UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

August 31, 2005

Gregg R. Overbeck, Senior Vice
President, Nuclear
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION -NRC EXAMINATION REPORT 05000528/2005301; 05000529/2005301; 05000530/2005301

Dear Mr. Overbeck:

On August 11, 2005, the Nuclear Regulatory Commission (NRC) completed an examination at your Palo Verde Nuclear Generating Station, Units 1, 2 and 3. The enclosed examination report documents the results of the NRC examination and the examination findings, which were discussed on August 4 and 11, 2005, with you and other members of your staff.

The examinations included an evaluation of five applicants for reactor operator licenses and three applicants for senior operator licenses. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. We determined that all applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Ryan Lantz, Chief
Operations Branch

Dockets: 50-528; 50-529; 50-530
Licenses: NPF-41; NPF-51; NPF-74

cc
Steve Olea
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

Douglas K. Porter, Senior Counsel
Southern California Edison Company
Law Department, Generation Resources
P.O. Box 800
Rosemead, CA 91770

Chairman
Maricopa County Board of Supervisors
301 W. Jefferson, 10th Floor
Phoenix, AZ 85003

Aubrey V. Godwin, Director
Arizona Radiation Regulatory Agency
4814 South 40 Street
Phoenix, AZ 85040

Craig K. Seaman, Director
Regulatory Affairs
Palo Verde Nuclear Generating Station
Mail Station 7636
P.O. Box 52034
Phoenix, AZ 85072-2034

Hector R. Puente
Vice President, Power Generation
El Paso Electric Company
310 E. Palm Lane, Suite 310
Phoenix, AZ 85004

Jeffrey T. Weikert
Assistant General Counsel
El Paso Electric Company
Mail Location 167
123 W. Mills
El Paso, TX 79901

John W. Schumann
Los Angeles Department of Water & Power
Southern California Public Power Authority
P.O. Box 51111, Room 1255-C
Los Angeles, CA 90051-0100

John Taylor
Public Service Company of New Mexico
2401 Aztec NE, MS Z110
Albuquerque, NM 87107-4224

Thomas D. Champ
Southern California Edison Company
5000 Pacific Coast Hwy, Bldg. D1B
San Clemente, CA 92672

Robert Henry
Salt River Project
6504 East Thomas Road
Scottsdale, AZ 85251

Brian Almon
Public Utility Commission
William B. Travis Building
P.O. Box 13326
1701 North Congress Avenue
Austin, TX 78701-3326

Karen O'Regan
Environmental Program Manager
City of Phoenix
Office of Environmental Programs
200 West Washington Street
Phoenix, AZ 85003

Electronic distribution by RIV:
Regional Administrator **(BSM1)**
DRP Director **(ATH)**
DRS Director **(DDC)**
DRS Deputy Director **(KMK)**
Senior Resident Inspector **(GXW2)**
Branch Chief, DRP/D **(TWP)**
Senior Project Engineer, DRP/D **(NFO)**
Team Leader, DRP/TSS **(RLN1)**
RITS Coordinator **(KEG)**
DRS STA **(DAP)**
V. Dricks, PAO **(VLD)**
J. Dixon-Herrity, OEDO RIV Coordinator **(JLD)**
RidsNrrDipmlipb
PV Site Secretary **(PRC)**

SISP Review Completed: __Y____ ADAMS: : Yes ☐ No Initials: _____
☐ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☐ Non-Sensitive

SOE:OB	SOE:OB	SEPI:PSB	C:OB	C:PBD	C:OB
JDrake/lmb	GJohnston	MHaire	RLantz	TPruett	RLantz
/RA/	/RA/	/RA/	/RA/	/RA/	/RA/
08/25/05	08/25/05	08/25/05	08/29/05	08/30/05	08/31/05

OFFICIAL RECORD COPY T=Telephone E=E-mail F=Fax

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets:	50-528; 50-529, 50-530
Licenses:	NPF-41; NPF-51; NPF-74
Report No.:	05000528/2005-301, 05000529/2005-301, and 05000530/2005-301
Licensee:	Arizona Public Service Company
Facility:	Palo Verde Nuclear Generating Station, Units 1, 2, and 3
Location:	5951 S. Wintersburg Tonopah, Arizona
Dates:	July 29 through August 11, 2005
Inspectors:	Gary Johnston, Senior Operations Engineer, Operations Branch Mark Haire, Operations Engineer, Operations Branch James Drake, Operations Engineer, Operations Branch
Approved By:	Ryan Lantz, Chief Operations Branch Division of Reactor Safety

SUMMARY OF FINDINGS

ER 05000528/2005-301, 05000529/2005-301, 05000530/2005-301; 7/29-8/11/2005; Palo Verde Nuclear Generating Station, Units 1, 2, and 3; Initial Operator Licensing Examinations.

NRC examiners evaluated the competency of five applicants for reactor operator licenses and three applicants for senior operator licenses at Palo Verde Nuclear Generating Station, Units 1, 2, and 3. The facility licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. Licensee proctors administered the written examination to all applicants on July 29, 2005, in accordance with the instructions provided by the chief examiner. The NRC administered the operating tests on August 1- 4, 2005.

Cornerstone: Human Performance

No findings of significance were identified (Section 40A5.1).

Report Details

4. OTHER ACTIVITIES

4OA5 Other Activities

.1 Initial License Examination Administration

.1.1 Operator Knowledge and Performance

e. Examination Scope

On July 29, 2005, the licensee proctored the administration of the written examinations to all eight applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on August 4, 2005.

The NRC examination team administered the various portions of the operating examination to all eight applicants on August 1-4, 2005. All eight applicants participated in two dynamic simulator scenarios. The five applicants for reactor operator participated in a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of 4 administrative tasks. The three applicants for upgrade to senior operator participated in a control room and facilities walkthrough test consisting of 5 system tasks, and an administrative test consisting of 5 administrative tasks.

b. Findings

All eight of the applicants passed all parts of the examinations. The applicants demonstrated good 3-way communications, alarm response, and peer checking. For the written examinations, the average score for reactor operator applicants was 90.0 percent, and the average score for senior operator applicants was 88.9 percent. The reactor operator applicant scores ranged from 86.5 to 94.6 percent, and the senior operator applicant scores ranged from 88.9 to 88.9 percent.

The licensee conducted a performance analysis for the written examinations with emphasis on questions missed by half or more of the applicants. After reviewing the licensee's analysis, the examiners concluded that the analysis adequately addressed potential training deficiencies, and that the licensee provided adequate remediation for these apparent deficiencies.

.2 Initial Licensing Examination Development

The licensee developed the examinations in accordance with NUREG-1021, Revision 9. Licensee facility training and operations staff involved in examination development were on a security agreement.

.2.1 Examination Quality

a. Examination Scope

The facility licensee submitted post-examination comments on August 4, 2005. Examiners reviewed the submittal against the plant operating procedures and reference materials.

b. Findings

The chief examiner determined that the written examination, as modified by the post-examination changes, was within the range of acceptability expected for an initial licensing examination and was satisfactory. Documentation of the licensee's post-examination comments and the NRC staff review are located in Section .2.5 below

.2.2 Operating Examination Outline and Examination Package

a. Examination Scope

The facility licensee submitted the examination outlines and draft examinations on May 18, 2005. Examiners reviewed the submittal against the requirements of NUREG-1021, Revision 9, and forwarded minor comments to the licensee on May 24, 2005. The chief examiner conducted an onsite validation of the examinations and provided further comments during the week of July 11-15, 2005. The licensee satisfactorily completed comment resolution on July 25, 2005.

b. Findings

Examiners approved the initial examination outline with minor comments and advised the licensee to proceed with the examination development.

The chief examiner determined that the examinations initially submitted by the licensee were within the range of acceptability expected for a proposed examination and were satisfactory.

No findings of significance were identified.

.2.3 Simulation Facility Performance

a. Scope

The examination team observed simulator performance with regard to plant fidelity during the examination validation and administration. The chief examiner also reviewed the outstanding simulator work orders to determine if there were any conflicts with examinations administered on the simulator.

b. Findings

No simulator deficiency was noted during validation and no findings of significance were identified.

.2.4 Examination Security

a. Scope

The examiners reviewed examination security both during the onsite preparation and examination administration weeks with respect to NUREG-1021 requirements. Written plans for simulator security and applicant control were reviewed and discussed with licensee personnel. In addition, the chief examiner sampled historical records of the applicants to verify the accuracy of data on their license applications, in accordance with Examiner Standard 202.C.2.e of NUREG 1021.

b. Findings

No findings of significance were identified.

.2.5 Post-Examination Comments

Question

5. Given the following plant conditions:

Unit 1 at 100% power
Pressurizer level setpoint is 53**%**
Charging Pump selector switch is in the “1-2-3" position
‘B’ Charging Pump is not currently running
Pressurizer level is now lowering

At which ONE of the following Pressurizer levels would you FIRST expect ‘B’ Charging pump to be operating due to an auto start?

a. 19%
b. 29%
c. 38%
d. 43%

Proposed Answer: C

Licensee Challenge:

The licensee proposed deleting this question because there is no correct answer as the question is written. With the charging pump selector switch in the “1-2-3" position, the “B” pump would be the normally running pump. The normally running pump will cycle off at +15 percent and restart at +14 percent. With the level setpoint at 53 percent, the “B”

pump should auto start at a pressurizer level of 67 percent. Therefore, none of the choices are a correct answer and the question should be deleted.

NRC Review

A review of the licensee's challenge revealed that the licensee's argument was valid. The examination question stem, as modified, resulted in the normally running pump being described as not running vice the standby pump, which was the original intent. The licensee's challenge was accepted. The question was deleted.

4OA6 Meetings, Including Exit

On August 4, 2005, the examination team presented the examination results to Mr. Riedel, Director Nuclear Training Department, and other members of the licensee's management staff at the conclusion of the operating examinations. The licensee acknowledged the findings presented. The licensee did not identify as proprietary any information or materials examined during the examination.

On August 11, 2005, the results of the NRC staff review of the post-examination comments from the licensee and subsequent examination regrading were discussed with Pat Wiley, Operations Training Department Leader, and other members of the licensee staff. The final resolution of post examination comments were acknowledged by the licensee.

Attachment: Supplemental Information

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

Fred Riedel, Director Nuclear Training Department
Reggie Taylor, Shift Manager Training Coordinator
Doug Rosenbaum, Operations training Instructor
Gary Box, Licensing Initial Training Section Leader
Warren Potter, Simulator Support
Pat Wiley, Operations Training Department Leader
Phillip Capehart, Operations Training Instructor
Jim Taylor, Operations Support Department Leader
Jim Ledford, Operations Training Instructor

NRC personnel

Greg Warnick, Senior Resident Inspector
Jim Melfi, Resident Inspector
Pablo Benvenuto, Resident Inspector
Gary Johnston, Senior Operations Engineer
Mark Haire, Operations Engineer
Jim Drake, Operations Engineer

Documents Reviewed

Open Simulator Work Orders as of July 11, 2005