

HARMON & WEISS

1725 I STREET, N.W.

SUITE 506

WASHINGTON, D. C. 20006

GAIL MCGREEVY HARMON
ELLYN R. WEISS
WILLIAM S. JORDAN, III
LEE L. BISHOP
DIANE CURRAN
LYNNE BERNABEI
LUCIA S. ORTH

TELEPHONE
(202) 833-9070

OF COUNSEL
L. THOMAS GALLOWAY

May 14, 1982

Robert M. Lazo, Esq., Chairman
Administrative Judge
Atomic Safety and
Licensing Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dr. Richard F. Cole
Administrative Judge
Atomic Safety and
Licensing Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dr. Dixon Callahan
Administrative Judge
Union Carbide Corporation
P. O. Box Y
Oak Ridge, Tennessee 37830

In the Matter of
Arizona Public Service Company et al.
(Palo Verde Nuclear Generating Station, Units 1, 2 and 3)
Dockets Nos. STN 50-528, STN 50-529 and STN 50-530

Dear Administrative Judges:

In accordance with this Board's Order of April 30, 1982, I am submitting, on behalf of Intervenor Patricia Lee Hourihan, the following list of witnesses, summary of the witnesses' testimony, and list of exhibits which may be introduced by Intervenor.

I have submitted an affidavit of Mr. Lorah, which outlines his testimony. I have carefully reviewed the affidavit with Mr. Lorah. Although it is not yet executed, I expect no significant changes, and will file the executed affidavit next week.

I have also submitted a Motion requesting that this Board reconsider its ruling that Intervenor may not introduce evidence or testimony about the Indians' claims to the effluent for which Applicants have contracted for use at Palo Verde. If this motion is granted, intervenor will present as her witness Mr. Philip Shea, whose testimony is outlined below. In order to have a complete record, I believe such a proffer of his testimony is necessary.

8205260195

Administrative Judges
Palo Verde
page two

The summary of the witnesses' testimony may be incomplete since Intervenor has not received certain requested documents from Applicants regarding the relationship between water quality and water quantity, and regarding the water requirements for the systems used to shut down the plant. When Intervenor receives these documents, I will submit a short summary of any testimony these witnesses will have regarding this new informaton.

Intervenor expects to introduce the following exhibits in connection with Mr. Lorah's testimony:

1. Arizona Department of Water Resources 1980-1981 Annual Report.
2. Reviewing Environmental Impact Statements - Power Plant Cooling Systems, Engineering Aspects, National Environmental Research Center, Office of Research and Development, U.S. Environmental Protection Agency, EPZ-660/2-73-016, October, 1973.
3. Some General Aspects of Fluctuations of Annual Runoff in the Upper Colorado River Basin, Vugica M. Yevdjovich, Engineering Research, Colorado State University, October, 1961, CER61VMY54.
4. An Environmental Analysis of the Central Arizona Project, U.S. Bureau of Reclamation, T.M. Powers, Economics Department of the University of Montana, 1978.
5. Potential Reuse Options for Wastewater Effluent and Residual Solids, June, 1977, U.S. Army Corps of Engineers, Los Angeles District, Phoenix Urban Study.
6. Phase I - Arizona Water Plan, Summary, Inventory of Resources and Uses, Arizona Water Commission, July, 1975.
7. Giusti, E.V., and E.L. Meyer, 1977. "Water Consumption by Nuclear Powerplants and Some Hydrological Implications," U.S. Geological Survey Circular 745 (U.S. Department of the Interior, Arlington, Va.)

Administrative Judges
Palo Verde
page three

Intervenor also wishes to present Mr. Bill Stephens as her witness, pursuant to subpoena, or alternatively, to question Mr. Stephens if the Board calls him as its witness. Depending on Mr. Stephens and the Board's decision as to Intervenor's application for a subpoena, Intervenor may wish to call pursuant to subpoena, Mr. John Robert McCain, staff director of the Arizona Municipal Water Users Association. Mr. McCain works closely with Mr. Stephens and has attended most of the licensing hearing.

Intervenor expects that Mr. Stephens or Mr. McCain will testify to the following:

1. Agreement No. 13904 between the cities and Joint Applicants for provision of effluent to be used at Palo Verde;
2. Renegotiations about that Agreement; the cities' interpretation of section 21; the cities' prior invocation of section 21;
3. The long-range planning of the cities in the Salt River Valley for their needs for water and methods of satisfying those needs for water including their plans for developing water supplies;
4. The cities' present and short-term plans for building of treatment facilities and wastewater treatment facilities;
5. The cities' plans for selling effluent to the Indians and others, and the cities' long-range plans for deriving benefit from effluent;
6. The cities' expectations regarding CAP allocations and the dependability of CAP allocations.
7. Expansion of Mr. Stephens' limited appearance testimony, including his written submission.

Administrative Judges
Palo Verde
page four

Intervenor will also present John Leshy, Professor of Law, Arizona State University. Mr. Leshy will testify to the following:

1. The Secretary of the Interior's legal responsibilities regarding reclamation waters, including Salt River Project waters and Central Arizona Project waters, and how these responsibilities might affect the CAP waters available to the cities within the Salt River Valley.

2. The present plans according to which the municipalities may trade their effluent with the Indians for the Indians' CAP allocations, and how that may affect the effluent available to the municipalities and the sources of water available to satisfy the needs of the municipalities.

3. Mr. Leshy may testify on the waters expected to be available to the municipalities through the Central Arizona Project.

4. Mr. Leshy, at this time, expects to rely only on legislation, legislative history, and exhibits already introduced by Joint Applicants.

Intervenor will present the testimony of Mr. William Paul Robinson, Executive Director and Environmental Analyst with the Southwest Research and Information Center in Albuquerque, N.M. Mr. Robinson, who holds a master's degree from the University of New Mexico in architecture with an emphasis on environmental design, has been engaged in environmental consulting work for over seven years and has testified in numerous administrative proceedings. He will testify regarding the following matters:

1. The adequacy of water reclamation demonstration plant and circulating water test facility pilot programs to verify and replicate operating conditions at the Palo Verde Nuclear Generating Station (PVNGS).

2. Analysis of several critical parameters to determine water quality relationships to water quantity requirements. These parameters include flow volumes, system geometry, time of operation, coolant flow velocity, coolant temperature, and coolant chemistry.

Administrative Judges
Palo Verde
page five

3. Analysis of these factors to determine whether the Joint Applicants have proven that the "15 cycles of concentration" design for the circulating condenser cooling system can be attained with consistency in the context of operating conditions over the operating life of PVNGS.

4. Mr. Robinson's professional opinion is that the short duration of demonstration plant tests and discrepancies in key chemical parameter data have produced information not directly comparable to anticipated WRS operational conditions and estimated concentrations of key chemical constituents. Consequently, it is believed that PVNGS may not be able to operate consistently at the design "15 cycles of concentration and may require more water than Joint Applicants have calculated.

Intervenor expects to introduce the following exhibits in connection with Mr. Robinson's testimony:

1. Atkinson, D.L., 1979. "Controlling and Predicting Cooling Tower Water Quality." *Industrial Water Engineering*, May/June, pp. 37-40.
2. Baker, R.J., 1977. "The Measurement of Chlorine Compound," in *Biofouling Control Procedures-Technology and Ecological Effects*, ed.: L.D. Jensen (Pub.: Marcel Dekker, Inc., New York, N.Y.), pp. 39-42.
3. Bechtel Power Corp., "Water Reclamation Studies for the Arizona Public Service Company, Palo Verde Nuclear Generating Station Units 1, 2 and 3," Job Number 10407 (Norwalk, Ca.)
4. Coane, W.V. (Bechtel Power Corp.), 1973-1974. Multiple Letters of Transmittal to Edwin E. Van Brunt, Jr. (Director, Arizona Nuclear Power Project) of Demonstration Plant Study Weekly Status Reports, Nos. 1-60 (written by C.L. Weddle and D.A. Salmond), from July 31, 1973 through September 25, 1974.
5. Coane, W.V. (Bechtel Power Corp.), 1975. Letter (B/ANPP-E-1974) to Edwin E. Van Brunt, Jr., (Director, Arizona Nuclear Power Project) Feb. 25 (with enclosures 1-4).

Administrative Judges
Palo Verde
page six

6. Cole, S.A., 1977. "Chlorination for the Control of Biofouling in Thermal Power Plant Cooling Water System," in Biofouling Control Procedures-Technology and Ecological Effects, ed.: L.D. Jensen (pub.: Marcel Dekker, Inc., New York, N.Y.) pp. 29-38.
7. Controls for Environmental Pollution, Inc., 1976-1981. "Water Quality Analyses on the Effluent Sewage Water," Progress Reports for Arizona Public Service Company, Arizona Nuclear Power Project, 91st Avenue Sewage Plant Study for 1976, 1977, 1978, 1979, and 1980. Four volumes dated September 13, 1976; June 1, 1977; October 1, 1979; and June 1, 1981.
8. Draley, J.E., 1977. "Biofouling Control in Cooling Towers and Closed Cycle Systems," in Biofouling Control Procedures-Technology and Ecological Effects, ed.: L.D. Jensen (pub.: Marcel Dekker, Inc., New York, N.Y.) pp. 23-28
9. Electric Power Research Institute, 1976. "Report of a Workshop on the Impact of Thermal Power Plant Cooling Systems on Aquatic Environments," EPRI SR-38-Special Report, vols. I and II, April.
10. Electric Power Research Institute, 1979. "Summary of Equilibrium and Process Model Data Acquisition-Treatment of Recirculated Cooling Water, Resource Document 1," EPRI FP-1251, Project 1261-1, Interim Report, September.
11. Electric Power Research Institute, 1980. Condenser Biofouling Control-Symposium Proceeding, eds: J.F. Garey, et al., EPRI CS-1450 (pub.: Ann Arbor Science, Ann Arbor, Mi.)
12. Goldstein, D.J.: Wui, I.W.: and Hicks, R.E., 1979. "Reuse of Treated Municipal Wastewater as Makeup to Circulating Cooling Systems," Industrial Water Engineering, July/August, pp. 20-29.

Administrative Judges
Palo Verde
page seven

13. Kluesdner, J.; Heist, J.; and Van Note, R.H. (Hydro and Community Facilities, Bechtel, Inc.) 1975. "A Demonstration of Wastewater Treatment for Reuse in Cooling Towers at 15 Cycles of Concentration." Presented at American Institute of Chemical Engineers Water Reuse Conference (Chicago, Ill.), May 4-8.
14. Lee, G.F., 1979. "Persistence of Chlorine in Cooling Water from Electric Generating Station," Journal of the Environmental Engineering Division, American Society of Civil Engineers, vol. 105, no. EE4, August, pp. 757-773.
15. Nester, G.J. and Cappeline, G.A., 1979. "Water Related Problem of Evaporative Cooling System and Control Methods," Industrial Water Engineering, May/June pp. 14-25.
16. Rogers, A.C., and Weddle, C.L., 1977. "The Reuse of Reclaimed Wastewater in Nuclear Power Plant Cooling Towers," American Nuclear Society Transaction, vol. 27, p. 851.
17. U.S. Environmental Protection Agency, 1973. "Reviewing Environmental Impact Statements-Power Plant Cooling Systems, Engineering Aspects," EPA-660/2-73-016 (National Environmental Research Center, Corvallis, Or.), October.
18. U.S. Environmental Protection Agency, 1979. "Wet/Dry Cooling and Cooling Tower Blowdown Disposal in Synthetic Fuel and Steam-Electric Power Plants," EPA-600/7-79-085 (Office of Energy, Mineral and Industry, Washington, D.C.), March.
19. Zeitoun, I.H.; Gulvac, J.A., and Rochow, J.J. (Consumers Power Company), 1980. "Power Plant Water Intake Assessment," Environmental Science and Technology (pub.: American Chemical Society), vol. 14, no. 4, April, pp. 398-402.

Administrative Judges
Palo Verde
page eight

Intervenor also intends to present testimony from Mr. E. K. Swanson, or another employee delegated by Dr. Ronald Miller, Chief of the Bureau of Water Quality Control, Arizona Department of Health Services. Mr. Swanson is the Manager of the Ambient Water Quality Unit, Bureau of Water Quality Control, Division of Environmental Health Services, Arizona Department of Health Services. He will testify about the following:

1) Contamination of wells and groundwater in the Salt River Valley and the sources of that contamination. He will focus on contamination by DBCP, TCE, and other associated volatile organics.

2) The probability that this contamination will continue in the future and the effects that may have on the quantity and quality of groundwater available to the municipalities.

Mr. Swanson will use the following documents in his testimony:

1. Dibromochloropropane (DBCP) Well Supply Program for Maricopa County Arizona (June 11, 1979), Timothy D. Love, Bureau of Water Quality Control, Division of Environmental Health Services, Arizona Department of Health Services, December 10, 1979.

2. Arizona Department of Health Services Reports on Trichloroethylene.

3. Bureau of Waste Control Reports on Contaminated Groundwater in the Vicinity of Landfills.

Intervenor would also like to question Mr. E. E. Van Brunt, Jr., as an adverse witness about the sources of water examined and the sources of water to be used for operation and shut down of Palo Verde.

Administrative Judges
Palo Verde
page nine

Intervenor may use the following letters in examining Mr. Van Brunt:

1. October 26, 1977, Letter to E. E. Van Brunt.
2. April 18, 1977, E. E. Van Brunt Letter to H. W. Worthington, U. S. Army Corps of Engineers.
3. November 14, 1977, Letter of Leonard C. Halpenny to Arthur C. Gehr.
4. November 11, 1977, Oral Presentation of E. E. Van Brunt.
5. June 20, 1978, Letter from H. W. Worthington to E. E. Van Brunt.
6. July 12, 1978, Letter from E. E. Van Brunt to H. W. Worthington.
7. July 20, 1978, Letter from H. W. Worthington to E. E. Van Brunt.
8. August 10, 1978, Letter of E. E. Van Brunt to H. W. Worthington.

If the Board permits Mr. Philip Shea to testify, Intervenor would present his testimony on the following matters:

1. The legality of the Applicants' contract for effluent under the federal reclamation laws.
2. The governmental interest that has not yet been asserted to ensure that federal reclamation waters are allocated to the benefit of lands within project boundaries.
3. The need for the NRC to consult with the Secretary of the Interior on the legality of the Applicants' contract for effluent and the legality of carrying effluent outside Salt River Project boundaries.

HARMON & WEISS

Administrative Judges
Palo Verde
page ten

Intervenor also informs the Commission that Mr. Shea intends to add all Joint Applicants as defendants in the suit he has brought on behalf of the Pima-Maricopa Indian Community against the Secretary of the Interior.

Respectfully submitted,

Lynne Bernabei

Counsel for Intervenor

HARMON & WEISS

1725 I Street, N.W.
Suite 506
Washington, D.C. 20006

(202) 833-9070

May 14, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKETED
USARC

MAY 24 11:22

In the Matter of)
)
ARIZONA PUBLIC SERVICE)
COMPANY, et al.)
)
(Palo Verde Nuclear)
Generating Station,)
Units 1, 2 and 3))
_____)

Docket Nos. STN 50-528
STN 50-529
STN 50-530

OFFICE OF SERVICE
DOCKETING & SERVICE
BRANCH

CERTIFICATE OF SERVICE

I hereby certify that copies of "Application for Issuance of Civil Subpoena (Ex Parte)" have been served upon the following listed persons by deposit in the United States mail, properly addressed and with postage prepaid, or, as indicated by an asterisk, by Federal Express, or, as indicated by a double asterisk, by making arrangements for hand delivery on May 19, 1982, this 18th day of May, 1982.

Docketing and Service Section
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Chairman, Maricopa County Board of Supervisors
111 South Third Avenue
Phoenix, Arizona 85004

Atomic Safety and Licensing Appeal Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

** Judge Sheldon J. Wolfe
Acting Chairman
Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Robert M. Lazo, Esq.
Chairman, Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

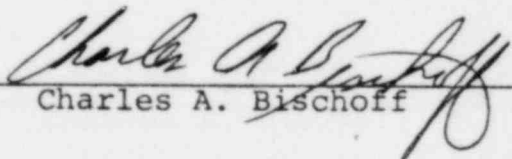
Dr. Dixon Callahan
Union Carbide Corporation
P.O. Box Y
Oak Ridge, Tennessee 37830

Lee Scott Dewey, Esq.
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Edwin J. Reis, Esq.
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Rand L. Greenfield, Esq.
Assistant Attorney General
P.O. Drawer 1508
Santa Fe, New Mexico 87504

* Lynne Bernabei, Esq.
Harmon & Weiss
1725 I Street, N.W.
Suite 506
Washington, D.C. 20006



Charles A. Bischoff