VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

December 9, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 647
NO/WDC:acm
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

During the recent Surry Unit 1 and Unit 2 outages, certain ASME, Section XI requirements were modified due to conditions which either prevented completion or provided extremely difficult circumstances. Pursuant to 10CFR 50.55a, paragraph g(5), relief is requested from these certain code requirements as delineated in ASME, Section XI. The following basis is provided.

1. Surry Unit 1; As part of the first 10 year ASME, Section XI inservice inspection program, 1974 Edition, Summer 75 Addenda, the non-regenerative letdown heat exchanger (1-CH-E-2) integrally welded support (2ws) required 100% surface examination as delineated in category C-E-1 and item C2.5 of table IWC-2600. Surry's ASME, Class 2 examination program was initiated in 1980 after the construction preservice requirements. Visual examination of the support confirmed the need for extensive weld preparation prior to the surface inspection. Radiation levels (Attachment 1) located beneath the heat exchanger, were measured to 30R requiring shielding to reduce levels (Attachment 2). The lead shielding in combination with numerous physical obstructions associated with the heat exchanger structure prevented the weld preparation in some areas. As a result, approximately 75% of weld was inspected (liquid penetrant) revealing no rejectable indications. The remaining 25% could not be inspected because of the preparation problems.

   We contend that adequate insurance of weld integrity has been assured, and that the situation justified the reduced examination.

2. Surry Unit 2; As required by IWA 4400(a) of ASME, Section XI, 1980 Edition, Winter 80 Addenda, following the welded installation of 2-MS-76, a post repair hydrostatic test was attempted. The 1½ inch valve (Attachment 3) is ASME, Class 2 functioning in a drain capacity within the main steam system. Hydrostatic test requirements are defined in IWC-5222(a) of ASME, Section XI. From this paragraph a test pressure of 1356 psig is derived. In attempting to attain the required pressure, boundary valve isolation leakage was evident. A test pressure of 1210 psig was reached using the stations auxiliary feedwater pump. The internal leakage of the boundary valves prevented full pressurization.

A047
1/1

Secondary isolation was impractical, as evidenced by the attached drawing, requiring full pressurization of the steam generator. A VT-2 examination was conducted at 1210 psig. In addition, a surface examination (liquid penetrant) was conducted on the replacement welds revealing no reportable indications.

We feel adequate testing has been accomplished, noting that 89% of test pressure was achieved. The additional surface examination was not code required, but administratively required by the station adding insurance of weld integrity.

These relief requests serve as our notification of deviations from ASME, Section XI. Notification prior to the deviations was not possible as there was no anticipation of the problems or their extent.

Very truly yours,

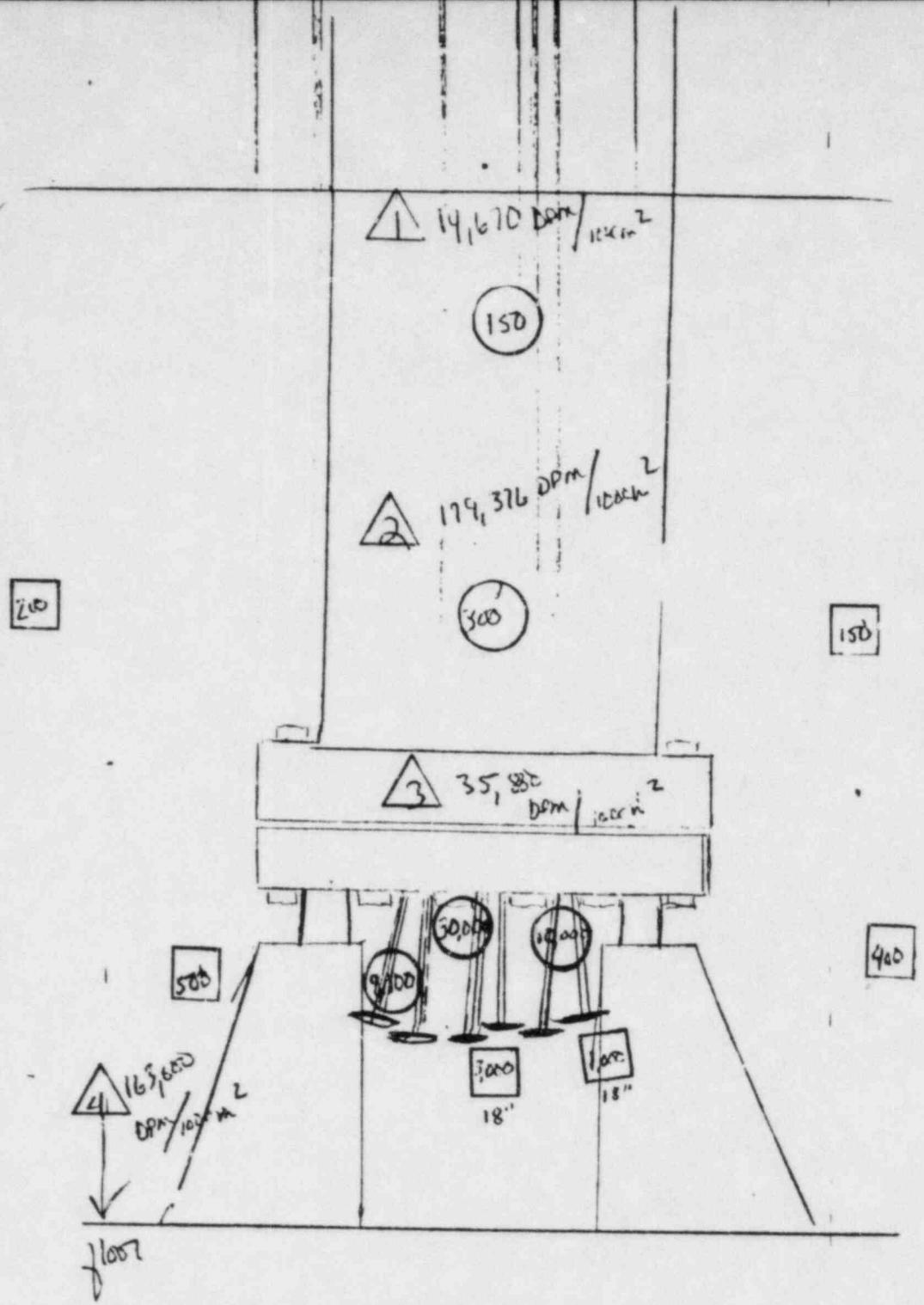
W. L. Stewart

cc: Mr. James P. O'Reilly
Regional Administrator
Region II

Mr. J. D. Neighbors
Project Manager-Surry
Operating Reactors Branch No. 1
Division of Licensing

Mr. D. J. Burke
NRC Resident Inspector
Surry Power Station

ATTACHMENT 1



Type Survey

☒ General Area ☒ Smears

☒ Air Sample ☒ Neutron

Instruments

Model	
RO 24	1057
RM-14	2585

Date 9-28-83

Time 0850

% Power, Unit 0 #1 0 #

By W. Cuts

Remarks

☒ Frisker(s) Checked Ok

☒ All readings in Mr/hr

☒ All G>T R Gates Locked Where Required w/o Int

☒ All smears < 1000 dpm/100 cm² except as noted on Survey

☒ Weekly source check of portable monitors

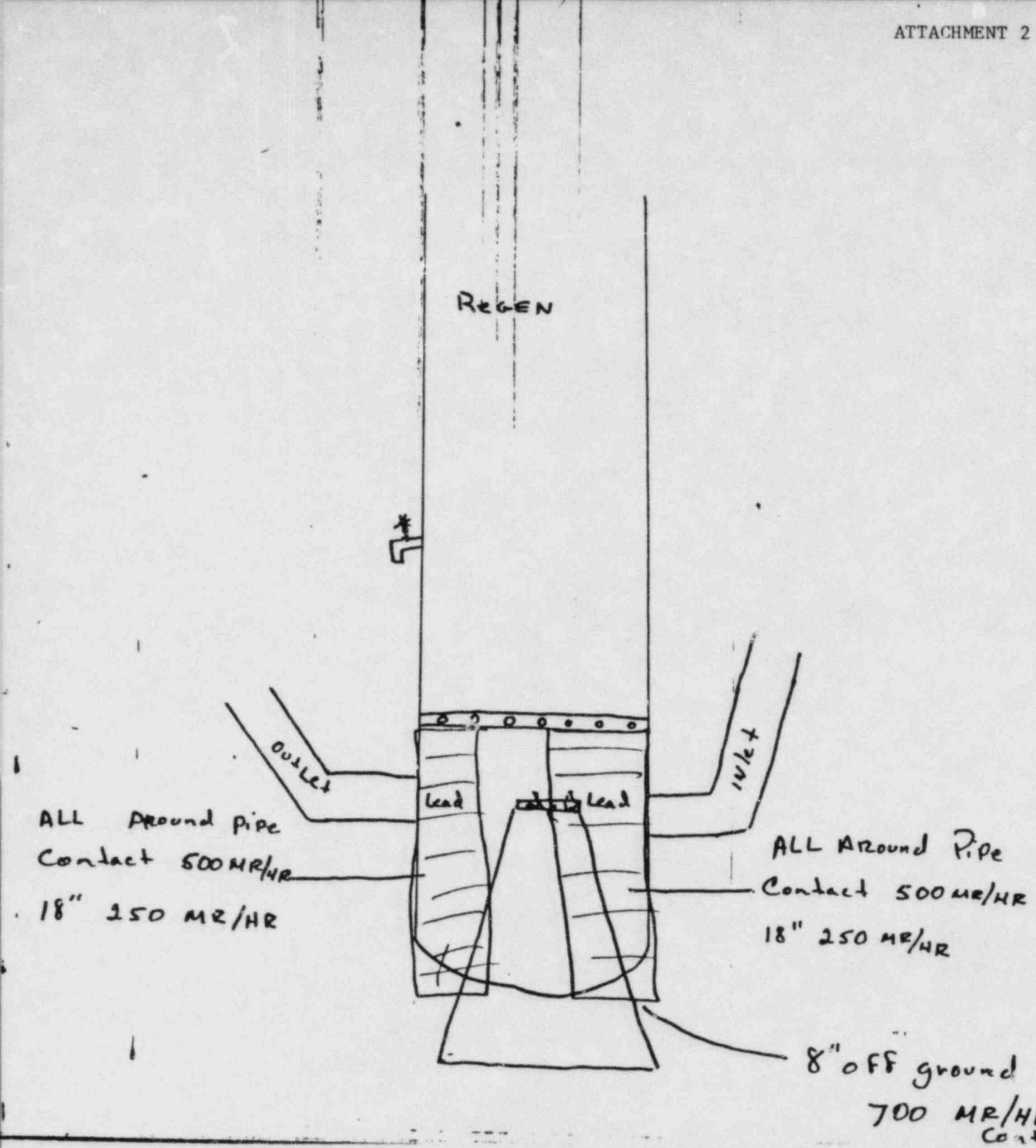
☐ General Area

△ Smears -X-X- Barriers

○ Contact

(F) Frisking Station

ATTACHMENT 2



☒ General Area ☒ Smears

☒ Air Sample ☒ Neutron

Instruments

Model #	S.N.
Teletector	10002

Date 10/4/83

Time 11 30 [redacted]

% Power, Unit 0 @ 100

By A. Rios

Remarks

☒ Frisker(s) Checked Ok

☒ All readings in Mr/hr

☒ All > 1 R Gates Locked Where Required _____ Int

☒ All smears < 1000 dpm/100 cm² except as noted on survey

☐ Weekly source check of portal monitors _____

□ General Area

△ Smears -X-Y- Barriers

○ Contact

(F) Frisking Station

ATTACHMENT 3