CONNECTICUT YANKEE ATOMIC POWER COMPANY

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May 20, 1980

Docket No. 50-213
B10001

Director of Nuclear Reactor Regulation
Attn: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Haddam Neck Plant
Information on Proposed Spent Resin Storage Facility

Over the past several weeks, informal discussions have taken place between our respective staffs in relation to the proposed Spent Resin Storage Facility at the Haddam Neck Plant. The proposed facility will provide temporary storage of spent resins in storage cells in the event of an interruption of normal off-site disposal.

Connecticut Yankee Atomic Power Company (CYAPCO) is providing herein a brief description of the facility (Attachment 1) and our assessment of the design pursuant to 10CFR50.59, 10CFR20, and Appendix B of the Haddam Neck Technical Specifications. We have concluded that the proposed addition to the plant does not constitute an unreviewed safety question or an unreviewed environmental impact for the following reasons:

(1) There is no increase in the risk related to the handling and storage of the resins. Any potential liquid release will be directed to the existing radwaste system.

(2) Potential radiation doses will be ALARA; maximum potential off-site dose is insignificant (0.022 mrem/year) compared to 40CFR190 or 10CFR50, Appendix I limits; maximum potential dose rate at the facility's wall is 1.2 mrem/hour, and it will be located in an area of infrequent occupancy. The design ensures compliance with all applicable requirements of 10CFR20.

(3) There is no change in the possibility of accidents previously analyzed in the FDSA and no new possible accidents affecting the safety of plant operation are created.

(4) There is no change to any margin of safety in the Technical Specification Bases.

In light of the above considerations and determinations, CYAPCO has concluded that the applicable regulations do not require NRC Staff review or approval of this matter. Therefore, the attached description is being provided for informational purposes only. It is anticipated that the subject facility will be operational later this calendar year.

CYAPCO is available for further discussion of any questions which the NRC Staff may have on this matter.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

W. G. Counsil
Vice President

Attachment

DOCKET NO. 50-213

ATTACHMENT 1

HADDAM NECK PLANT

SPENT RESIN STORAGE FACILITY

MAY, 1980

HADDAM NECK PLANT
SPENT RESIN STORAGE FACILITY

(1) Location

(2) Description

(3) Structural Design

(4) Quantity and Types of Wastes

(5) Container Integrity

(6) Location Plan (Figure 1)

(7) Structure Plan (Figure 2)

(8) Structure Sections (Figure 3)

HADDAM NECK PLANT
SPENT RESIN STORAGE FACILITY

(1) LOCATION

This structure is located at the northerly corner of the plant adjacent to the ION exchanger and the spent resin storage pit. This location is within a radiation-controlled area inside the protected area of the plant (see Figure 1).

(2) DESCRIPTION

The structure consists of a mass of reinforced concrete measuring 22 feet by 29 feet by 10 feet high containing 11 cylindrical cells 5 feet 2 inches in diameter (see Figures 2 and 3). The structure is founded on rock or fill concrete approximately 3 feet below grade. The sides of each cell wall be lined with stainless steel and each cell shall have a 2 foot thick concrete cover. Also, each cell will have a drain which will be routed back into the plant for processing. Additionally, reinforced concrete shield walls will extend another 12 feet above the top of the storage cells on the north and west sides. The spent resin liners will be handled, as they are now, with the existing yard crane.

(3) STRUCTURAL DESIGN

It has been determined that the spent resin storage cells could withstand the following:

Wind load in excess of 150 MPH

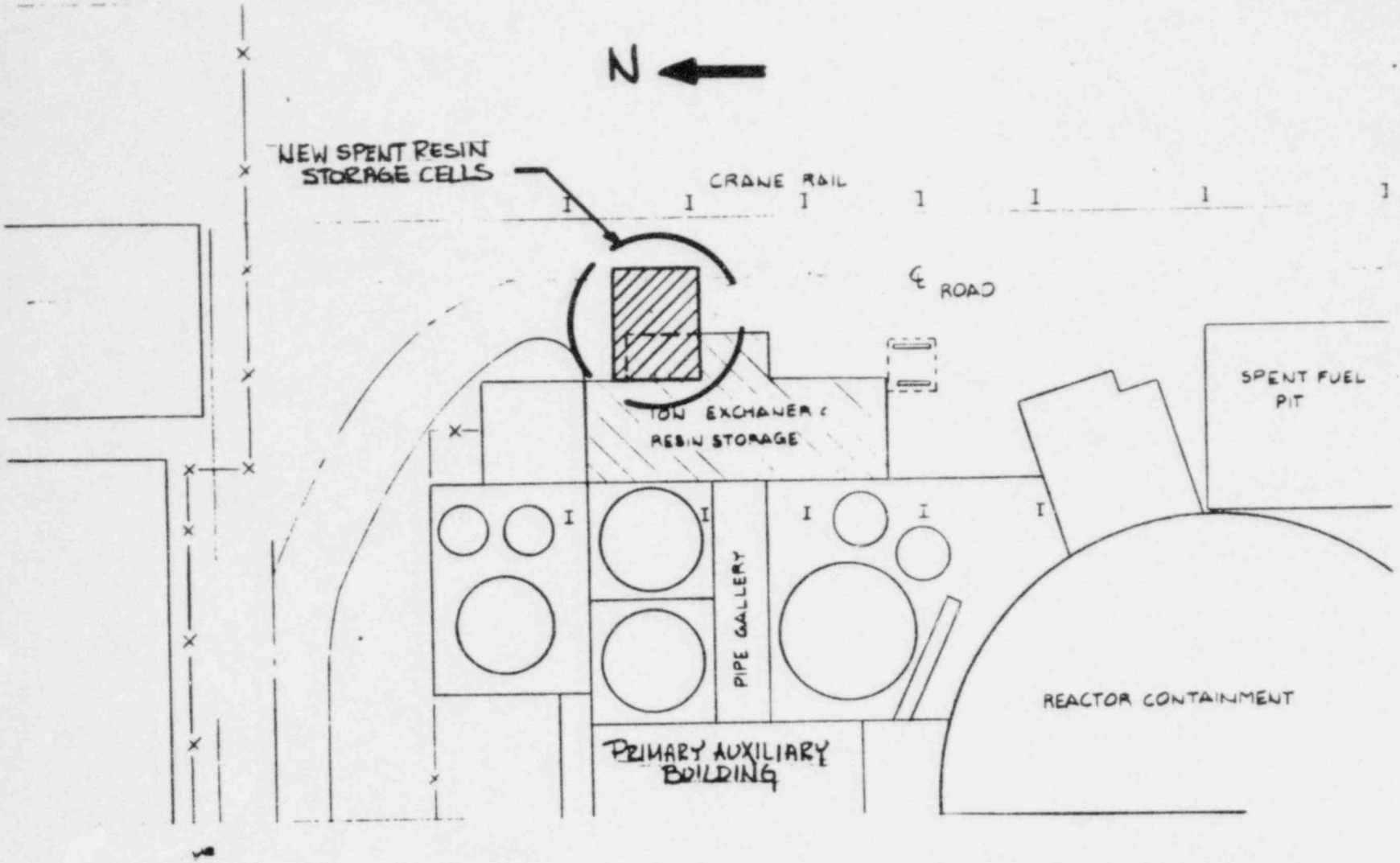
Although no seismic design is required because the waste is considered solid, it has been determined that this structure will withstand forces greater than those generated by the operating basis earthquake (Regulatory Guide 1.60) normalized to .17g.

(4) QUANTITY AND TYPE OF WASTES

Each of the eleven (11) storage cells is designed to hold one (1) 126 cubic foot liner containing dewatered spent resin or eight (8) 55 gallon drums containing filter cartridges solidified in cement. The shielding requirements are based on a total of 2,464 curies. Actual inventory when full is expected to be much less since older containers will experience significant radioactive decay and the solidified filter cartridges are typically much less radioactive than the spent resin on which the dose calculations were made.

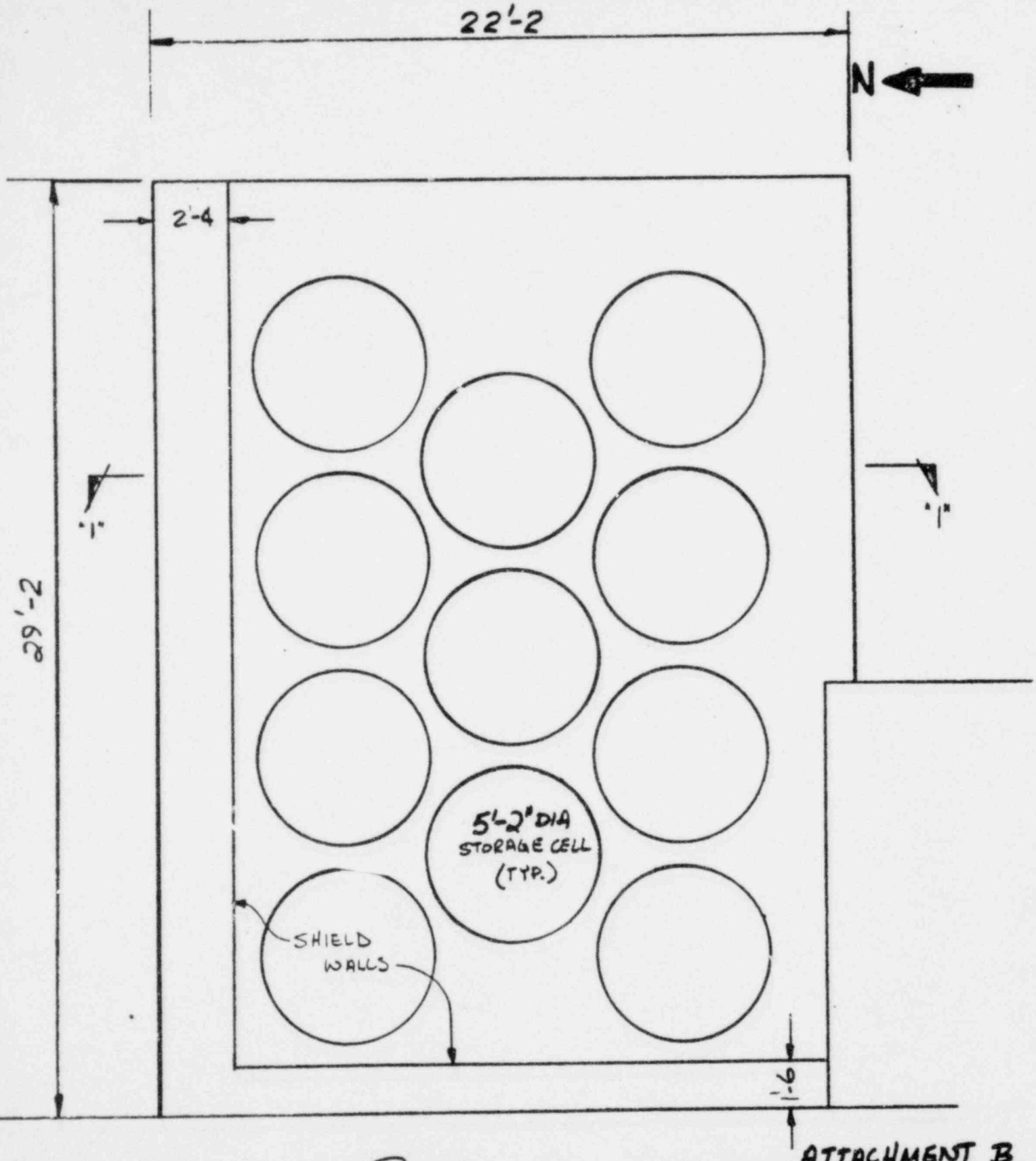
(5) CONTAINER INTEGRITY

The resin liners will be internally coated with epoxy and will be painted externally. Prior to filling the liners, the external paint will be inspected for chips or scratches and touched up if necessary.



ATTACHMENT A

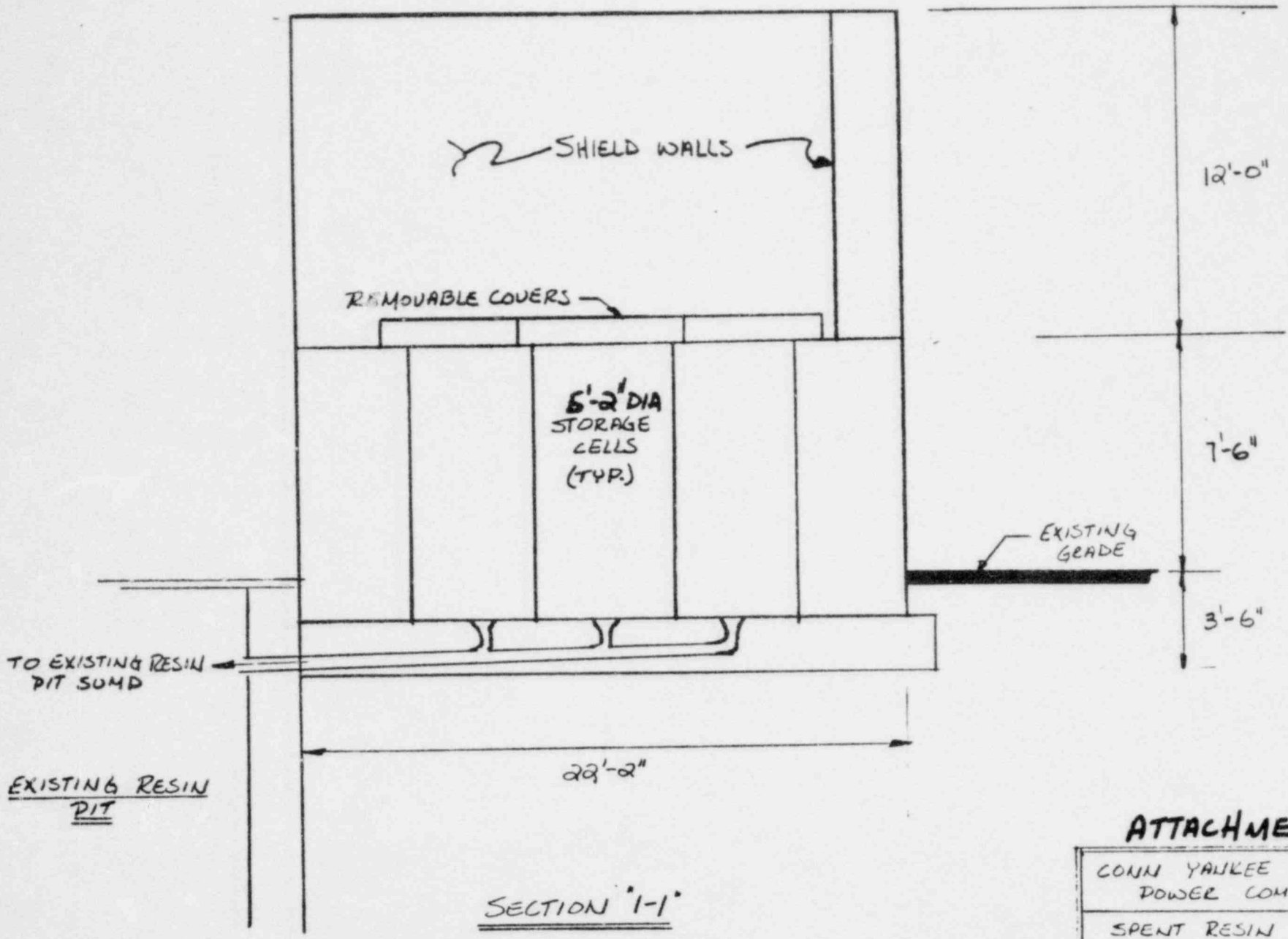
CONN YANKEE ATOMIC POWER COMPANY	
SPENT RESIN STORAGE CELLS	
	FIG. 1



PLAN

ATTACHMENT B

CONN YANKEE ATOMIC POWER COMPANY
SPENT RESIN STORAGE CELLS
FIG 2



SECTION '1-1'

ATTACHMENT C

CONN YANKEE ATOMIC POWER COMPANY
SPENT RESIN STORAGE CELLS
FIG 3