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102-04933-SAB/TNW/CJJ

April 29, 2003

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station: P1-37  
Washington, DC 20555-0001

Dear Sir:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2, and 3  
Docket Nos. STN 50-528/529/530  
Annual Environmental Operating Report 2002**

Enclosed please find a copy of the Annual Environmental Operating Report for 2002. This report covers the operation of PVNGS Units 1, 2, and 3 during 2002, and is being submitted pursuant to Section 5.4.1 of Appendix B to the Operating License.

No commitments are being made to the NRC in this letter. If you have any questions, please contact Thomas N. Weber at (623) 393-5764.

Sincerely,

*TNW/CJJ... for  
SA Bauer*

SAB/TNW/CJJ/kg

Enclosure

cc: E. W. Merschoff (all w/o enclosure)  
J. N. Donohew  
N. L. Salgado

*IE25*

**ENCLOSURE**

**2002 Annual Environmental Operating Report**

# 2002 Annual Environmental Operating Report

## I. INTRODUCTION

The Palo Verde Nuclear Generating Station (PVNGS) is located in Maricopa County, Arizona, approximately 50 miles west of the Phoenix metropolitan area. The PVNGS site comprises approximately 4080 acres. Site elevations range from 890 feet above mean sea level at the southern boundary to 1030 feet above mean sea level at the northern boundary. The station consists of three pressurized water reactor electrical generating units with a nominal generating capacity of 1270 MWE per Unit.

PVNGS was issued low power operating licenses NPF-34, NPF-46 and NPF-65 for Units 1, 2 and 3 by the United States Nuclear Regulatory Commission (NRC) on December 31, 1984, December 9, 1985, and March 25, 1987, respectively. The Unit 1 full power operating license NPF-41 was issued June 1, 1985. The Unit 2 full power operating license NPF-51 was issued April 24, 1986. The Unit 3 full power operating license NPF-74 was issued November 25, 1987. Appendix B to these operating licenses is entitled the "Environmental Protection Plan (Non Radiological)". The Environmental Protection Plans (EPP) of each of the current operating licenses are identical.

The EPP is to provide for protection of environmental values during construction and operation of the nuclear facility. The principal objectives of the EPP are as follows:

- (1) Verify that the station is operated in an environmentally acceptable manner, as established by the FES (Final Environmental Statement) and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and Local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility construction and operation and actions taken to control those effects.

This Annual Environmental Operating Report is required by Section 5.4.1 of the EPP. This report describes the activities during the year 2001 related to the PVNGS EPP. For purposes of this report, references to the EPP are considered to be the EPP of NPF-41, NPF-51, and NPF-74.

# 2002 Annual Environmental Operating Report

## II. ENVIRONMENTAL MONITORING SUMMARIES AND ANALYSIS

### A. Cultural Resources

Section 4.2.1 of the EPP requires that an archaeological survey be performed when final alignment of the PVNGS-to-Saguaro transmission line is completed. As of the date of this report, plans for this transmission line have been indefinitely suspended. Therefore, there has been no activity with regard to this requirement of the EPP.

### B. Terrestrial Ecology Monitoring

As communicated in a letter from William F. Conway, APS, to NRC, dated December 30, 1991, the salt deposition monitoring program was discontinued at the end of 1991.

## III. PLANT DESIGN AND OPERATION CHANGES

Section 3.1 of the EPP allows changes in station design or operation or the performance of tests or experiments affecting the environment provided that such changes, tests, or experiments do not involve an unreviewed environmental question and do not involve a change to the EPP. Changes, tests, or experiments in which all measurable non-radiological effects are confined to the on-site areas previously disturbed during site preparation and plant construction or in which the environment is not affected are exempt from the evaluation and reporting requirements of Section 3.1.

Section 3.2 of the EPP also exempts changes, tests, or experiments, which are required to comply with other Federal, State, or local environmental regulations.

Ten (10) design and operation changes were evaluated in 2002 to determine if they involved either an unreviewed environmental question or constituted a change in the EPP. Table III-1 summarizes the results of these evaluations. None of these changes involved an unreviewed environmental question or a change in the EPP.

## IV. EPP NON-COMPLIANCES

There were no instances of non-compliance with the EPP identified during 2002.

## V. NON-ROUTINE REPORTS

There were no non-routine reports required by Section 5.4.2 of the EPP submitted during 2002.

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**TABLE III - 1  
SUMMARY OF ENVIRONMENTAL EVALUATIONS PERFORMED DURING 2002  
FOR PLANT DESIGN AND OPERATION CHANGES**

Log #	Title	Description	Analysis	Interpretation	Evaluation
01-078		WRSS January 2002 Pipeline & Manhole Inspection and Repair	Maintenance activities associated with the inspection and repair require the use of portable combustion equipment, earth moving operations, and abrasive blasting / coating operations. These activities can increase airborne emissions. Maintenance and repair will also disturb offsite areas.	<p>The FES does not address portable emission sources. The equipment purchased / rented / contracted will be permitted in accordance with county regulations.</p> <p>The earth moving activities associated with the construction of the facility were discussed in the FES and no adverse environmental impacts were identified. The scope of the proposed work activities would be less than those already evaluated in the FES. Therefore, there are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>The FES does not address abrasive blasting / coating operations. There are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>The offsite area that is disturbed is within the right of way of areas disturbed during initial construction. The FES identifies that routine maintenance may occur in these areas.</p>	There was no unreviewed environmental question because the equipment operation and maintenance activities will be conducted in accordance with county regulations. In addition, the area to be disturbed was previously identified in the FES.

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SUMMARY OF ENVIRONMENTAL EVALUATIONS PERFORMED DURING 2002  
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Log #	Title	Description	Analysis	Interpretation	Evaluation
01-079	WO 2347392	Sludge Landfill Clearing	Land clearing activities associated with operation, maintenance and use of the site Sludge Landfill involves earth-moving operations. These activities can increase airborne emissions. Land clearing is performed to open a new area for sludge disposal.	<p>The earth moving activities associated with the construction of the facility were discussed in the FES and no adverse environmental impacts were identified. The scope of the proposed work activities would be less than those already evaluated in the FES. Therefore, there are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>With respect to land use, the potential to disturb archeological sites or harm endangered vegetation / animals were evaluated. The actual construction site was inspected and no archeological or endangered species of plants / animals were identified.</p>	There was no unreviewed environmental question because the equipment operation and maintenance activities will be conducted in accordance with county regulations. In addition, the area to be disturbed was previously identified in the FES.
02-001	T-MOD 2422863	T-Mod cooling tower fan replacement for performance testing	Changes to cooling tower operation or equipment could affect offsite impacts evaluated in the FES and drift-monitoring program.	The FES identifies that based on current cooling tower design there are no adverse environmental impacts identified. The proposed change does not change the fan design airflow rate or velocity and therefore will not affect cooling tower operations. The modification is considered a like for like replacement.	The design change is a like-for-like replacement of existing equipment already evaluated in the FES. The change, therefore, will have no adverse environmental impact as previously determined in the FES.

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SUMMARY OF ENVIRONMENTAL EVALUATIONS PERFORMED DURING 2002  
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Log #	Title	Description	Analysis	Interpretation	Evaluation
02-008	PCWO 2441887	WRSS April 2002 Manhole Inspection and Repair	Maintenance activities associated with the inspection and repair require the use of portable combustion equipment, earth moving operations, and abrasive blasting / coating operations. These activities can increase airborne emissions. Maintenance and repair will also disturb offsite areas.	<p>The FES does not address portable emission sources. The equipment purchased / rented / contracted will be permitted in accordance with county regulations.</p> <p>The earth moving activities associated with the construction of the facility were discussed in the FES and no adverse environmental impacts were identified. The scope of the proposed work activities would be less than those already evaluated in the FES. Therefore, there are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>The FES does not address abrasive blasting / coating operations. There are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>The offsite area that is disturbed is within the right of way of areas disturbed during initial construction. The FES identifies that routine maintenance may occur in these areas.</p>	There was no unreviewed environmental question because the equipment operation and maintenance activities will be conducted in accordance with county regulations. In addition, the area to be disturbed was previously identified in the FES.

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**TABLE III - 1**  
**SUMMARY OF ENVIRONMENTAL EVALUATIONS PERFORMED DURING 2002**  
**FOR PLANT DESIGN AND OPERATION CHANGES**

Log #	Title	Description	Analysis	Interpretation	Evaluation
02-009	DMWO 221246	Unit 2 Old Steam Generator Storage Facility	The construction of the Unit 2 Old Steam Generator Storage Facility requires the use of portable combustion equipment and earth moving operations. The use of portable combustion equipment could increase airborne emissions due to the combustion of fossil fuel. Earth moving operations could increase airborne emissions due to fugitive dust.	The FES does not address portable emission sources. The equipment purchased / rented / contracted will be permitted in accordance with county regulations.  The earth moving activities associated with the construction of the facility were discussed in the FES and no adverse environmental impacts were identified. The scope of the proposed work activities would be less than those already evaluated in the FES. Therefore, there are no adverse impacts as long as activities are conducted in accordance with county regulations.	There was no unreviewed environmental question because equipment operation and construction activities will be conducted in accordance with county regulations.
02-012		Purchase new air compressors for use on site	The use of portable combustion equipment could increase airborne emissions due to the combustion of fossil fuel.	The FES does not address portable emission sources. The equipment purchased / rented / contracted will be permitted in accordance with county regulations.	There was no unreviewed environmental question because equipment operation will be conducted in accordance with county regulations.

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**TABLE III - 1**  
**SUMMARY OF ENVIRONMENTAL EVALUATIONS PERFORMED DURING 2002**  
**FOR PLANT DESIGN AND OPERATION CHANGES**

Log #	Title	Description	Analysis	Interpretation	Evaluation
02-026	WDP-TB-559	Redhawk Makeup Line System	<p>The work package involved the construction and installation of an underground pipeline between PVNGS and the Redhawk Power Plant to supply treated effluent water. The evaluation was previously reviewed per Environmental Evaluation 00-057 and was for the construction of the pipeline. The installation of the pipeline has the potential for air, water, and land use impacts.</p>	<p>The evaluation performed per 00-057 was still in effect and applicable to this package modification.</p> <p>The FES does not address portable emission sources. The equipment purchased / rented / contracted will be permitted in accordance with county regulations. The earth moving activities associated with the construction of the facility were discussed in the FES and no adverse environmental impacts were identified. The scope of the proposed work activities would be less than that already evaluated in the FES. Therefore, there are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>With respect to land use, the potential to disturb archeological sites or harm endangered vegetation / animals were evaluated. The actual construction site was inspected and no archeological or endangered species of plants / animals were identified.</p> <p>The construction would transgress an existing ephemeral wash that is classified as a waterway of the US. As a result, any construction activities in these areas will be conducted in accordance with existing state and federal requirements.</p>	<p>There was no unreviewed environmental question because all construction activities will be performed in accordance with existing federal, state, and county requirements. All necessary permits and plans will be submitted to the appropriate regulatory agency prior to conducting work in an affected area.</p>

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TABLE III - 1  
SUMMARY OF ENVIRONMENTAL EVALUATIONS PERFORMED DURING 2002  
FOR PLANT DESIGN AND OPERATION CHANGES

Log #	Title	Description	Analysis	Interpretation	Evaluation
02-033	EDC 2002-00382	Remove inserts from the CW Cooling Tower Distribution Deck Spiral Target Nozzles	The removal of inserts from the cooling tower nozzles has the potential to affect emissions from the cooling towers.	The FES and salt drift monitoring program identified impacts associated with cooling tower drift. Cooling tower operation was previously reviewed. The scope of work caused no real change to cooling tower operation. The scope of work performed and the number of inserts removed would not cause a significant increase in emissions and the original impact assessments remained valid.	There was no unreviewed environmental question because the scope of work performed would not cause any significant increase in emissions. The towers will continue to be operated in accordance with county regulations.

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SUMMARY OF ENVIRONMENTAL EVALUATIONS PERFORMED DURING 2002  
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Log #	Title	Description	Analysis	Interpretation	Evaluation
02-040	PCWO 2448498 and 2444414	WRSS May 2001 Pipeline Refurbishment	Maintenance activities associated with the inspection and repair require the use of portable combustion equipment, earth moving operations, and abrasive blasting / coating operations. These activities can increase airborne emissions. Maintenance and repair will also disturb offsite areas.	<p>The FES does not address portable emission sources. The equipment purchased / rented / contracted will be permitted in accordance with county regulations.</p> <p>The earth moving activities associated with the construction of the facility were discussed in the FES and no adverse environmental impacts were identified. The scope of the proposed work activities would be less than those already evaluated in the FES. Therefore, there are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>The FES does not address abrasive blasting / coating operations. There are no adverse impacts as long as activities are conducted in accordance with county regulations.</p> <p>The offsite area that is disturbed is within the right of way of areas disturbed during initial construction. The FES identifies that routine maintenance may occur in these areas.</p>	There was no unreviewed environmental question because the equipment operation and maintenance activities will be conducted in accordance with county regulations. In addition, the area to be disturbed was previously identified in the FES.

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Log #	Title	Description	Analysis	Interpretation	Evaluation
02-047	DMWO 2493193	Construction of Rudd Transmission Line on PV Property	The scope of work involved the addition of transmission lines on site property.	The environmental impacts associated with transmission lines and transmission line corridors were previously evaluated in the FES. The proposed modification would run an additional transmission line in an already evaluated corridor. Therefore there would be no new or unreviewed environmental impacts.	There was no unreviewed environmental question because the transmission lines would be in an existing transmission line corridor that has already been evaluated in the FES.

\* FES - Final Environmental Statement; ER-OL - Environmental Report, Operating License Stage