made.

The absence of species collected during the 1970s from later collections could represent a contraction of the range of the species in question, misidentification of specimens in the original collection, or differences in the specific microhabitat characteristics at individual sampling stations. ~~Figure 2.4-2~~Figure 2.4-3 demonstrates that the studies summarized in Table 2.4-7 shared only one common sample site, an indication that microhabitat could be an important influence.

Of fish collected in the Ninety-Nine Islands Reservoir during 2006, members of the Centrarchid family are most numerous. Centrarchids accounted for 2455 of 3621 specimens captured (or 68 percent of the total catch). As listed in Table 2.4-8, most of the Castostomids, Cyprinids, and Ictalurids were captured below the Ninety-Nine Islands Dam at the confluence of the Broad River and King's Creek. Comparing numbers captured at Stations 460 and 463

within Ninety-Nine Islands Reservoir (see ~~Figure 2.4-2~~Figure 2.4-3), Centrarchid species (sunfish and bass) appear equally distributed above and below the new make-up water intake on the north side of the site.

11. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.2.3, Page 2.4-27, replace the figure reference, as follows:

    The habitats sampled at Locations 453 and 465 (see ~~Figure 2.4-2~~Figure 2.4-3) were generally similar, consisting of locations near islands in the river with large riffle areas, tree root masses, leaf packs, and small sand/cobble substrates. Locations 459, 460, and 463 within Ninety-Nine Islands Reservoir were also similar to each other in habitat, which was limited by steep banks, some root masses along the bank, and organic matter on the bottom.

12. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.2.5.1, Paragraph 2, as follows:

    The Cherokee ER reported collecting seven specimens of the robust redhorse during scheduled sampling periods at Sample Station 15 (Reference 5), located at the confluence of the Broad River and King's Creek immediately downstream from Ninety-Nine Islands Reservoir (see ~~Figure 2.4-2~~Figure 2.4-3). However, further identification by Duke Power Company using additional taxonomic experts revealed that the report was a result of misidentification due to incomplete understanding of the taxonomy of the species at the time.

13. Revise COLA Part 3, ER Chapter 2, Subsection 2.4.2.5.2, Paragraph 4, as follows:

    SCDNR collected this darter only downstream of Ninety-Nine Islands Reservoir (Reference 38). One specimen of the species was collected adjacent to the Lee Nuclear Site at Sample Station 463 (see Table 2.4-8 and ~~Figure 2.4-2~~Figure 2.4-3) during the 2006 winter fish sampling program. It also occurred during the sampling at this same locale in 1974–1976.

14. Revise COLA Part 3, ER Chapter 2, Page 2.4-56, Footnote to Table 2.4-8, as follows:

    a) See ~~Figure 2.4-2~~Figure 2.4-3 for sample station locations.
    b) Also reported in References 5 and 38.
    c) Also reported in either Reference 5 or Reference 38.

15. Revise COLA Part 3, ER Chapter 2, by renumbering Figure 2.4-2 to Figure 2.4-3, as shown in Attachment 97-2.

16. Revise COLA Part 3, ER Chapter 2, by adding a new Figure 2.4-2, as shown in Attachment 97-1.

17. Revise COLA Part 3, ER Chapter 2, Table 2.4-1, as follows:

TABLE 2.4-1
ACREAGE OCCUPIED BY VARIOUS ECOLOGICAL TYPES AT THE LEE NUCLEAR SITE

Map Symbol	Ecological Type	Brief Description of Type	Acres	Percent Of Total
O/F/M	Open/Field/Meadow	Nonforested areas dominated by grasses, herbs, or bare soil maintained by cattle grazing and/or mowing.	421.6	~~22.19~~22.2
MH	Mixed Hardwood	Stands dominated by mixed hardwoods with little or no pine in the canopy.	~~410.3~~406.1	~~21.60~~21.4

MHP	Mixed Hardwood-Pine	Stands dominated by mixed hardwood with pine in the canopy.	307.3	~~16.18~~16.2
OW	Open Water	Reservoirs and ponds constructed in uplands and Broad River backwaters.	~~249.4~~250.0	~~13.13~~13.2
PMH	Pine-Mixed Hardwood	Stands dominated by pine with mixed hardwood in the canopy and understory.	227.1	~~11.96~~12.0
USC	Upland Scrub	Partially forested early successional, scrubby areas.	156.9	~~8.26~~8.3
OPMH	Open Pine-Mixed Hardwood	Selectively cut stands with scattered pine in canopy and mixed hardwood understory.	65.3	~~3.44~~3.4
NJW	Nonjurisdictional Wetland	Disturbed, open, man-made wetland not under regulatory authority of USACE.	32.4	~~1.70~~1.7
P	Pine	Young to midaged pine stands/plantations with no hardwoods in canopy.	16.0	~~0.84~~0.8
NAW	Nonalluvial Wetland	Backwater emergent wetland associated with ponds, reservoirs, and upland depressions.	~~8.1~~10.8	~~0.43~~0.6
~~SC~~AW	~~Stream Channel~~Alluvial Wetland	~~Intermittent drainages in uplands under regulatory authority of USACE.~~Forested bottomland along Broad River floodplain.	~~2.8~~3.2	~~0.15~~0.2
~~AW~~SC	~~Alluvial Wetland~~Stream Channel	~~Forested bottomland along Broad River floodplain~~Intermittent drainages in uplands under regulatory authority of USACE	~~2.3~~2.8	~~0.12~~0.1
		Total	**1899.5**	**~~100.00~~**

Associated Attachments:

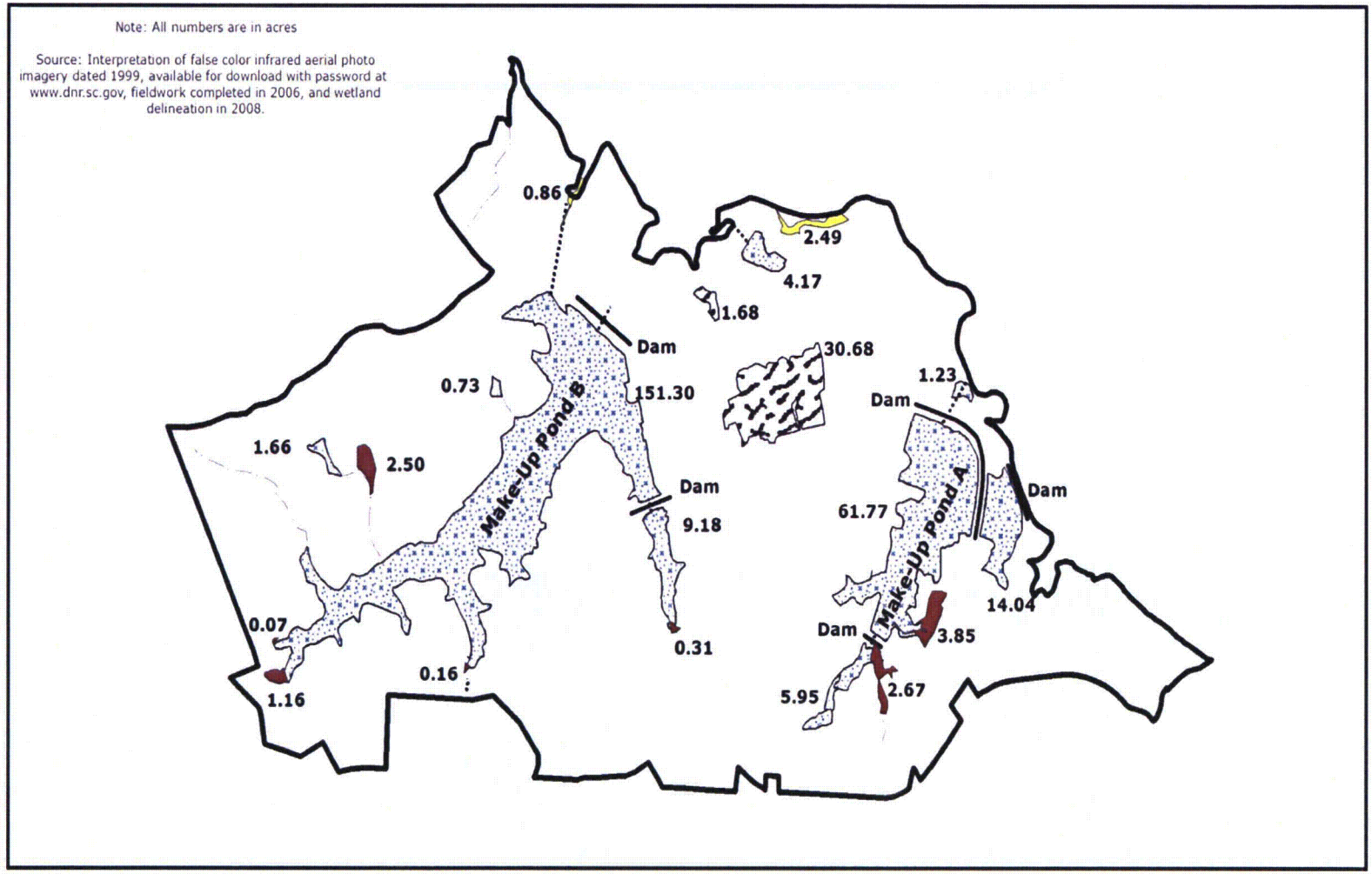
Attachment 97-1 ER Figure 2.4-2, Wetlands on the Lee Nuclear Site.

Attachment 97-2 ER Figure 2.4-3, Approximate Locations of Fish Collection Stations on the Broad River in Proximity to the Proposed Lee Nuclear Site.

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 97-1 to RAI 97

ER Figure 2.4-2, Wetlands on the Lee Nuclear Site



Legend

- Property Boundary (1931 ac.)
- Spillway Channel or Underground Pipe
- Stream Channels (Waters of the U.S.) [2.8 ac.]
- Alluvial Wetland (3.4 ac.)
- Non-Alluvial Wetland (10.7 ac.)
- Non-Jurisdictional Wetland (32.4 ac.)
- Open Water (250 ac.)

0 0.25 0.5
Miles

N
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S

WILLIAM STATES LEE III
NUCLEAR STATION UNITS 1 & 2

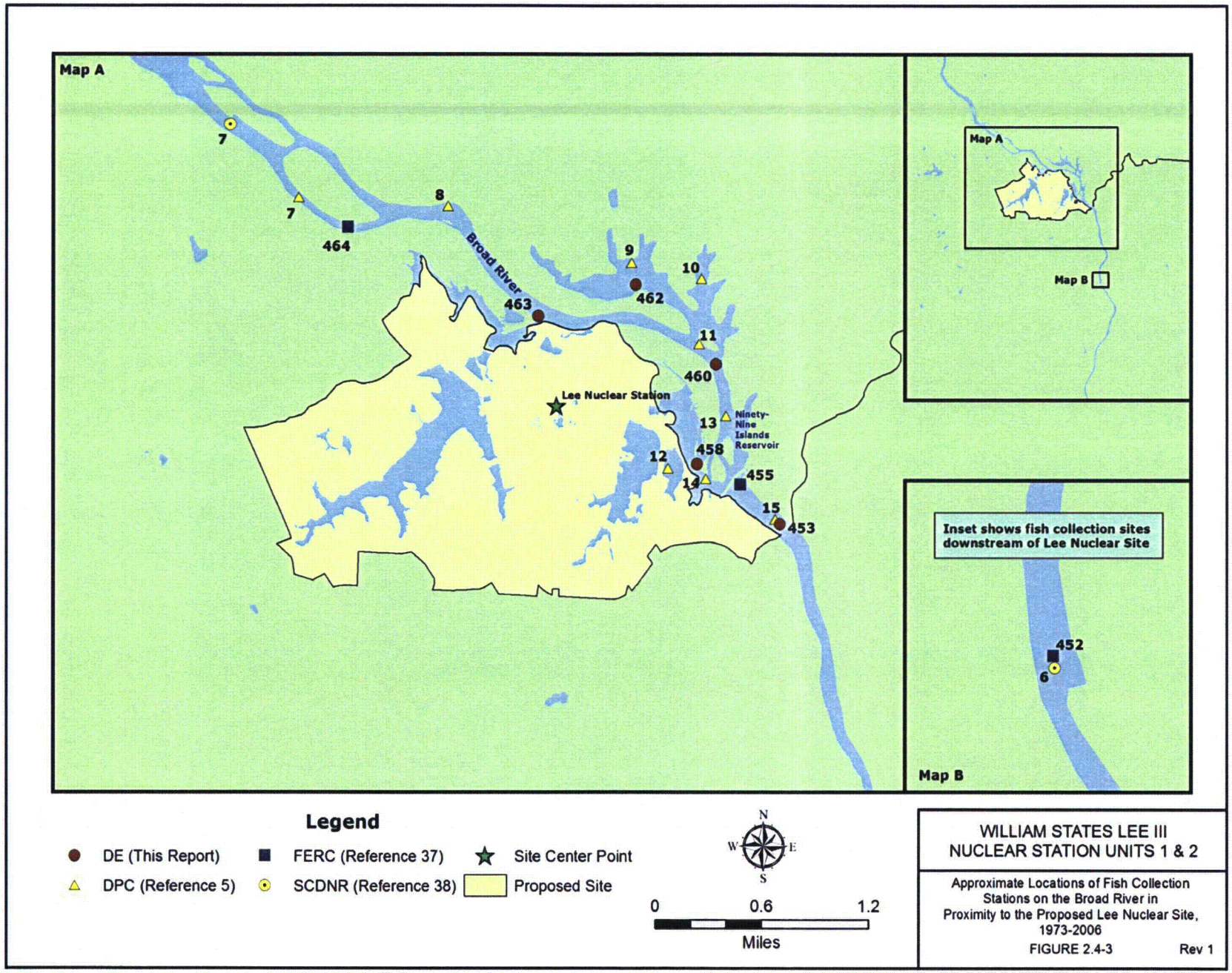
Wetlands on the Lee Nuclear Site

FIGURE 2.4-2 Rev 1

Lee Nuclear Station Response to Request for Additional Information (RAI)

Attachment 97-2 to RAI 97

ER Figure 2.4-3, Approximate Locations of Fish Collection Stations on the Broad River in Proximity to the Proposed Lee Nuclear Site



WILLIAM STATES LEE III
NUCLEAR STATION UNITS 1 & 2

Approximate Locations of Fish Collection Stations on the Broad River in Proximity to the Proposed Lee Nuclear Site, 1973-2006

FIGURE 2.4-3 Rev 1