September 20, 2006

Mr. James M. Levine
Executive Vice President, Generation
Arizona Public Service Company
P. O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 2 AND 3 - RELIEF REQUEST NO. 34 RE: REQUEST TO EXTEND THE SECOND 10-YEAR INSERVICE INSPECTION PROGRAM INTERVAL (TAC NOS. MD1458 AND MD1459)

Dear Mr. Levine:

By letter dated May 4, 2006, as supplemented by letter dated May 26, 2006, Arizona Public Service Company submitted Relief Request No. 34, requesting relief from certain American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) requirements at Palo Verde Nuclear Generating Station (Palo Verde), Units 2 and 3. The request for relief would authorize an alternative to the ASME Code requirements to defer the reactor vessel weld examinations of Palo Verde Units 2 and 3 for one fuel cycle.

Based on the enclosed safety evaluation, the Nuclear Regulatory Commission staff concludes that the proposed alternative provides an acceptable level of quality and safety. Therefore, pursuant to paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations*, the licensee's alternative repair as stated in Relief Request No. 34 is authorized for Palo Verde Units 2 and 3 for the second 10-year inservice inspection interval. The proposed alternative is authorized until the end of the spring 2008 refueling outage for Palo Verde Unit 2 and until the end of the spring 2009 refueling outage for Palo Verde Unit 3.

All other requirements of the ASME Code, Section III and XI, for which relief has not been specifically requested and approved remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Sincerely,

/RA/

David Terao, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosure: Safety Evaluation

cc w/encl: See next page

September 20, 2006

Mr. James M. Levine
Executive Vice President, Generation
Arizona Public Service Company
P. O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 2 AND 3 - RELIEF REQUEST NO. 34 RE: REQUEST TO EXTEND THE SECOND 10-YEAR INSERVICE INSPECTION PROGRAM INTERVAL (TAC NOS. MD1458 AND MD1459)

Dear Mr. Levine:

By letter dated May 4, 2006, as supplemented by letter dated May 26, 2006, Arizona Public Service Company submitted Relief Request No. 34, requesting relief from certain American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) requirements at Palo Verde Nuclear Generating Station (Palo Verde), Units 2 and 3. The request for relief would authorize an alternative to the ASME Code requirements to defer the reactor vessel weld examinations of Palo Verde Units 2 and 3 for one fuel cycle.

Based on the enclosed safety evaluation, the Nuclear Regulatory Commission staff concludes that the proposed alternative provides an acceptable level of quality and safety. Therefore, pursuant to paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations*, the licensee's alternative repair as stated in Relief Request No. 34 is authorized for Palo Verde Units 2 and 3 for the second 10-year inservice inspection interval. The proposed alternative is authorized until the end of the spring 2008 refueling outage for Palo Verde Unit 2 and until the end of the spring 2009 refueling outage for Palo Verde Unit 3.

All other requirements of the ASME Code, Section III and XI, for which relief has not been specifically requested and approved remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Sincerely,

/RA/

David Terao, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Enclosure: Safety Evaluation

cc w/encl: See next page

DISTRIBUTION

PUBLIC	RidsNrrDirsItsb	RidsNrrDorlLpl4		RidsNrrPMMFields
LPLIV r/f	RidsNrrDorlDpr	RidsAcrsAcnwMailCenter	RidsNrrLAFeizollahi	
RidsOgcRp	AShaikh, DCI	RidsRgn4MailCenter (TPruett)	SDinsmore, DRA	
JLamb, EDO RIV				

Accession Number: ML062490513

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	CVIB/BC	APLA/BC	OGC	NRR/LPL4/BC
NAME	MFields	LFeizollahi	MMitchell	MRubin	TCampbell	DTerao

DATE	7/18/06	9/18/06	8/09/2006	8/09/2006	09/13/2006	9/20/06

OFFICIAL RECORD COPY

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

INSERVICE INSPECTION PROGRAM RELIEF REQUEST NO. 34

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

PALO VERDE NUCLEAR GENERATING STATION, UNIT 2 AND 3

DOCKET NOS. STN 50-529 AND STN 50-530

1.0 INTRODUCTION

By letter dated May 4, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML061300676), as supplemented by letter dated May 26, 2006 (ADAMS Accession No. ML061570209), Arizona Public Service Company (APS or the licensee) submitted Relief Request No. 34, requesting relief from certain American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) requirements at Palo Verde Nuclear Generating Station (Palo Verde), Units 2 and 3. The request for relief would authorize an alternative to the ASME Code requirements to defer the reactor vessel weld examinations of Palo Verde Units 2 and 3 for one fuel cycle.

2.0 REGULATORY REQUIREMENTS

The inservice inspection (ISI) of the ASME Code Class 1, 2, and 3 components in nuclear plants is to be performed in accordance with the ASME Code, Section XI, and applicable edition and addenda as required by 50.55a(g) of Title 10 of the *Code of Federal Regulations* (10 CFR), except where specific relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). The regulation at 10 CFR 50.55a(a)(3) states: "Proposed alternatives to the requirements of paragraphs (c), (d), (e), (f), (g), and (h) of this section or portions thereof may be used when authorized by the Director of the Office of Nuclear Reactor Regulation. The applicant shall demonstrate that: (i) The proposed alternatives would provide an acceptable level of quality and safety, or (ii) Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety."

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that ISI examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The second 10-year ISI interval for Palo Verde Units 2 and 3 began in March 1997, and January 1998, respectively. The ISI Code of record is

the 1992 Edition with the 1992 Addenda. The components (including supports) may meet the requirements set forth in subsequent editions and addenda of the ASME Code incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein and subject to commission approval.

3.0 RELIEF REQUEST NO. 34, REQUEST TO EXTEND THE SECOND 10-YEAR ISI PROGRAM INTERVAL

3.1 Code Requirements

Subsection IWA-2430(a) of the 1992 Edition, 1992 Addenda, ASME Code states: "The inservice examinations and system pressure tests required by IWB, IWC, IWD, and IWE shall be completed during each of the inspection intervals for the service lifetime of the power unit. The inspections shall be performed in accordance with the schedules of Inspection Program A of IWA-2431, or optionally Inspection Program B of IWA-2432." Subsection IWB-2410 of this edition of the ASME Code states: "Inservice examination and system pressure tests may be performed during the plant outages such as refueling shutdowns or maintenance shutdowns." Palo Verde Units 2 and 3 have adopted Inspection Program B of IWA-2432 per the inspection scheduling requirements of IWB-2412.

Subsection IWA-2430(d) of the 1992 Edition, 1992 Addenda, ASME Code states, "For components inspected under Program B, each of the inspection intervals may be extended or decreased by as much as 1 year. Adjustments shall not cause successive intervals to be altered by more than 1 year from the original pattern of the intervals." In accordance with this ASME Code-allowed extension, APS has opted to use this provision, thus extending the end of the second 10-year ISI interval to March 17, 2008, for Palo Verde Unit 2 and January 10, 2009, for Palo Verde Unit 3.

3.2 Licensee's Proposed Alternative

The licensee proposes to perform the second 10-year ISI reactor pressure vessel (RPV) weld examination for Palo Verde Units 2 and 3 during the spring 2008 and spring 2009 refueling outages, respectively. The additional extension being requested is less than 60 days for Palo Verde Unit 2 and less than 150 days for Palo Verde Unit 3, beyond the ASME Code-allowed 1-year extension.

3.3 Components for which Relief Is Requested

The affected components are the Palo Verde Units 2 and 3 RPVs; specifically, the components identified in the table below. The Examination Categories and Item Numbers are from Table IWB-2500-1 of the 1992 Edition of ASME Code, Section XI.

Examination Category	Item Number	Description
B-A	B1.11	Circumferential Shell Welds
B-A	B1.22	Meridional Shell Welds (Bottom Head Only)

Examination Category	Item Number	Description
B-A	B1.30	Shell-to-Flange Weld
B-D	B3.90	Nozzle-to-Vessel Welds
B-D	B3.100	Nozzle Inner Radius Areas

3.4 Licensee's Basis for Proposed Alternative

The requirements for a technical basis to extend the Second 10-year ISI interval to the end of the spring 2008 and spring 2009 refueling outages for Palo Verde Units 2 and 3, respectively, for the identical inspections are contained in a letter from R. Gramm of the NRC to G. Bischoff of the Westinghouse Owners Group (WOG), dated January 27, 2005 (Reference 1), which identifies the five areas that form the basis for the technical justification. The licensee has addressed all five technical areas in their relief request submittal as follows:

A. Plant-specific RPV ISI history

B. Pressurized-water reactor (PWR) RPV ISI history

C. Degradation mechanisms in the RPV

D. Material condition of the RPV relative to embrittlement

E. Operational experience relative to RPV structural integrity challenging events

Palo Verde Units 2 and 3 are currently in their second 10-year ISI interval for the RPV weld examinations. The preservice and one ISI have been performed on the Examination Category B-A and B-D welds to date for both Palo Verde Units 2 and 3. These examinations, which were performed in accordance with ASME Code, Section XI, 1980 Edition, winter 1981 Addenda, and Regulatory Guide 1.150, achieved essentially 100 percent coverage and no reportable indications were found. The licensee provided tables in their May 4, 2006, letter showing detailed inspection history for the welds and claims that due to the examination method used and the coverage obtained on the welds, any significant flaws that could challenge RPV integrity would be detected by the respective inservice inspections.

Per the requirements of the technical basis as given in Reference 1, the licensee also conducted a survey of the RPV ISI history for 14 PWRs representing 301 total years of service and included RPVs fabricated by various vendors. None of the 14 plants surveyed reported any reportable findings during examinations of Category B-A and B-D welds. All PWRs have performed their first 10-year ISI of the subject examinations and no surface-breaking or unacceptable near-surface flaws have been reported in any of these inspections performed per the requirements of Regulatory Guide 1.150 or ASME Code, Section XI, Appendix VIII.

The licensee has also conducted an assessment of the possible RPV weld degradation mechanisms. According to the licensee, the only currently known degradation mechanism for the subject welds is fatigue due to thermal and mechanical cycling from operational transients.

Based on flaw growth simulation studies, APS identified the cooldown transient as having the greatest contribution to flaw growth. Based on the low likelihood of more than one or two cooldown transients occurring and the relatively low fatigue usage factors for the welds in the subject examinations, the licensee concluded that any flaw growth due to fatigue is expected to be inherently small.

APS noted that from a loading perspective the most severe operational challenge to RPV integrity is due to pressurized thermal shock (PTS) events. The licensee states that the Palo Verde Units 2 and 3 RPV weld materials are below, and will remain below, the PTS screening criteria (according to 10 CFR 50.61) during the requested deferral period.

APS stated that it has implemented emergency operating procedures (EOPs) and operator training to prevent the occurrence of PTS events. Consistent with the Combustion Engineering (CE) Emergency Response Guidelines (ERGs), the Palo Verde EOPs instruct the operators to identify the onset of PTS conditions and provide the steps required to mitigate any cold pressurization challenge to RPV integrity. The basic PTS mitigation strategy of the Palo Verde EOPs involves: (1) termination of the primary system cool down, (2) termination of emergency core cooling system flow (if proper criteria are met), (3) depressurization of the primary system, (4) establishment of stable primary system conditions in the normal operating range, and (5) implementation of a thermal "soaking" period prior to any cool down outside of the normal operating region.

APS characterized the response to three scenarios (developed by the Nuclear Regulatory Commission (NRC) staff during its PTS risk reevaluation work) that are believed to be the most likely scenarios which could cause a PTS event that would challenge significant flaws in the RPV welds. The three scenarios are initiated by the following infrequent events:

1. Any transient with a reactor trip followed by one stuck-open pressurizer safety relief valve that recloses after about 1 hour. Severe PTS events also require the failure to properly control high-head injection.

   APS identified the steps in the EOPs that direct the operators to initiate a reactor coolant system (RCS) cool down and depressurization, which includes throttling or stopping high pressure safety injection (HPSI) flow as needed. Throttling and/or stopping HPSI prevents or minimizes the magnitude of re-pressurization of the RCS if a stuck open pressurizer valve reseats, thereby precluding PTS.

2. Large loss of secondary steam from steam line break or stuck-open atmospheric dump valves. Severe PTS events also require the failure to properly control auxiliary feedwater flow rate and destination (e.g., away from affected steam generators) and failure to properly control high pressure injection.

   APS identified the steps in the EOPs that are used to mitigate the effects of an excessive steam demand while maintaining adequate core cooling. After isolating the most affected steam generator, including stopping auxiliary feedwater to the faulted steam generator, the operators are directed to stabilize the RCS temperature using the RCS pressure/temperature limit curves, which show the acceptable areas of operation and delineate where PTS becomes a concern.

3. Four to nine-inch loss-of-coolant accidents. Severity of a PTS event depends on break location (worst location appears to be in the pressurizer surge line) and primary injection systems flow rate and water temperature.

   APS stated that the response to this sequence would be similar to Sequence 1.

APS concluded that by combining: (1) the basic requirements of the CE ERGs, (2) the use of plant-specific set points with a defined technical basis, and (3) the formal reconciliation of any differences between the CE ERG reference plant and Palo Verde; the Palo Verde EOPs provide adequate means for preventing potential PTS transients.

4.0 TECHNICAL EVALUATION

APS summarized prior ISI examinations performed on the RPV welds for Palo Verde Units 2 and 3. All of the subject welds had been examined and no indications of flaws were reported. The fundamental purpose of performing these RPV weld ISI examinations is to detect and size flaws. This allows the prediction of subsequent flaw growth to assure that the flaws do not grow to the critical dimensions prerequisite of failure. Although ultrasonic examination technology has improved over the past decades, the geometry and materials involved in RPV weld examinations are such that these exams have not been particularly challenging from an inspection-technology perspective. Therefore, the staff agrees with APS's qualitative assessment that the prior examinations were of sufficient quality to identify any significant flaws that would challenge RPV integrity and that no significant flaws had been identified.

APS discussed the population of all PWRs and indicated that no surface-breaking flaws have been discovered and, for a population of 14 plants that were reviewed in detail, no reportable indications were identified in any of the RPV welds. The licensee stated that Palo Verde Units 2 and 3 RPVs contain one layer cladding and that the completed cladding was 100 percent liquid penetrant examined during construction to assure freedom from lack of fusion or other linear defects. Therefore, the staff concludes that the fleet ISI experience and the ISI experience specific to Palo Verde Units 2 and 3 is consistent with the APS evaluations that there is low probability of surface breaking flaws propagating due to fatigue.

APS indicated that fatigue is the only operative mechanism that could have caused flaws to either initiate or grow in the welds during the period since the previous inspection. The staff concludes that corrosion, stress corrosion cracking, and other forms of degradation due to the materials' interaction with its chemical environment are not active degradation mechanisms for the RPV welds. This is because the RPV forgings and welds are separated from the reactor coolant by a layer of corrosion-resistant cladding. Even if the cladding was breached (for example due to an original fabrication flaw in the cladding), the coolant water chemistry is controlled such that oxygen and other aggressive contaminants are maintained at very low levels so that the coolant is not aggressive to the ferritic material. Furthermore, the welds have not been subjected to a history of abnormal operational loading events, so mechanical overload has not been an active flaw initiation or propagation mechanism. Therefore, the staff agrees with the conclusion that fatigue is the only likely operative mechanism that could have created or propagated flaws since the date the previous ISI examinations were performed.

The licensee states that the fatigue usage factors for these RPV welds will be much less than the ASME Code design limit of 1.0 after 40 years of operation and that the most severe fatigue transient would be the cooldown. The staff agrees that it is unlikely that more than one or two cooldown events would occur during the requested extension period of the licensee's proposed alternative. In addition, the staff estimates that any flaw growth due to normal operational transients during the period since the last ISI examination would likely be very minimal.

APS provided the unirradiated nil-ductility transition reference temperature (RT_{NDT}) values for each of the RPV beltline materials for both Palo Verde Units 2 and 3 and provided the PTS reference temperature (RT_{PTS}) values to facilitate assessment of the effects of neutron irradiation on these beltline materials. Section 50.61 of 10 CFR currently provides PTS screening criteria of RT_{PTS} equal to 270 EF for plates and axial welds and RT_{PTS} equal to 300 EF for circumferential welds. Based on current projections, APS found that the intermediate shell plate in Unit 2 is the most limiting material for Palo Verde Units 2 and 3. The projected RT_{PTS} value of 78 EF at 32 effective full power years for this material is well below the PTS screening criteria. Furthermore, it is recognized by the NRC and industry that a large amount of conservatism exists in the current PTS screening criteria as evidenced in the NRC memorandum, "Technical Basis for Revision of the Pressurized Thermal Shock (PTS) Screening Criteria in the PTS Rule (10 CFR 50.61)," dated December 31, 2002 (Reference 2). Based on the beltline material data, existing PTS criteria and the known conservatism of the current PTS rule, it is clear that Palo Verde Units 2 and 3 will remain well below the PTS screening criteria during the extension period. Therefore, the staff concludes that complying with 10 CFR 50.61 is sufficient to demonstrate that the probability of RPV failure due to a PTS event is acceptably low.

The PTS risk associated with operation during any time interval is the product of the likelihood that a significant flaw exists and the likelihood that a PTS event occurs during the interval which would challenge the flaw. An increased risk associated with the requested extension arises from the potential existence of a significant flaw that would have been detected and repaired during the inspection at the end of the original interval. With an extended interval, this flaw would continue to be vulnerable to a severe PTS event during the period the inspection interval is extended. Instead of attempting to estimate this increased risk, APS concluded that the risks associated with extending the inspection interval by one refueling cycle is small.

APS described its strategy that would allow the operators to identify the onset of PTS conditions and provide the steps required to mitigate any cold pressurization challenge to RPV integrity. APS identified the EOPs that would be used to respond to the three scenarios (developed by the NRC staff during its PTS risk reevaluation work) that are believed to be the most likely scenarios that could cause a PTS event that would challenge significant flaws in the RPV welds. APS discussed the procedures at Palo Verde Units 2 and 3 that the operators would use to identify and mitigate the severity of a PTS event following either of the first two initiating events.

The staff concurs that the likelihood of any of these initiating events occurring during the extension period is low. Furthermore, existing plant procedures and material properties can mitigate the severity of, or the affects of, the PTS event that would be caused by these initiating events.

In summary, the staff has reviewed APS's evaluation and makes the following conclusions:

- Previous RPV ISI results were of sufficient quality to provide useful test results.
- Previous ISI examinations did not identify any indications of flaws.
- The RPV welds are not subjected to stresses or corrosive conditions that would create new flaws or cause old flaws to grow.
- Industry experience with ISI examinations of similar welds has yielded similar results: there are no known significant RPV flaws.
- The most severe degradation mode that is expected to be operative is fatigue, and the most severe operational event with respect to fatigue is cooldown, an event expected to occur only one or two times during the extension period. Therefore, growth of flaws due to fatigue would be minimal during the period since the previous ISI examination and would likely be very small during the proposed extension period.
- The RPV material has sufficient toughness to be acceptable with respect to PTS, as determined by APS's compliance with the requirements of 10 CFR 50.61.
- The likelihood of a severe PTS event occurring during the proposed extension period is low.

Accordingly, the staff concurs with APS's qualitative assessment that the Palo Verde Units 2 and 3 welds have a low likelihood of having significant flaws and that there is a low likelihood of experiencing a severe PTS event during the proposed extension period. The staff finds that the risk associated with the one-cycle extension of the examination interval is sufficiently small that it need not be quantified to support the conclusion that this alternative continues to provide an acceptable level of quality and safety. Operation of the RPV for an additional cycle, without performing the ISI examination of the subject welds, would not significantly increase the risk of flaw growth due to fatigue or to RPV failure due to PTS.

5.0 CONCLUSION

The NRC staff has reviewed the licensee's proposed Relief Request No. 34 as an alternative to the ASME Code requirements to defer the reactor vessel weld examinations of Palo Verde Units 2 and 3 for one fuel cycle. Under the premise of the above evaluation, the NRC staff concludes that APS's proposed alternative provides reasonable assurance of an adequate level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the staff authorizes the proposed alternative for the second 10-year ASME Code inservice inspection interval at Palo Verde Units 2 and 3. This proposed alternative is authorized until the end of the spring 2008 refueling outage for Palo Verde Unit 2 and spring 2009 refueling outage for Palo Verde Unit 3.

All other ASME Code, Section XI, requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

6.0 REFERENCES

1. R. Gramm of the NRC to G. Bischoff of the WOG, "Summary of Teleconference with the Westinghouse Owners Group Regarding Potential One Cycle Relief of Reactor Pressure Vessel Shell Weld Inspections at Pressurized Water Reactors Related to WCAP-16168-NP, 'Risk-Informed Extension of Reactor Vessel In-Service Inspection Intervals,'" dated January 27, 2005.

2. NRC Memorandum, A. Thadani to S. Collins, "Technical Basis for Revision of the Pressurized Thermal Shock (PTS) Screening Criteria in the PTS Rule (10 CFR 50.61)," dated December 31, 2002.

Principal Contributors: S. Dinsmore
A. Shaikh

Date: September 20, 2006

cc:

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

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

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 40
Buckeye, AZ 85326

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
Harris Tower & Pavillion
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

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

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

Mr. Craig K. Seaman, General Manager
Regulatory Affairs and
Performance Improvement
Palo Verde Nuclear Generating Station
Mail Station 7636
P.O. Box 52034
Phoenix, AZ 85072-2034

Mr. Matthew Benac
Assistant Vice President
Nuclear & Generation Services
El Paso Electric Company
340 East Palm Lane, Suite 310
Phoenix, AZ 85004

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

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

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

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

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

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

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