

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

'83 FEB -3 P3:04

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

Docket Nos. STN 50-529  
STN 50-530

WEST VALLEY AGRICULTURAL PROTECTION COUNCIL, INC.'S  
MOTION FOR RULING ON CONTENTIONS, FOR DECLARATION THAT  
NEPA ANALYSIS IS INADEQUATE AND FOR CONTINUANCE OF PROCEEDINGS

On December 30, 1982, the Atomic Safety and Licensing Board granted the West Valley Agricultural Protection Council, Inc.'s ("West Valley's") Petition to Intervene and reopened the record in the operating license proceedings for Units 2 and 3 of Palo Verde Nuclear Generating Station ("PVNGS"). The Board agreed with West Valley's assertion that the potential effects of aerosol salt deposition on area crops presents a significant and serious environmental question which neither the Final Environmental Statement on the Construction Permit ("FES-CP") nor the Final Environmental Statement-Operating License ("FES-OL") adequately address. See Memorandum and Order at 9, 13. The Board accordingly admitted West Valley's contention number 3 ("The salt deposition from the PVNGS will reduce the productivity of agricultural lands owned by West Valley members"). The Board deferred ruling on West Valley's remaining contentions and other relief sought pending a prehearing conference. The Board has now scheduled that conference for February 24, 1983.

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West Valley requests first that the Board admit the remaining contentions concerning salt deposition for litigation in the operating license proceeding. Each of West Valley's factual contentions (Contentions I, II, IV(A), IV(C), V & VI) is interrelated and each bears upon an unresolved and significant environmental issue.

West Valley further requests that the Board rule formally that the environmental statements submitted by the NRC fail to comply with National Environmental Policy Act ("NEPA"), 42 U.S.C 4331 et seq., requirements (Contentions VII and VIII). Although the Board has held that the environmental statements only sparsely address the effects of PVNGS cooling tower salt drift on crops, it did not expressly rule on West Valley's NEPA claims.

In view of the current paucity of data on the salt deposition question, the lack of any definite Environmental Protection Plan, and the need for further NEPA analysis, West Valley requests that any discovery or hearings in connection with its contentions be continued pending preparation by the NRC of an adequate environmental analysis. As set forth in the reports appended as exhibits to this Motion,<sup>\*</sup> West Valley's experts have made a preliminary identification of the information which should underpin an informed decision about salt drift impacts and are

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<sup>\*</sup>/ Reports from Dr. Charles Mulchi and Dr. Edward Davis are appended as Exhibits 1 and 2. West Valley's third expert, Dr. Michael Golay, is preparing a similar report for submission to the Board in the near future. Dr. Golay's extensive commitments in recent weeks precluded submission of his report at this time.

available to consult with the NRC Staff and Joint Applicants in designing appropriate salt drift impact studies and analyzing their results.

Finally, West Valley requests that the Board direct the NRC and Joint Applicants to explain how continued cooling tower construction before development of an adequate record on salt drift impacts is consistent with the requirement that the NRC preserve reasonable alternatives until the NEPA process is complete. See 42 U.S.C. 4332, 40 CFR 1506.1. Should the NRC and Joint Applicants be unable to ensure that continued construction will not foreclose reasonable alternatives, West Valley intends to seek a halt to cooling tower construction pursuant to 10 CFR §2.206(a).

Respectfully submitted,

Dated: \_\_\_\_\_

  
\_\_\_\_\_  
Kenneth Berlin  
2550 M Street, N.W.  
Washington, D.C. 20037  
(202) 828-8400

EXHIBIT 1

MEMORANDUM

January 21, 1983

TO: Mr. Kenneth Berlin  
Attorney for Petitioner, West Valley Agricultural  
Protection Council, Inc.

FROM: Dr. Edward A. Davis  
Consultant

SUBJECT: Important Considerations in the Further Examination  
of the Salt Deposition Questions at the Palo Verde  
Nuclear Generating Station

As indicated in the petition, our examination of the Palo Verde application revealed several deficiencies in the environmental impact analysis of salt deposition to off-site croplands:

1. All sources of salt emission from the Palo Verde site were not properly identified;
2. The modeling of these sources was not complete;
3. The potential damage to crops grown at off-site locations was not carefully assessed.

As a result a closer look at salt deposition and its effects should be undertaken. The plan to do this should be carefully drawn. The following comments provide some points that should be considered.

An important understanding, and the driving force, in this effort should be the recognition that very little is known about the problem. In particular:

1. The salt drift characteristics of the proposed cooling towers (circular mechanical draft), spray ponds, and

evaporation ponds have not been studied under climatic conditions similar to those at Palo Verde.

2. Models that predict salt drift and deposition from these sources are inherently inaccurate and, without validating experience under Palo Verde conditions, cannot be expected to provide accurate predictions.
3. Damaging levels of salt deposition to crops growing under Palo Verde conditions have not been established.

Hence, only a proper combination of salt emission and deposition monitoring, simulated (mock-up) crop damage tests, and careful deposition modeling can accurately assess the potential for damage to crops by salt deposition near the Palo Verde site.

#### Monitoring Program

As maintained by the applicant, a monitoring program is the key to understanding the salt deposition problem. The program should have several elements. Among which are:

1. Measurement of airborne salt at selected locations around the Palo Verde site and extending to sufficient distances to establish salt level trends. The program should include pre-operational measurements to establish ambient baseline values. The program should be continued over several growing seasons spanning a wide variety of meteorological conditions.
2. Measurement of the salinity of the cooling tower basin water in conjunction with the airborne salt measurements.

This should be done regularly and recorded along with the plant operating conditions (load, etc.). Site meteorology should also be recorded (probably available every hour from the meteorological tower at the site). In addition, on several occasions under various operating conditions the drift rate of the cooling towers should be measured along with the flow rate and temperature of the tower emissions. Visible plumes should be photographed.

3. Observation of the evaporation ponds to determine if dry areas can be a source of wind-blown salt dust.

As the ponds are used the extent to which dry salt deposits are formed should be observed. The erodability of the dry surfaces should be measured.

4. Performance of simulated (mock-up) salt deposition experiments on representative crops that are grown

near the Palo Verde plant. These tests are most important in determining the threshold at which damage could occur. There is some reason to believe that low levels of salt deposition under the arid Palo Verde conditions could be more damaging than indicated by data collected on crops in more humid regions. The only way to determine this is to do the controlled mock-up experiments. The monitoring results alone are not very useful unless damage thresholds are known. Comparison of monitoring results with threshold values would indicate whether or

not the plant emissions are well below damaging levels. In addition the threshold data is essential in estimating the effect of bringing Unit No. 2 and 3 on-line, with or without additional control on salt emissions.

#### Analysis of Salt Deposition from Cooling Tower Drift

The cooling towers were the only source of saline drift analyzed by the applicant. The analysis had certain deficiencies as noted in our petition. The analysis should be refined by using appropriate tower performance parameters provided by the vendor and/or measured in the monitoring program. The model should be modified as needed and used to obtain careful estimates of salt deposition to properties around the Palo Verde site. In addition, the deposition results should be tabulated in a month-by-month format so that detailed comparison with growing seasons can be made.

#### Analysis of Salt Deposition from Evaporation Pond Blow-off

Evaporation ponds were not considered as a potential source of salt deposition by the applicant. As shown in our petition these could be a major source of salt. The design and operation of the evaporation ponds should be carefully analyzed to determine if they could become a source of wind-blown salt dust. The dynamics of the pond should be examined including input of cooling tower blow-down, seepage into the soil, evaporation into the atmosphere, etc. The fraction of the pond area that is dry as plant operation continues over years should be determined

along with the nature (erodability) of the dry surface and the means of dust control if salt blow-off should be a problem. Operating experience with ponds under similar climatic conditions should be located, if possible. The salt deposition to off-site locations should be modeled and the results tabulated on a month-by-month basis.

#### Analysis of Salt Deposition from Spray Pond Drift

Salt deposition resulting from spray pond use during unit shutdown was not analyzed by the applicant. The operating parameters of the spray ponds should be established, e.g., salinity levels, drift rate, etc. The deposition on off-site properties should then be estimated through careful modeling and the results tabulated on a month-by-month basis.



Recommendation for Correcting the  
Deficiencies in the EIS for PVNGS

January 1983

Charles L. Mulchi, Ph.D.

1. A monitoring program to acquire baseline atmosphere salt concentrations and deposition rates on crops in the region near PVNGS should be started immediately. The program should use state of the art procedures and span the various seasons of the year, making sure the full range of environmental conditions are included. The program should continue after the initiation of Unit 1 operations and be expanded to include an assessment of salt emissions from all sources (cooling towers, evaporation ponds, spray system, etc.).

2. The section of the EIS concerning the modeling of salt emissions, transport and deposition in the region near PVNGS has to be revised. Several drift models should be compared using meteorological data collected at PVNGS. The models selected should have been tested under field conditions in environments as similar to that at PVNGS as possible. If necessary, the relationships between atmospheric concentration and deposition rates and impaction on vegetation in desert environments should be researched to a greater degree. Worst case situations such as changes in the salinity of the tower make-up water, periods of high humidity and calm winds, etc., should be examined and reported for each tower. Also, all sources of salt emissions at PVNGS must be included. The ultimate fate of the millions

of pounds of salts to be emitted from the PVNGS each year must be fully known before one can attempt to assess the future impact on crops, etc.

3. Using the updated modeling results concerning salt deposition rates, impaction, etc. previously discussed, experiments simulating the impact on agricultural crops throughout the life cycle of the plants should be conducted. These studies should include all of the major crops currently grown in the region, especially cotton, alfalfa, melons, grapes, lettuce, carrots, etc. The studies should be conducted under environments similar to that near PVNGS using cultural practices typical for the area. The treatments should include irrigation with water having salinity rates comparable to that currently supplied by the Buckeye Irrigation Co. and farm wells plus increased levels of salts which will likely occur as high quality irrigation water availability decreases as Units 2 and 3 begin full operations. The foliar treatments should span the range of salt deposition rates projected for PVNGS plus a factor of 10 to cover for errors in modeling. The crops should be rated for salt tolerance and yields and quality information should be collected. This information will be vital to farmers having to make decisions concerning the selection of crops to be grown in the region impacted by PVNGS. (Note: It is preferred that these investigations be conducted in natural environments rather than in greenhouse or growth chambers because (a) yield and quality information on crop plants grown in artificial environments are

at best speculative, and (b) salt accumulation on leaves and wetting and drying action of brief rain events and morning dew formation, etc. will be difficult to simulate in artificial environments).

4. Cost analyses concerning the agricultural sector should be revised to include: (a) yield reduction associated with having to shift to higher saline irrigation water as high quality irrigation water from the City of Phoenix becomes less available after Units 2 and 3 become operational; (b) yield and quality reduction due to salt impact on vegetation; (c) cost of added irrigation to leach salts from soils associated with the shift to lower quality irrigation water; (d) loss of some farms which are currently operating in marginally high saline conditions; and (e) impact of water shortages on farms downstream on the Salt River below the Buckeye Irrigation District which currently use all of the surplus waste water not consumed by the Buckeye Irrigation Co.

5. Methods to reduce salt emissions and water consumption by PVNGS should be explained. Using the revised economic analysis from the agricultural section as a guide, the cost of various options for charges at PVNGS can be more properly addressed. Reduction in either or both of these parameters would greatly reduce the pending impact on agriculture. For example, shifts to dry cooling facilities would reduce the impact to zero for Units 2 and 3. Hopefully the impact from

Unit 1 will be minimal. In these considerations, it will be important to assume that agriculture will remain an important economic factor for the region for perhaps longer than the life of PVNGS. Some shifts in land use are going to happen irrespective of PVNGS; however, the region is too vast to assume a total shift from agriculture in the next several decades as some forecasters less familiar with the region have presumed. Since agriculture has been the primary economic factor in the region for generations, it must receive priority. If the cost of options to reduce water use and salt emission from Units 2 and 3 at PVNGS are too high to be economical for APS, perhaps APS should consider relocating Units 2 and 3 to other areas in the southwest where a more favorable economic climate exists.

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MEMORANDUM IN SUPPORT OF WEST VALLEY AGRICULTURAL  
PROTECTION COUNCIL, INC.'S MOTION FOR RULING ON CONTENTIONS,  
FOR DECLARATION THAT NEPA ANALYSIS IS INADEQUATE  
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I.    Introduction

The recent ruling of the Atomic Safety and Licensing Board which allows the West Valley Agricultural Protection Council, Inc. ("West Valley") to intervene and which reopens the record in licensing proceedings for Units 2 and 3 of Palo Verde Nuclear Generating Station ("PVNGS") tellingly emphasizes the sketchy attention and analysis devoted to a critical environmental issue-- the effect of aerosol salt deposition on valuable crops grown by West Valley's members in immediate proximity to PVNGS. In its opinion, the Board states:

The Board considers the salt deposition issue to be both a significant and a serious environmental issue. Land suitable for farming is in short supply in Arizona. Thus, special public interest implications are involved. The spectre of possibly rendering unusable some of what little fertile land is available impels us to compile as comprehensive

a record as possible to insure that this will not happen.... The Board has previously noted that the record on salt deposition is sparse.

Memorandum and Order at 13 (emphasis added).

Given the Board's evaluation of the significance of the salt deposition issue and its dissatisfaction with the environmental analyses prepared to date, West Valley submits that the appropriate course at this juncture is for the Board to admit the remaining factual contentions on salt deposition impacts for litigation and to rule explicitly that the NRC's analysis of the salt deposition issue fails to meet National Environmental Policy Act ("NEPA"), 42 U.S.C. 4331 et seq., requirements. In view of that serious NEPA defect, the Board should then order a continuance of the operating license proceedings for PVNGS Units 2 and 3 until the NRC Staff obtains the studies essential to a thorough environmental analysis and prepares a supplemental or revised Environmental Impact Statement. In addition, West Valley requests that the Board direct the NRC staff and Joint Applicants to demonstrate that continued cooling tower construction during renewed NEPA consideration is compatible with preserving reasonable alternatives.

II. The Board Should Admit Contentions I, II, IV(A), IV(C), V, and VI as Issues in Controversy

The Board's Memorandum and Order of December 30, 1982 admits as an issue in controversy West Valley's Contention that "the salt deposition from the PVNGS will reduce the productivity of agricultural lands owned by West Valley's members." (Contention

III). The Board did not rule on the admissibility of West Valley's other contentions, but indicated that it would schedule a prehearing conference to discuss their disposition. Memorandum and Order at 14, ¶5. By order of January 26, 1983, the Board scheduled that conference for February 24, 1983.

West Valley submits that the remaining Contentions concerning the effects of salt deposition, Contentions I, II, V, and VI are closely interrelated with Contention III and therefore should be admitted and resolved in this proceeding. The allegations in Contention I ("The salt deposition which will result from the operation of the PVNGS is inadequately assessed in the Environmental Reports (ER) and Environmental Impact Statements (EIS) and vastly understated") present questions essential to an understanding of the salt deposition problem. Contention I raises the reliability of salt emission measurement, environmental effects of cooling tower deterioration, underprediction of salt deposition rates by the cooling tower drift model, changes in salt concentrations over the life of the plant, and salt drift from spray and evaporation ponds. Such questions obviously go to the heart of the salt deposition issue. Similarly, Contention II ("The ER and EIS fail to evaluate the impact of salt on agricultural crops") focuses on aspects of salt deposition unique to desert agriculture, the central matter now pending before the Board.

Examination of Contentions V and VI is equally critical to an informed judgment about salt deposition impacts. Contention V ("The ER and EIS fail to consider the full economic impact of the cooling towers on the area surrounding PVNGS") addresses the

potential economic cost of lost agricultural production. Contention VI ("The ER and EIS fail to consider technically and financially feasible alternatives that would reduce salt loss from the PVNGS cooling towers") suggests potential technological changes that might ameliorate salt deposition problems.

The Board's December 30, 1982 Memorandum and Order explicitly limits the reopening of this proceeding to the salt deposition issue. Moreover, its Initial Decision of December 30, 1982 on Intervenor Patricia Hourihan's Contentions forecloses further consideration of water availability issues in these operating license proceedings. West Valley therefore does not presently seek Board adjudication of Contention IV(B), which concerns water availability, nor will it ask the Board to address points raised in other contentions that involve water availability (e.g., Contention I. D. (iii)). West Valley urges, however, that the Board admit Contentions IV(A) and IV(C) which concern improper evaluation in the Environmental Statement of the true costs of water allocated to PVNGS. Since consideration of the salt deposition issue will necessarily entail reexamination of the cost-benefit analysis for PVNGS, the true costs associated with allocating water to PVNGS--a question integral to the cost-benefit analysis for plant operations--should also be explored.

III. The Board Should Expressly Rule That the Environmental Statements and Reports Inadequately Address Salt Deposition Effects

West Valley's Contention VII ("The EIS prepared by the NRC should be revised because it fails to analyze adequately the

potential impact of salts on agricultural crops") and Contention VIII ("The NRC should prepare a supplemental EIS") challenge the adequacy of the NRC's Environmental Statements under the National Environmental Policy Act ("NEPA"), 42 U.S.C. 4331 et seq. The Board has not yet ruled on West Valley's NEPA claims. But the Board concluded, as noted above, that the question of salt deposition is both serious and significant and that available information is sparse. Memorandum and Order at 13. Such conclusions implicitly recognize that the Final Environmental Statement on the Construction Permit ("FES-CP") and the Final Environmental Statement-Operating License ("FES-OL") fail to meet NEPA requirements. West Valley requests that the Board expressly rule that the NEPA analyses provided by the NRC Staff to date are inadequate.

Review of the adequacy of environmental analysis is an important function of Licensing Board proceedings:

A licensing board... is expected to evaluate independently and resolve the appropriate contentions of the various parties, to assure itself that the regulatory staff's review has been adequate, and to inquire further into areas where it may perceive problems or find a need for elaboration. If it finds itself not satisfied with the adequacy or completeness of the staff review, or of the evidence presented in support of the license application, it may, for example, reject the application, or may require further development of the record to support such application.

Public Service Company of New Hampshire, et al. (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 526 (1977), quoting Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331,

334. The Board, noted the Commission, serves as "a final check in the NRC NEPA process." Id.

The Board has already found that the issue of salt deposition by PVNGS on agricultural crops is significant and largely unaddressed. Such a limited record cannot meet NEPA's requirement that an Environmental Statement "insure a fully informed and well-considered decision." Vermont Yankee Nuclear Power Corporation v. Natural Resources Defense Council, Inc., 435 U.S. 519, 558 (1978). At the same time, as demonstrated by the Board's grant of intervention, West Valley has presented significant evidence that aerosol salt drift from PVNGS may cause substantial damage to intervenor's crops and thus the environment. Given these two factors, the Board should expressly rule that the present Environmental Statement is inadequate and that NEPA mandates additional studies leading to supplementation or revision of the Environmental Statement.

Regulations of the Council on Environmental Quality ("CEQ") require supplementation of a final environmental statement if:

- (i) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.
- (ii) ...when the agency determines that the purposes of the Act will be furthered by doing so.

40 CFR 1502.9 (c)(i)(ii),(2) (1982) (emphasis added). CEQ's interpretation of NEPA is entitled to substantial deference.

Andrus v. Sierra Club, 442 U.S. 347, 358 (1979). Moreover, the NRC has expressly adopted the CEQ regulations for guidance. 10 CFR §§51.5(b)(1), 51.23(d) (1982); see 40 CFR 1500.3 (1982). Information concerning impacts of cooling tower operation on a major agricultural industry is, as the Board stated, "significant" and "relevant to environmental concerns" and therefore a basis for supplementation.

The cases on supplementation of environmental impact statements support this conclusion. For example, in Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1024-25 (9th Cir. 1980), the Court concluded that new information showing that a geological fault potentially posed a greater threat to safety of the dam than previously recognized triggered the supplementation requirement. Subsequent detailed seismic studies, however, demonstrated that the original EIS had in fact considered a sufficient range of earthquake damage and therefore cured the NEPA defect. And, new studies by the Federal Highway Administration bearing on a highway project were recently held "new and significant" information requiring supplementation of the agency's environmental impact statement. Stop H-3 Association v. Lewis, 538 F. Supp. 149, 170 (D. Haw. 1982).

West Valley has brought forward significant new information about a serious environmental issue--salt deposition on crops grown under desert conditions. Since neither the environmental statements nor reports address the issue, the Board should declare the FES-OL inadequate and require development of

data which can serve as the foundation for a satisfactory supplemental NEPA statement.

Should the necessary data prove to be unattainable or unduly time consuming to compile, the NRC could then prepare a worst case analysis. Council on Environmental Quality regulations expressly require that agencies conduct further studies or perform worst case analyses where there are gaps in relevant important information:

If (1) the information relevant to adverse impacts is essential to a reasoned choice among alternatives and is not known and the overall costs of obtaining it are exorbitant or (2) the information relevant to adverse impacts is important to the decision and the means to obtain it are not known (e.g., the means for obtaining it are beyond the state of the art) the agency shall weigh the need for the action against the risk and severity of possible adverse impacts were the action to proceed in the face of uncertainty. If the agency proceeds, it shall include a worst case analysis and an indication of the probability or improbability of its occurrence.

40 CFR §1502.22(b) (1982) (emphasis added).

In North Slope Borough v. Andrus, 486 F. Supp. 332 (D.D.C. 1980), rev'd on other grounds, 642 F.2d 589, 605 (D.C. Cir. 1980), the Court noted that this provision would require preparation of a worst case analysis because of important shortcomings in information on the environmental effects of Arctic Ocean oil drilling. According to the Court:

It is undisputed that much is still unknown about the consequences of oil exploration and drilling in severe environments such as the Beaufort Sea. Little is known, for example, about the Bowhead whale and about the impact which exploration and drilling will have on the species. NEPA requires

that the "cost of uncertainty--i.e., the costs of proceeding without more and better information be considered in the decision-making process. Current Council on Environmental Quality Regulations require the inclusion in the EIS of a worst case analysis where there are gaps in relevant information or scientific uncertainty.

Id. at 346 (emphasis added). Preparation of worst case analyses are not only reasonable under NEPA but are "statutory minima." See Sierra Club v. Sigler, 532 F. Supp. 1222 (S.D. Tex. 1982).

In any event, given the absence of meaningful data on salt deposition around PVNGS and the seriousness of the potential environmental consequences, NEPA requires additional agency studies of the salt deposition issue. Such studies should either underpin a supplemental Environmental Statement, or, if inconclusive, should lead to preparation of a worst case analysis.

IV. The Board Should Continue the PVNGS Licensing Proceeding Until the NRC Provides An Analysis of the Salt Deposition Question that Complies with NEPA Requirements

West Valley submits that the only appropriate and feasible procedure at this point, given the conceded need for additional detailed studies concerning salt deposition impacts on West Valley's crops, is to continue discovery and hearings in this operating license proceeding until the NRC Staff and Joint Applicants conduct the studies that are a prerequisite to an informed analysis of the issue and an adequate FES-OL.

Licensing Boards have considerable flexibility in scheduling discovery and hearings. 10 CFR §2.718(e); Potomac Electric Power Company (Douglas Point Nuclear Generating Station,

Units 1 and 2), ALAB-277, 1 NRC 539, 544; New England Power Company, et al. (NEP, Units 1 and 2), LBP-79-9, 7 NRC 271, 283 (1978). As the Douglas Point Appeal Board explained:

[T]he absence of any rigid scheduling criteria established by statute or regulation suggests that the adjudicatory boards were to decide for themselves... when hearings should be held on specific issues. It seems to us that a variety of factors appropriately should be taken into account in reaching that decision. Principal among them are: (1) the degree of likelihood that any early finding on the issue(s) would retain their validity; (2) the advantage, if any, to the public interest and to the litigants in having an early, if not necessarily conclusive, resolution of the issue(s); and (3) the extent to which the hearing of the issue(s) at an early stage would, particularly if the issue(s) were later reopened because of supervening developments, occasion prejudice to one or more of the litigants.

Potomac Electric Power Company, supra, at 547.

In attempting to apply those criteria in a situation similar to that presented by the PVNGS operating license proceedings, the NEP Board noted:

There is not enough solid information in the record at this time to enable the Board to exercise a sound discretion in applying these criteria to the question of the timing and pace of scheduling hearings and antecedent discovery.

New England Power Company, supra, at 291. The Board therefore postponed discovery and hearings until appropriate environmental and safety reports had been issued. Id. at 294.

Such a ruling is also warranted here. At this point there simply is not enough data on salt damage to crops grown in a desert environment for proceedings to address the issue in any

meaningful way. This is not a situation in which failure to supplement an Environmental Statement may be cured through the hearing process. See Warm Springs Dam Task Force, supra, at 1025-26; Boston Edison Company, (Pilgrim Nuclear Generating Station, Unit 2), ALAB-479, 7 NRC 774, 782 (1978); Allied General Nuclear Services et al. (Barnwell Nuclear Fuel Plant), ALAB-296, 2 NRC 671, 681 (1975). Nor is it one in which hearings may proceed on one environmental issue at the same time that the agency remedies separate defects in its NEPA analysis. Allied General Nuclear Services, supra. Presently available data on crop damage in dry environments like PVNGS is too limited to cure the inadequacies of the PVNGS Environmental Statements or to provide a basis for licensing proceedings. The NRC plainly lacks the "information sufficient to permit a reasoned choice of alternatives so far as environmental aspects are concerned." Boston Edison Company, supra, 7 NRC at 783.

Exhibits to West Valley's Motion prepared by our experts provide a preliminary description of the types of data needed. According to these recognized experts on cooling tower salt drift and its effects upon agriculture, the potential damage to West Valley's crops can only be evaluated following collection of base line data on salts, use of more precise cooling tower drift models, simulated studies tailored to the unique climatic situation presented at PVNGS and a carefully designed monitoring program.

West Valley's experts have indicated that they would be available to consult with the NRC Staff and Joint Applicants on

appropriate model parameters. They would, in addition, be available to review and comment on study designs and an expanded monitoring program. Reports which were previously submitted by West Valley's experts with the Petition to Intervene should also provide useful guidelines to the NRC Staff for curing the present paucity of information on salt deposition damage to desert crops.

Under these circumstances, further operating license proceedings would serve no purpose. As the cases have explained, the decision to proceed turns upon whether there has been "a reasonably full development of relevant information." New England Power Company, et al., supra, at 284, quoting Potomac Electric Power Company, supra, at 552.

In addition, NRC regulations prohibit NRC Staff from taking a position in hearings before completion of its NEPA analyses, 10 CFR §51.52(a), (b); Offshore Power Systems (Floating Nuclear Power Plants), ALAB-489, 8 NRC 194, 202 (1978); Allied General Nuclear Services, supra, 2 NRC at 679. NRC regulations also contemplate that applicants may be called upon to furnish new information or new studies, 10 CFR §§2.102(a), 2.103(b); New England Power Company, supra, 7 NRC at 277.

Furthermore, in ordering a continuance of the proceedings, the Board will not intrude upon the province of the NRC Staff. The Board may not direct the performance by the staff of its NEPA duties. Offshore Power Systems, supra; New England Power Company, supra. The Board plainly has the power and the duty, however, to decline to hear an important environmental issue about

which little is known. Public Service Company of New Hampshire, supra. The fact that a continuance pending completion of an adequate environment statement has the effect of ordering the NRC Staff, and perhaps the Applicants, to undertake new environmental studies does not amount to an impermissible intrusion into staff functions: "[The Board] may issue an order which in effect requires one or more of the parties to perform additional research." Id.

As the foregoing discussion demonstrates, a continuance of the operating license proceedings is essential to proper evaluation of the salt deposition issue.<sup>\*/</sup> Indeed, NRC preparation

<sup>\*/</sup> West Valley has requested a continuance rather than a stay of this proceeding. A recent Licensing Board decision explains that a Motion for Stay directed to the Board should be treated as a Motion for Continuance since the Board has no need to issue a stay to itself. Cleveland Electric Illuminating Company (Perry Nuclear Power Plant, Units 1 and 2), LBP-82-13, 15 NRC 527, 528 (1982). This conclusion seems sensible since 10 CFR §2.788 specifically deals with stays of decisions of presiding officers and Appeals Boards pending review; no ruling which West Valley might appeal has been issued. A stay, as the rule suggests, is ordinarily directed to proceedings before another tribunal. Cf. Allied General Nuclear Services, supra, at 677.

West Valley notes, however, that in a somewhat analogous situation a Licensing Board concluded that stay criteria applied. Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-81-5, 13 NRC 226 (1981). The stay criteria, set forth in 10 CFR §2.788(e), include:

- (1) Whether the moving party has made a strong showing that it is likely to prevail on the merits;
- (2) Whether the party will be irreparably injured unless a stay is granted;
- (3) Whether the granting of a stay would harm other parties; and
- (4) Where the public interest lies.

of a thoughtful Supplemental Environmental Statement might well obviate the need for any hearing.

V. The NRC and Joint Applicants Should Be Required to Demonstrate that Continued Cooling Tower Construction Would Not Limit Reasonable Alternatives

The continued commitment of resources during the NEPA process may unfairly weight the cost-benefit balance struck by an agency. See, e.g., Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-395, 5 NRC 772, 779 (1977); Union Electric Company

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\* / Footnote continued.

In the Pacific Gas and Electric case, the State of California requested the Licensing Board to stay authorization of fuel loading and low power testing pending preparation of an environmental impact statement or appraisal of the effects of those activities. The Board indicated that stay criteria would apply and found California unlikely to prevail on the merits, noting that a previously prepared Environmental Statement and supplement on full-power operation had already covered any possible impacts from less than full power operation.

Assuming that the criteria of 10 CFR §2.788 govern West Valley's Motion, however, West Valley meets the standards for a stay. The NEPA violation is unmistakable. The Environmental Statements have not addressed what the Board has concluded is a significant environmental issue. West Valley's members face the prospect of serious--potentially devastating--damage to their crops unless the salt deposition issue is fully addressed. Hearings at this point would not only be unproductive but might prejudice the NEPA process. Moreover, the additional studies essential to an understanding of the issue can begin well before Units 2 and 3 are scheduled to go on line, and therefore may not significantly delay operation of Units 2 and 3. If the studies cannot be substantially completed by that time, the NRC could consider proceeding with a worst case analysis. And, finally, the public interest, as embodied in NEPA, requires a timely and full exploration of all significant environmental consequences of proposed federal actions.

(Callaway Plant, Units 1 and 2), ALAB-352, 4 NRC 371, 373 (1976). As construction progresses, the decision to alter a project becomes increasingly undesirable, which in turn makes reconsideration of environmental impacts a sham. See Sierra Club v. Hennessy, 18 ERC 1297, 1301 (2d Cir. December 3, 1982), and cases cited therein.

Regulations of the Council on Environmental Quality therefore require that agencies limit their actions during the NEPA process:

Until an agency issues a record of decision as provided in §1505.2..., no action concerning the proposal shall be taken which would:

- (1) Have an adverse environmental impact; or
- (2) Limit the choice of reasonable alternatives.

40 CFR §1506.2 (1982) (emphasis added). West Valley requests that the Board direct the NRC Staff and Joint Applicants to demonstrate that cooling tower construction will not limit reasonable alternatives. Should it appear that continued construction before completion of an adequate FES-OL will foreclose alternatives potentially less damaging to crops, West Valley intends to seek a halt to construction from the NRC pursuant to 10 CFR 2.206(a). See Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-6754, 15 NRC 1101 (1982).

The ultimate decision whether to halt construction because of a NEPA violation depends upon a balancing of the equities, e.g., Sierra Club v. Hennessy, supra at 1303; Union Electric Company, supra at 380. West Valley contends that an

injunction would be warranted here. The NEPA violation is clear-cut and substantial. Construction of the cooling towers as planned may have a devastating effect on West Valley's crops. Further expenditures on construction may also improperly weight the necessary cost benefit analysis. Finally, the delay factor is less significant than in other cases. The delay itself would not affect Unit 1 full power operation. And, it is our understanding that once supplemental NEPA analysis is complete, the remaining cooling tower construction should take only a short period. West Valley does not intend to delay construction without good cause, but rather seeks assurance that the livelihood of its members will not be significantly impaired by the completion of construction before adequate environmental data are available.

#### CONCLUSION

For the above stated reasons, West Valley urges that the Board admit each of its contentions concerning salt deposition, hold the Environmental Statements inadequate, continue discovery and hearings until NEPA analyses of salt deposition effects are complete, and direct the NRC staff and Joint Applicants to demonstrate that continued cooling tower construction is consistent with preserving reasonable alternatives.

Respectfully submitted,

Dated: \_\_\_\_\_

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

In the Matter of )  
 )  
ARIZONA PUBLIC SERVICE ) Docket Nos. STN 50-529  
COMPANY, et al. ) STN 50-530  
 )  
(Palo Verde Nuclear Generating )  
Station, Units 2 and 3) )  
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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "Motion for Ruling on Contentions for Declaration that NEPA Analysis is Inadequate and for Continuance of Proceedings" and Memorandum in Support have been served upon the following listed persons by personal service (as indicated by an asterisk) or by United States Express Mail (as indicated by a double asterisk) or regular United States mail, properly addressed and with postage prepaid, this 2nd day of February, 1983:

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