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Attorneys for JOINT APPLICANTS

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

ARIZONA PUBLIC SERVICE

COMPANY, et al.,

(Palo Verde Nuclear
Generating Station, Units 1, 2 and 3)

DOCKET NOS. STN 50-528

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TO: WEST VALLEY AGRICULTURAL PROTECTION COUNCIL, INC. and its attorneys.

Under authority of 10 C.F.R. §2.740(b) you are hereby requested to answer in writing and under oath, within thirty (30) days from the receipt hereof, the following interrogatories:

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INSTRUCTIONS FOR USE

- A. All information is to be divulged which is in the possession of the individual or corporate party, his attorneys, investigators, agents, employees, or other representatives of the named party and his attorney.
- B. Where an individual interrogatory calls for an answer which involves more than one part, each part of the

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1		answer should be clearly set out so that it is under- standable.		
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3	C.	Where the term "you," or "defendant" is used, it is meant to include every individual party and separate		
4		answers should be given for each person named as a party, if requested.		
5	D.	A space has been provided on the Form of Interroga- tories for your answer. Two copies are served here-		
6		with. Complete all copies and serve a copy of each separate counsel representation, retaining a copy in your file. Attach a verification and certificate of mailing.		
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9	E.	In the event the space provided is not sufficient for your answer to any of the questions, please attach a separate sheet of paper with the additional informa-		
10		tion.		
11	F.	These interrogatories are intended as continuing interrogatories, requiring you to answer by supplemental		
12		answer, setting forth any information within the scope of the interrogatories as may be acquired by you, you		
13		agents, attorneys, or representatives following your original answers.		
14				
15		DEFINITIONS		
16		The following definitions are applicable to all		
17	Interrogatories contained herein:			
18	Α.	Any pronoun shall be deemed to designate the masculine feminine or neuter gender, and singular or plural, as		
19		in each case may be appropriate.		
20	В.	"Any," "each" and "all" shall be read to be all inclusive, and to require the enumeration of each and ever		
21		item of information or document responsive to the interrogatory in which such term appears.		
22	c.	"And" and "or" and any other conjunctions or disjunc-		
23	٠.	tions used herein shall be read both conjunctively and disjunctively so as to require the enumeration of all		
24		information responsive to all or any part of each interrogatory in which any conjunction or disjunction		
25		appears.		

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- D. "Person" means an individual, firm, corporation, association, organization or other entity.
- E. "You" and "your" as used herein shall refer to the West Valley Agricultural Protection Council, Inc., and to any and all of its members, agents, representatives, or employees, and unless otherwise indicated, shall be read to include West Valley's attorneys.
- "Document" as used herein means any physical thing containing information, including without limitation of the generality of the foregoing any affidavit, agreement of any kind (or memorandum thereof), analysis, application, appointment calendar, appraisal, assignment, audit, bankbook, bank statement, bill, bill of lading, bill of sale, blueprint, book of account, bulletin, cancelled check, card, certificate (of any kind), chart, check, checkbook, check stub, compilation of data or statistics, computer input or output material (including but not limited to any computer program, printout or plotter output), computer storage device (including but not limited to any magnetic tape, paper tape, magnetic disk, magnetic card, punch card, mass storage device, diskette, floppy disk, core storage or other computer memory), contract, correspondence (sent or received), data sheet, diagram, diary, diploma, drawing, evaluation, examination or examination results, film (whether or not developed), financial statement, financing statement, forecast or projection, form (whether or not filled out), graph, instructions, instrument (including but not limited to any negotiable or non-negotiable instrument), inventory, invoice, ledger or ledger sheet, list, log or logbook, manuscript, map, memorandum, message (including but not limited to any report of any telephone conversation, conference or other conversation), microfilm, notebook, note or notes or summarization of any communication (including but not limited to any conversation, telephone conversation, personal interview or conference), notes or summarization of any meeting (including but not limited to any negotiation, class, seminar, conference, rally, convention, lecture, session or formal or informal discussion), outline, painting, paper, patent or patent application, photograph or photographic negative (including but not limited to any x-ray, slide, movie or videotape), plans, planning materials, preliminary drawing, promissory note or other evidence of indebtedness, position paper, prospectus, publication (including but not limted to any book, booklet, circular, magazine, newspaper, pamphlet or periodical), purchase order,

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questionnaire, raw or uncompiled data or statistics, receipt, recording of any kind (whether or not transcribed), register, report, schedule, schematic, scroll, specifications, statement, study, survey, tablet, telegram (sent or received), telex, test or test results, ticket or ticket stub, voucher, warrant, working paper, writing, or other data compilation from which information can be obtained or translated through detection devices to reasonably usable form when translation is practicable or necessary, and includes any original, draft (with or without notes or changes thereon) or copy (with or without notes or changes thereon) of any of the foregoing. Any such docum ent bearing on any portion thereof any mark (including but not limited to initials, stamped indicia, comments or notations of any character) not a part of the original text or photographic reproduction thereof, is to be considered as a separate document.

- G. "Identify" as used herein with respect to a document shall be read to require a statement of all of the following information relative to such document: (1) title; (2) nature and subject matter; (3) date; (4) author; (5) addressee; (6) file number or other identifying mark or code; (7) location by room, building, address, city and state; (8) identification of custodian; and (9) whether or not it is claimed that such document is privileged, and if so, the type of privilege claimed and a statement of all the circumstances which will be relied upon to support such claim of privilege.
- H. "Identify" as used herein with respect to any individual shall be read to require a statement of all of the following information pertaining to such individual: (1) present home address; (2) present home telephone number; (3) employer; (4) present or last known business address; (5) business telephone number; (6) job description; (7) title; and (8) employment history (if any) with the party answering, including dates, job descriptions and job titles.
- I. "Identify" as used herein with respect to any entity other than an individual shall be read to require a statement of all of the following information relating to such entity: (1) full name or title; (2) principal place of business; (3) nature or type of entity; and (4) its principal business.
- J. "Identify" as used herein with respect to any conversation (including any telephone communication) or meeting

shall be read to require a statement of all of the fol-
lowing information relating to such conversation or
meeting: (1) the date on which it occurred; (2) the
identity of each and every person who was present or
who participated; (3) the place at which it occurred
or, in the case of a telephone communication, the loca-
tion of each party; and (4) a detailed statement of the
substance of what was discussed or what actions were
taken.

- K. "Petition" as used herein shall refer to the "Petition to Intervene and Request for Preparation of Supplemental or Revised Environmental Impact Statement, Hearing and Other Relief" dated October 13, 1982.
- L. "West Valley" as used herein shall refer to the West Valley Agricultural Protection Council, Inc.
- M. "PVNGS" as used herein shall refer to the Palo Verde Nuclear Generating Station.
- N. "Joint Applicants" as used herein shall refer to Arizona Public Service Company ("APS"), Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, and Southern California Public Power Authority.

INTERROGATORIES

1. In your Petition, you allege that West Valley is a non-profit corporation formed in 1982 by farmers in Maricopa County, Arizona. State the date upon which West Valley was incorporated, and identify the officers and directors of the corporation.

2. In your Petition, you allege that West Valley has 56 farmer members. Identify the 56 members who comprise West Valley and state, for each, his or her address.

3. For each member named in response to the preceding interrogatory, state the precise legal description of the land owned and/or leased and/or operated by such member, using the UTM or Arizona Coordinate System to describe such property; also state the total number of acres owned and/or operated by each such member.

4. For each parcel of property described in answer to the preceding interrogatory, state whether you claim that such parcel, or any part thereof, will be affected or may potentially be affected by salt drift deposition from the PVNGS. If you claim that only a portion of any parcel listed herein will or may be affected, describe

specifically the part thereof which you claim will or may be affected.

For each parcel of property listed in answer to the preceding interrogatory, state the amount of drift per acre which you claim will be deposited thereon on a daily, monthly and annual basis.

> Describe the precise method by which the deposition figures given in response to the preceding interrogatory were calculated. Include in your answer all facts, assumptions, and calculations upon which such figures are based.

to Interrogatory No. 6.

7. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

8. Identify each and every document which refers or relates in any way to the facts set forth in your answer

9. For each parcel of land described in answer to Interrogatory No. 3, state whether the farmer member of West Valley owns such land, leases it, or farms it under any other form of ownership or control. If the farmer member leases the land described, state the name of the owner/lessor; if the farmer member does not own or lease such property, describe the relationship pursuant to which the farmer member operates the land in question.

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10. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

Identify each and every document which refers 11. or relates in any way to the facts set forth in your answer to Interrogatory No. 9.

12. For each parcel of land described in response to Interrogatory No. 3, indicate for each of the last ten years, the percentage of such acreage which was actually

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planted in crops and further state for each of the last ten years:

(a) The crop(s) which were planted on such acreage, or any part thereof, and the number of acres which were planted in each such crop.

(b) For each crop identified in response to subpart (a) of this interrogatory, state the approximate date upon which each crop was planted, the approximate leafout date of such crop and the harvest date thereof.

(c) Define the yield (in pounds, bales, bushels, etc. per acre) of each crop planted on each of the parcels of property described in response to Interrogatory No. 3.

(d) As a continuation of the preceding subparts of this interrogatory, state the market price per harvest unit of the crops identified in subpart (a) above, for each parcel of land listed in response to Interrogatory No. 3.

(e) With respect to the information provided in subpart (d) of this interrogatory, state the individdal or entity to whom the crop(s) or any part thereof was sold, the date upon which the crop was sold and the means by which the sale price was established.

13. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such

person, state the specific facts concerning which they have knowledge or claim to have knowledge.

14. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 12.

sponse to Interrogatory No. 3, and for each crop which you claim was grown thereon during the past ten years, identify the irrigation method used for each such crop and the frequency with which such crop was irrigated. Your answer should include, but not be limited to, the total quantity of water applied per acre per day, per month, and per growing season, and the source of the irrigation water.

16. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

17. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 15.

18. Describe the water quality (<u>i.e.</u>, the content in parts per million (ppm)), for the irrigation water referred to in Interrogatory No. 15, of any minerals, nutrients, or other solids, including -- but not limited to -- salt; further state the source of your information regarding the water quality described herein.

19. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

20. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 18.

21. For each crop planted on each parcel of property described in response to Interrogatory No. 3, and for each of the last ten years, identify any and all crop and/or soil treatments applied to the crop at any time during its

growing season. Your answer should include, but not be limited to, a description of all herbicides, pesticides, fertilizers, soil leaching practices, etc., administered to the crop and/or to the soil, and a description of the phase of the crop's life at which such practices were administered. Further include in your answer, the purpose of such practice, the method of administration, the frequency thereof, and the approximate cost of each administration.

22. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

23. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 21.

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24. Your Petition alleges that West Valley members produce ninety six million dollar's (\$96,000,000) worth of agricultural products per year. Describe in precise detail the method by which you arrived at the \$96,000,000 figure and the year or growing season(s) to which such figure applies. Also state the alleged value of crops grown by each farmer member for each of the last ten years, or by his predecessor if the farmer member has not owned, leased or operated his land for the last ten years.

Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

26. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 24.

27. Your Petition (paragraph 1, pg. 2) alleges that all West Valley members are located "within the area likely to be affected" by salt deposition. Give the legal description, the owner of each parcel thereof, and the total acreage included, in your definition or calculation of the area which you claim will be affected.

28. Contention I.A.(i) of the Petition alleges that a "recent study" has shown that the "sampling method" utilized by the vendor in determining the drift ratio of the recirculating water in the cooling towers "can easily be in

error by greater than 100 percent." Identify the recent study to which you are referring, the author thereof, the date of its preparation and the precise conclusions set forth therein which you claim support the above allegation.

29. Define the <u>sampling method</u> which you claim was utilized by the vendor and which you allege can result in the error of greater than 100 percent.

30. Identify each and every fact, premise, theory or conclusion upon which you rely to support the allegation that the vendor's sampling method can result in a drift ratio which can be in error by greater than 100 percent.

31. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

32. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 30.

33. Describe in detail the sampling method which you allege should have been used in order to reduce or eliminate the potential error which you allege in contention I.A.(i).

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34. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

35. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 33.

36. Contention I.A.(ii) alleges that the sampling methods utilized in determining the drift ratio failed to recognize wind effects within the fill and drift elimination system. Describe precisely the wind effects which you claim were not recognized and further describe the precise manner in which you claim such wind effects will impact upon the drift ratio.

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37. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

38. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 36.

39. Contention 1.A.(iv) alleges that the ER, EIS and sampling methods utilized in determining the drift ratio failed to measure "water distribution canal drift losses."

Describe in detail the drift losses which you claim will arise from the water distribution canal and the precise manner in which such losses will contribute or otherwise affect the drift ratio.

40. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

41. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 39.

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42. Contention I.B. (iii) alleges that studies at the Chalk Point, Maryland power plant showed a "sizeable increase" in salt deposition occurring after the plant had been in operation for six years. Identify each and every fact, premise, theory or conclusion and describe all data and information, which you allege supports that allegation. Your answer should include, but not be limited to, a description of the makeup water quality, tower operation, meteorology (including temperature and icing conditions), deposition pattern and all other pertinent data which you claim contributed to or otherwise affected the increase in the salt deposition which you allege occurred after six years of operation.

Identify each person having knowledge, or 43. claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

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44. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 42.

45. Contention I.B.(iv) describes certain cooling tower deteriation problems which you claim will affect salt emissions. Identify each and every "problem" which you claim will affect such changes and describe the precise manner in which such problems will contribute to or otherwise affect the salt emissions.

Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

47. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 45.

48. Contention I.C. alleges that the cooling tower drift model utilized at PVNGS underpredicts salt deposition to off-site properties by a factor of ten or more. State each and every fact, theory, premises or conclusion upon which you rely to support that allegation.

49. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such

person, state the specific facts concerning which they have knowledge or claim to have knowledge.

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50. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 48.

51. Contention I.C.(iii) alleges that the predictions for the PVNGS do not exhibit the "usual salt deposition patterns". Describe what you claim are "usual" salt deposition patterns and further describe the precise manner in which you claim the PVNGS predictions deviate from such patterns.

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Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

53. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 51.

54. Describe all data, reports, statistics, or other information upon which you rely to support your definition of the "usual pattern" referred to in contention I.C., including all meteorological data, predictive documentation, tower operating characteristics and field verification which supports your contention.

55. Contention I.C.(ii) alleges that the PVNGS model cannot be applied to the Palo Verde region and be expected to provide accurate results without some "verifying experience". Describe precisely what you mean by the term "verifying experience" and further describe the manner in which you claim such verification would contribute to the accuracy of the model.

56. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

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accurate.

57. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 55.

58. Contention I.C.(iv)(a) alleges that the PVNGS model assumes that drift droplets are released "too high". State each and every fact, theory, premise or conclusion upon which you base that allegation, and further describe the elevation at which you claim such release would be more

Identify each person having knowledge, or 59. claiming to have knowledge, of the facts set forth in your person, state the specific facts concerning which they have

answer to the preceding interrogatory. As to each such knowledge or claim to have knowledge.

Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 58.

61. Contention I.C.(iv)(b) alleges that the PVNGS model fails to consider "turbulent diffusion" of the drift droplets. State each and every fact, theory, premise or conclusion upon which you base that allegation; include in your answer a precise description of the turbulent diffusion which you claim should have been included in the model, and the manner in which such diffusion affects the drift deposition which is the subject of this contention.

62. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your SNELL & WILMER
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PHOENIX ARIZONA 85073

answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

63. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 61.

64. Contention I.C.(iv)(d) alleges that the PVNGS model fails to consider the "effect of plume trapping by elevated temperature inversions". Describe precisely and in detail the effect which the alleged plume trapping has on the dispersion and deposition of the drift which is the subject of this contention. Include in your answer the source, frequency, and other relevant characteristics of the elevated temperature inversions which you allege cause or contribute to plume trapping.

65. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

Identify each and every document which refers 66. or relates in any way to the facts set forth in your answer to Interrogatory No. 64.

67. Contention I.C.(v) alleges that salt drift predictions for the PVNGS are low compared to "another study" of a "similar tower". Describe the study to which you are referring and state the precise factual conclusions contained therein which you claim support your allegation that the PVNGS predictions are low, including comparisons of drift deposition as a function of distance from the respective towers.

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68. As a continuation of the preceding interrogatory, describe the "similar tower" referred to and include each and every similarity which you claim contributes to or facilitates a valid comparison of the drift deposition predictions for such tower to the drift deposition predictions for PVNGS.

69. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

70. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 68.

71. Contention I.C.(ii) uses the term "vastly different" in reference to the climatic conditions at Palo Verde. Describe the specific climatic or meteorlogical factors which you allege are significant to the ability of a drift model to accurately predict salt drift deposition. Include in your answer the magnitude or scope of the differences in these significant climatic parameters that you claim would make a model with verifying experience in one region unacceptable in terms of its predictive accuracy in another climatic region.

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72. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

73. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 71.

74. Contention I.C.(vi) alleges that a "properly conducted salt drift analysis" would show the PVNGS model to be unreliable by a factor of from ten to seventy. Describe in detail each and every step, facet, assumption and component of the properly conducted salt drift analysis which you claim would show the PVNGS model to be unreliable.

75. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

76. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 74.

77. Contention I.D.(i) alleges that "at times" the cooling tower salinity of the Palo Verde cooling towers will be "higher than assumed in the model." With reference to that allegation, state:

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1	(a) The "times" at which, or during which,
2	you allege the cooling water salinity of the tower will be
3	higher.
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9	(b) Each and every fact upon which you base
10	your determination or calculation of such "times".
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16	(c) The salinity levels which you claim will
17	occur, and the magnitude by which they will exceed those
18	levels assumed in the model. State each and every fact upon
19	which you base this allegation.
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25	(d) Describe what you claim to be the causes

of the higher salinity concentrations referred to in sub-

part (c) above, and the duration of the higher levels that you allege will be experienced.

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78. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

79. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 77.

80. Contention I.D.(ii) alleges that records from
the Buckeye Irrigation Company show that some water samples
taken from the Phoenix sewage effluent which will be uti-
lized at the PVNGS contain twice the salt content listed in
the ER and the EIS. Describe each and every "record" which
you are relying on to support that allegation and further
state:
(a) The date upon which each and every
sample referenced in such records was collected.
(b) The person or persons responsible for
the collection of the sample.
. (c) The collection methods utilized to
obtain the samples.

(d) The tests, calculations, or other methods used to determine the salt content of such samples.

(e) The precise location at which such samples were drawn from the Phoenix Sewage effluent.

81. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

82. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 80.

83. Contention I.D.(iii) alleges that the cooling water source is likely to change over the life of the plant.

State each and every fact, theory, premise or conclusion upon which you rely to support that allegation.

84. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

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85. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 83.

86. Contention I.D.(iii) alleges that the change to which that contention refers will lead to "much higher initial salt concentrations" than shown in the model. Identify each and every fact, theory, premise or conclusion upon which you rely to support that allegation including specifically the magnitude of the concentration which you allege will result.

87. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 86.

89. Identify each and every fact, calculation, study, test, or other pertinent data upon which you rely to support the allegation in contention I.E.(i) that blow off from the evaporation ponds will average 23,000 pounds of salt per day.

90. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such

person, state the specific facts concerning which they have knowledge or claim to have knowledge.

91. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 89.

92. Identify each and every fact, study, test, calculation, or other pertinent data upon which you rely to support the allegation in contention F that the salt deposition from spray ponds may exceed the deposition from the cooling towers.

93. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

94. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 92.

95. Contention I.F.(ii) alleges that the ER unrealistically expects refueling intervals for each tower to be one month per year when experience at most other similar stations has shown that a larger value would be more realis-

tic. Identify each and every station to which that allegation refers, the dates of refueling outages at each such station and the "larger value" which you allege would be more realistic for refueling intervals.

96. Identify each person having knowledge, or

97. Identify each and every document which refers

claiming to have knowledge, of the facts set forth in your

answer to the preceding interrogatory. As to each such

knowledge or claim to have knowledge.

to Interrogatory No. 95.

person, state the specific facts concerning which they have

or relates in any way to the facts set forth in your answer

98. Identify each and every fact upon which you rely for your selection of the "larger value" referred to in contention I.F. (ii).

99. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

100. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 98.

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101. Identify each and every fact theory, premise or conclusion upon which you rely to support the allegation in contention I.F. (iii) that the drift distributions from the spray ponds are unreliable and that the vendor's drift source term and drift transport model can be expected to be seriously in error by as much as a factor of ten. Include in your answer each and every study, test, calculation, report, or other source of pertinent data which supports such allegation.

102. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

103. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 101.

104. Define the term "drift ratio" as used in contention I.G.(i).

105. Describe each and every item or component of cooling tower deterioration to which you refer in contention I.G.(ii) and which you claim will affect the drift ratio utilized by the Applicant. Include specifically the date upon which you claim each such component or item of deterioration can be expected to begin, the magnitude of such deterioration, the precise aspect of the tower which you claim will suffer such deterioration, and the precise manner in which such deterioration will contribute to or otherwise affect the drift ratio.

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106. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

107. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 105.

108. Identify each and every fact, theory, premise or conclusion upon which you rely to support the allegation in contention I.G.(i) that drift ratio measurements may be in error by a factor of more than 100 percent.

	109. Ident	ify each	person hav	ving knowl	edge, or
claiming t	to have kno	owledge, o	f the fact	s set for	th in your
answer to	the prece	ding inter	rogatory.	As to e	ach such
person, st	tate the sp	ecific fac	cts concer	ning which	they have
knowledge	or claim t	o have kno	wledge.		

110. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 108.

111. Identify each and every fact, theory, premise or conclusion upon which you rely to support the allegation

in contention I.G.(iii) that the cooling tower drift model may be in error by a factor of ten to seventy or more.

112. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

113. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 111.

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114. Contention II.A. alleges that in other situations where cooling tower emissions might have had the potential to adversely affect surrounding croplands, other applicants have conducted "careful assessments" of the impact of the cooling towers on such crops. Identify each and every report, test, measurement, calculation, prediction, or other pertinent data which you allege is a component of such a "careful assessment".

115. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

116. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 114.

117. Contention II.A. alleges that there is a "far greater risk" of crop damage in the instant situation. Identify each and every fact, theory, premise or conclusion upon which you rely to support that allegation.

118. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

119. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 117. 120. Identify the data used to establish the his-tory of rain events in the PVNGS region to which you refer in contention III.A. (i). 121. Define the term "PVNGS region" as used in contention III.A.(i).

every fact, theory, premise or conclusion upon which you rely to support that allegation.

123. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

124. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 122.

125. Your contention III.A.(ii) claims that the climatic conditions at the PVNGS will "wet the leaves of crops in a manner" that will dissolve much of the salt deposited on the leaves. Describe precisely the manner in which you claim the climatic conditions will effect such dissolution, and further identify each and every fact, theory, premise or conclusion upon which you rely to support that allegation.

126. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

127. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 125.

128. Contention III.A.(ii) uses the phrase "much of the salt". Describe precisely what is meant by that phrase and further describe the precise manner in which you arrived at the level or figure which you claim will be dissolved.

129. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

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130. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 128.

131. Identify each and every fact, theory, premise or conclusion upon which you rely to support the allegation in contention III.A.(ii) that climatic conditions will cause movement and concentration of salt along the leaf margins. Further, identify the characteristics and causes of such movements and concentrations.

132. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

133. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 131.

134. Define the terms general "chlorosis" and "necrosis" as used in your contention III.A. (ii).

135. Identify each and every fact, theory, premise or conclusion upon which you rely to support the allegation in contention III.A.(i) that movement and concentrations of salts along the leaf margins will cause chlorosis and necrosis. Include in your answer the precise manner in

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which you claim such movements and concentrations will result in chlorosis and necrosis.

136. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

137. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 135.

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138. Describe the significance of "leaf margins" in connection with your assessment of potential salt damage to crops. 139. In addition to the leaf margins which you claim will be damaged by the potential salt drift deposition, are there any other portions of the plants (i.e., leafs, stems, roots, etc.) that you allege are subject to plant degeneracy or disease as the result of salt deposition. ____ If your answer to this interrogatory is in the affirmative, please state: (a) Each and every part or portion of such plants which you claim are subject to deterioration or disease. (b) The precise disease or other deterioration which you claim may or can be caused by salt deposi-

140. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

141. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 139.

142. Contention III.A.(iii) alleges that studies at Chalk Point, Maryland showed much higher injury to crops during a drought year than had been observed during previous years. Identify the precise study, and each factual conclusion contained therein, upon which you rely to support the allegation of this contention.

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143. Contention III.A.(iv) alleges that the salt accumulation on leaves resulting from the operation of the PVNGS would cause plants to exhibit symptoms of general drought stress. Identify each and every fact, theory, premise or conclusion upon which you rely to support that allegation. Include specifically the level of accumulation which you believe is necessary to cause plants to exhibit symptoms of general drought stress; further describe precisely what is meant by the term "general drought stress", and the manner in which such stress affects or impacts upon the plant.

144. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your

answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

145. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 143.

146. Describe the specific difference, if any, between "general drought stress" and the condition which you claim will result from salt deposition.

147. Can injury caused by "general drought stress" be distinguished from injury caused by salt deposition?

_____. If your answer to this interrogatory is in the affirmative, describe the specific differences in the injuries
or conditions, and further describe each and every test,
calculation, or measurement which is used to determine the
source of a particular plant's injury or disease.

148. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

149. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 147.

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150. Contention III.B.(i) states that "recent studies" have established that aeresol deposition of salts from cooling towers can harm agricultural crops. Identify each and every "recent study" to which that contention refers, including the authors, dates of preparation, and each and every fact recited therein which you claim supports the allegation of contention III.B. (i).

151. Contention III.B.(i)(b) states that certain studies have established that aerosol salt deposition can harm a "variety of crops" at "comparatively low levels," and that "high enough deposition levels" can harm virtually all crops. With reference to that allegation, state:

(a) The crops included in your definition of the "variety of crops" which you claim can be damaged by comparatively low levels of salt deposition. For each and every crop listed, identify the facts, theories, premises, or contentions upon which you rely to support the allegation that such crop can be so damaged, including each and every study, report measurement, or test upon which you rely.

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			(b)	Def	ine	the	phrase	"compa	ratively	10	wc
levels"	in	the	cont	ext	of	each	specific	crop	alleged	to	be
harmed.											

(c) Define the phrase "high enough deposition levels" which you allege can harm "virtually all crops."

152. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

153. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 151.

154. Contention III.B.(i)(c) state that certain studies have established that a generating station much smaller and utilizing less saline water than PVNGS caused extensive salt damage to native plants growing in similar climactic and soil conditions. With reference to that allegation, state:

(a) The name and location of the generating station to which the above allegation refers, including the factual basis upon which you allege that such station was "much smaller" than PVNGS.

(b) Each and every fact, theory, pr	emise or
conclusion upon which you rely to support the alle	gation
that such station utilized less saline water than	PVNGS,
including the precise amount (in terms of both water	r volume
and salinity concentrations) of saline water that y	ou claim
was utilized.	

(c) The precise nature and extent of the "extensive salt damage" referred to in contention III.B.(i)(c).

(d) The native plants which you allege were damaged.

(e) Each and every fact upon which you rely to support the allegation that the plants damaged by the allegedly smaller station referred to in contention III.B.(i)(c) were grown in similar climatic and soil conditions. Your answer should include, but not be limited to, a description of the meteorological data upon which you rely to support the claim that the climatic conditions were similar, and a description of the soil types which you claim were similar.

155. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

156. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 154. 157. Contention III(B)(ii) alleges that salt injury to cotton could cause a reduction in the number of bolls per plant and thus a reduction in crop yields. Iden-tify each and every fact, theory, premise or conclusion upon which you rely to support that allegation, including spe-cifically in your answer, the following: (a) The nature and level of salt injury which you claim would be necessary to effect a reduction in the number of bolls per plant.

(b) The precise reduction in the "number of bolls" per plant that you claim would be caused by such injury.

(c) The precise reduction, by percentage or by yield per acre, which you claim would be caused by such salt injury.

158. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

159. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 157.

160. Contention III(B)(ii) further alleges that salt injury would result in a reduction in leaf area caused by necrosis induced salt injury, reducing the photosynthetic capacity of the plant and reducting the plant's ability to assimilate cellulose fibers. Identify each and every fact, theory premise or conclusion upon which you rely to support that allegation, including specifically, any tests, studies, or calculations upon which you rely to support said allegation.

161. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

162. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 160.

163. Contention III(C) alleges that salt deposition from the PVNGS will occur at levels sufficient to cause harm to surrounding agricultural crops. State precisely the level of salt deposition which you allege is "sufficient to cause harm", and the precise nature of the harm which you allege will be caused. Identify each and every fact, theory, premise or conclusion upon which you rely to support this allegation.

164. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such

person, state the specific facts concerning which they have knowledge or claim to have knowledge.

or relates in any way to the facts set forth in your answer to Interrogatory No. 163.

166. Identify the studies to which you refer in contention III.C.(i). Include in your answer the identification of the "certain plants" which were the apparent subject of such study; further identify the specific meteorological data upon which you rely to support the allegation that a heavy rainfall washed all salt from the crops on the average of once a week.

167. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

168. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 166.

169. Contention III.C.(ii) alleges that in the area surrounding the PVNGS, deposition levels of 2-4 lbs. per acre per week will occur near the plant. Define precisely the area which you include in your definition of "near the plant." Identify each and every fact, theory,

premise or conclusion upon which you rely to support the allegation that levels of 2-4 lbs. per acre per week will occur in such area.

170. Identify each person having knowledge, or claiming to have knowledge, of the facts set forth in your answer to the preceding interrogatory. As to each such person, state the specific facts concerning which they have knowledge or claim to have knowledge.

171. Identify each and every document which refers or relates in any way to the facts set forth in your answer to Interrogatory No. 169.

172. Contention III(C)(iii) uses the phrase "in areas further from the plant." Define precisely the area included in your definition of such areas, and further define the level of deposition to which you believe such area will be potentially subject.

attached to your Petition as Exhibit "A", states on page 1, that "[t]here are several indications that the model used for the Palo Verde study underpredicts salt deposition."

Define each and every "indication" referred to in that statement which leads you to the conclusion that the Palo Verde model under predicts salt deposition. For each "indication" listed, state the following:

(a) Each and every fact, theory, premise or conclusion upon which you rely to support the alleged indication.

(b) The source of such indication.

(c) Each and every study, test, or other such report which supports, verifies, or lends credence to the facts set forth in response to this interrogatory.

Davis reviewed pertinent sections of NRC, APS and related documents [references 1-4 of the report] in order to evaluate the modeling of the drift deposition. For each separate document reviewed in connection with such evaluation, state the specific "pertinent sections" of the document which were reviewed and relied upon by Dr. Davis in reaching his conclusions.

175. Dr. Davis' report at page 6, further indicates that "several persons connected with the project have
been contacted to discuss various details of the model."
With reference to that statement, identify the following:

(a) Each person contacted.

(b) The individual who contacted each person, if other than Dr. Davis.

(c) The manner in which and the place at which each person was contacted.

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(d) The substance of each and every conversation held with each individual listed in response to subpart (a) hereof.

(e) Whether or not any notes, memorandum or other written memorializations were made regarding the conversations referred to above. _____ If your answer to subpart (e) hereof is in the affirmative, identify the custodian of such reports, notes, or other memorializations.

176. Dr. Davis' report, at page 7, states that he was provided with certain information regarding modeling parameters from individuals connected with the Marley Company. Dr. Davis further states that "the values provided are considerably different than those used in the APS Environmental Report on Palo Verde." With regard to that allegation, state:

1	(a) A description of the values provided by
2	Marley.
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8	(b) The specific values in the APS Environ-
9	mental Report to which the Marley data was compared.
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15	(c) The precise extent of the difference
16	referred to in Dr. Davis' report, at page 7.
17	
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22	(d) The significance of the difference which
23	Dr. Davis alleges exists between the Marley and the AFS
24	data.
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177. Dr. Davis' report states at page 8, that drift from the spray ponds is emitted from a much lower height and could cause more off-site salt deposition than the towers, depending on the cooling water salinity. Identify each and every fact, theory, premise or conclusion upon which West Valley relies to support that statement, including specifically, but not limited to, the level of cooling water salinity, the height of release, and the drift droplet size distribution upon which the truth of the statement is dependent.

178. Dr. Davis' report at page 8, further states that in relation to potential dust blowoff from the evaporation ponds, "rough estimates based on information in references 7 and 8 indicate that this source could exceed the cooling tower as its salt source as the ponds grow in size." Appennix IIA of Dr. Davis' report purports to provide details of this estimate. With specific reference to Appendix IIA, state the following:

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(a) The identity of the individual who developed, or the source of, the mathematical equation set forth in Appendix IIA.

(b) The manner in which the "threshold value of 12 mph" for wind speed was determined, calculated or otherwise arrived at.

(c) The manner in which the "typical value of erodibility" 50 to 200 tons/acre-year was determined, calculated or otherwise determined.

1	(d) The manner in which you arrived at the
2	figure of 20% for the frequency of sufficiently high wind
3	speed.
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9	179. List each and every communication relating in
10	any way to the matters or allegations referred to in Conten-
11	tion I, between any West Valley member, agent, investigator,
12	or attorney and the Applicant or its agents or employees,
13	stating for each such communication:
14	(a) The date it occurred.
15	
16	
17	
18	
19	
20	(b) Whether it was verbal or written.
21	
22	
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(c) The name and last known address of the person initiating the communication. (d) The name and last known address of the person receiving the communication. (e) The substance of the conversation and the particular allegation(s) of Contention I to which it related.

(f) If written, the name and address of the present custodian of a copy of each such communication.

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(g) If verbal	1
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(1) Whether by personal conversation or by telephone.

(2) The names of any persons present during the communications.

(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

180. List each and every communication relating in
any way to the matters or allegations referred to in Con-
tention II, between any West Valley member, agent, investi-
gator, or attorney and the Applicant or its agents or em-
ployees, stating for each such communication:
(a) The date it occurred.
(b) Whether it was verbal or written.
(c) The name and last known address of the
person initiating the communication.
person initiating the communication.
(d) The name and last known address of the

person receiving the communication.

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by telephone.

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(e) The substance of the conversation and the particular allegation(s) of Contention II to which it related.

(f) If written, the name and address of the present custodian of a copy of each such communication.

(g) If verbal:

(1) Whether by personal conversation or

			(2)	The	names	of	any	persons	present
during	the	communic	ation	s.					

(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

any way to the matters or allegations referred to in Contention III, between any West Valley member, agent, investigator, or attorney and the Applicant or its agents or employees, stating for each such communication:

(a) The date it occurred.

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3	(b) Whether it was verbal or written.
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9	(c) The name and last known address of the
10	person initiating the communication.
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16	(d) The name and last known address of the
17	person receiving the communication.
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23	(e) The substance of the conversation and
24	the particular allegation(s) of Contention III to which it
25	related.

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6	(f) If written, the name and address of the
7	present custodian of a copy of each such communication.
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13	(g) If verbal:
14	(1) Whether by personal conversation or
15	by telephone.
16	
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19	
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21	(2) The names of any persons present
22	during the communications.
23	
24	
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(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

any way to the matters or allegations set forth in Contention I, between any West Valley members and/or between any West Valley members and/or between any only its attorney), stating for each such communication:

(a) The date it occurred.

(b) Whether it was verbal or written.

1	(c) The name and last known address of the
2	person initiating the communication.
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8	(d) The name and last known address of the
9	person receiving the communication.
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15	(e) The substance of the conversation and
16	the particular allegation(s) of Contention I to which it
17	related.
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23	(f) If written, the name and address of the
24	present custodian of a copy of each such communication.

SNELL & WILMER	3100 VALLEY BANK CENTER	PHOENIX ARIZONA 85073	

131	(g)	If	verbal:
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(1) Whether by personal conversation or by telephone.

(2) The names of any persons present during the communications.

(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

183. List each and every communication relating in any way to the matters or allegations set forth in Contention II, between any West Valley members and/or between any West Valley member and any agent of West Valley (excluding only its attorney), stating for each such communication: (a) The date it occurred. (b) Whether it was verbal or written. (c) The name and last known address of the person initiating the communication. (d) The name and last known address of the

person receiving the communication.

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(e) The substance of the conversation and the particular allegation(s) of Contention II to which it related.

(f) If written, the name and address of the present custodian of a copy of each such communication.

(g) If verbal:

(1) Whether by personal conversation or by telephone.

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		(2)	The	names	of	any	persons	present
during	the	communication	ıs.					

(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

184. List each and every communication relating in any way to the matters or allegations set forth in Contention III, between any West Valley members and/or between any West Valley member and any agent of West Valley (excluding only its attorney), stating for each such communication:

(a) The date it occurred.

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3	(b) Whether it was verbal or written.
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9	(c) The name and last known address of the
10	person initiating the communication.
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16	(d) The name and last known address of the
17	person receiving the communication.
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23	(e) The substance of the conversation and
24	the particular allegation(s) of Contention III to which it
25	related.

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5	(f) If written, the name and address of the
6	present custodian of a copy of each such communication.
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12	(g) If verbal:
13	(1) Whether by personal conversation or
14	by telephone.
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20	(2) The names of any persons present
21	during the communications.
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(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

any way to the matters or allegations referred to in Contention I, between any West Valley member or agent of West Valley, and any person not referred to in Interrogatories Nos. 179 or 182, stating for each such communication:

(a) The date it occurred.

(b) Whether it was verbal or written.

person receiving the communication. (e) The substance of the conversation the particular allegation(s) of Contention I to white related. In the particular allegation (s) of Contention I to white particular al	1	(c) The name and last known address of the
(d) The name and last known address person receiving the communication. (e) The substance of the conversation the particular allegation(s) of Contention I to whi related. (f) If written, the name and address	2	person initiating the communication.
(d) The name and last known address person receiving the communication. (e) The substance of the conversation the particular allegation(s) of Contention I to whi related. (f) If written, the name and address	3	
(d) The name and last known address person receiving the communication. (e) The substance of the conversation the particular allegation(s) of Contention I to whi related. (f) If written, the name and address	4	
(d) The name and last known address person receiving the communication. (e) The substance of the conversation the particular allegation(s) of Contention I to whi related. (f) If written, the name and address	5	
gerson receiving the communication. (d) The name and last known address person receiving the communication. (e) The substance of the conversation the particular allegation(s) of Contention I to white related. (f) If written, the name and address	6	
person receiving the communication. (e) The substance of the conversation the particular allegation(s) of Contention I to white related. If related. (f) If written, the name and address	7	
10 11 12 13 14 15 (e) The substance of the conversation 16 the particular allegation(s) of Contention I to whith 17 related. 18 19 20 21 22 23 (f) If written, the name and address	8	(d) The name and last known address of the
11 12 13 14 15 (e) The substance of the conversation 16 the particular allegation(s) of Contention I to white related. 18 19 20 21 22 23 (f) If written, the name and address	9	person receiving the communication.
12 13 14 15 (e) The substance of the conversation 16 the particular allegation(s) of Contention I to whith 17 related. 18 19 20 21 22 23 (f) If written, the name and address	10	
13 14 15 (e) The substance of the conversation 16 the particular allegation(s) of Contention I to white related. 18 19 20 21 22 23 (f) If written, the name and address	11	
(e) The substance of the conversation the particular allegation(s) of Contention I to white related. related. (f) If written, the name and address	12	
(e) The substance of the conversation the particular allegation(s) of Contention I to whi related. If it is a substance of the conversation I to whi related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. If it is a substance of the conversation I to whi I related. I substance of the conversation I to whi I substance of the conversation I su	13	
the particular allegation(s) of Contention I to whi related. 18 19 20 21 22 23 (f) If written, the name and address	14	
17 related. 18 19 20 21 22 23 (f) If written, the name and address	15	(e) The substance of the conversation and
18 19 20 21 22 23 (f) If written, the name and address	16	the particular allegation(s) of Contention I to which it
19 20 21 22 23 (f) If written, the name and address	17	related.
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21 22 23 (f) If written, the name and address	19	
22 23 (f) If written, the name and address	20	
23 (f) If written, the name and address	21	
	22	
24 present custodian of a copy of each such communication	23	(f) If written, the name and address of the
	24	present custodian of a copy of each such communication.

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(1) Whether by personal conversation or by telephone.

(2) The names of any persons present during the communications.

(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

186. List each and every communication relating in any way to the matters or allegations referred to in Contention II, between any West Valley member or agent of West Valley, and any person not referred to in Interrogatories Nos. 180 or 183, stating for each such communication: (a) The date it occurred. (b) Whether it was verbal or written. (c) The name and last known address of the person initiating the communication. (d) The name and last known address of the

person receiving the communication.

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the	particular	alle	egati	on(s)	of	Conte	ention	ı II	to	which	it
rela	ited.										

(f) If written, the name and address of the present custodian of a copy of each such communication.

(g) If verbal:

(1) Whether by personal conversation or

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		(2)	The	names	of	any	persons	present
during	the	communicat	ion	s.					

(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

any way to the matters or allegations referred to in Contention III, between any West Valley member or agent of West Valley, and any person not referred to in Interrogatories Nos. 181 or 184, stating for each such communication:

(a) The date it occurred.

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related.

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3	(b) Whether it was verbal or written.
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9	(c) The name and last known address of the
10	person initiating the communication.
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16	(d) The name and last known address of the
17	person receiving the communication.
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23	(e) The substance of the conversation and
24	the particular allegation(s) of Contention III to which it

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5	(f) If written, the name and address of the
6	present custodian of a copy of each such communication.
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12	(g) If verbal:
13	(1) Whether by personal conversation or
14	by telephone.
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20	(2) The names of any persons present
21	during the communications.
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(3) Whether any notice or memos were made of the communication and, if so, by whom and the name and address of the present custodian of each such record.

188. List the names, addresses, official titles (if any), and other identification of all witnesses, including expert witnesses, who, it is contemplated, will be called upon to testify in support of your contentions in this action, indicating the nature and substance of the testimony which is expected to be given and the relationship of each such witness, if any, to West Valley.

189. Do you or your attorneys, have in your possession, or know the existence of, any written or recorded statements from any of the persons identified in your answer to Interrogatory No. 188, or from any other person or entity who has any knowledge or the facts and events related to the issues in this proceeding?

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6	190. If your answer to the preceding interrogatory
7	is in the affirmative, please state the following:
8	(a) The name of the person who made the
9	statement or recording;
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15	(b) The date the statement or recording was
16	made;
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22	(c) The name of the person who obtained the
23	statement or recording;
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(d) The name of the person or persons having custody or possession of the original and all copies of the statement or recording.

191. Describe and identify by title, author, date of preparation, recipient and subject matter, each and every document and or exhibit which you intend to use or which you may use as evidence at the hearing in this proceeding. Include in your answer, the name of the person, firm or corporation presently in possession of the original and of any copy of each such document.

192. Have you employed, or do you intend to employ or use, any technician or expert witness for the purposes of

1	supporting your allegations and contentions in this pro-
2	ceeding and/or for the purposes of testifying on behalf of
3	West Valley at the hearing in this proceeding?
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9	193. If the answer to the preceding interrogatory
10	is in the affirmative, please state, for each such techni-
11	cian or expert, the following:
12	(a) His name or other means of identifica-
13	tion, last known address and telephone number;
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19	(b) His profession, job title or occupation
20	and the field in which he is an expert;
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1	(c) Whether you intend to call him as a wit-
2	ness during the hearing in this proceeding;
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8	(d) A summary of his formal education in his
9	field;
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15	(e) The name and address of each school
16	where he received any special education or training in his
17	fieli and a description of the training;
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23	(f) The name or description of each degree
24	he has received, including the date each was received, and
25	the name of the school from which he received each degree.

employed;

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5	194. Do any of the persons listed in your answer
6	to Interrogatory No. 193 have any special expertise as a
7	result of any experience or employment?
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13	195. If your answer to the preceding interrogator
14	is in the affirmative, please state the following as to each
15	such person:
16	(a) The training, employment or experience
17	he has received;
18	
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23	(b) The name and address of the school or
24	place where he received his training experience or was

		(c)	The	date	he	received	his	training
experience	or	when	emplo	yed;				

(d) The name of each professional and or trade association of which he is a member.

196. Have any of the persons listed in your answer to Interrogatory No. 193 written or co-authored any books, papers, treatises or articles on the subjects in their field of expertise?

197. If your answer to the preceding interrogatory is in the affirmative, for each person and each such book, paper, treatise or article, please state:

(a) The title and subject matter;

(b) The name and address of the publisher;

(c) The date of publication;

198. For each person listed in your answer to Interrogatory No. 193, please state whether each such person has practiced, worked or been involved in his particular field of expertise during the past ten years.

199. For each person identified in response to the (a) Whether he was self-employed, employed by someone else, or associated with any other persons in any (b) Each address where he has practiced or (c) The dates he was with such employer;

(d) The type of duties he performed with each employer.

200. As to each person listed in your answer to the preceding interrogatory who has not practiced or worked in his field of expertise during the past ten years, list and identify each person's employment or vocation during that period of time.

201. What experience, other than that stated above has each person listed in your answer to Interrogatory No. 193 have to qualify him as an expert or technician in his field or which may give rise to his capacity as a witness at the hearing in this proceeding?

202. Has any expert or technician conducted any tests examinations, or inspections in connection with this . It your answer to this interrogaproceeding? tory is in the affirmative, please identify each such person.

203. If your answer to the preceding interrogatory is in the affirmative, did such expert or technician make a record or report of his findings?

- 204. If your answer to the preceding interrogatory is in the affirmative, please state:
 - (a) The date each such report was submitted;

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		(b) T	he name	9 (or o	other	iden	tific	ation	,
address	and	telephone	number	of	the	person	to	whom	each	such
report v	was s	submitted;								

(c) The name, last known address and telephone number of each person who has present custody of each such report;

(d) The subject matter and finding of each such report.

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		205	Is	any exp	ert	or	technici	an	to	be o	compensat	ed
for	his	work	and	efforts	in	co	nnection	wit	th	this	action?	

206. If your answer to the preceding interrogatory is in the affirmative, state as to each such expert or technician the amount he is to be paid and on what basis his compensation is to be determined.

207. For each expert you may call to testify at the hearing on this proceeding, specify and state with particularity by expert, the subject matter on which he is expected to testify.

208. State, by expert, the substance of the facts and opinions to which each such expert is expected to testify.

209. Set forth, by expert, a summary of the grounds for each opinion which may be given by each such expert at the hearing on this proceeding.

210. List specifically and in detail each and every exhibit you propose to utilize at the hearing in this proceeding or which you may utilize at the hearing on this proceeding.

211. With reference to the exhibits listed in answer to the preceding interrogatory, state the source of the exhibit, the nature of the exhibit, (i.e., whether said exhibit is documentary, a picture or other); who prepared each exhibit; and the date upon which each exhibit was prepared.

DATED this 15 day of March, 1983.

SNELL & WILMER

C. Sehr Arthur

Warren E.

Platt Bischoff Charles A Bischoft Vaughn A Crawford 3100 Valley Center

Phoenix, Arizona 85073

Attorneys for Joint Applicants

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Arthur C. Gehr Warren E. Platt Charles A. Bischoff Vaughn A. Crawford SNELL & WILMER 3100 Valley Center Phoenix, Arizona 85073 (602) 257-7211

Attorneys for JOINT APPLICANTS

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of) ARIZONA PUBLIC SERVICE) COMPANY, et al.,	Docket Nos.	STN 50-528 STN 50-529 STN 50-530
(Palo Verde Nuclear Generating) Station, Units 1, 2 and 3)		

CERTIFICATE OF SERVICE

I hereby certify that copies of Joint Applicants' First Set of Non-Uniform Interrogatories to West Valley Agricultural Protection Council, Inc. have been served upon the following listed persons by deposit in the United States mail, properly addressed and with postage prepaid, this /S day of March, 1983.

SNELL & WILME

Gehr Warren E. Platt

Chafles A. Bischoff Vanghn A. Crawford

Attorneys for Joint Applicants

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	[[양양] [[w]]
1	Docketing and Service Section
2	U.S. Nuclear Regulatory Commission Washington D.C. 20555
3	Chairman, Maricopa County Board of Supervisors 111 S. 3rd Avenue
4	Phoenix, Arizona 85004
5	Atomic Safety and Licensing Appeal Board Panel U.S. Nuclear Regulatory Commission
6	Washington, D.C. 20555
7	Atomic Safety and Licensing Board Panel U.S. Nuclear Regulatory Commission Washington, D.C. 20555
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10	Chairman, Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555
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16	
17	Lee Scott Dewey, Esq. Office of the Executive Legal Director U.S. Nuclear Regulatory Commission
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