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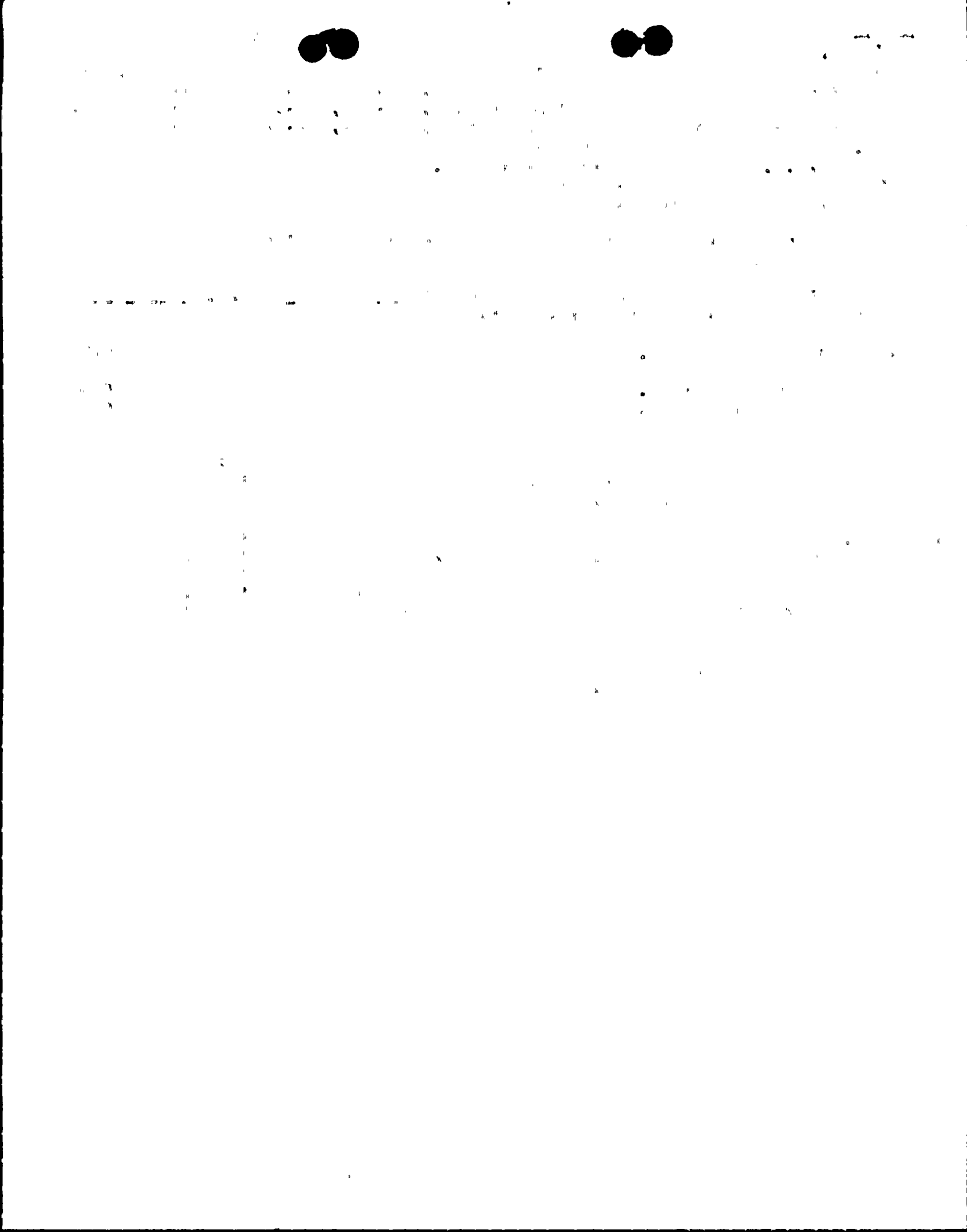
SUBJECT: Forwards response to NRC 840522 questions on plant spray ponds.

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## Arizona Nuclear Power Project

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Director of Nuclear Reactor Regulation  
Mr. George W. Knighton, Chief  
Licensing Branch No. 3  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

ANPP-32730-EEVB/WFQ  
May 24, 1985

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2, and 3  
Docket Nos. STN 50-528(License No. NPF-34)/529/530  
Spray Pond Questions  
File: 85-004-419.06

Dear Mr. Knighton:

Attached please find a copy of APS responses to NRC questions on the PVNGS spray ponds. These questions were provided in a telephone conversation with the NRC on May 22, 1984.

Very truly yours,

E. E. Van Brunt, Jr.  
Executive Vice President  
Project Director

EEVB/WFQ/slh  
Attachment

cc: R. P. Zimmerman  
E. A. Licitra  
A. C. Gehr

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STATE OF ARIZONA )  
 ) ss.  
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr., represent that I am Executive Vice President, Arizona Nuclear Power Project, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true.

Edwin E. Van Brunt, Jr.  
Edwin E. Van Brunt, Jr.

Sworn to before me this 26 day of may, 1985.

Dora E. Meador  
Notary Public

My Commission Expires:

My Commission Expires April 6, 1987



ATTACHMENT

Specific NRR Questions on the PVNGS Spray Pond Pitting Problem

NRC QUESTION - Have any examinations been performed on the diesel generator (DG) heat exchangers or the essential cooling water heat exchangers since the MIC was discovered in the spray pond piping?

APS RESPONSE - No. Visual examinations have been performed on the spray pond water side of those heat exchangers in the past 2 years, and only minor repairs were required in those areas where the plasite (epoxy) lining had failed. These failures were due to either improper lining application/curing, or normal local defects that develop in most coatings/linings used in water service. Such defects will continue to be experienced in the future, and will be repaired as routine maintenance items. There is no evidence of established bacteria colonies of any species, and no evidence of MIC. Such evidence would have been observed if it had been present, even before the spray pond piping pitting was documented.

NRC QUESTION - What structural materials are used in the DG heat exchangers (HX), and what is their resistance to chloride induced stress corrosion cracking (SCC) and pitting?

APS RESPONSE - All of the DG Heat Exchangers use epoxy lined carbon steel shells and end caps, Admiralty tubes and 70-30 copper nickel tube sheets.

All of these materials have excellent resistance to both chloride pitting and stress corrosion cracking.

NRC QUESTION - Same as Question Number 2, except respond for the essential cooling water heat exchangers.



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APS RESPONSE - Same as Number 2, except that the tube sheets are 70-30 copper nickel cladding on carbon steel.

NRC QUESTION - What actions has APS taken to prevent future corrosion attack on these heat exchangers?

APS RESPONSE - The revised water chemistry program will prevent the establishment of all species of bacteria. All previous corrosion has been minor and not related to bacteria.

NRC QUESTION - Describe the visual examinations of the PVNGS Unit 1 Auxiliary Feedwater Piping (AFW) System since the discovery of the spray pond pitting.

APS RESPONSE - On March 22, 1985, the PVNGS inservice inspection group supervisor personally examined portions of both AFW trains. He is a certified Level III Examiner in Visual Examination. Two stainless steel spool pieces were removed (one in each train) and a total of ten stainless steel welds were examined. No evidence of MIC or other corrosion was observed.



