FNP-0-ETP-4338
June 15, 1994
Revision 1

FARLEY NUCLEAR PLANT

ENGINEERING TECHNICAL PROCEDURE

FNP-0-ETP-4338

SAFETY RELATED

SERVICE WATER STORAGE POND SOUNDING SURVEY

Approved:

R Yance
Systems Performance Manager

Date Issued: 6-15-94

SP DEC/ETP-162/16

SYSTEMS PERFORMANCE TEST RESULTS SUMMARY REPORT

Section I Test Description

Title: Service Water Storage Pond Sounding Survey

Procedure Number: FNP-0-ETP-4338 Revision Number: 1

Start Date: _____ Completion Date: _____

Section II Test Results, Evaluation and Recommendations

☐ Test satisfactory (test results recommended for approval)

☐ Test unsatisfactory (explain below, as needed)

☐ All data sheets and other test data are attached.

☐ All test data steps and data sheets have been completed and signed off.

☐ Other disposition as recommended below.

Remarks:

Performed By: _____ Date: _____

Section III Systems Performance Supervisor's Review

Comments: _____

Approved: _____ Date: _____

The provisions of FNP-0-AP-24 are not applicable.

	REVISION NO.										
PAGE NO.	0	1	2	3	4	5	6	7	8	9	10
1	X	X									
2	X	X									
3	X	X									
4		X									
FIGURE 1		X									
Data Sheet 1											
1	X	X									
2	X	X									
Data Sheet 2											
1	X	X									

FARLEY NUCLEAR PLANT
ENGINEERING TECHNICAL PROCEDURE
FNP-0-ETP-4338

SERVICE WATER STORAGE POND SOUNDING SURVEY

1.0 Purpose

This procedure specifies the survey technique required to obtain data for the purpose of calculating the volume and surface area of the service water pond. Provisions of FNP-0-AP-24 are not applicable.

2.0 Acceptance Criteria

2.1 The Data recorded is reviewed on-site to ensure that the service water pond has been adequately covered and that the data is properly transferred to diskette. Otherwise, no quantitative acceptance criteria exist.

2.2 IF scour is indicated under the river water makeup concrete structure, the manager of Nuclear Maintenance Support at Southern Nuclear should be contacted for an engineering evaluation of the condition.

3.0 References

3.1 Delnorte Model 540, Microwave Distance Measuring Unit Operating Instructions.

3.2 Innerspace Fathometer Operating Instructions.

4.0 Test Equipment, Special Tools and Materials.

4.1 Delnorte Model 540 Microwave Distance Measuring Unit (DMU) to be supplied by PGTS-Civil.

4.2 Hewlett Packard, 200 series, computer to be supplied by PGTS-Civil.

4.3 Innerspace Fathometer to be supplied by PGTS-Civil.

PGTS 5.0 Precautions and Limitations

5.1 Unable to sound at water depth of 2.4 feet and under due to size of equipment.

5.2 Approval of the Test Supervisor is required prior to performing procedure sections or steps out of sequential order. Supervisor approval shall be documented on the data sheet.

5.3 IF a procedural step that required documentation is purposely not performed, and is not required, **THEN** "N/A" (Not Applicable) shall be entered in the sign off space. **IF** the procedure or controlling work order does not provide specific instructions for "not applicable" steps, **THEN** the Test Supervisor will N/A the step not performed, document in the margin by the step the reason for the step being not applicable, and provide his signature and the date.

5.4 Steps of the procedure with a designator (described below) in the left margin denote the requirement for the individual performing the step to provide his signature and date on the data sheet.

5.4.1 Designator PGTS, APCO Power Generation Services.

5.4.2 Designator SP, Systems Performance.

SP/PGTS 6.0 Prerequisites and Initial Conditions

6.1 PGTS-Civil has coordinated work through the General Manager of Nuclear Support at Southern Nuclear.

6.2 Performance of this procedure has been scheduled by FNP-SP.

6.3 Permission has been obtained from the Shift Supervisor to perform this procedure.

7.0 Instructions

7.1 Calibration

PGTS 7.1.1 Calibrate the fathometer, using a lead line check at approximately 15 feet deep.

PGTS 7.1.2 Calibrate the distance measuring unit.

7.2 Testing

PGTS 7.2.1 Visually inspect the dam and record results on Data Sheet 2.

7.2.2 Determine if scour or erosion is occurring around or under the edges of the concrete slab of the SW Pond river water makeup structure as shown on Figure 1. Using a rigid rod (such as an 8 foot long section of #6 rebar or 1/2" pipe) probe around the edges of both sides of the 23' - 6" section of concrete slab. With the pond level at 185 feet, scour is indicated if the probe can be immersed more than 2 feet into the water without contacting the soil or if any portion of the bottom of the 23' - 6" slab can be detected. If scour is indicated, note the location, depth and extent on Data Sheet 2.

PGTS 7.2.3 Run level survey to determine the storage pond water elevation and record on Data Sheet 1.

PGTS 7.2.4 Input preprogrammed sounding line coordinates to the computer and begin sounding survey.

PGTS 7.2.5 Survey the dike area with sounding lines located 20 feet apart.

PGTS 7.2.6 Survey the slough area with sounding lines located 20 feet apart.

PGTS 7.2.7 Survey the main body area with sounding lines located 50 feet apart.

Acceptance Criteria: Sounding is acceptable if (a.) a minimum of 90% of the sounding lines are sounded and (b.) two consecutive sounding lines are not missed.

7.2.8 IF the acceptance criteria was met, THEN proceed to Step 7.2.9.

7.2.9 IF the acceptance criteria (a.) and/or (b.) was NOT met, THEN resound until (a.) and (b.) are met (not to exceed 5 resounds).

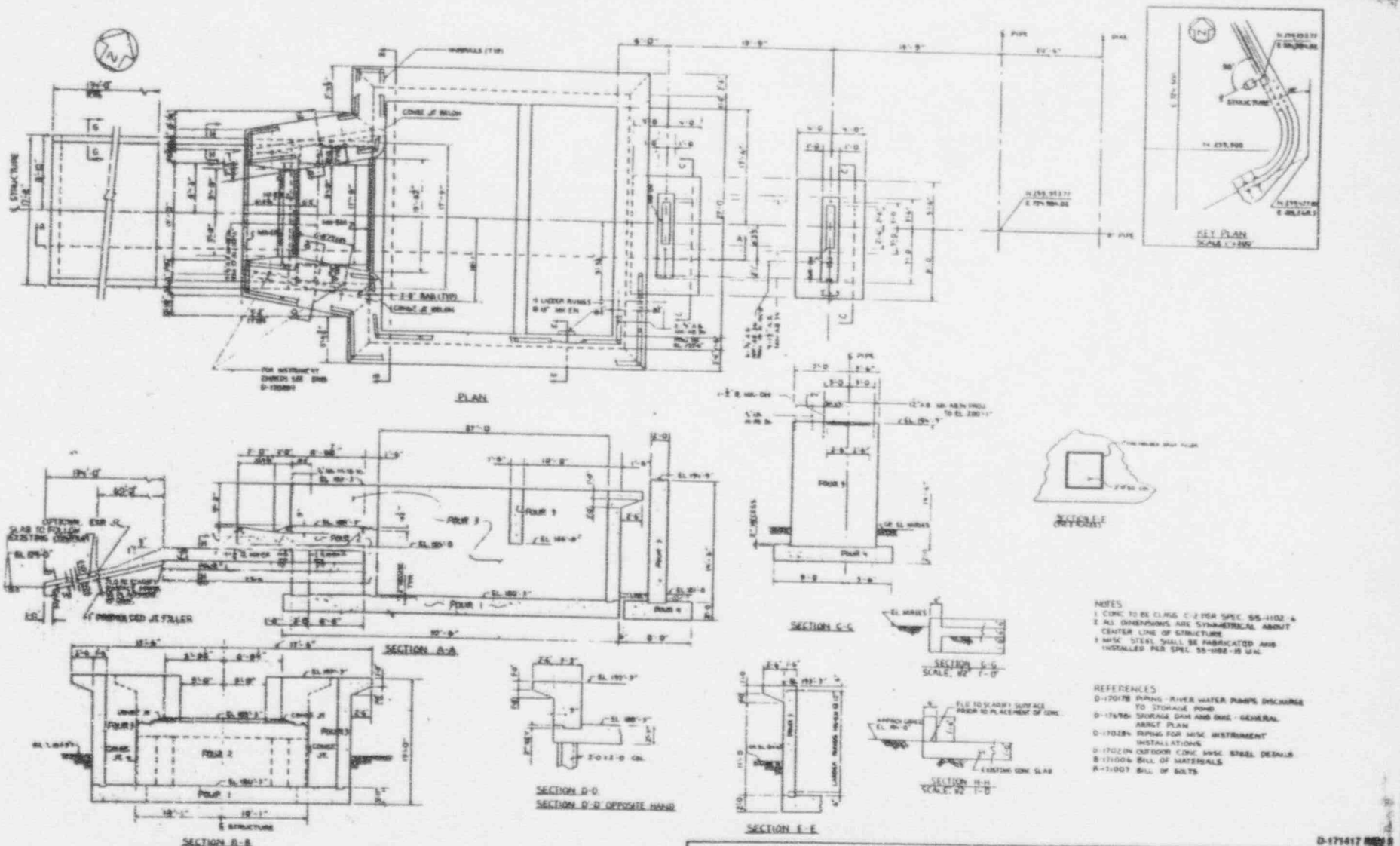
PGTS 7.2.10 Check the storage pond elevation, by survey, a minimum of once every 5 hours (a minimum of 2 rechecks each work day).

PGTS		7.2.11	Calibrate the distance measuring unit at the end of each work day (3 days typically required to complete sounding).
PGTS		7.2.12	IF the distance measuring unit calibration error check exceeds 10 feet, THEN recalibrate the distance measuring unit.
PGTS		7.2.13	Calibrate the fathometer at the end of the job.

8.0 Restoration

PGTS	8.1	Remove all equipment from the pond area.
SP	8.2	Notify the Shift Supervisor that the job is complete.

FIGURE 1


PLAN
SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
SECTION D-D OPPOSITE HAND
SECTION E-E
SECTION F-F
SECTION G-G
SECTION H-H
KEY PLAN
NOTES
REFERENCES
JOSEPH M. FARLEY NUCLEAR PLANT UNIT 1 AND UNIT 2
OUTDOOR CONCRETE POND FILL DISCHARGE STRUCTURE

Data Sheet 1
Sounding Survey for the Service Water Storage Pond

Step	Description		Signature/Date
5.0	Precautions and Limitations read and understood	PGTS	_____/_____
6.0	Prerequisites and initial conditions completed/satisfied	PGTS SP	_____/_____ _____/_____
7.1.1	Calibrate the fathometer	PGTS	_____/_____
7.1.2	Calibrate the distance measuring unit	PGTS	_____/_____
7.2.1	Dam inspected and results recorded on Data Sheet 2	PGTS	_____/_____
7.2.2	River Water makeup structure checked for scour and results recorded on Data Sheet 2.	PGTS	_____/_____
7.2.3	Storage Pond Elevation Elev. _____ Time _____	PGTS	_____/_____
7.2.4	Input programs: FAR_SC1 FAR_L3 FAR_L1 FAR_L4 FAR_L2	PGTS	_____/_____
7.2.5	Survey the dike area	PGTS	_____/_____
7.2.6	Survey the slough area	PGTS	_____/_____
7.2.7	Survey the main body of water	PGTS	_____/_____

Acceptance Criteria: Sounding is acceptable if (a.) a minimum of 90% of the sounding lines are sounded and (b.) two consecutive sounding lines are not missed.

Remarks: _____

_____

_____

Data Sheet 1
Sounding Survey for the
Service Water Storage Pond

Step	Description		Signature/Date
7.2.10	Survey pond elevation		
	Elev. _____ Time _____	PGTS	_____/_____
	Elev. _____ Time _____	PGTS	_____/_____
7.2.11	Calibrate the distance measuring unit at the end of the work day	(Day 1) PGTS	_____/_____
		(Day 2) PGTS	_____/_____
		(Day 3) PGTS	_____/_____
7.2.12	Calibrate the distance measuring unit if error exceeds 10 feet	PGTS	_____/_____
7.2.13	Calibrate the fathometer at the end of the job.	PGTS	_____/_____
8.1	Remove all equipment	PGTS	_____/_____
8.2	Notify Shift Supervisor of job completion	SP	_____/_____

Remarks: _____

_____

_____

Data Sheet 2
Service Water Storage Pond Dam
Reservoir Area

	YES	NO	LOCATION
I. Inside Slopes			
A. GRASSED			
1. Sluffing	_____	_____	_____
2. Erosion	_____	_____	_____
3. Undermining (conc. aprons)	_____	_____	_____
4. Shrinkage Cracks	_____	_____	_____
5. Scouring	_____	_____	_____
B. RIP RAP			
1. Settlement	_____	_____	_____
2. Voids	_____	_____	_____
II. Outside Slopes			
A. GRASSED (All Areas)			
1. Wet Zones	_____	_____	_____
2. Seepage	_____	_____	_____
3. Erosion	_____	_____	_____
4. Shrinkage Cracks	_____	_____	_____
5. Animal Burrows	_____	_____	_____
6. Scouring	_____	_____	_____
III. River Water Pond Makeup Structure			
A. Underwater Concrete Slab			
1. Scouring	_____	_____	_____

IV. Comments: (List Any Abnormalities) _____

_____

_____