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April 22, 1993

U.S. Nuclear Regulatory Commission  
Mail Station P1-37  
Washington, D.C. 20555

Attention: Document Control Desk

Subject: Grand Gulf Nuclear Station  
Unit 1  
Docket No. 50-416  
License No. NPF-29  
1992 Grand Gulf Nuclear Station (GGNS) Annual  
Environmental Operating Report (AEOR)

GNRO-93/00052

Gentlemen:

Attached is the Grand Gulf Nuclear Station (GGNS) Annual Environmental Operating Report (AEOR) for the period January 1, 1992 through December 31, 1992. This report is submitted in accordance with the Environmental Protection Plan, Appendix B to the GGNS Operating License (NPF-29), Section 5.4, Station Reporting Requirements.

If you have any questions or require additional information concerning this report, please contact Jewel Summers at (601) 437-2149, or this office.

Yours truly,

C. R. Hutchinson  
Vice President, Operations GGNS

JS/mtc

attachment: 1992 Annual Environmental Operating Report  
cc: (See Next Page)

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April 22, 1993

GNRO-93/00052

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GRAND GULF NUCLEAR STATION

1992 ANNUAL ENVIRONMENTAL OPERATING REPORT

## PREFACE

The Annual Environmental Operating Report (AEOR) provides information and data obtained from implementation of Grand Gulf Nuclear Station's (GGNS) Environmental Protection Plan (EPP), Appendix B to the GGNS Operating License (NPF-29), which only requires terrestrial issues to be addressed, for the period January 1 through December 31, 1992. In addition, the AEOR includes annual regional and perched groundwater levels, and precipitation data as required by Section 2.4.13.5 of the GGNS Updated Final Safety Analysis Report (UFSAR).

The GGNS Final Environmental Statement did not identify any aquatic issues. Consequently, the EPP does not address any. The GGNS National Pollutant Discharge Elimination System Permit issued by the Mississippi Department of Environmental Quality (MDEQ) contains effluent limitations and monitoring requirements for aquatic matters. The MDEQ regulates matters involving water quality and aquatic biota.

With exception to the UFSAR requirement, this report addresses only those issues required by the EPP. In the past, the AEOR included activities associated with the GGNS Construction Permit. However, the Nuclear Regulatory Commission (NRC) approved cancellation of Construction Permit CPPR-119 for Unit 2 on August 21, 1991 (GNRI-91/00176); therefore, GGNS terminated monitoring and reporting activities associated with the construction permit.

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SECTION 1.0

INTRODUCTION

## 1.1 IMPACT ASSESSMENT AND SUMMARY

GGNS personnel monitored the environmental impact of plant operational activities between January 1 and December 31, 1992. The monitoring results contained in the following sections indicate no adverse impact on the environment due to the operation of GGNS. In addition, GGNS personnel have not observed harmful effects or evidence of trends toward irreversible damage to the surrounding environment at GGNS.

SECTION 2.0  
ENVIRONMENTAL SURVEILLANCE ACTIVITIES

## 2.1 TRANSMISSION LINE SURVEYS

GGNS discontinued this program in 1988.

## 2.2 GROUNDWATER MONITORING

GGNS implements a groundwater monitoring program to:

- o Provide data on seasonal fluctuation of the regional groundwater table and,
- o Monitor the perched groundwater table around the Power Block.

This program utilizes twelve wells for regional groundwater levels on the site area and fifteen wells for perched groundwater levels around the Power Block.

### Regional Groundwater

GGNS utilizes regional groundwater wells (Figure 2-1 and Table 2-1) to monitor the affect of the radial wells on the existing groundwater table. Seasonal fluctations in the regional well levels normally correspond to the Mississippi River. GGNS personnel measure water levels in these wells at least twice per year (April and September).

### Perched Groundwater

The GGNS Plant has a monitoring and dewatering system (Figure 2-2 and Table 2-2) located around the Power Block and Standby Service Water Basins to monitor and dewater the underlying perched aquifer. The plant utilizes seven wells (MW-1 through MW-7) to monitor water levels in the perched aquifer and eight wells (DW-1 through DW-8) to dewater the aquifer if water levels approach or exceed the design basis elevation of 109 feet mean sea level (MSL). GGNS personnel measure water levels in these wells monthly.

### 2.3 COOLING TOWER DRIFT PROGRAM

GGNS submitted a request to discontinue the Cooling Tower Drift Program to the NRC (GNRO-92/00017) on February 7, 1992 and received approval (GNRI-92/00102) on May 11, 1992. Therefore, GGNS discontinued this program after the first quarter of 1992.

### 2.4 ENVIRONMENTAL EVALUATIONS

The EPP permits changes in GGNS design or operation and performance of tests or experiments that affect the environment, provided they do not involve a change in the EPP or an unreviewed environmental question. However, EPP requirements do not apply to changes, tests or experiments which do not affect the environment. Also, EPP requirements do not relieve GGNS of 10 CFR 50.59 requirements, "Changes, Tests and Experiments," which address the question of safety associated with proposed changes, tests and experiments.

The EPP excludes changes, tests or experiments from the evaluation:

- o If all measurable environmental effects confined to onsite areas previously disturbed during site preparation and plant construction, or
- o If required to achieve compliance with other federal, state or local requirements.

TABLE 2-1

REGIONAL GROUNDWATER WELL LOCATIONSIN FIGURE 2-1

<u>LEGEND</u>	<u>WELL NUMBER</u>	<u>LOCATION DESCRIPTION</u>
1	P-5, OW-5	NE Lay down Area
2	OW-209A, P-209	Bluff behind Vehicle Maintenance Shop
3	OW-202	Bluff north of Switchyard
4	OW-10	West end Met. Tower field
5	OW-4, OW-4A, P-4	Former County Road - Adjacent to Stream A
6	OW-29A	West Lay down Area
7	OW-69A	Field - North side Haul Road
8	OW-7	Across the south Plant Access Road and south of Basin B

TABLE 2-2

PERCHED GROUNDWATER WELL LOCATIONSIN FIGURE 2-2

<u>WELL NO.</u>	<u>LOCATION DESCRIPTION</u>
MW-1	North end of Turbine Bldg
MW-2	Northwest corner of Auxiliary Bldg
MW-3	Northeast of SSW B Basin (between fences)
MW-4	Southwest side SSW A Basin
MW-5	Northeast GGNS Maintenance Shop
MW-6	North of Condensate Storage Tank
MW-7	East of Turbine Bldg
DW-1	East of Turbine Bldg
DW-2	Corner Auxiliary Bldg - Turbine Bldg
DW-3	Northwest corner of Auxiliary Bldg by electric panels
DW-4	Southwest corner of Auxiliary Bldg
DW-5	Between SSW A and SSW B Basins
DW-6	In front of Diesel Generator Bldg (under manhole)
DW-7	Corner of Turbine Bldg - Auxiliary Bldg
DW-8	Behind Radwaste Bldg

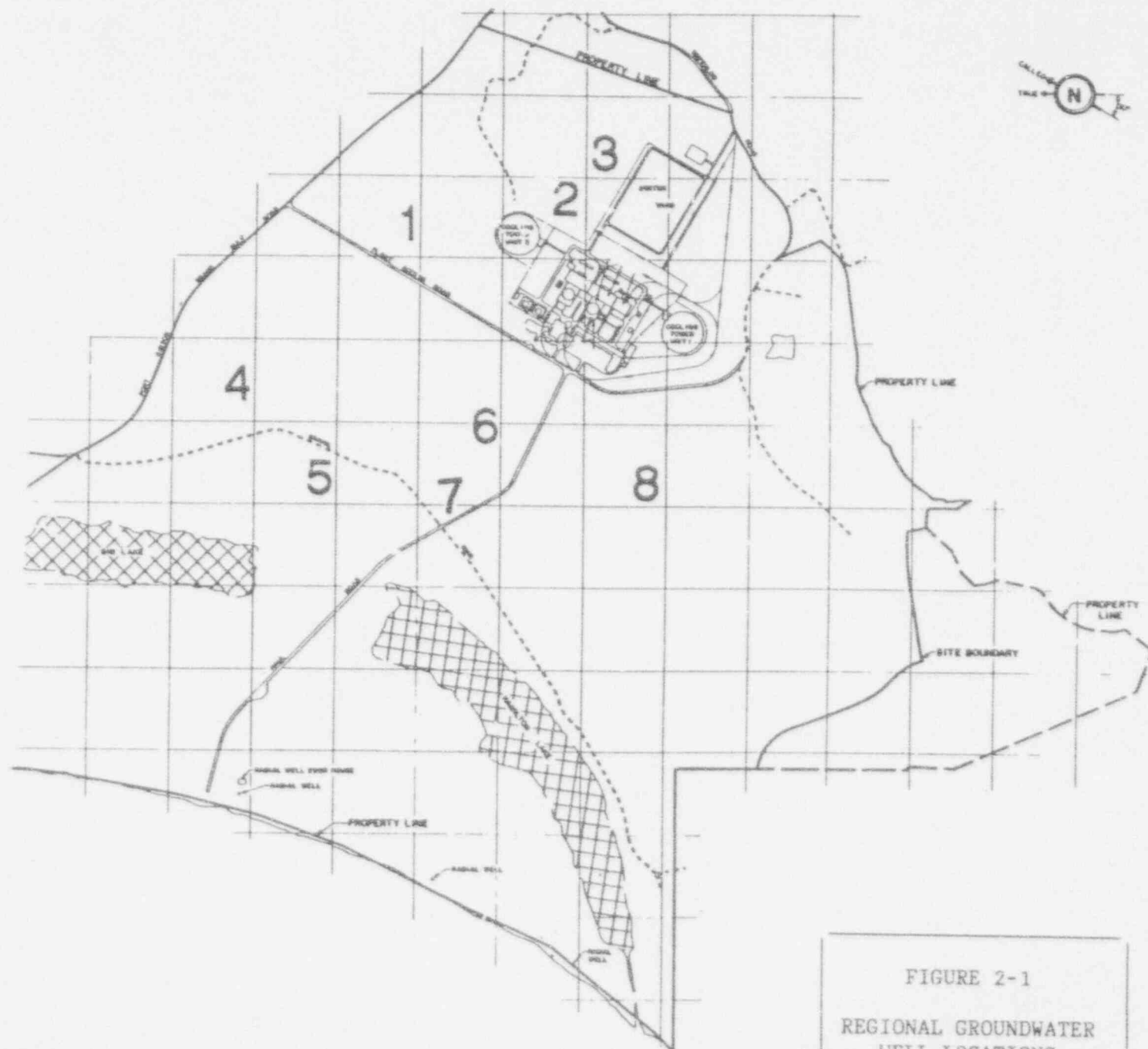


FIGURE 2-1  
REGIONAL GROUNDWATER  
WELL LOCATIONS



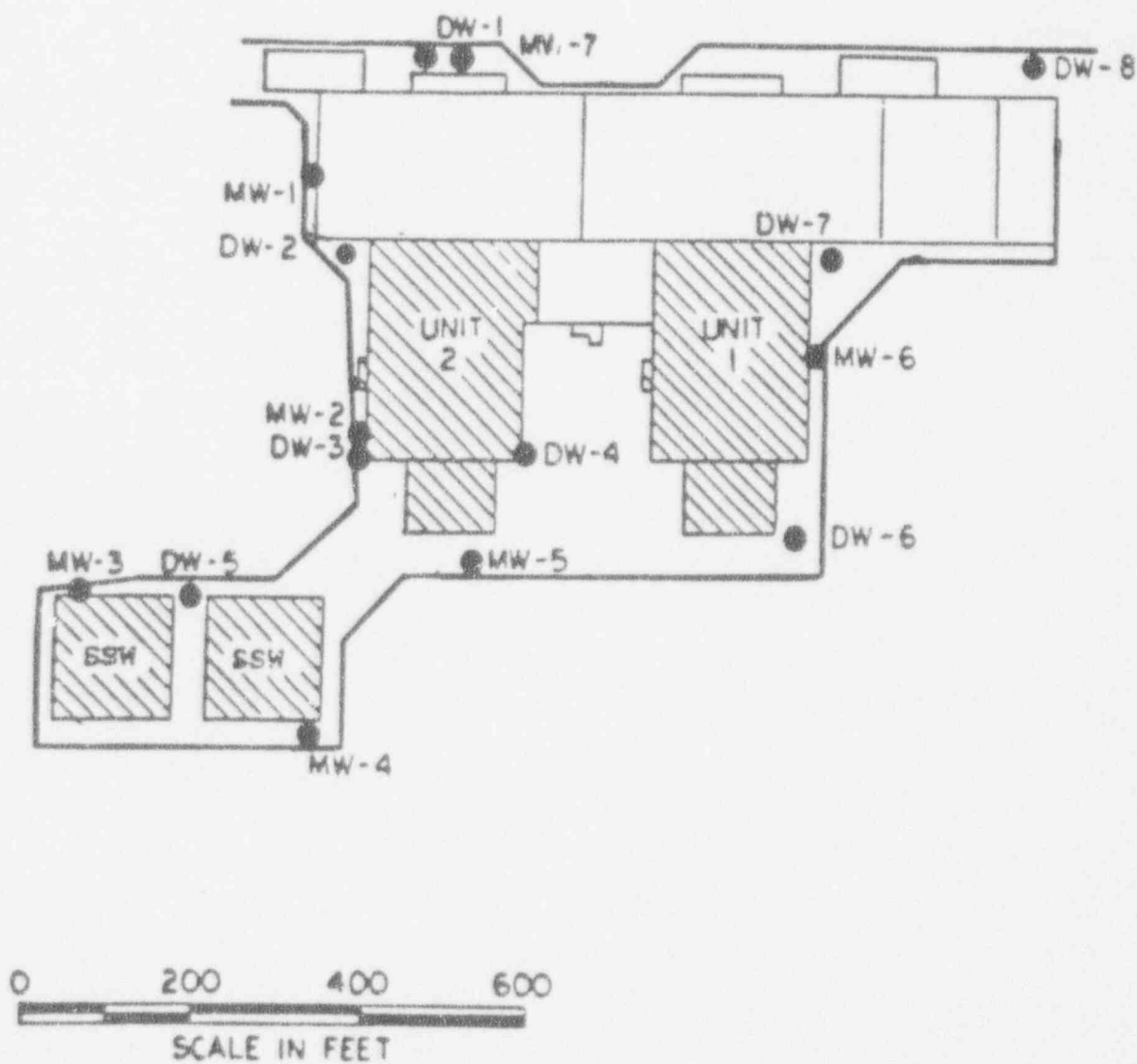
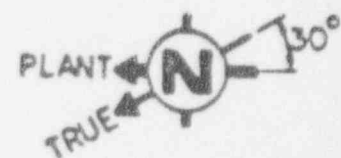


FIGURE 2-2  
LOCATION OF CONSTRUCTION  
DEWATERING AND OBSERVATION  
WELLS (PERCHED)

SECTION 3.0

OBSERVATIONS AND DISCUSSIONS

### 3.1 GROUNDWATER

#### Regional Groundwater

Table 3-1 presents regional groundwater monitoring data. Recorded water levels in 1992 showed no significant fluctuations during the monitoring period. These results indicate no affect on the regional water table by the radial well pumping operation. Figure 3-1 shows a hydrograph for the wells.

#### Perched Aquifer

Table 3-2 presents perched groundwater monitoring data. As shown in Table 3-2, Dewatering Well 6 exceeded the 109.0 feet MSL in January and February due to pump failure. GGNS reported these incidents to the NRC in GNRO-92/0001 and GNRO-92/00026, respectively. However, GGNS corrected the problem and elevated levels returned below the 109.0 feet MSL. Figure 3-2 shows a hydrograph for the wells.

#### Rainfall

Table 3-3 presents rainfall data for 1985 through 1992. As shown in Table 3-3, the 1992 total rainfall compares with the 1984 through 1992 annual total mean. Figure 3-3 shows a graph for rainfall data.

### 3.2 COOLING TOWER DRIFT

GGNS submitted a request to discontinue the Cooling Tower Drift Program to the NRC (GNRO-92/00017) on February 7, 1992 and received approval (GNRI-92/00102) on May 11, 1992. Therefore during 1992, GGNS personnel collected cumulative salt deposition samples for only one quarterly period. Appendix I contains the calculated salt deposition rates for this period.

### 3.3 ENVIRONMENTAL EVALUATIONS

During 1992, GGNS activities did not include any unreviewed environmental questions. Chemistry's review of environmental evaluations indicated routine matters within the scope of expected activities. GGNS did not observe any environmental consequences as a result of conduct of the activities evaluated. Table 3-4 summarizes environmental evaluations performed in 1992. Appendix II contains completed evaluations for 1992.

TABLE 3-1

1992 REGIONAL GROUNDWATER DATA<sup>1</sup>

WELL	04-13-92	04-23-92	09-04-92	09-28-92
OW-4	73.3	73.3	71.4	71.3
OW-4A	73.3	73.1	71.3	70.9
OW-29A	71.1	71.2	71.3	71.2
OW-209A	93.7	93.7	93.1	93.2
P-5	77.7	77.7	77.2	77.1
OW-7	78.7	78.6	76.0	75.6
P-4	61.0	61.0	60.0	59.4
OW-69A	72.1	72.3	70.6	70.2
OW-202	79.8	79.7	78.4	78.1
OW-5	78.0	77.9	76.6	76.5
OW-10	79.9	80.0	79.1	78.9
P-209	91.9	92.4	93.3	93.1

(1) Water level expressed at feet above Mean Sea Level (MSL)

TABLE 3-2

1992 PERCHED GROUNDWATER DATA<sup>1</sup>

MONTH	DATE	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8
January	01-03-92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
January	01-06-92	101.6	103.0	103.3	105.2	104.3	106.5	99.6	99.7	101.7	103.2	103.2	102.7	106.0	107.1	109.5
January	01-16-92	101.4	103.0	103.3	105.6	104.0	106.5	99.8	99.6	101.5	103.1	103.0	103.3	105.9	107.2	108.1
February	02-17-92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
February	02-18-92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
February	02-20-92	101.6	103.4	103.5	106.1	104.3	106.8	100.3	100.2	101.8	103.4	103.5	103.6	106.2	107.8	107.3
March	03-19-92	101.8	103.4	103.6	105.5	104.3	107.0	100.3	100.2	102.0	103.4	103.4	103.5	105.9	107.5	108.4
April	04-15-92	101.7	103.4	104.0	105.4	104.2	107.8	100.4	100.1	101.9	103.3	103.4	103.5	106.1	107.6	108.3
May	05-13-92	101.9	103.6	104.0	105.4	104.2	107.8	100.4	100.1	101.9	103.3	103.4	103.5	106.1	107.7	107.8
June	06-17-92	101.4	102.6	103.8	105.0	103.7	104.6	99.5	99.3	105.4	102.9	103.0	105.1	101.6	105.5	106.8
July	07-15-92	101.4	102.7	103.3	105.0	103.6	104.4	99.6	99.5	101.4	102.9	103.0	103.3	104.8	105.3	106.4
August	08-19-92	100.9	102.5	102.5	105.2	103.3	104.2	99.4	99.4	101.2	102.7	102.5	103.3	104.6	104.5	106.0
September	09-17-92	101.2	102.7	103.3	105.2	103.6	104.5	99.7	99.6	101.4	102.8	102.8	103.3	105.0	105.5	106.8
October	10-28-92	101.2	102.5	103.0	104.7	104.0	103.7	99.5	99.4	101.2	102.6	102.6	103.0	104.5	104.6	105.9
November	11-12-92	100.9	102.3	103.0	105.1	103.6	103.8	99.2	99.2	101.0	102.4	102.4	103.0	105.3	104.7	105.9
December	12-11-92	100.9	102.3	103.2	105.7	103.1	103.8	99.4	99.3	101.1	102.5	102.5	103.1	104.1	104.5	106.2

<sup>1</sup> Water level expressed at feet above Mean Sea Level (MSL)

TABLE 3-3

1984-1992 ANNUAL RAINFALL DATA

MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL MEAN	ANNUAL TOTAL
YEAR														
1984	3.28	6.17	5.86	3.31	4.76	4.75	3.24	8.31	0.74	15.87	8.68	1.47	5.54	66.44
1985	3.20	8.54	4.33	2.28	2.21	4.59	4.10	6.16	7.10	10.19	3.41	3.95	5.01	60.06
1986	0.95	1.53	2.97	3.59	13.29	6.15	1.29	2.65	4.41	5.51	8.56	6.75	4.80	57.65
1987	3.66	8.69	9.26	1.54	5.04	3.73	4.08	3.37	1.42	0.97	6.78	2.13	4.22	50.67
1988	3.59	3.05	4.94	3.90	1.13	0.68	4.40	3.65	5.16	4.07	2.59	4.08	3.44	41.24
1989	6.74	3.07	5.19	1.21	5.98	8.47	11.74	0.37	0.62	0.88	4.60	3.30	4.35	52.17
1990	13.41	5.24	2.16	3.89	8.52	2.74	3.21	2.15	3.10	2.73	1.79	8.73	4.81	57.67
1991	7.48	4.34	8.10	17.20	4.71	5.84	1.67	2.27	2.58	1.16	5.25	6.12	5.56	66.72
1992	5.48	5.69	3.87	1.39	2.01	6.73	3.86	9.57	2.80	2.75	7.35	4.11	4.63	55.61
MIN VALUE	0.95	1.53	2.16	1.21	1.13	0.68	1.29	0.37	0.62	0.88	1.79	1.47	3.44 *	41.24 *
MAX VALUE	13.41	8.69	9.26	17.20	13.29	8.47	11.74	9.57	7.10	15.87	8.68	8.73	5.56 *	66.72 *
MEAN VALUE	5.31	5.15	5.19	4.26	5.29	4.85	4.18	4.28	3.10	4.90	5.45	4.52	4.71 *	56.47 *

\* 1984 - 1992

TABLE 3-4

1992 ENVIRONMENTAL EVALUATION SUMMARY

<u>Environmental Evaluation Number</u>	<u>Description</u>
013-92	Revises UFSAR Section 11.5.2.3.2 to be consistent with Tech Spec and Section 12.3.4.2.7 to be consistent with surveillance procedures and station practices.



FIGURE 3-1

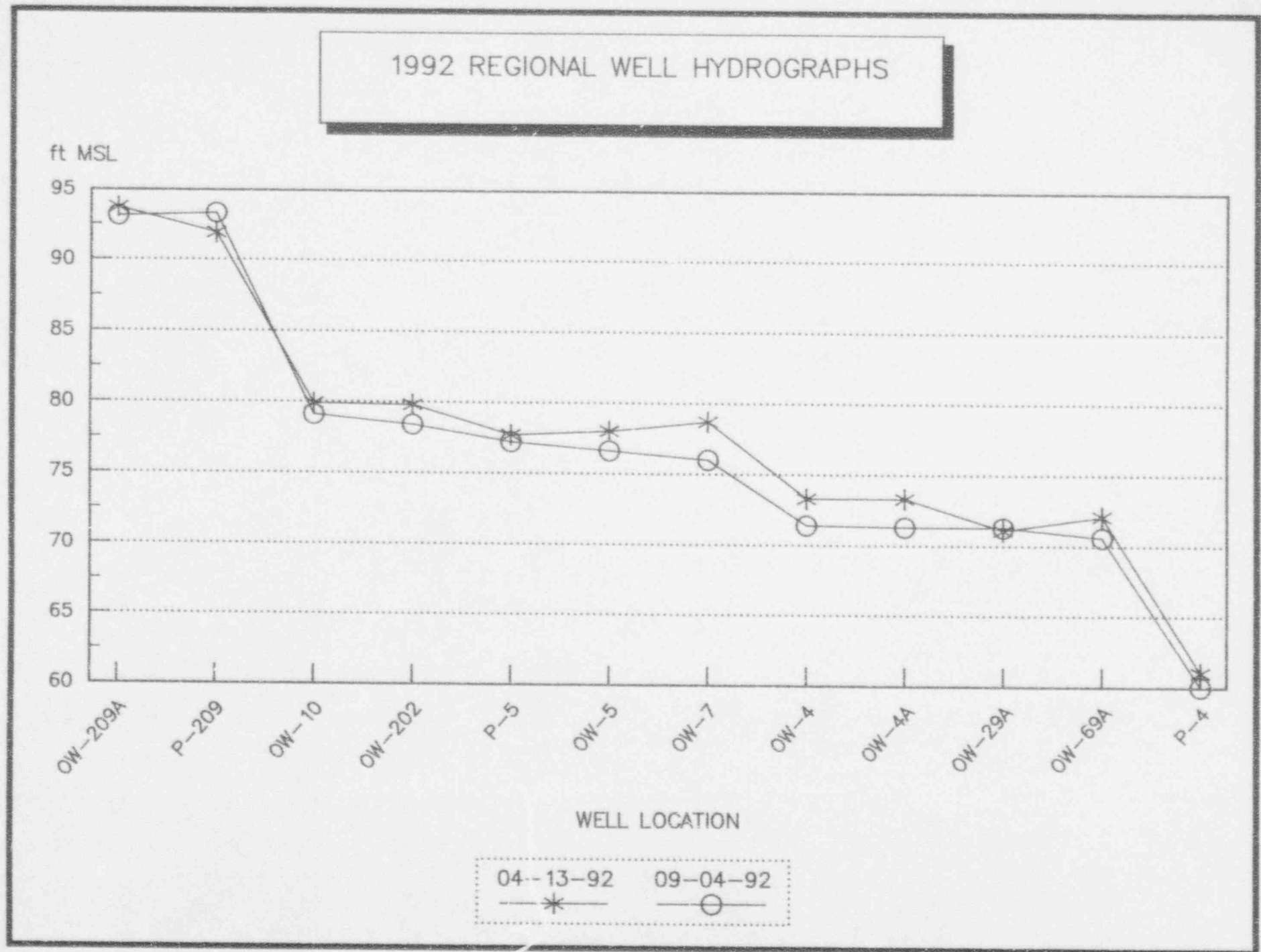


FIGURE 3-2  
Page 1 of 2

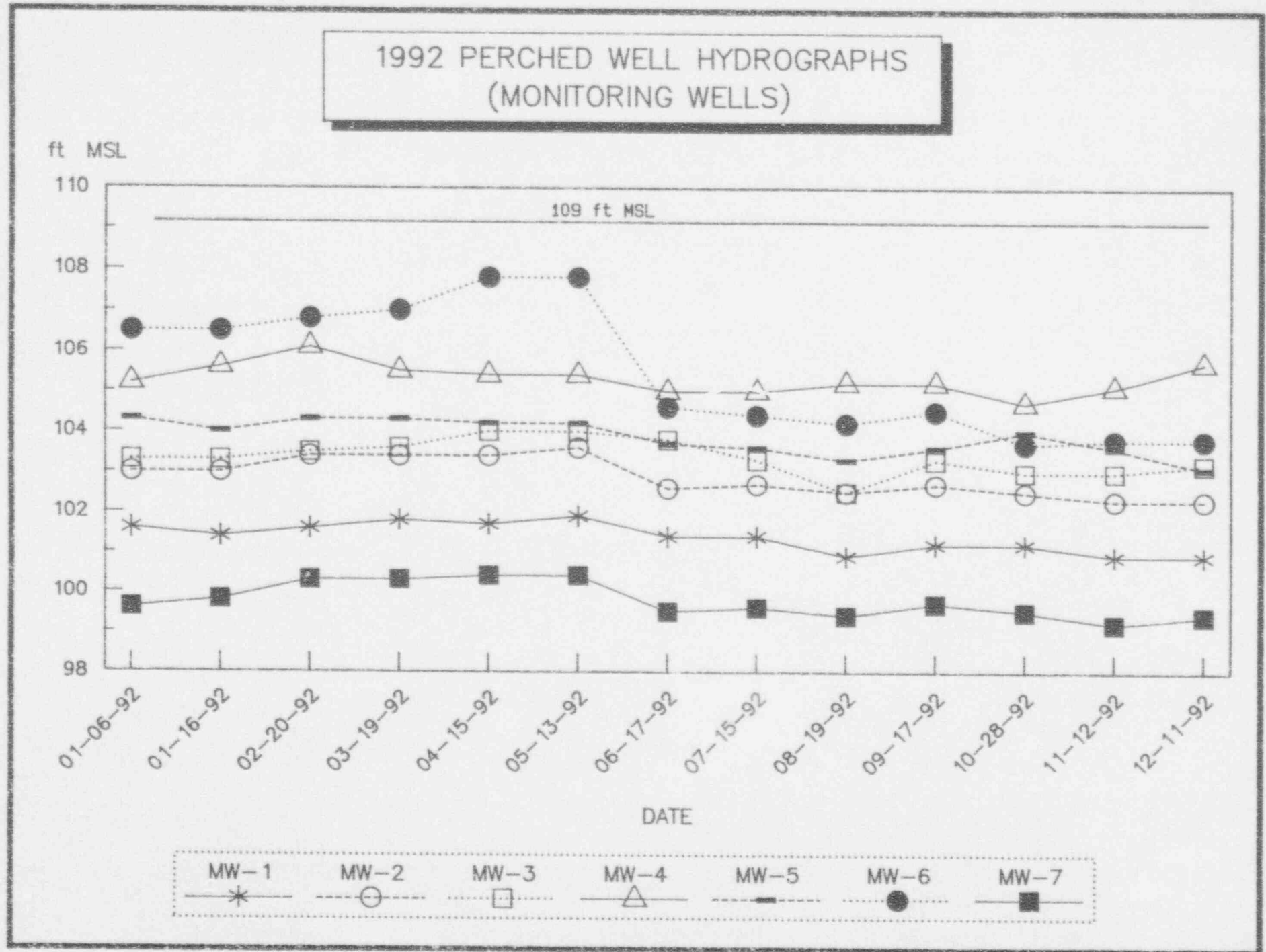


FIGURE 3-2  
Page 2 of 2

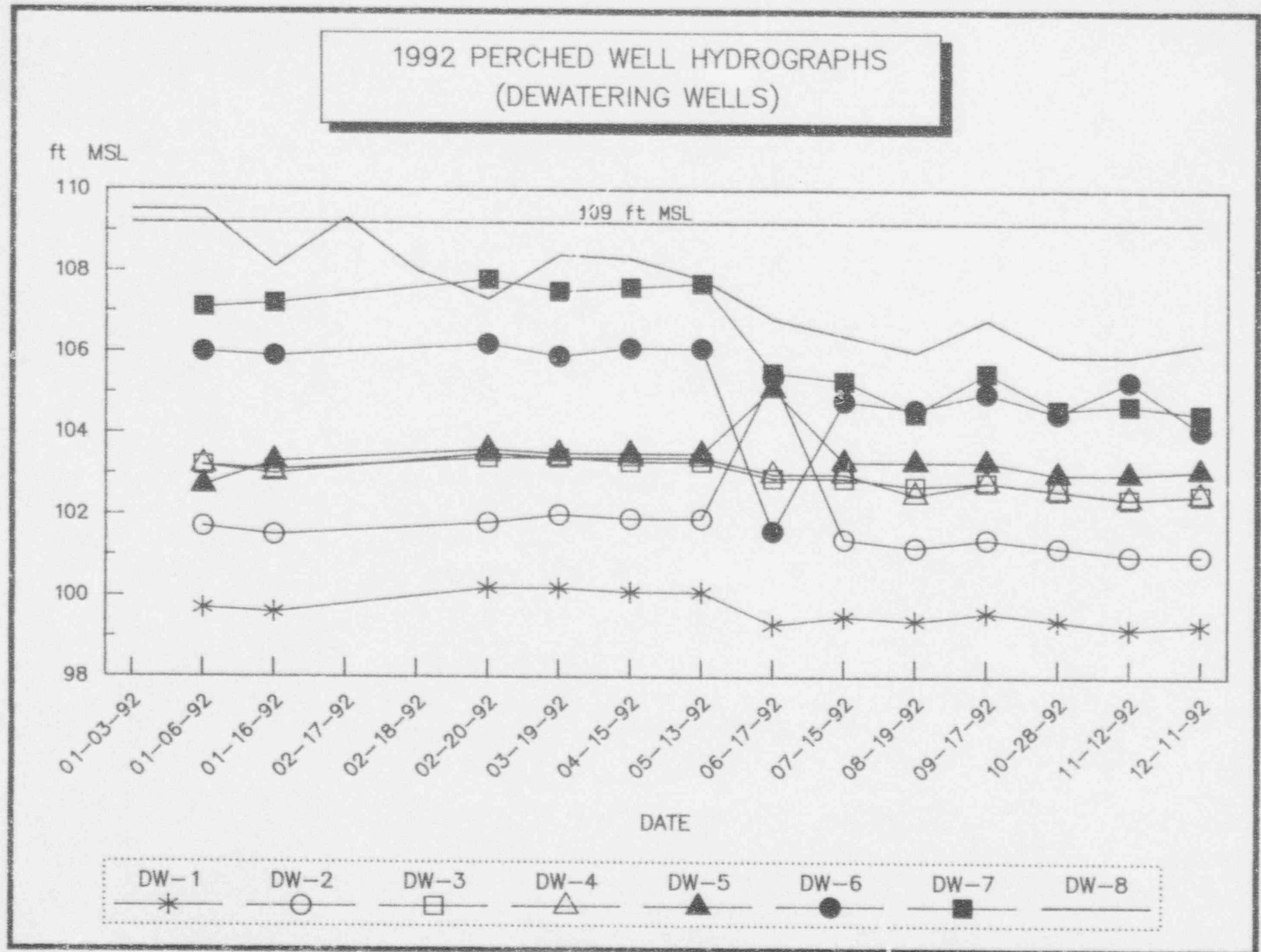
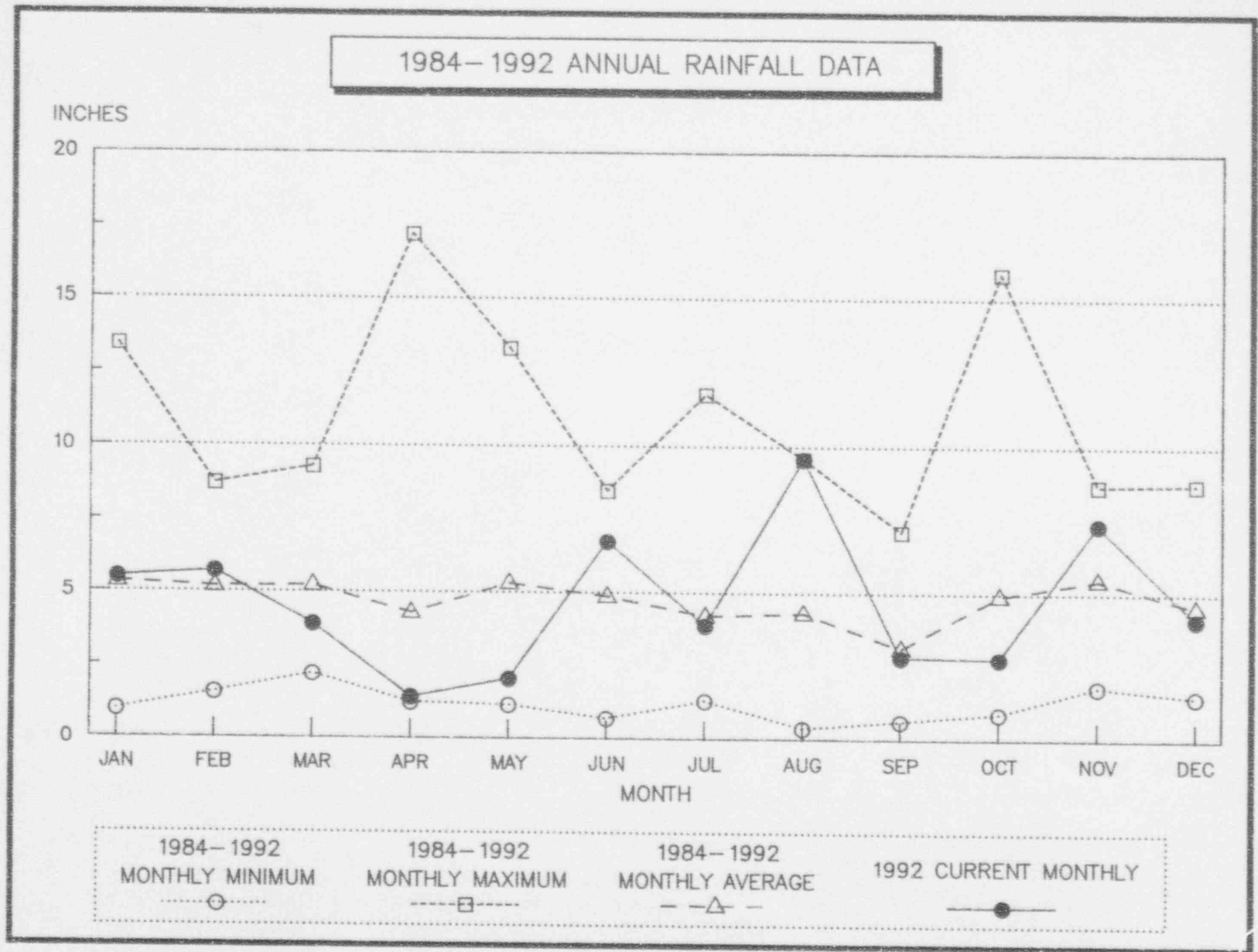


FIGURE 3-3



SECTION 4.0

ADMINISTRATIVE REQUIREMENTS

#### 4.1 EPP CHANGES

GGNS revised (License Amendment No. 96) the EPP during 1992 to reflect deletion of the Cooling Tower Drift Program requirement as approved by the NRC (GNRI-92/00102) on May 11, 1992. GGNS had previously discontinued the erosion control inspection monitoring requirements in 1988.

#### 4.2 EPP NONCOMPLIANCES

GGNS activities contained no EPP noncompliances during 1992. GGNS personnel successfully conducted sampling and surveillance activities according to the EPP schedule without a reportable deviation.

#### 4.3 NONROUTINE REPORTS

GGNS submitted no nonroutine reports in 1992.

#### 4.4 POTENTIALLY SIGNIFICANT UNREVIEWED ENVIRONMENTAL ISSUES

GGNS encountered no potentially significant unreviewed environmental issues in 1992. GGNS personnel made changes in station design and operation, tests and experiments, of which none resulted in an unreviewed environmental question, in accordance with the EPP, paragraph 3.1, Plant Design and Operation.

APPENDIX I

SALT DEPOSITION RATES

## DATA SHEET 3

## SALT DEPOSITION DATA SUMMARY

PERIOD ENDING : 04-10-92

ANALYSIS RESULTS : EPB, INC.

## SALT DEPOSITION STATIONS

SALT (mg/m sq.)	1	1A	2	2A	2B	3	4
Calcium	487.30	509.52	84.76	94.92	123.02	112.70	98.41
Chloride	26.35	99.68	125.71	102.54	88.57	188.89	90.79
Fluoride	-0.32	-0.32	0.16	0.00	2.22	0.00	-0.32
Iron	11.75	9.52	11.90	11.11	11.11	11.11	9.52
Magnesium	59.09	110.16	12.54	11.75	14.13	14.29	12.38
Nitrate	0.63	0.63	1.11	0.95	2.22	0.95	0.63
Sodium	98.89	120.33	131.11	285.87	149.68	174.13	98.89
Phosphorus	362.38	171.27	624.60	571.59	538.10	533.49	431.27
Sulfate	386.67	508.89	534.60	557.46	652.54	583.81	384.44
TDS	-15.87	-15.87	31.75	15.87	222.22	15.87	-15.87
(cont.)	5	5A	5B	6	6A	7	9
Calcium	112.70	115.08	121.11	134.13	134.13	36.51	274.60
Chloride	147.94	112.22	115.40	131.27	112.22	57.46	100.32
Fluoride	114.13	-0.16	2.38	-0.16	-0.16	-0.95	-0.16
Iron	10.32	10.32	11.90	17.46	15.08	7.94	36.51
Magnesium	15.71	13.33	15.08	22.86	22.86	5.40	34.76
Nitrate	0.79	0.79	2.38	0.79	0.79	0.00	0.79
Sodium	125.08	101.27	101.27	82.22	139.37	76.67	120.32
Phosphorus	594.29	608.57	730.00	456.19	427.62	309.37	339.52
Sulfate	566.19	473.33	743.49	475.71	418.57	301.90	430.48
TDS	0.00	0.00	238.10	0.00	0.00	-79.37	0.00



APPENDIX II

ENVIRONMENTAL EVALUATIONS

ENVIRONMENTAL EVALUATION 013-92

(Revises JFSAR Section 11.5.2.3.2  
to be consistent with Tech Spec  
and Section 12.3.4.2.7 to be  
consistent with surveillance  
procedures and station practices.)

01-S-06-24	Revision 12
Attachment I	Page 1 of 7

QA RECORD	INITIALS
RT = B14.33	NUMBER OF PAGES
NON-QA RECORD	DATE

GRAND GULF NUCLEAR STATION UNIT 1  
CHANGES, TEST OR EXPERIMENTS SAFETY AND ENVIRONMENTAL EVALUATION FORM

I. SAFETY EVALUATION OVERVIEW

A. REFERENCE DATA

Originator: Rodney A. Fielder Dept/Sect: Chemistry Eval No.: 013-92

Document Evaluated: UFSAR 11.5.2.3.2 & 12.3.4.2.7

References: See Attached

FSAR Change Required? ☒ Yes ☐ No CR No.: \_\_\_\_\_

FSAR Sections to be Revised: 11.5.2.3.2 & 12.3.4.2.7

TRM Change Required? ☐ Yes ☒ No

Technical Specification Change Required ☐ Yes ☒ No CR No.: \_\_\_\_\_

B. EXECUTIVE SUMMARY (Also serves as input to NRC Annual Report)

Brief Description of Change, Test, or Experiment: See Attached

Reason for Change, Test, or Experiment: See Attached

Safety Evaluation Summary and Conclusions: See Attached

I. SAFETY EVALUATION OVERVIEW

A. REFERENCE DATA

References:

Quality Deficiency Report # 0222-91

NRC Inspection Report No. 50-416/91-19, IFI 91-19-02

GGNS UFSAR 11.5.2.3.1, paragraph 1 sentence 4

GGNS Technical Specifications, 1.0 Definitions, Channel Check 1.5

GGNS Technical Specifications, 1.0 Definitions, Source Check 1.42

GGNS Technical Specifications Table 4.3.7.12-1, Table Notation (3)

NUREG-0800 STANDARD REVIEW PLAN, 11.5 Process and Effluent Radiological Monitoring Instrumentation and Sampling Systems

ANSI N13.10-1974, Specification and Performance of On-site Instrumentation for continuously Monitoring Radioactivity in Effluents

GEK-73680B Grand Gulf, Operation and Maintenance Instructions, Process Radiation Monitoring System, 22A4026 Revision 2 (4.8.2.1 & 4.8.2.2)

Eberline Instrument Corporation, AXM-1 Calibration Checkout Procedure, 10429-A318

Eberline Instrument Corporation, Checkout Procedure for PING/SPING, 10429-A268

GTC 92-00176, Telephone Conversation Record, John Lassetter to Bill Gloerson of Region II US Nuclear Regulatory Commission

# I. SAFETY EVALUATION OVERVIEW

## B. EXECUTIVE SUMMARY

### Brief Description of Change:

UFSAR section 11.5.2.3.2 and paragraph 2 of section 12.3.4.2.7 are being changed as per the enclosed mark-ups.

### Reason for Change:

These sections of the UFSAR have been identified as being inaccurate through the following:

- ♦US Nuclear Regulatory Commission Inspection Report No. 50-416/91-19 (tracking by IFI 91/19-02) identified UFSAR section 11.5.2.3.2 as being inconsistent with Tech Spec, specifically footnote (3) of Table 4.3.7.12-1 of Tech Spec 4.3.7.12. Additionally, checking vendor references reveals that the stated requirement for 15% calibration accuracy, in sentence 1, conflicts with applicable vendor data on the installed monitors. No basis for this 15% figure can be accounted for through investigations up to and including the Standard Review Plan and applicable ANSI Standards. The only correlation that can be derived for the origins of the 15% calibration accuracy seem to be a misapplication and misinterpretation of the logarithmic scale accuracy (Equivalent Linear Full Scale /ELFS Tolerance) which is 15% for the original log chart recorders and 32% for the LCRM's (Log Count Rate Meters). As the actual tolerance varies between the different vendor's equipment this value is being deleted with calibration accuracy values to be controlled by GGNS station calibration Surveillance Procedures.
- ♦Quality Deficiency Report #0222-91 identifies UFSAR section 12.3.4.2.7 as being inconsistent with Surveillance Procedures and station practices for installed Airborne Radioactive Monitoring Systems. Specifically, control charts are not being maintained as described in the UFSAR. The test being performed, for which the UFSAR describes use of control charts, is a Channel Check. Channel Checks are qualitative (as described in Tech Spec Definitions 1.5) and control charts are not applicable. The records presently being maintained for these Channel Checks, pass/fail data and, where applicable, background levels, are adequate and consistent with industry practice, station procedures and Tech Specs.

I. SAFETY EVALUATION OVERVIEW

B. EXECUTIVE SUMMARY

Safety Evaluation Summary and Conclusions:

The above described changes will have no impact to plant safety and pose no unreviewed safety questions. The plant equipment involved will continue to perform their safety functions as originally designed and currently maintained.

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GRAND GULF NUCLEAR STATION UNIT 1  
CHANGES, TEST OR EXPERIMENTS SAFETY AND ENVIRONMENTAL EVALUATION FORM (Continued)

II. SAFETY EVALUATION

☐ Not Applicable per Safety Evaluation  
Applicability Review

A. TECHNICAL SPECIFICATIONS

☐ YES ☒ NO

1. Implementation or performance of the action described in the evaluated document will require a change to the GGNS Unit 1 Technical Specifications.  
Basis: See attached

B. UNREVIEWED SAFETY QUESTION

Implementation or performance of the action described in the evaluated document:

☐ YES ☒ NO

1. May increase the probability of occurrence of an accident previously evaluated in the SAR.  
Basis: See attached

☐ YES ☒ NO

2. May increase the consequences of an accident previously evaluated in the SAR.  
Basis: See Attached

☐ YES ☒ NO

3. May increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR.  
Basis: See Attached

☐ YES ☒ NO

4. May increase the consequences of a malfunction of equipment important to safety previously evaluated in the SAR.  
Basis: See Attached

☐ YES ☒ NO

5. May create the possibility for an accident of a different type than any previously evaluated in the SAR.  
Basis: See Attached

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GRAND GULF NUCLEAR STATION UNIT 1  
CHANGES, TEST OR EXPERIMENTS SAFETY AND ENVIRONMENTAL EVALUATION FORM (Continued)

☐ YES ☒ NO

6. May create the possibility for a malfunction of equipment important to safety of a different type than any previously evaluated in the SAR.  
Basis: See Attached

☐ YES ☒ NO

7. Will reduce the margin of safety as defined in the basis for any Technical Specifications.  
Basis: See Attached

III. ENVIRONMENTAL EVALUATION

☐ Not Applicable per Environmental Evaluation Applicability Review

A. ENVIRONMENTAL PROTECTION PLAN

☐ YES ☒ NO

1. Will require a change in the Environmental Protection Plan.  
Basis: See Attached

B. UNREVIEWED ENVIRONMENTAL QUESTION

☐ YES ☒ NO

1. Concerns a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by the NRC staff's testimony to the Atomic Safety and Licensing Board (ASLB), supplements to the FES, environmental impact appraisal, or in any decisions of the ASLB.  
Basis: See Attached

☐ YES ☒ NO

2. Concerns a significant change in effluents or power level.  
Basis: See Attached



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GRAND GULF NUCLEAR STATION UNIT 1  
CHANGES, TEST OR EXPERIMENTS SAFETY AND ENVIRONMENTAL EVALUATION FORM (Continued)

[ ] YES [x] NO

3. Concerns a matter not previously reviewed and evaluated in the documents specified in II.B.1 above, which may have a significant adverse environmental impact.

Basis: See Attached

Evaluated: Reaney A. Fielder 4/1/92

Originator/Date

Reviewed/Approved: John M. Lassetter 4/7/92

Reviewer/Date

PLANT SAFETY REVIEW COMMITTEE REVIEW

(For Safety and/or Environmental Evaluations only)

MANAGER, R&ES

(For Environmental Evaluations only)

Reviewed/Approved: Robt Jackson 4/16/92

Manager, R&ES/Date

Reviewed/Approved: Wm Lytle 4/18/92

Chairman, PSRC/Date

## II. SAFETY EVALUATION

### A. TECHNICAL SPECIFICATIONS

1. No change to GGNS Tech Specs is required due to these changes to the UFSAR. These changes either bring the affected sections of the UFSAR (Section 11.5.2.3.2) into agreement with Technical Specifications or (in the case of UFSAR Section 12.3.4.2.7) do not change, and cause no conflict with, GGNS Tech Specs.

The change to UFSAR Section 11.5.2.3.2 rewords this section to read approximately the same as Tech Specs footnote (3) of Table 4.3.7.12-1. The statement in UFSAR 11.5.2.3.2 regarding calibration accuracy is being deleted as this value has been found to be incorrect in comparison with vendor manuals and specifications for the various monitors covered in this UFSAR statement. Rather than substitute another value, deleting this calibration value is preferred as the calibration accuracy requirement varies depending on the model and or manufacturer of the monitor/instrument in question. This value is better controlled in accordance with vendor manuals and GGNS Surveillance Procedures. As Tech Specs do not list a calibration accuracy value no conflicts exist for this change.

The change to UFSAR Section 12.3.4.2.7 states a requirement for maintaining control charts. As no like requirement exists in Tech Specs for this instrumentation, deleting this requirement causes no conflict with or change to Tech Specs.

### B. UNREVIEWED SAFETY QUESTION

1. The plant monitors/instrumentation affected by these UFSAR Sections, and the changes being evaluated here, will continue to function as per the manufacturer's specifications. The accident bases evaluated in the UFSAR remain unchanged and the possibility of an accident occurring as evaluated in the UFSAR is unaffected.

The change in specified calibration accuracy in section 11.5.2.3.2 corrects an inconsistency between manufacturers' specifications and the UFSAR. This specification of 15% accuracy appears to be a misapplication of logarithmic accuracy

(Equivalent Linear Full Scale/ELFS Tolerance) which is only applicable to the original log chart recorders. No basis for the 15% accuracy requirement can be found otherwise from vendor equipment manuals, NUREG 0800 Standard Review Plan, or reference ANSI Standards. Removing the 15% criteria allows for the differing calibration accuracies for the various type and brand of instruments installed at GGNS. The accuracy requirements for individual calibrations is adequately controlled by individual calibration Surveillance Procedures. The instruments will continue to perform their intended function within the limits of their design.

Deletion of the requirement for control charts in UFSAR section 12.3.4.2.7 is consistent with industry practice and poses no change to operational capability of these instruments. The requirement for control charts appears to be a misapplication of use of control charts as control charts are only used for quantitative checks where an actual value is measured and repeatability tracked to determine operability. These instruments undergo channel checks using comparisons to previous readings or comparisons to similar instrumentation which are qualitative (go - no go) tests. There is no quantitative value to be tracked and charted. This is also consistent with the definition of Channel Check found in the definition section of GGNS Tech Specs. This poses no change in the operation of these instruments and they will continue to perform their design function.

2. The instruments affected by these UFSAR sections are used to monitor effluents and would be used for measuring and developing protective actions in the event of an accident involving a release of radioactivity which could involve an increase in postulated doses to the public above the GGNS license limit.

As noted above (1.), however, the functioning of these instruments would be unaffected by these UFSAR changes. As their functioning will be unchanged, the consequences of accidents previously evaluated in the UFSAR would not be increased.

3. The probability of occurrence of a malfunction of equipment of equipment important to safety previously evaluated in the UFSAR would be unchanged.

As the operation of these instruments/monitors would be unaffected by these UFSAR changes, no increase of accident probability would occur.

4. The consequences of malfunction of equipment important to safety previously evaluated would be unchanged as these instruments and their operation would remain unchanged. These UFSAR changes clear up inaccuracies and inconsistencies in the applicable sections of the UFSAR.
5. No new accident type is foreseen from these UFSAR changes. This is based on there being no change to the operation and capabilities of the affected plant instrumentation/monitors covered by these sections of the UFSAR.
6. As no change in instrument/monitor operation or capabilities occurs from this UFSAR change, the probability for a malfunction of equipment important to safety of a different type than any previously evaluated in the UFSAR is not created.
7. The margin for safety defined the basis for Tech Specs will not be reduced. Inconsistencies between these sections of the UFSAR and Tech Specs are resolved by this change. This makes the criteria and requirements of Tech Specs, as implemented by Station Surveillance Procedures, the controlling document for these instruments/monitors.

### III. ENVIRONMENTAL EVALUATION

#### A. ENVIRONMENTAL PROTECTION PLAN

1. Some of these monitors do monitor releases to the environment. As the actual releases and monitoring functions of these instruments will be unaffected, no change to the Environmental Plan is required.

#### B. UNREVIEWED ENVIRONMENTAL QUESTION

1. As noted above, no environmental effects or change in the monitoring of environmental release points will occur from these UFSAR changes. Therefore, no adverse environmental impact previously evaluated in the FES would occur.

2. No change in effluents or power level occur from these UFSAR changes.
3. With no change in the functioning of this equipment, no effects on other plant equipment and no change to the environment, no matter not previously reviewed and evaluated and which may have a significant adverse impact will occur from these changes to the UFSAR.