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June 5, 1984

Director of Nuclear Reactor Regulation
Attention: D. M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206
Systematic Evaluation Program Integrated Assessment
San Onofre Nuclear Generating Station
Unit 1

By letter dated May 7, 1984, it was indicated that the program to satisfy the requirements of SEP Topic III-3.C, Inservice Inspection of Water Control Structures, would be transmitted at a later date. Provided as an enclosure to this letter is the subject program, Surveillance Program for Flood Water Control Structures and Service Water Reservoir SONGS 1.

If you have any questions regarding this matter, please let me know.

Very truly yours,

M. O. Medford

Enclosure

A035
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SURVEILLANCE PROGRAM FOR FLOOD WATER CONTROL STRUCTURES AND SERVICE WATER RESERVOIR, SONGS 1

I. PURPOSE

Various water control structures provide protection from flooding for the plant. In addition, the service water reservoir is used as a source of water for the Fire Protection System in accordance with technical specifications.

This program provides criteria for surveillance of these structures in accordance with the NRC Safety Evaluation Report on SEP Topic III-3C (Reference A).

II. SCOPE OF WORK

Surveillance, consisting of physical inspection, shall be performed at the frequencies specified in Section IV, Frequency of Surveillance. All nonconforming items observed during the surveillance shall be brought to the attention of the Manager, Operations and Maintenance Support within ten days of the completion of surveillance. Items included in this surveillance program are as shown in Figure 1 and are as follows:

A. Flood Water Control Structures:

1. North side flood protection system consisting of the railroad gate and wall, the catch basin, the shotcrete lined channel, the north channel wall and the existing diversion structure, which includes two 48" diameter corrugated metal pipes (CMP) and three flap gate openings 30" diameter and (2) 42" diameter in the seawall.

2. South side flood protection system consisting of the curb at the fence line separating Units 1&2.

3. East side flood berm protection system consisting of the concrete berm and the catch basin at the top of the bluff.

4. West side flood protection system consisting of the seawall/ beach walkway system.

5. Power block yard drainage system consisting of the yard sump adjacent to the intake structure.

B. Cooling Water System Structures:

1. Three million gallon (3 MG) reservoir (a source of water for the Fire Protection System in accordance with technical specifications).

C. Related facilities not included in scope.

1. Intake and discharge conduits, screenwell and gates, terminal structures and manholes (the NRC, per Reference A, Section V.5, has accepted inspection per Division Order D-M 20 as acceptable.)

2. PMF berm east of Interstate 5 (surveillance is performed per QA Procedure E&C 26-60-1).

III. SURVEILLANCE CRITERIA

A. As-Built Drawings -

1. General - 567753, 5153098, 5153099

2. North side flood protection system - 5153102SG, 5153103SG, 5153104, 5153106SG, 5153015, 5153121, 5153124, 5153125, 5153126, 5153127, 5153108.

3. South side flood protection system - 21060, 21065 (SONGS 2 and 3)

4. East side flood protection system - 5160384, 5160385, 5160386, 5160387, 5160388, 5160389, 5161792 (SONGS 1, 2 and 3)

5. West side flood protection system - 587227, 584801, 5166135, 5180940, 5180941, 5180942, 5180943, 5180944, 5180945, 5168176

6. Yard drainage system - 5153109, 5153110

7. Three million gallon (3 MG) reservoir - 567763, 586621

B. Construction Records - Onsite CDM Files

C. Surveillance Report

A detailed report or memorandum for file shall be prepared after each required inspection. The report shall document the use of field measurements, surveys or photographs with scales as required for comparison of previous and present conditions or new or progressive problems.

The report shall also address the following items, to the extent they may exist, and provide a recommended disposition.

1. Concrete or gunite surfaces - general condition, cracks, major spalls or popouts, previous repairs, exposed steel, stains, and visual evidence of surface degradation caused by corrosion or chemical attack.

2. Stability - general condition of rip-rap, bluffs, berms, and slopes around the Service Water Reservoir.

3. Evidence of foundation settlement and structure misalignment.

4. Sedimentation and debris accumulation greater than 10% of water conveyance area in open channels or which would restrict movement of flap gates.

5. Structural damage to railroad flood gate.

IV. FREQUENCY OF SURVEILLANCE

A. Initial Inspection

The first general onsite inspection is to be carried out within 60 days after this program is approved by the NRC.

B. Subsequent Inspection

Subsequent inspections shall be made biennially for the next four years, except for the north channel ditch and the seawall flap gates, which shall be inspected annually. The in-service inspection interval may then be increased up to a maximum of five years, following review of the inspection results by SCE Civil Engineering after the first four years. These regular intervals shall in no way preclude more frequent inspection if deemed necessary.

C. Special Inspection

Special inspections are to be performed following severe events, such as earthquakes with horizontal ground motion acceleration exceeding 0.2g in the site, tsunami, hurricanes, tornadoes, intense local rainfalls, or other unusual events which could affect the performance of water control structures.

V. TECHNICAL EVALUATION AND REPAIRS

When findings of the engineering data review and onsite inspection indicate that significant changes have occurred, an evaluation of the existing conditions of the water-control structures shall be made. The evaluation should include the assessment of the hydraulic and hydrologic capacities and the structural stabilities based on the changes or affected parameters.

All repairs shall be clearly and carefully documented on as-built drawings and be retained as a permanent record for future surveillance and repairs.

VI. RECORD OF SURVEILLANCE DOCUMENTS

All surveillance documents shall be kept at the site CDM Center for reference purposes and shall be available for inspection by regulatory authorities and shall be retained for the life of the plant.

Any reportable condition observed during the inspection should be reported to the NRC in accordance with 10CFR50.73 and 50.72 as necessary.

VII. REEVALUATION OF SURVEILLANCE CRITERIA

This surveillance criteria shall be reviewed by SCE Civil Engineering Section after being in effect for five years to reevaluate its effectiveness.

VIII. REFERENCES

A. Letter from Dennis M. Crutchfield (NRC) to R. Dietch (SCE) dated November 27, 1981; Subject: SEP Topic III-3C "Inservice Inspection of Water Control Structures

B. Nuclear Regulatory Commission Regulatory Guide 1.127. "Inspection of Water-Control Structures Associated with Nuclear Power Plants"

C. American Concrete Institute Publication (ACI 201), "Guide for Making a Condition Survey of Concrete in Service"

D. SCE Steam Generating Division Order D-M 20, "Circulating Water Conduit Inspections"

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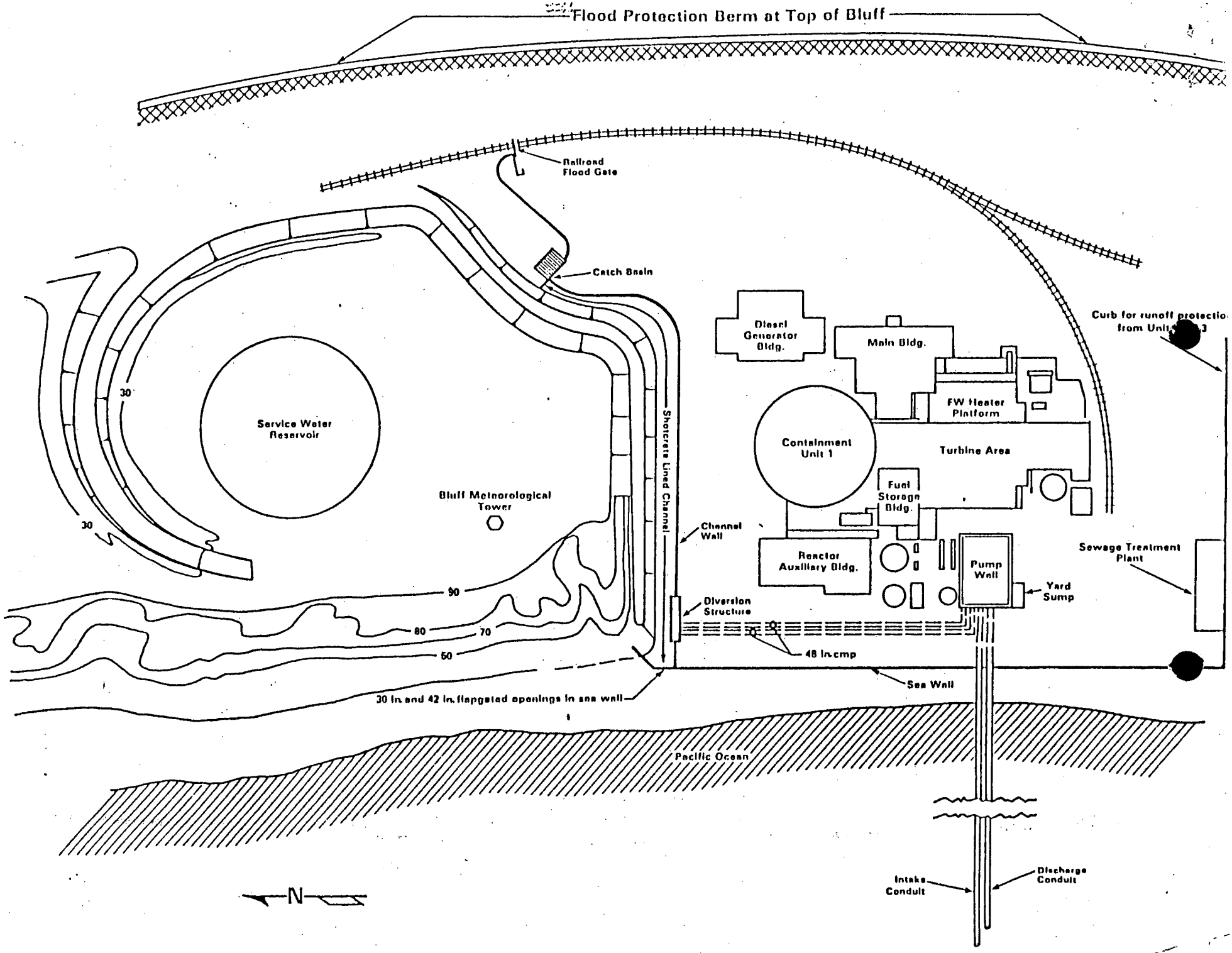

Figure 1 - San Onofre - General Site Plan