

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA**

**APPLICATION FOR CERTIFICATION FOR
THE BEACON SOLAR ENERGY PROJECT**

DOCKET NO. 08-AFC-2

DOCKET

08-AFC-2

DATE MAR 11 2010

RECD. MAR 11 2010

BEACON SOLAR, LLC'S PREHEARING CONFERENCE STATEMENT

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Dated: March 11, 2010

Pursuant to the Revised Notice of Prehearing Conference and Evidentiary Hearing dated February 26, 2010 (the "Notice") and Title 20 of the California Code of Regulations § 1718.5, Beacon Solar, LLP ("Beacon") hereby files its Prehearing Conference Statement for the Beacon Solar Energy Project (BSEP). This Prehearing Conference Statement responds to the nine items requested in the Notice, in order.

I. TOPIC AREAS READY TO PROCEED TO EVIDENTIARY HEARING

Beacon believes all topics are complete and ready to proceed to evidentiary hearings. As stated in Beacon's Motion for Prehearing Order Regarding Project Alternatives, Beacon does not believe alternatives to recycled water cooling need to be discussed during the hearing including switching technologies to a photovoltaic project or using an air cooled condenser for power plant cooling. (*See* Beacon Solar, LLC's Motion for Prehearing Order Regarding Project Alternatives, filed in this proceeding on March 11, 2010.) As reflected in the Stipulation Regarding Cooling Water and Alternatives and revised Condition of Certification SOIL & WATER-1, Beacon has agreed to use recycled water for power plant cooling. Therefore, even though Beacon does not agree with the conclusions reached by California Energy Commission Staff ("Staff") in this area, Beacon and Staff have agreed to disagree on this issue and Beacon does not intend to address the issue further in this proceeding.

II. TOPIC AREAS NOT READY TO PROCEED TO EVIDENTIARY HEARING

As stated above, Beacon believes that all topic areas are complete and ready to proceed to evidentiary hearings.

III. TOPIC AREAS IN DISPUTE AND REQUIRING ADJUDICATION

Beacon has been able to resolve a great number of resource area issues with Staff prior to the Prehearing Conference. The only outstanding areas of disagreement with Staff relate to specific requirements contained in Conditions of Certification for Biological Resources, Water Resources (one Condition of Certification) and Cultural Resources, and Staff's finding of a significant adverse visual impact in the area of Visual Resources. Beacon only received CURE's rebuttal testimony less than two days ago and is still reviewing that testimony, but based on its review of CURE's exhibits to date, Beacon anticipates disputes relating to Biological Resources, to spills of heat transfer fluid (Waste Management or Hazardous Materials), to concerns about Los Angeles Department of Water and Power's (LADWP) System Impact Study, and to CURE's

request that Beacon use recycled water for construction. The nature of the disputes in these areas is set forth in the direct testimony and cross-examination scope provided below. As detailed in Beacon’s Motion for Prehearing Order Regarding Cooling Water Alternatives, Beacon does not believe the hearings should address photovoltaic technology and dry cooling as alternatives to recycled water for power plant cooling.

IV. BEACON’S WITNESS LIST

Set forth below is a list of hearing topics, associated witnesses, summaries of the topics of the witnesses’ testimony, and estimated time for their direct testimony. This summary is based upon current information and therefore, relates only to the disputed subject areas.¹ A complete list of witnesses Beacon may have occasion to sponsor is set forth in the Exhibit Lists in Attachments A and B. All witnesses have professional expertise in the discipline of their testimony. The witnesses’ qualifications were included in Beacon’s Direct Exhibits, filed on October 28, 2009. Each witness listed below is expected to testify in person, and will testify as to the project's compliance with applicable laws, ordinances, regulations and standards (LORS), the environmental impacts of BSEP, and the proposed conditions intended to mitigate potential impacts.

| DIRECT TESTIMONY WITNESS LIST | | | |
|--------------------------------------|---|---|--------------------|
| <u>Topic</u> | <u>Witness</u> | <u>Summary of Testimony</u> | <u>Time</u> |
| Biological Resources | - Jennifer Guigliano - Alice Karl - Philip Leitner - Kenneth Stein | The Beacon Project complies with applicable Biological Resources LORS and will not create a significant adverse environmental impact. Certain of the mitigation measures and Conditions of Certification proposed by Staff need to be revised. The studies conducted by the applicant are reliable and complied with applicable protocol. | 45 minutes. |

¹ As noted above, this list is dependant on the Committee’s ruling on Beacon’s Motion for Prehearing Order Regarding Cooling Water Alternatives.

| DIRECT TESTIMONY WITNESS LIST | | | |
|--------------------------------------|--|--|--------------------|
| <u>Topic</u> | <u>Witness</u> | <u>Summary of Testimony</u> | <u>Time</u> |
| Cultural Resources | - Rebecca Apple - Kenneth Stein | The Beacon Project complies with applicable Cultural Resources LORS and will not create a significant adverse environmental impact. Certain of the mitigation measures and Conditions of Certification can be revised and retain the protection for the resources. | 20 minutes. |
| Transmission System Engineering | - Duane McCloud - Jared Foster | LADWP's system impacts study is reliable and there are no reasonable concerns regarding transmission system constraints. | 10 minutes. |
| Visual Resources | - Merlyn Paulson | BSEP will not create a significant adverse environmental impact from any of the KOPs, including KOP-2 and KOP-6. | 20 minutes. |
| Heat Transfer Fluid/Waste Management | - Duane McCloud - Michael Flack | BSEP complies with applicable Waste Management LORS and does not present a significant risk relating to heat transfer fluid leaks or spills. | 15 minutes. |
| Water Resources | - Michael Flack - Duane McCloud - Scott Busa | The monitoring requirements contained in SOIL & WATER-1 should be revised. Using recycled water for construction is not needed. | 15 minutes. |
| Overriding Consideration | - Kenneth Stein | There are numerous overriding consideration for BSEP. | 15 minutes. |

V. CROSS-EXAMINATION

Beacon would like to reserve the right to cross-examine all witnesses presented by Staff or CURE, though it anticipates such testimony to be limited to the disputed topics set forth in Section III, above. Accordingly, pursuant to the Notice, below is a summary of the topics for which Beacon desires to have cross-examination, the anticipated scope of the cross examination, and the estimated time needed for cross examination.

| <u>Topic</u> | <u>Scope</u> | <u>Time</u> |
|----------------------------------|--|------------------------------|
| Biological Resources | The testimony of Mr. Cashen and Mr. Bias should not change the conclusions reached by Beacon and Staff's witnesses that the project has been adequately assessed and mitigated.. | 20 minutes per CURE witness. |
| Cultural Resources | Certain of the mitigation measures and Conditions of Certification proposed by Staff are unnecessary to mitigate impacts to cultural resources or comply with cultural resources LORS. | 15 minutes. |
| Transmission Systems Engineering | The conclusions regarding the capacity of the transmission lines are inaccurate and not supported by the evidence. | 15 minutes. |
| Visual Resources | BSEP will not have a significant visual impact given the environmental setting of the project. Contrary expert opinion is not supported by the evidence. | 10 minutes. |
| Waste Management | The BSEP does not present a significant risk relating to heat transfer fluid leaks or spills. | 15 minutes. |
| Water Resources | The monitoring requirements contained in SOIL & WATER-1 need to be revised. | 15 minutes. |

The above summary notwithstanding, because Beacon cannot know precisely what testimony will be presented by those parties or the timing or scope of topic areas that may be addressed by them, Beacon hereby reserves the right to cross-examine witnesses introduced in all subject areas.

VI. EXHIBIT LISTS

Due to the length of the Exhibit Lists, Beacon has attached them to this Prehearing Conference Statement rather than restating them in the text. A chronological list of the exhibits Beacon may present at the evidentiary hearings is set forth in Attachment A. A list of the exhibits Beacon may present organized by subject matter is set forth in Attachment B. These lists are based upon currently available information, and at the present time, Beacon is hopeful that it will only need to formally introduce those exhibits that relate to the disputed subject areas set forth in Section III, above. However, Beacon will need to introduce additional exhibits if other parties offer testimony relating to other issues. Beacon is not specifically referencing any LORS as exhibits, but will rely on applicable LORS, case law, and decisions of this Commission and other public agencies where necessary.

VII. TOPIC AREAS FOR WHICH BEACON WILL SEEK A COMMISSION OVERRIDE

Beacon disagrees with the conclusions in the FSA that the BSEP will have a significant, unmitigatable impact in the area of Visual Resources, and intends to present evidence and testimony at the evidentiary hearings demonstrating why the impact will not be significant. Nevertheless, in the event the Committee disagrees with Beacon and accepts the recommendations in the FSA, Beacon will seek a Commission override in the area of Visual Resources.

VIII. SCHEDULING MATTERS

With regard to briefing, Beacon proposes setting a deadline of April 19, 2010 for the opening brief and a deadline of May 3, 2010 for the reply brief, given that the evidentiary hearings may not conclude until after March 25, 2010.

Beacon does not anticipate that any vacation schedules will impact the briefing schedule for the BSEP proceedings.

IX. PROPOSED MODIFICATIONS TO THE PROPOSED CONDITIONS OF CERTIFICATION

Beacon has been able to resolve with Staff the majority of its concerns with the Conditions of Certification proposed in the FSA. However, a few disagreements remain in the areas of Biological Resources, Cultural Resources, and Water Resources.

Beacon's proposed modifications to Staff's proposed Biological Resources Conditions of Certification are set forth in redline strikeout format in Attachment C.

Beacon's proposed modifications to Staff's proposed Cultural Resources Conditions of Certification are set forth in redline strikeout format in Attachment D.

Beacon's proposed modifications to Staff's proposed Water Resources Conditions of Certification are set forth in redline strikeout format in Attachment E. This includes proposed modifications to Staff's proposed Appendix I.

DATED: March 11, 2010

DOWNEY BRAND LLP

By: _____/s/
Jane E. Luckhardt

ATTACHMENT A

Chronological List of Exhibits

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA**

**APPLICATION FOR CERTIFICATION FOR
THE BEACON SOLAR ENERGY PROJECT**

DOCKET NO. 08-AFC-2

AMENDED APPLICANT'S EXHIBIT LIST – SEQUENTIAL

MARCH 9, 2010

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|---|----------------|-------------------------------------|
| 1 | 3/13/2008 | AFC Section 1.0: Executive Summary | ES | Kenny Stein |
| 2 | 3/13/2008 | AFC Section 2.0: Project Description | PD | Duane McCloud |
| 3 | 3/13/2008 | AFC Section 3.0: Closure | PD | Duane McCloud |
| 4 | 3/13/2008 | AFC Section 4.0: Alternatives | ALTS | Kenny Stein |
| 5 | 3/13/2008 | AFC Section 5.1: General Environmental Information | PD | Kenny Stein |
| 6 | 3/13/2008 | AFC Section 5.2: Air Quality | AIR | Sara Head |
| 7 | 3/13/2008 | AFC Section 5.3: Biological Resources | BIO | Lyndon Quon |
| 8 | 3/13/2008 | AFC Section 5.4: Cultural Resources | CUL | Rebecca Apple |
| 9 | 3/13/2008 | AFC Section 5.5: Geologic Hazards and Resources | GEO | Mike Flack |
| 10 | 3/13/2008 | AFC Section 5.6: Hazardous Materials Handling | HAZMAT | Russ Kingsley |
| 11 | 3/13/2008 | AFC Section 5.7: Land Use | LU | Jerry McLees |
| 12 | 3/13/2008 | AFC Section 5.8: Noise | NOISE | Duane McCloud |
| 13 | 3/13/2008 | AFC Section 5.9: Paleontological Resources | PALEO | Cara Corsetti, SWCA |
| 14 | 3/13/2008 | AFC Section 5.10: Public Health | PH | Greg Wolffe |
| 15 | 3/13/2008 | AFC Section 5.11: Socioeconomics | SOCIO | Addie Olazabal |
| 16 | 3/13/2008 | AFC Section 5.12: Soils | SOILS | Mike Flack |
| 17 | 3/13/2008 | AFC Section 5.13: Traffic and Transportation | TRAFF | John Wilson, Wilson Eng. |
| 18 | 3/13/2008 | AFC Section 5.14: Transmission Line Safety & Nuisance | T-LINE | Duane McCloud/Steve Richards |
| 19 | 3/13/2008 | AFC Section 5.15: Visual Resources | VIS | Merlyn Paulson / Brian Stormwind |
| 20 | 3/13/2008 | AFC Section 5.16: Waste Management | WASTE | Mike Arvidson |
| 21 | 3/13/2008 | AFC Section 5.17: Water Resources | WATER | Mike Flack |
| 22 | 3/13/2008 | AFC Section 5.18: Worker Safety | WS | Mike Arvidson |
| 23 | 3/13/2008 | AFC Appendix A: Surrounding Properties Assessor's Parcel Nos./Property Owners | PD | Kenny Stein |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|---|----------------|---------------------------|
| 24 | 3/13/2008 | AFC Appendix B.1: Preliminary Geotechnical Constraints Evaluation | GEO | Bob Anders |
| 25 | 3/13/2008 | AFC Appendix B.2: Preliminary Geotechnical Investigation Report | GEO | Bob Anders |
| 26 | 3/13/2008 | AFC Appendix C.1: Civil Engineering Design Criteria | FD | Bob Anders |
| 27 | 3/13/2008 | AFC Appendix C.2: Mechanical Engineering Design Criteria | FD | Jared Foster |
| 28 | 3/13/2008 | AFC Appendix C.3: Control Engineering Design Criteria | FD | Jared Foster |
| 29 | 3/13/2008 | AFC Appendix C.4: Geologic and Foundation Design Criteria | FD | Bob Anders |
| 30 | 3/13/2008 | AFC Appendix C.5: Structural Engineering Design Criteria | FD | Bob Anders |
| 31 | 3/13/2008 | AFC Appendix C.6: Electrical Engineering Design Criteria | FD | Steve Richards |
| 32 | 3/13/2008 | AFC Appendix D: Therminol VP1 Heat Transfer Fluid MSDS | WASTE | Jared Foster |
| 33 | 3/13/2008 | AFC Appendix E: Air Quality Supporting Documentation | AIR | Sara Head |
| 34 | 3/13/2008 | AFC Appendix E.4 Air Quality Modeling Files CD | AIR | Sara Head |
| 35 | 3/13/2008 | AFC Appendix F: Biological Resources Supporting Documentation | BIO | Lyndon Quon |
| 36 | 3/13/2008 | AFC Appendix F: Biological Resources Supporting Documentation, Attachment E, Mojave Desert Tortoise and Mohave Ground Squirrel Habitat Assessment Reports | BIO | Alice Karl/Philip Leitner |
| 37 | 3/13/2008 | AFC Appendix G.1: Archaeological Report | CUL | Rebecca Apple |
| 38 | 3/13/2008 | AFC Appendix G.2: Built Structures Report | CUL | Rebecca Apple |
| 39 | 3/13/2008 | AFC Appendix H: Paleontological Resources Technical Report | PALEO | Cara Corsetti, SWCA |
| 40 | 3/13/2008 | AFC Appendix I: Phase I Site Assessments | WASTE | Jim Fickerson |
| 41 | 3/13/2008 | AFC Appendix J: Water Resources Supporting Documentation | WATER | Mike Flack |
| 42 | 3/13/2008 | AFC Appendix J.3.d: Raw Data and Aquifer Test Analysis (CD only) | WATER | Mike Flack |
| 43 | 3/13/2008 | AFC Appendix K.1: Water Agencies Correspondence | ALTS | Jared Foster |
| 44 | 3/13/2008 | AFC Appendix K.2: Los Angeles Department of Water & Power Correspondence | T-LINE | Scott Busa |
| 45 | 3/13/2008 | AFC Appendix K.3: Southern California Gas Company Correspondence | PD | Scott Busa |
| 46 | 3/13/2008 | AFC Appendix K.4: Kern County Agencies Correspondence | LU | Jerry McLees |
| 47 | 3/13/2008 | AFC Appendix K.5: Department of Defense Correspondence | LU | Kenny Stein |
| 48 | 3/13/2008 | AFC Appendix K.6: Department of Toxic Substances Control Correspondence | WASTE | Mike Arvidson |
| 49 | 3/13/2008 | AFC Appendix L: Drainage Plans | SOILS | Bob Anders |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|---------------------------------|
| 50 | 3/13/2008 | Application For FDOC | AIR | Sara Head/Russ Kingsley |
| 51 | 4/8/2008 | Data Adequacy Supplement, Air Quality | AIR | Sara Head |
| 52 | 4/8/2008 | Data Adequacy Supplement, Biological Resources | BIO | Jennifer Guigliano |
| 53 | 4/8/2008 | Data Adequacy Supplement, Cultural Resources | CUL | Rebecca Apple |
| 54 | 4/8/2008 | Data Adequacy Supplement, Geological Hazards | GEO | Mike Flack |
| 55 | 4/8/2008 | Data Adequacy Supplement, Land Use | LU | Jerry McLees |
| 56 | 4/8/2008 | Data Adequacy Supplement, Socioeconomics | SOCIO | Addie Olazabal |
| 57 | 5/1/2008 | Correspondence with Kern County Planning Department | LU | Kenny Stein/Jerry McLees |
| 58 | 6/11/2008 | Slide Presentation From Informational Hearing | ES | Scott Busa |
| 59 | 7/2/2008 | Summary of Pre-Application Field Meeting for Streambed Alteration Agreement | BIO | Kenny Stein/Jim Prine |
| 60 | 7/16/2008 | Responses to CEC Data Requests 1-3 & 7-12 | AIR | Sara Head |
| 61 | 7/16/2008 | Responses to CEC Data Requests, Attachment DR-10 | AIR | Sara Head |
| 62 | 7/16/2008 | Responses to CEC Data Requests 13-16 & 18-25 | BIO | Jennifer Guigliano |
| 63 | 7/16/2008 | Responses to CEC Data Requests 17 & 43-44 | H&H | Jennifer Guigliano/Bob Anders |
| 64 | 7/16/2008 | Responses to CEC Data Requests 26-35, with attachments | CUL | Rebecca Apple |
| 65 | 7/16/2008 | Responses to CEC Data Requests 36-42 | SOCIO | Addie Olazabal |
| 66 | 7/16/2008 | Responses to CEC Data Requests 45-49, with Attachment DR-47 | SOILS | Duane McCloud |
| 67 | 7/16/2008 | Responses to CEC Data Requests 50-53 | T-LINE | Duane McCloud/Steve Richards |
| 68 | 7/16/2008 | Responses to CEC Data Requests 54-57, with Attachment DR-56 Phase I ESA for Natural Gas Pipeline Route | WASTE | Jim Fickerson |
| 69 | 7/16/2008 | Responses to CEC Data Requests 58-70 | WATER | Mike Flack |
| 70 | 7/16/2008 | Responses to CEC Data Requests, Attachment DR-63 | WATER | Mike Flack |
| 71 | 7/19/2008 | Streambed Alteration Agreement | BIO | Jennifer Guigliano/Jim Prine |
| 72 | 8/18/2008 | Supplemental Responses to CEC Data Requests 4, 5, 6, & 12, & Attachment DR-5 | AIR | Sara Head |
| 73 | 8/18/2008 | Supplemental Responses to CEC Data Requests 17, 18 & 20, with Attachment DR-17 | BIO | Jennifer Guigliano |
| 74 | 8/18/2008 | Supplemental Response to Data Requests 30, 32, 34 & 35, with Attachment DR-34 and DR-35 | CUL | Rebecca Apple |
| 75 | 8/18/2008 | Supplemental Responses to CEC Data Requests 44 & 45, with Attachments DR-44 and DR-45 | H&H | Jennifer Guigliano / Bob Anders |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|------------------------------|
| 76 | 9/2/2008 | Supplemental Responses to CEC Data Requests 50-53, with Attachment DR-50 (SIS) | T-LINE | Duane McCloud/Steve Richards |
| 77 | 9/19/2008 | Responses to Questions From Rancho Seco Residents, Set One | ES | Meg Russell |
| 78 | 10/13/2008 | Revised Response to Data Request 14 | BIO | Jennifer Guigliano |
| 79 | 10/13/2008 | Responses to CEC Data Requests 71-78 | BIO | Jennifer Guigliano |
| 80 | 10/13/2008 | Responses to CEC Data Requests 79-80 | CUL | Rebecca Apple |
| 81 | 10/13/2008 | Responses to CEC Data Requests 81-92 | SOCIO | Addie Olazabal |
| 82 | 10/13/2008 | Responses to CEC Data Requests 93-95 | H&H | Bob Anders |
| 83 | 10/13/2008 | Responses to CEC Data Requests 96-127, with Figures and Tables | WATER | Mike Flack |
| 84 | 10/13/2008 | Data Requests 113, Attachment DR-113, MODFLOW files | WATER | Mike Flack |
| 85 | 10/23/2008 | Supplemental Response to Data Requests 30, 32 & 34, with Attachment DR-32: Evaluation of Cultural Resources | CUL | Rebecca Apple |
| 86 | 10/23/2008 | Supplemental Responses to CEC Data Requests 101-103, 106-109, 112, 114-115, 117-123, with Tables and Figures | WATER | Mike Flack |
| 87 | 10/29/2008 | Botanical and Wildlife Special Status Species Spring Survey Report | BIO | Jennifer Guigliano |
| 88 | 10/29/2008 | Response to CDFG letter on BSEP Streambed Alteration Notification | BIO | Jennifer Guigliano |
| 89 | 11/24/2008 | Email from Kenny to Eric on Alternative Layouts | ALTS | Kenny Stein |
| 90 | 11/26/2008 | Supplemental Workshop Responses to Data Requests 14, 17 & 20 | BIO | Jennifer Guigliano |
| 91 | 11/26/2008 | <u>Confidential</u> Supplemental Workshop Response to Data Request 34: Geomorph Maps and Cover Memorandum | CUL | Rebecca Apple |
| 92 | 12/1/2008 | Application for Incidental Take of Threatened or Endangered Species, Section 2081 of CESA | BIO | Jennifer Guigliano |
| 93 | 12/5/2008 | Responses to Questions From Rancho Seco Residents, Set Two | ES | Meg Russell |
| 94 | 12/9/2008 | Supplemental Workshop Responses to CEC Data Requests 96, 101, 112, 114, 118, & 121, with attachments | WATER | Mike Flack |
| 95 | 12/12/2008 | Email from Kenny to Eric on Auxiliary Loads | FD | Kenny Stein |
| 96 | 12/12/2008 | Email from Sara to Will Walters on Waste Loadout | AIR | Sara Head |
| 97 | 12/15/2008 | Beacon Waste Stream Quantities - Revised Table 5.16-6 | WASTE | Janine Forrest |
| 98 | 12/22/2008 | Email from K. Stein Regarding Cut/Fill For Evaporation Ponds | FD | Kenny Stein |
| 99 | 1/6/2009 | Construction Greenhouse Gas Emissions Calculations | AIR | Sara Head / Howard Balentine |
| 100 | 1/13/2009 | Beacon Dry Cooling Evaluation | ALTS | Jared Foster/Gary Pratt |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|---------------------------------|
| 101 | 1/13/2009 | Email from K. Stein Regarding Control Temperature for HTF Freeze Pro | FD | Kenny Stein |
| 102 | 1/16/2009 | Email Response to CEC Request Regarding High TDS Water | WATER | Mike Flack |
| 103 | 1/20/2009 | Confidential - Beacon Solar Energy Project Revenue Data | PD | Scott Busa |
| 104 | 1/21/2009 | Geoarchaeological Trenching Plan | CUL | Craig Young, Far Western |
| 105 | 1/23/2009 | Email Correspondence Regarding Visible Plumes | VIS | Brian Stormwind |
| 106 | 1/31/2009 | Summary of Conference Call With Lahontan | WATER | Mike Flack |
| 107 | 2/6/2009 | Preliminary Results Beacon Solar Project Geoarchaeology (Supplemental Response to Data Request 34) | CUL | Craig Young, Far Western |
| 108 | 2/10/2009 | Response to RWQCB Comments on draft ROWD Application | WATER | Mike Flack |
| 109 | 2/23/2009 | Email Response to E. Solorio Regarding Sources of Groundwater Data, With Updated J.4 database | WATER | Mike Flack |
| 110 | | Application for Low Effects HCP | BIO | Jennifer Guigliano |
| 111 | 3/4/2009 | Boundary Survey Sheets | LU | Jerry McLees |
| 112 | 3/26/2009 | Email Response to Request for Clarification on Resource Evaluations From M. McGuirt | CUL | Rebecca Apple |
| 113 | 4/8/2009 | PPSA Comments, Section IIA: Air Quality | AIR | Sara Head |
| 114 | 4/8/2009 | PPSA Comments, Section IIB: Biological Resources | BIO | Jennifer Guigliano |
| 115 | 4/8/2009 | PPSA Comments, Section IIC: Cultural Resources | CUL | Rebecca Apple |
| 116 | 4/8/2009 | PPSA Comments, Section IID: Hazardous Materials Management | HAZMAT | Russ Kingsley |
| 117 | 4/8/2009 | PPSA Comments, Section IIE: Noise and Vibration | NOISE | Duane McCloud |
| 118 | 4/8/2009 | PPSA Comments, Section IIF: Traffic and Transportation | TRAFF | Duane McCloud |
| 119 | 4/8/2009 | PPSA Comments, Section IIG: Visual Resources | VIS | Merlyn Paulson |
| 120 | 4/8/2009 | PPSA Comments, Section IIIA: Soil and Water Resources | WATER | Mike Flack / Jennifer Guigliano |
| 121 | 4/8/2009 | PPSA Comments, Section IIIB: Alternatives | ALTS | Kenny Stein |
| 122 | 4/21/2009 | Kern County resolutions approving LU applications | LU | Jerry McLees |
| 123 | 5/1/2009 | Landform Structure and Archaeological Sensitivity in the Beacon Solar Energy Project Area | CUL | Craig Young, Far Western |
| 124 | 5/1/2009 | PSA Comments, Introduction | ES | Kenny Stein |
| 125 | 5/1/2009 | PSA Comments, Executive Summary | ES | Scott Busa |
| 126 | 5/1/2009 | PSA Comments, Project Description | PD | Scott Busa |
| 127 | 5/1/2009 | PSA Comments, Alternatives | ALTS | Kenny Stein |
| 128 | 5/1/2009 | PSA Comments, Air Quality | AIR | Sara Head |
| 129 | 5/1/2009 | PSA Comments, Biological Resources | BIO | Jennifer Guigliano |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|---|----------------|---|
| 130 | 5/1/2009 | PSA Comments, Attachment BIO-1: Desert Tortoise Removal Plan, April 2009 | BIO | Alice Karl |
| 131 | 5/1/2009 | PSA Comments, Attachment BIO-2: Burrowing Owl Relocation Area Management Plan | BIO | Jennifer Guigliano |
| 132 | 5/1/2009 | PSA Comments, Cultural Resources | CUL | Rebecca Apple |
| 133 | 5/1/2009 | PSA Comments, Attachment CUL-1: Comments and Amendments to Cultural Resources Conclusions | CUL | Rebecca Apple |
| 134 | 5/1/2009 | PSA Comments, Attachment CUL-2: Proposed Cultural Resources Mitigation | CUL | Rebecca Apple |
| 135 | 5/1/2009 | PSA Comments, Hazardous Materials Management | HAZMAT | Duane McCloud |
| 136 | 5/1/2009 | PSA Comments, Land Use | LU | Duane McCloud |
| 137 | 5/1/2009 | PSA Comments, Noise | NOISE | Duane McCloud |
| 138 | 5/1/2009 | PSA Comments, Public Health | PH | Sara Head |
| 139 | 5/1/2009 | PSA Comments, Attachment Public Health-1: Health Risk Assessment | PH | Sara Head |
| 140 | 5/1/2009 | PSA Comments, Soil and Water | WATER | Mike Flack |
| 141 | 5/1/2009 | PSA Comments, Attachment Soil and Water-1: Draft Water Mitigation and Offset Plan | WATER | Mike Flack/Jennifer Guigliano |
| 142 | 5/1/2009 | PSA Comments, Attachment Soil and Water-2: Revised Table 112W | WATER | Mike Flack |
| 143 | 5/1/2009 | PSA Comments, Traffic and Transportation | TRAFF | Duane McCloud |
| 144 | 5/1/2009 | PSA Comments, Visual Resources | VIS | Merlyn Paulson |
| 145 | 5/1/2009 | PSA Comments, Waste Management | WASTE | Duane McCloud |
| 146 | 5/1/2009 | PSA Comments, Worker Safety and Fire Protection | WS | Duane McCloud |
| 147 | 5/1/2009 | PSA Comments, Engineering Assessment | FD | Duane McCloud |
| 148 | 5/1/2009 | PSA Comments, Geology and Paleontology | PALEO | Kenny Stein |
| 149 | 5/1/2009 | PSA Comments, General Conditions | FD | Duane McCloud |
| 150 | 5/13/2009 | Materials from CLOMR Meeting | H&H | Jennifer Guigliano |
| 151 | 6/1/2009 | Common Raven Monitoring, Management & Control Plan | BIO | Jennifer Guigliano |
| 152 | 6/1/2009 | Rerouted Wash Electronic Support Files | H&H | Jennifer Guigliano/Gerard Dalziel/Serkan Mahmutoglu |
| 153 | 6/3/2009 | Comments on CEC Groundwater Sampling Program | ALTS | Mike Flack |
| 154 | 6/19/2009 | PDR, Section 1.0: Intro & Section 5.0: Conclusions | FD | Kenny Stein |
| 155 | 6/19/2009 | PDR, Section 2.1: Staff Suggested Changes | FD | Kenny Stein |
| 156 | 6/19/2009 | PDR Section 2.1.1: Diversion Channel Redesign | H&H | Jennifer Guigliano/Serkan Mahmutoglu |
| 157 | 6/19/2009 | PDR Section 2.1.2: Water Treatment & Discharge Facilities | FD | Scott Stern/Dan Sampson |
| 158 | 6/19/2009 | PDR Section 2.1.3: Stormwater Retention and Erosion Control | FD | Bob Anders |
| 159 | 6/19/2009 | PDR Section 2.1.5: SCE Distribution Lines | FD | Scott Busa |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|---|----------------|---------------------------------|
| 160 | 6/19/2009 | PDR Section 2.1.6: Land Treatment Unit | FD | Janine Forrest |
| 161 | 6/19/2009 | PDR Section 2.1.7: Site Layout Adjustments | FD | Jared Foster |
| 162 | 6/19/2009 | PDR Section 2.1.8: Telecommunications System | FD | Scott Busa |
| 163 | 6/19/2009 | PDR Section 2.1.9: Solar Field Maintenance Vehicles | AIR | Duane McCloud |
| 164 | 6/19/2009 | PDR Section 2.1.10: Visual Impacts Reduction | VIS | Merlyn Paulson |
| 165 | 6/19/2009 | PDR Section 2.2: Beacon Proposed Project Refinements | FD | Duane McCloud |
| 166 | 6/19/2009 | PDR Section 3.1: Koehn Lake Alternative | ALTS | Mike Flack |
| 167 | 6/19/2009 | PDR Section 3.1.1: Water Treatment Facilities for Configuration 2 | ALTS | Scott Stern/Dan Sampson |
| 168 | 6/19/2009 | PDR Section 3.1.2: Evaporation Pond Size for Configuration 2 | ALTS | Janine Forrest |
| 169 | 6/19/2009 | PDR Section 3.2: Rosamond Waste Water Alternative | ALTS | Scott Busa |
| 170 | 6/19/2009 | PDR Section 4.1.1: Air Quality | AIR | Sara Head |
| 171 | 6/19/2009 | PDR Section 4.1.2: Biological Resources | BIO | Jennifer Guigliano |
| 172 | 6/19/2009 | PDR Section 4.1.4: Hazardous Materials Management | HAZMAT | Russ Kingsley |
| 173 | 6/19/2009 | PDR Section 4.1.6: Traffic and Transportation | TRAFF | Duane McCloud |
| 174 | 6/19/2009 | PDR Section 4.1.7: Visual Resources | VIS | Merlyn Paulson |
| 175 | 6/19/2009 | PDR Section 4.1.8: Waste Management | WASTE | Jared Foster/Janine Forrest |
| 176 | 6/19/2009 | PDR Section 4.2.1: Air Quality and Public Health Impacts | AIR | Sara Head |
| 177 | 6/19/2009 | PDR Section 4.2.1.2: Public Health Analysis for Propane | PH | Sara Head |
| 178 | 6/19/2009 | PDR Section 4.2.2: Biological Resources | BIO | Jennifer Guigliano |
| 179 | 6/19/2009 | PDR Section 4.2.3: Hazardous Materials Management | HAZMAT | Jared Foster / Howard Balentine |
| 180 | 6/19/2009 | PDR Section 4.2.4: Traffic and Transportation | TRAFF | Jared Foster |
| 181 | 6/19/2009 | PDR Section 4.2.5: Visual Resources | VIS | Merlyn Paulson |
| 182 | 6/19/2009 | PDR Section 4.2.6.1: Waste from Additional HTF Expansion Tanks | WASTE | Russ Kingsley |
| 183 | 6/19/2009 | PDR Section 4.2.7: Other Environmental Topic Areas | WS | Mike Arvidson |
| 184 | 6/19/2009 | PDR Section 4.3.1: Air Quality | ALTS | Sara Head |
| 185 | 6/19/2009 | PDR Section 4.3.5: Soil and Water Resources | ALTS | Mike Flack |
| 186 | 6/19/2009 | PDR Section 4.3.6: Traffic and Transportation | ALTS | Jared Foster |
| 187 | 6/19/2009 | PDR Section 4.3.7: Waste Management | ALTS | Jared Foster/Janine Forrest |
| 188 | 6/19/2009 | PDR Figure 1: Water Balance With On-Site Groundwater | WATER | Scott Stern/Dan Sampson |
| 189 | 6/19/2009 | PDR Figure 2: Water Balance With High TDS Water | ALTS | Scott Stern/Dan Sampson |
| 190 | 6/19/2009 | PDR Figure 3: Revised Site Layout | FD | Jared Foster |
| 191 | 6/19/2009 | PDR Figure 5: Revised Power Block Equipment Layout (with Propane) | FD | Jared Foster |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|---|----------------|------------------------------|
| 192 | 6/19/2009 | PDR Figure 6: Revised Key One Line Diagram | T-LINE | Duane McCloud/Steve Richards |
| 193 | 6/19/2009 | PDR Figure 7: Water Supply Wells Located in the Koehn Sub-Basin | ALTS | Mike Flack |
| 194 | 6/19/2009 | PDR Attach. 1a, Draft Memorandum for Hydrologic & Hydraulic Analysis of Rerouted Channel for Beacon Solar Energy, June 2009 | H&H | Gerard Dalziel |
| 195 | 6/19/2009 | PDR Attachment 1b: ReRouted Wash Mitigation Plan | BIO | Jennifer Guigliano |
| 196 | 6/19/2009 | PDR Attachment 2: Evaporation Pond Calculations | FD | Jared Foster/Janine Forrest |
| 197 | 6/19/2009 | PDR Attachment 3: Storm Water Management- Conceptual Retention and Grading Study | FD | Bob Anders |
| 198 | 6/19/2009 | PDR Attachment 4a: Burrowing Owl Survey Report for Emergency Access Road | BIO | Jennifer Guigliano |
| 199 | 6/19/2009 | PDR Attachment 4b: Desert Tortoise Survey Report for Emergency Access Road | BIO | Jennifer Guigliano |
| 200 | 6/19/2009 | PDR Attachment 4c: Cultural Resources Survey Report for Emergency Access Road | CUL | Rebecca Apple |
| 201 | 6/19/2009 | PDR Attachment 4d: Paleontological Resources Survey Report for Emergency Access Road | PALEO | Cara Corsetti, SWCA |
| 202 | 6/19/2009 | PDR Attachment 5: Groundwater Mitigation Plan | WATER | Mike Flack |
| 203 | 6/19/2009 | PDR Attachment 6: Amendment to Report of Waste Discharge | WATER | Mike Flack |
| 204 | 6/19/2009 | PDR Attachment 7a: Construction Emissions Related to Emergency Access Road | AIR | Sara Head |
| 205 | 6/19/2009 | PDR Attachment 7b: Operational Emissions Related to Propane Deliveries and Use | AIR | Sara Head |
| 206 | 6/19/2009 | PDR Attachment 7c: Boiler Manufacturer's Specifications | AIR | Sara Head |
| 207 | 6/19/2009 | PDR Attachment 7d: Additional Air Quality Impact Analyses | AIR | Sara Head |
| 208 | 6/19/2009 | PDR Attachment 8: Phase I Environmental Site Assessment for Additional Transmission Line Parcel | WASTE | Jim Fickerson |
| 209 | 6/22/2009 | Air Modeling Files Related to Project Design Refinements | AIR | Sara Head |
| 210 | 6/29/2009 | Email from J. Guigliano re rerouted wash electronic support files (MIKE21?) | H&H | Jennifer Guigliano |
| 211 | 7/2/2009 | Revised Application for FDOC | AIR | Sara Head/Russ Kingsley |
| 212 | 7/16/2009 | Email from K. Stein Regarding Maintenance Vehicle Comparisons | AIR | Kenny Stein/Glen King |
| 213 | 7/17/2009 | Application for Lot Line Adjustment | LU | Jerry McLees |
| 214 | 7/20/2009 | Response to Air Quality Questions From Workshop | AIR | Sara Head |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|--------------------------------------|
| 215 | 7/20/2009 | Response to Request Regarding BSEP Subsurface Investigations | CUL | Rebecca Apple |
| 216 | 7/20/2009 | Response to Request for Predictive Sensitivity Groundwater Analysis | WATER | Mike Flack |
| 217 | 7/20/2009 | Response to Rerouted Wash Information Request | H&H | Jennifer Guigliano |
| 218 | 7/26/2009 | Emails from Jenn re FLO2D Models, Models on CD | H&H | Jennifer Guigliano/Serkan Mahmutoglu |
| 219 | 8/1/2009 | Email Regarding Red Rock Poppy | BIO | Kenny Stein |
| 220 | 8/1/2009 | Habitat Conservation Plan | BIO | Jennifer Guigliano |
| 221 | 8/11/2009 | Email to CEC Regarding Results of Offsite Well Sampling | ALTS | Mike Flack |
| 222 | 8/18/2009 | Email to CEC With Resubmittal of Revised Metals Results for Offsite Sampling | ALTS | Mike Flack |
| 223 | 8/24/2009 | Response to Letter From John Musick | LU | Scott Busa |
| 224 | 8/30/2009 | Arciero Well Data (from J. Musick) | ALTS | Mike Flack |
| 225 | 9/11/2009 | Email Regarding Updated Construction Water Impacts Assessment | WATER | Mike Flack |
| 226 | 12/2/1997 | LADWP's Draft Initial Study/Proposed Negative Declaration SAMDA Water Exploration, Fremont Valley Ranch Water Management Project | WATER | Mike Flack |
| 227 | 4/1/2009 | Stetson Groundwater Report (CA City) | WATER | Mike Flack |
| 228 | 5/1/2009 | PSA Comments, Attachment Worker Safety-1: Letter From Kern County Fire Dept. | WS | Jared Foster |
| 229 | 6/21/2009 | CEC Well Canvas | ALTS | Mike Flack |
| 230 | 7/1/2009 | CEC Well Canvas Photos | ALTS | Mike Flack |
| 231 | 7/2/2009 | DWR Well Data | WATER | Mike Flack |
| 232 | 8/1/2009 | KCAPCD Revised FDOC | AIR | Sara Head/Russ Kingsley |
| 233 | 9/4/2009 | Email From BLM Regarding Visual Impacts | VIS | Kenny Stein |
| 234 | 10/28/2009 | Declaration of Addie Olazabal: Socioeconomics | SOCIO | Addie Olazabal |
| 235 | 10/28/2009 | Declaration of Alice Karl: Biological Resources | BIO | Alice Karl |
| 236 | 10/28/2009 | Declaration of Bob Anders: Geoarchaeology | GEO | Bob Anders |
| 237 | 10/28/2009 | Declaration of Bob Anders: Hydrology & Hydraulics | H&H | Bob Anders |
| 238 | 10/28/2009 | Declaration of Bob Anders: Soils | SOILS | Bob Anders |
| 239 | 10/28/2009 | Declaration of Bob Anders: Facility Design | FD | Bob Anders |
| 240 | 10/28/2009 | Declaration of Brian Stormwind: Visual | VIS | Brian Stormwind |
| 241 | 10/28/2009 | Declaration of Cara Corsetti: Paleo | PALEO | Cara Corsetti, SWCA |
| 242 | 10/28/2009 | Declaration of D. Craig Young: Cultural | CUL | Craig Young, Far Western |
| 243 | 10/28/2009 | Declaration of Dan Sampson: Water | WATER | Dan Sampson |
| 244 | 10/28/2009 | Declaration of Dan Sampson: Facility Design | FD | Dan Sampson |
| 245 | 10/28/2009 | Declaration of Dan Sampson: Alternatives | ALTS | Dan Sampson |
| 246 | 10/28/2009 | Declaration of Duane McCloud: Project Description | PD | Duane McCloud |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|--------------------------|
| 247 | 10/28/2009 | Declaration of Duane McCloud: Air Quality | AIR | Duane McCloud |
| 248 | 10/28/2009 | Declaration of Duane McCloud: Hazardous Materials | HAZMAT | Duane McCloud |
| 249 | 10/28/2009 | Declaration of Duane McCloud: Land Use | LU | Duane McCloud |
| 250 | 10/28/2009 | Declaration of Duane McCloud: Noise | NOISE | Duane McCloud |
| 251 | 10/28/2009 | Declaration of Duane McCloud: Soils | SOILS | Duane McCloud |
| 252 | 10/28/2009 | Declaration of Duane McCloud: Traffic & Transportation | TRAFF | Duane McCloud |
| 253 | 10/28/2009 | Declaration of Duane McCloud: Waste Management | WASTE | Duane McCloud |
| 254 | 10/28/2009 | Declaration of Duane McCloud: Worker Safety | WS | Duane McCloud |
| 255 | 10/28/2009 | Declaration of Duane McCloud: Transmission Line | T-LINE | Duane McCloud |
| 256 | 10/28/2009 | Declaration of Duane McCloud: Facility Design | FD | Duane McCloud |
| 257 | 10/28/2009 | Declaration of Gerard Dalziel: Hydology & Hydraulics | H&H | Gerard Dalziel |
| 258 | 10/28/2009 | Declaration of Gary Pratt: Alternatives | ALTS | Gary Pratt |
| 259 | 10/28/2009 | Declaration of Glen King: Air Quality | AIR | Glen King |
| 260 | 10/28/2009 | Declaration of Greg Wolffe: Public Health | PH | Greg Wolffe |
| 261 | 10/28/2009 | Declaration of Howard Balentine: Air Quality | AIR | Howard Balentine |
| 262 | 10/28/2009 | Declaration of Howard Balentine: Hazardous Materials | HAZMAT | Howard Balentine |
| 263 | 10/28/2009 | Declaration of Janine Forrest: Waste Management | WASTE | Janine Forrest |
| 264 | 10/28/2009 | Declaration of Janine Forrest: Facility Design | FD | Janine Forrest |
| 265 | 10/28/2009 | Declaration of Janine Forrest: Alternatives | ALTS | Janine Forrest |
| 266 | 10/28/2009 | Declaration of Jared Foster: Hazardous Materials | HAZMAT | Jared Foster |
| 267 | 10/28/2009 | Declaration of Jared Foster: Traffic & Transportation | TRAFF | Jared Foster |
| 268 | 10/28/2009 | Declaration of Jared Foster: Waste Management | WASTE | Jared Foster |
| 269 | 10/28/2009 | Declaration of Jared Foster: Worker Safety | WS | Jared Foster |
| 270 | 10/28/2009 | Declaration of Jared Foster: Facility Design | FD | Jared Foster |
| 271 | 10/28/2009 | Declaration of Jared Foster: Alternatives | ALTS | Jared Foster |
| 272 | 10/28/2009 | Declaration of Jennifer Guigliano: Biological Resources | BIO | Jennifer Guigliano |
| 273 | 10/28/2009 | Declaration of Jennifer Guigliano: Hydology & Hydraulics | H&H | Jennifer Guigliano |
| 274 | 10/28/2009 | Declaration of Jennifer Guigliano: Water | WATER | Jennifer Guigliano |
| 275 | 10/28/2009 | Declaration of Jerry McLees: Land Use | LU | Jerry McLees |
| 276 | 10/28/2009 | Declaration of Jim Fickerson: Waste Management | WASTE | Jim Fickerson |
| 277 | 10/28/2009 | Declaration of Jim Prine: Biological Resources | BIO | Jim Prine |
| 278 | 10/28/2009 | Declaration of John Wilson: Traffic & Transportation | TRAFF | John Wilson, Wilson Eng. |
| 279 | 10/28/2009 | Declaration of Kenneth Stein: Executive Summary | ES | Kenny Stein |
| 280 | 10/28/2009 | Declaration of Kenneth Stein: Project Description | PD | Kenny Stein |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|-------------------|
| 281 | 10/28/2009 | Declaration of Kenneth Stein: Air Quality | AIR | Kenny Stein |
| 282 | 10/28/2009 | Declaration of Kenneth Stein: Biological Resources | BIO | Kenny Stein |
| 283 | 10/28/2009 | Declaration of Kenneth Stein: Land Use | LU | Kenny Stein |
| 284 | 10/28/2009 | Declaration of Kenneth Stein: Paleontology | PALEO | Kenny Stein |
| 285 | 10/28/2009 | Declaration of Kenneth Stein: Visual Resources | VIS | Kenny Stein |
| 286 | 10/28/2009 | Declaration of Kenneth Stein: Facility Design | FD | Kenny Stein |
| 287 | 10/28/2009 | Declaration of Kenneth Stein: Alternatives | ALTS | Kenny Stein |
| 288 | 10/28/2009 | Declaration of Lyndon Quon: Biological Resources | BIO | Lyndon Quon |
| 289 | 10/28/2009 | Declaration of Meg Russell: Executive Summary | ES | Meg Russell |
| 290 | 10/28/2009 | Declaration of Merlyn Paulson: Visual Resources | VIS | Merlyn Paulson |
| 291 | 10/28/2009 | Declaration of Mike Arvidson: Waste Management | WASTE | Mike Arvidson |
| 292 | 10/28/2009 | Declaration of Mike Arvidson: Worker Safety | WS | Mike Arvidson |
| 293 | 10/28/2009 | Declaration of Mike Flack: Geology | GEO | Mike Flack |
| 294 | 10/28/2009 | Declaration of Mike Flack: Soils | SOILS | Mike Flack |
| 295 | 10/28/2009 | Declaration of Mike Flack: Water (1) | WATER | Mike Flack |
| 296 | 10/28/2009 | Declaration of Mike Flack: Water (2) | WATER | Mike Flack |
| 297 | 10/28/2009 | Declaration of Mike Flack: Alternatives (1) | ALTS | Mike Flack |
| 298 | 10/28/2009 | Declaration of Mike Flack: Alternatives (2) | ALTS | Mike Flack |
| 299 | 10/28/2009 | Declaration of Philip Leitner: Biological Resources | BIO | Phil Leitner |
| 300 | 10/28/2009 | Declaration of Rebecca Apple: Cultural Resources | CUL | Rebecca Apple |
| 301 | 10/28/2009 | Declaration of Russ Kingsley: Air Quality (1) | AIR | Russ Kingsley |
| 302 | 10/28/2009 | Declaration of Russ Kingsley: Air Quality (2) | AIR | Russ Kingsley |
| 303 | 10/28/2009 | Declaration of Russ Kingsley: Hazardous Materials | HAZMAT | Russ Kingsley |
| 304 | 10/28/2009 | Declaration of Russ Kingsley: Waste Management | WASTE | Russ Kingsley |
| 305 | 10/28/2009 | Declaration of Sara Head: Air Quality (1) | AIR | Sara Head |
| 306 | 10/28/2009 | Declaration of Sara Head: Air Quality (2) | AIR | Sara Head |
| 307 | 10/28/2009 | Declaration of Sara Head: Public Health | PH | Sara Head |
| 308 | 10/28/2009 | Declaration of Sara Head: Alternatives | ALTS | Sara Head |
| 309 | 10/28/2009 | Declaration of Scott Busa: Executive Summary | ES | Scott Busa |
| 310 | 10/28/2009 | Declaration of Scott Busa: Project Description | PD | Scott Busa |
| 311 | 10/28/2009 | Declaration of Scott Busa: Facility Design | FD | Scott Busa |
| 312 | 10/28/2009 | Declaration of Scott Busa: Land Use | LU | Scott Busa |
| 313 | 10/28/2009 | Declaration of Scott Busa: Transmission Line | T-LINE | Scott Busa |
| 314 | 10/28/2009 | Declaration of Scott Busa: Alternatives | ALTS | Scott Busa |
| 315 | 10/28/2009 | Declaration of Scott Stern: Water | WATER | Scott Stern |
| 316 | 10/28/2009 | Declaration of Scott Stern: Facility Design | FD | Scott Stern |
| 317 | 10/28/2009 | Declaration of Scott Stern: Alternatives | ALTS | Scott Stern |
| 318 | 10/28/2009 | Declaration of Serkan Mahmutoglu: Hydrology & Hydraulics | H&H | Serkan Mahmutoglu |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|---|
| 319 | 10/28/2009 | Declaration of Steve Richards: Facility Design | FD | Steve Richards |
| 320 | 10/28/2009 | Declaration of Steve Richards: Transmission Line | T-LINE | Steve Richards |
| 321 | 11/2009 | 60% Hydrologic and Hydraulic Analysis of Rerouted Channel | H&H | Jennifer Guigliano/Gerard Dalziel/Serkan Mahmutoglu |
| 322 | 3/9/2010 | Rebuttal Testimony of Kenneth Stein on Overriding Considerations | ES | Kenneth Stein |
| 323 | 3/9/2010 | Declaration of Jody Salamacha-Hollier | VIS | Jody Salamacha-Hollier |
| 324 | 3/9/2010 | Rebuttal Testimony of Merlyn Paulson on Visual Resources | VIS | Merlyn Paulson |
| 325 | 3/9/2010 | Rebuttal Testimony of Jennifer Guigliano on Biological Resources | BIO | Jennifer Guigliano |
| 326 | 3/9/2010 | Rebuttal Testimony of Alice Karl on Biological Resources | BIO | Alice Karl |
| 327 | 3/9/2010 | Rebuttal Testimony of Philip Leitner on Biological Resources | BIO | Philip Leitner |
| 328 | 3/9/2010 | Rebuttal Testimony of Kenneth Stein on Biological Resources | BIO | Kenneth Stein |
| 329 | 3/9/2010 | Rebuttal Testimony of Rebecca Apple on Cultural Resources | CUL | Rebecca Apple |
| 330 | 3/9/2010 | Rebuttal Testimony of Kenneth Stein on Cultural Resources | CUL | Kenneth Stein |
| 331 | 3/9/2010 | Rebuttal Testimony of Duane McCloud on Cultural Resources | CUL | Duane McCloud |
| 332 | 3/9/2010 | Rebuttal Testimony of Duane McCloud on Waste Management | WASTE | Duane McCloud |
| 333 | 3/9/2010 | Rebuttal Testimony of Michael Flack on Waste Management | WASTE | Mike Flack |
| 334 | 3/9/2010 | Rebuttal Testimony of Duane McCloud on Transmission System Engineering | T-LINE | Duane McCloud |
| 335 | 3/9/2010 | Rebuttal Testimony of Michael Flack on Water Resources | Water | Mike Flack |
| 336 | 3/9/2010 | Rebuttal Testimony of Scott Busa on Water Resources | Water | Scott Busa |

ATTACHMENT B

List of Exhibits by Subject Area

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA**

**APPLICATION FOR CERTIFICATION FOR
THE BEACON SOLAR ENERGY PROJECT**

DOCKET NO. 08-AFC-2

AMENDED APPLICANT'S EXHIBIT LIST - BY TOPIC AREA

MARCH 9, 2010

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------------------|-------------|---|----------------|----------------|
| Executive Summary | | | | |
| 1 | 3/13/2008 | AFC Section 1.0: Executive Summary | ES | Kenny Stein |
| 58 | 6/11/2008 | Slide Presentation From Informational Hearing | ES | Scott Busa |
| 77 | 9/19/2008 | Responses to Questions From Rancho Seco Residents, Set One | ES | Meg Russell |
| 93 | 12/5/2008 | Responses to Questions From Rancho Seco Residents, Set Two | ES | Meg Russell |
| 124 | 5/1/2009 | PSA Comments, Introduction | ES | Kenny Stein |
| 125 | 5/1/2009 | PSA Comments, Executive Summary | ES | Scott Busa |
| 279 | | Declaration of Kenneth Stein: Executive Summary | ES | Kenny Stein |
| 289 | | Declaration of Meg Russell: Executive Summary | ES | Meg Russell |
| 309 | | Declaration of Scott Busa: Executive Summary | ES | Scott Busa |
| 322 | 3/9/2010 | Rebuttal Testimony of Kenneth Stein on Overriding Considerations | ES | Kenneth Stein |
| Project Description | | | | |
| 2 | 3/13/2008 | AFC Section 2.0: Project Description | PD | Duane McCloud |
| 3 | 3/13/2008 | AFC Section 3.0: Closure | PD | Duane McCloud |
| 5 | 3/13/2008 | AFC Section 5.1: General Environmental Information | PD | Kenny Stein |
| 23 | 3/13/2008 | AFC Appendix A: Surrounding Properties Assessor's Parcel Nos./Property Owners | PD | Kenny Stein |
| 45 | 3/13/2008 | AFC Appendix K.3: Southern California Gas Company Correspondence | PD | Scott Busa |
| 103 | 1/20/2009 | Confidential - Beacon Solar Energy Project Revenue Data | PD | Scott Busa |
| 126 | 5/1/2009 | PSA Comments, Project Description | PD | Scott Busa |
| 246 | | Declaration of Duane McCloud: Project Description | PD | Duane McCloud |

| Ex. No. | Date | Title | Subject | Sponsor |
|--------------------|-------------|--|----------------|------------------------------|
| 280 | | Declaration of Kenneth Stein: Project Description | PD | Kenny Stein |
| 310 | | Declaration of Scott Busa: Project Description | PD | Scott Busa |
| Air Quality | | | | |
| 6 | 3/13/2008 | AFC Section 5.2: Air Quality | AIR | Sara Head |
| 33 | 3/13/2008 | AFC Appendix E: Air Quality Supporting Documentation | AIR | Sara Head |
| 34 | 3/13/2008 | AFC Appendix E.4 Air Quality Modeling Files CD | AIR | Sara Head |
| 50 | 3/13/2008 | Application For FDOC | AIR | Sara Head/Russ Kingsley |
| 51 | 4/8/2008 | Data Adequacy Supplement, Air Quality | AIR | Sara Head |
| 60 | 7/16/2008 | Responses to CEC Data Requests 1-3 & 7-12 | AIR | Sara Head |
| 61 | 7/16/2008 | Responses to CEC Data Requests, Attachment DR-10 | AIR | Sara Head |
| 72 | 8/18/2008 | Supplemental Responses to CEC Data Requests 4, 5, 6, & 12, & Attachment DR-5 | AIR | Sara Head |
| 96 | 12/12/2008 | Email from Sara to Will Walters on Waste Loadout | AIR | Sara Head |
| 99 | 1/6/2009 | Construction Greenhouse Gas Emissions Calculations | AIR | Sara Head / Howard Balentine |
| 113 | 4/8/2009 | PPSA Comments, Section IIA: Air Quality | AIR | Sara Head |
| 128 | 5/1/2009 | PSA Comments, Air Quality | AIR | Sara Head |
| 163 | 6/19/2009 | PDR Section 2.1.9: Solar Field Maintenance Vehicles | AIR | Duane McCloud |
| 170 | 6/19/2009 | PDR Section 4.1.1: Air Quality | AIR | Sara Head |
| 176 | 6/19/2009 | PDR Section 4.2.1: Air Quality and Public Health Impacts | AIR | Sara Head |
| 204 | 6/19/2009 | PDR Attachment 7a: Construction Emissions Related to Emergency Access Road | AIR | Sara Head |
| 205 | 6/19/2009 | PDR Attachment 7b: Operational Emissions Related to Propane Deliveries and Use | AIR | Sara Head |
| 206 | 6/19/2009 | PDR Attachment 7c: Boiler Manufacturer's Specifications | AIR | Sara Head |
| 207 | 6/19/2009 | PDR Attachment 7d: Additional Air Quality Impact Analyses | AIR | Sara Head |
| 209 | 6/22/2009 | Air Modeling Files Related to Project Design Refinements | AIR | Sara Head |
| 211 | 7/2/2009 | Revised Application for FDOC | AIR | Sara Head/Russ Kingsley |
| 212 | 7/16/2009 | Email from K. Stein Regarding Maintenance Vehicle Comparisons | AIR | Kenny Stein/Glen King |

| Ex. No. | Date | Title | Subject | Sponsor |
|-----------------------------|-------------|---|----------------|------------------------------|
| 214 | 7/20/2009 | Response to Air Quality Questions From Workshop | AIR | Sara Head |
| 232 | 8/1/2009 | KCAPCD Revised FDOC | AIR | Sara Head/Russ Kingsley |
| 247 | | Declaration of Duane McCloud: Air Quality | AIR | Duane McCloud |
| 259 | | Declaration of Glen King: Air Quality | AIR | Glen King |
| 261 | | Declaration of Howard Balentine: Air Quality | AIR | Howard Balentine |
| 281 | | Declaration of Kenneth Stein: Air Quality | AIR | Kenny Stein |
| 301 | | Declaration of Russ Kingsley: Air Quality (1) | AIR | Russ Kingsley |
| 302 | | Declaration of Russ Kingsley: Air Quality (2) | AIR | Russ Kingsley |
| 305 | | Declaration of Sara Head: Air Quality (1) | AIR | Sara Head |
| 306 | | Declaration of Sara Head: Air Quality (2) | AIR | Sara Head |
| Biological Resources | | | | |
| 7 | 3/13/2008 | AFC Section 5.3: Biological Resources | BIO | Lyndon Quon |
| 35 | 3/13/2008 | AFC Appendix F: Biological Resources Supporting Documentation | BIO | Lyndon Quon |
| 36 | 3/13/2008 | AFC Appendix F: Biological Resources Supporting Documentation, Attachment E, Mojave Desert Tortoise and Mohave Ground Squirrel Habitat Assessment Reports | BIO | Alice Karl/Philip Leitner |
| 52 | 4/8/2008 | Data Adequacy Supplement, Biological Resources | BIO | Jennifer Guigliano |
| 59 | 7/2/2008 | Summary of Pre-Application Field Meeting for Streambed Alteration Agreement | BIO | Kenny Stein/Jim Prine |
| 62 | 7/16/2008 | Responses to CEC Data Requests 13-16 & 18-25 | BIO | Jennifer Guigliano |
| 71 | 7/19/2008 | Streambed Alteration Agreement | BIO | Jennifer Guigliano/Jim Prine |
| 73 | 8/18/2008 | Supplemental Responses to CEC Data Requests 17, 18 & 20, with Attachment DR-17 | BIO | Jennifer Guigliano |
| 78 | 10/13/2008 | Revised Response to Data Request 14 | BIO | Jennifer Guigliano |
| 79 | 10/13/2008 | Responses to CEC Data Requests 71-78 | BIO | Jennifer Guigliano |
| 87 | 10/29/2008 | Botanical and Wildlife Special Status Species Spring Survey Report | BIO | Jennifer Guigliano |
| 88 | 10/29/2008 | Response to CDFG letter on BSEP Streambed Alteration Notification | BIO | Jennifer Guigliano |
| 90 | 11/26/2008 | Supplemental Workshop Responses to Data Requests 14, 17 & 20 | BIO | Jennifer Guigliano |
| 92 | 12/1/2008 | Application for Incidental Take of Threatened or Endangered Species, Section 2081 of CESA | BIO | Jennifer Guigliano |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|---|----------------|--------------------|
| 110 | | Application for Low Effects HCP | BIO | Jennifer Guigliano |
| 114 | 4/8/2009 | PPSA Comments, Section IIB: Biological Resources | BIO | Jennifer Guigliano |
| 129 | 5/1/2009 | PSA Comments, Biological Resources | BIO | Jennifer Guigliano |
| 130 | 5/1/2009 | PSA Comments, Attachment BIO-1: Desert Tortoise Removal Plan, April 2009 | BIO | Alice Karl |
| 131 | 5/1/2009 | PSA Comments, Attachment BIO-2: Burrowing Owl Relocation Area Management Plan | BIO | Jennifer Guigliano |
| 151 | 6/1/2009 | Common Raven Monitoring, Management & Control Plan | BIO | Jennifer Guigliano |
| 171 | 6/19/2009 | PDR Section 4.1.2: Biological Resources | BIO | Jennifer Guigliano |
| 178 | 6/19/2009 | PDR Section 4.2.2: Biological Resources | BIO | Jennifer Guigliano |
| 195 | 6/19/2009 | PDR Attachment 1b: ReRouted Wash Mitigation Plan | BIO | Jennifer Guigliano |
| 198 | 6/19/2009 | PDR Attachment 4a: Burrowing Owl Survey Report for Emergency Access Road | BIO | Jennifer Guigliano |
| 199 | 6/19/2009 | PDR Attachment 4b: Desert Tortoise Survey Report for Emergency Access Road | BIO | Jennifer Guigliano |
| 219 | 8/1/2009 | Email Regarding Red Rock Poppy | BIO | Kenny Stein |
| 220 | 8/1/2009 | Habitat Conservation Plan | BIO | Jennifer Guigliano |
| 235 | | Declaration of Alice Karl: Biological Resources | BIO | Alice Karl |
| 272 | | Declaration of Jennifer Guigliano: Biological Resources | BIO | Jennifer Guigliano |
| 277 | | Declaration of Jim Prine: Biological Resources | BIO | Jim Prine |
| 282 | | Declaration of Kenneth Stein: Biological Resources | BIO | Kenny Stein |
| 288 | | Declaration of Lyndon Quon: Biological Resources | BIO | Lyndon Quon |
| 299 | | Declaration of Philip Leitner: Biological Resources | BIO | Phil Leitner |
| 325 | 3/9/2010 | Rebuttal Testimony of Jennifer Guigliano on Biological Resources | BIO | Jennifer Guigliano |
| 326 | 3/9/2010 | Rebuttal Testimony of Alice Karl on Biological Resources | BIO | Alice Karl |
| 327 | 3/9/2010 | Rebuttal Testimony of Philip Leitner on Biological Resources | BIO | Philip Leitner |
| 328 | 3/9/2010 | Rebuttal Testimony of Kenneth Stein on Biological Resources | BIO | Kenneth Stein |

| Ex. No. | Date | Title | Subject | Sponsor |
|---------------------------|------------|---|---------|--------------------------|
| Cultural Resources | | | | |
| 8 | 3/13/2008 | AFC Section 5.4: Cultural Resources | CUL | Rebecca Apple |
| 37 | 3/13/2008 | AFC Appendix G.1: Archaeological Report | CUL | Rebecca Apple |
| 38 | 3/13/2008 | AFC Appendix G.2: Built Structures Report | CUL | Rebecca Apple |
| 53 | 4/8/2008 | Data Adequacy Supplement, Cultural Resources | CUL | Rebecca Apple |
| 64 | 7/16/2008 | Responses to CEC Data Requests 26-35, with attachments | CUL | Rebecca Apple |
| 74 | 8/18/2008 | Supplemental Response to Data Requests 30, 32, 34 & 35, with Attachment DR-34 and DR-35 | CUL | Rebecca Apple |
| 80 | 10/13/2008 | Responses to CEC Data Requests 79-80 | CUL | Rebecca Apple |
| 85 | 10/23/2008 | Supplemental Response to Data Requests 30, 32 & 34, with Attachment DR-32: Evaluation of Cultural Resources | CUL | Rebecca Apple |
| 91 | 11/26/2008 | Confidential Supplemental Workshop Response to Data Request 34: Geomorph Maps and Cover Memorandum | CUL | Rebecca Apple |
| 104 | 1/21/2009 | Geoarchaeological Trenching Plan | CUL | Craig Young, Far Western |
| 107 | 2/6/2009 | Preliminary Results Beacon Solar Project Geoarchaeology (Supplemental Response to Data Request 34) | CUL | Craig Young, Far Western |
| 112 | 3/26/2009 | Email Response to Request for Clarification on Resource Evaluations From M. McGuirt | CUL | Rebecca Apple |
| 115 | 4/8/2009 | PPSA Comments, Section IIC: Cultural Resources | CUL | Rebecca Apple |
| 123 | 5/1/2009 | Landform Structure and Archaeological Sensitivity in the Beacon Solar Energy Project Area | CUL | Craig Young, Far Western |
| 132 | 5/1/2009 | PSA Comments, Cultural Resources | CUL | Rebecca Apple |
| 133 | 5/1/2009 | PSA Comments, Attachment CUL-1: Comments and Amendments to Cultural Resources Conclusions | CUL | Rebecca Apple |
| 134 | 5/1/2009 | PSA Comments, Attachment CUL-2: Proposed Cultural Resources Mitigation | CUL | Rebecca Apple |
| 200 | 6/19/2009 | PDR Attachment 4c: Cultural Resources Survey Report for Emergency Access Road | CUL | Rebecca Apple |
| 215 | 7/20/2009 | Response to Request Regarding BSEP Subsurface Investigations | CUL | Rebecca Apple |
| 242 | | Declaration of D. Craig Young: Cultural Resources | CUL | Craig Young, Far Western |
| 300 | | Declaration of Rebecca Apple: Cultural Resources | CUL | Rebecca Apple |

| Ex. No. | Date | Title | Subject | Sponsor |
|-----------------------------------|-------------|---|----------------|---------------------------------------|
| 329 | 3/9/2010 | Rebuttal Testimony of Rebecca Apple on Cultural Resources | CUL | Rebecca Apple |
| 330 | 3/9/2010 | Rebuttal Testimony of Kenneth Stein on Cultural Resources | CUL | Kenneth Stein |
| 331 | 3/9/2010 | Rebuttal Testimony of Duane McCloud on Cultural Resources | CUL | Duane McCloud |
| Geology | | | | |
| 9 | 3/13/2008 | AFC Section 5.5: Geologic Hazards and Resources | GEO | Mike Flack |
| 24 | 3/13/2008 | AFC Appendix B.1: Preliminary Geotechnical Constraints Evaluation | GEO | Bob Anders |
| 25 | 3/13/2008 | AFC Appendix B.2: Preliminary Geotechnical Investigation Report | GEO | Bob Anders |
| 54 | 4/8/2008 | Data Adequacy Supplement, Geological Hazards | GEO | Mike Flack |
| 236 | | Declaration of Bob Anders: Geoarchaeology | GEO | Bob Anders |
| 293 | | Declaration of Mike Flack: Geology | GEO | Mike Flack |
| Hazardous Materials | | | | |
| 10 | 3/13/2008 | AFC Section 5.6: Hazardous Materials Handling | HAZMAT | Russ Kingsley |
| 116 | 4/8/2009 | PPSA Comments, Section IID: Hazardous Materials Management | HAZMAT | Russ Kingsley |
| 135 | 5/1/2009 | PSA Comments, Hazardous Materials Management | HAZMAT | Duane McCloud |
| 172 | 6/19/2009 | PDR Section 4.1.4: Hazardous Materials Management | HAZMAT | Russ Kingsley |
| 179 | 6/19/2009 | PDR Section 4.2.3: Hazardous Materials Management | HAZMAT | Jared Foster / Howard Balentine |
| 248 | | Declaration of Duane McCloud: Hazardous Materials | HAZMAT | Duane McCloud |
| 262 | | Declaration of Howard Balentine: Hazardous Materials | HAZMAT | Howard Balentine |
| 266 | | Declaration of Jared Foster: Hazardous Materials | HAZMAT | Jared Foster |
| 303 | | Declaration of Russ Kingsley: Hazardous Materials | HAZMAT | Russ Kingsley |
| Hydrology & Hydraulics | | | | |
| 63 | 7/16/2008 | Responses to CEC Data Requests 17 & 43-44 | H&H | Jennifer Guigliano/Bob Anders |
| 75 | 8/18/2008 | Supplemental Responses to CEC Data Requests 44 & 45, with Attachments DR-44 and DR-45 | H&H | Jennifer Guigliano / Bob Anders |
| 82 | 10/13/2008 | Responses to CEC Data Requests 93-95 | H&H | Bob Anders |

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|-----------------|-------------|---|----------------|---|
| 150 | 5/13/2009 | Materials from CLOMR Meeting | H&H | Jennifer Guigliano |
| 152 | 6/1/2009 | Rerouted Wash Electronic Support Files | H&H | Jennifer Guigliano/Gerard Dalziel/Serkan Mahmutoglu |
| 156 | 6/19/2009 | PDR Section 2.1.1: Diversion Channel Redesign | H&H | Jennifer Guigliano/Serkan Mahmutoglu |
| 194 | 6/19/2009 | PDR Attach. 1a, Draft Memorandum for Hydrologic & Hydraulic Analysis of Rerouted Channel for Beacon Solar Energy, June 2009 | H&H | Gerard Dalziel |
| 210 | 6/29/2009 | Email from J. Guigliano re rerouted wash electronic support files (MIKE21?) | H&H | Jennifer Guigliano |
| 217 | 7/20/2009 | Response to Rerouted Wash Information Request | H&H | Jennifer Guigliano |
| 218 | 7/26/2009 | Emails from Jenn re FLO2D Models, Models on CD | H&H | Jennifer Guigliano/Serkan Mahmutoglu |
| 237 | | Declaration of Bob Anders: Hydrology & Hydraulics | H&H | Bob Anders |
| 257 | | Declaration of Gerard Dalziel: Hydrology & Hydraulics | H&H | Gerard Dalziel |
| 273 | | Declaration of Jennifer Guigliano: Hydrology & Hydraulics | H&H | Jennifer Guigliano |
| 318 | | Declaration of Serkan Mahmutoglu: Hydrology & Hydraulics | H&H | Serkan Mahmutoglu |
| 321 | 11/09 | 60% Hydrologic and Hydraulic Analysis of Rerouted Channel | H&H | Jennifer Guigliano/Gerard Dalziel/Serkan Mahmutoglu |
| Land Use | | | | |
| 11 | 3/13/2008 | AFC Section 5.7: Land Use | LU | Jerry McLees |
| 46 | 3/13/2008 | AFC Appendix K.4: Kern County Agencies Correspondence | LU | Jerry McLees |
| 47 | 3/13/2008 | AFC Appendix K.5: Department of Defense Correspondence | LU | Kenny Stein |
| 55 | 4/8/2008 | Data Adequacy Supplement, Land Use | LU | Jerry McLees |
| 57 | 5/1/2008 | Correspondence with Kern County Planning Department | LU | Kenny Stein/Jerry McLees |
| 111 | 3/4/2009 | Boundary Survey Sheets | LU | Jerry McLees |
| 122 | 4/21/2009 | Kern County resolutions approving LU applications | LU | Jerry McLees |
| 136 | 5/1/2009 | PSA Comments, Land Use | LU | Duane McCloud |

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|-----------------------|-------------|--|----------------|------------------------|
| 213 | 7/17/2009 | Application for Lot Line Adjustment | LU | Jerry McLees |
| 223 | 8/24/2009 | Response to Letter From John Musick | LU | Scott Busa |
| 249 | | Declaration of Duane McCloud: Land Use | LU | Duane McCloud |
| 275 | | Declaration of Jerry McLees: Land Use | LU | Jerry McLees |
| 283 | | Declaration of Kenneth Stein: Land Use | LU | Kenny Stein |
| 312 | | Declaration of Scott Busa: Land Use | LU | Scott Busa |
| Noise | | | | |
| 12 | 3/13/2008 | AFC Section 5.8: Noise | NOISE | Duane McCloud |
| 117 | 4/8/2009 | PPSA Comments, Section IIE: Noise and Vibration | NOISE | Duane McCloud |
| 137 | 5/1/2009 | PSA Comments, Noise | NOISE | Duane McCloud |
| 250 | | Declaration of Duane McCloud: Noise | NOISE | Duane McCloud |
| Paleontology | | | | |
| 13 | 3/13/2008 | AFC Section 5.9: Paleontological Resources | PALEO | Cara Corsetti, SWCA |
| 39 | 3/13/2008 | AFC Appendix H: Paleontological Resources Technical Report | PALEO | Cara Corsetti, SWCA |
| 148 | 5/1/2009 | PSA Comments, Geology and Paleontology | PALEO | Kenny Stein |
| 201 | 6/19/2009 | PDR Attachment 4d: Paleontological Resources Survey Report for Emergency Access Road | PALEO | Cara Corsetti, SWCA |
| 241 | | Declaration of Cara Corsetti: Paleo | PALEO | Cara Corsetti, SWCA |
| 284 | | Declaration of Kenneth Stein: Paleontology | PALEO | Kenny Stein |
| Public Health | | | | |
| 14 | 3/13/2008 | AFC Section 5.10: Public Health | PH | Greg Wolffe |
| 138 | 5/1/2009 | PSA Comments, Public Health | PH | Sara Head |
| 139 | 5/1/2009 | PSA Comments, Attachment Public Health-1: Health Risk Assessment | PH | Sara Head |
| 177 | 6/19/2009 | PDR Section 4.2.1.2: Public Health Analysis for Propane | PH | Sara Head |
| 260 | | Declaration of Greg Wolffe: Public Health | PH | Greg Wolffe |
| 307 | | Declaration of Sara Head: Public Health | PH | Sara Head |
| Socioeconomics | | | | |
| 15 | 3/13/2008 | AFC Section 5.11: Socioeconomics | SOCIO | Addie Olazabal |
| 56 | 4/8/2008 | Data Adequacy Supplement, Socioeconomics | SOCIO | Addie Olazabal |
| 65 | 7/16/2008 | Responses to CEC Data Requests 36-42 | SOCIO | Addie Olazabal |
| 81 | 10/13/2008 | Responses to CEC Data Requests 81-92 | SOCIO | Addie Olazabal |
| 234 | | Declaration of Addie Olazabal: Socioeconomics | SOCIO | Addie Olazabal |
| Soils | | | | |
| 16 | 3/13/2008 | AFC Section 5.12: Soils | SOILS | Mike Flack |
| 49 | 3/13/2008 | AFC Appendix L: Drainage Plans | SOILS | Bob Anders |
| 66 | 7/16/2008 | Responses to CEC Data Requests 45-49, with Attachment DR-47 | SOILS | Duane McCloud |

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|---|-------------|--|----------------|-------------------------------------|
| 238 | | Declaration of Bob Anders: Soils | SOILS | Bob Anders |
| 251 | | Declaration of Duane McCloud: Soils | SOILS | Duane McCloud |
| 294 | | Declaration of Mike Flack: Soils | SOILS | Mike Flack |
| Traffic & Transportation | | | | |
| 17 | 3/13/2008 | AFC Section 5.13: Traffic and Transportation | TRAFF | John Wilson, Wilson Eng. |
| 118 | 4/8/2009 | PPSA Comments, Section IIF: Traffic and Transportation | TRAFF | Duane McCloud |
| 143 | 5/1/2009 | PSA Comments, Traffic and Transportation | TRAFF | Duane McCloud |
| 173 | 6/19/2009 | PDR Section 4.1.6: Traffic and Transportation | TRAFF | Duane McCloud |
| 180 | 6/19/2009 | PDR Section 4.2.4: Traffic and Transportation | TRAFF | Jared Foster |
| 252 | | Declaration of Duane McCloud: Traffic & Transportation | TRAFF | Duane McCloud |
| 267 | | Declaration of Jared Foster: Traffic & Transportation | TRAFF | Jared Foster |
| 278 | | Declaration of John Wilson: Traffic & Transportation | TRAFF | John Wilson, Wilson Eng. |
| Transmission Line Safety & Engineering | | | | |
| 18 | 3/13/2008 | AFC Section 5.14: Transmission Line Safety & Nuisance | T-LINE | Duane McCloud/Steve Richards |
| 44 | 3/13/2008 | AFC Appendix K.2: Los Angeles Department of Water & Power Correspondence | T-LINE | Scott Busa |
| 67 | 7/16/2008 | Responses to CEC Data Requests 50-53 | T-LINE | Duane McCloud/Steve Richards |
| 76 | 9/2/2008 | Supplemental Responses to CEC Data Requests 50-53, with Attachment DR-50 (SIS) | T-LINE | Duane McCloud/Steve Richards |
| 192 | 6/19/2009 | PDR Figure 6: Revised Key One Line Diagram | T-LINE | Duane McCloud/Steve Richards |
| 255 | | Declaration of Duane McCloud: Transmission Line | T-LINE | Duane McCloud |
| 313 | | Declaration of Scott Busa: Transmission Line | T-LINE | Scott Busa |
| 320 | | Declaration of Steve Richards: Transmission Line | T-LINE | Steve Richards |
| 334 | 3/9/2009 | Rebuttal Testimony of Duane McCloud on Transmission System Engineering | T-LINE | Duane McCloud |
| Visual Resources | | | | |
| 19 | 3/13/2008 | AFC Section 5.15: Visual Resources | VIS | Merlyn Paulson / Brian Stormwind |
| 105 | 1/23/2009 | Email Correspondence Regarding Visible Plumes | VIS | Brian Stormwind |

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|-------------------------|-------------|--|----------------|-----------------------------|
| 119 | 4/8/2009 | PPSA Comments, Section IIG: Visual Resources | VIS | Merlyn Paulson |
| 144 | 5/1/2009 | PSA Comments, Visual Resources | VIS | Merlyn Paulson |
| 164 | 6/19/2009 | PDR Section 2.1.10: Visual Impacts Reduction | VIS | Merlyn Paulson |
| 174 | 6/19/2009 | PDR Section 4.1.7: Visual Resources | VIS | Merlyn Paulson |
| 181 | 6/19/2009 | PDR Section 4.2.5: Visual Resources | VIS | Merlyn Paulson |
| 233 | 9/4/2009 | Email From BLM Regarding Visual Impacts | VIS | Kenny Stein |
| 240 | | Declaration of Brian Stormwind: Visual | VIS | Brian Stormwind |
| 285 | | Declaration of Kenneth Stein: Visual Resources | VIS | Kenny Stein |
| 290 | | Declaration of Merlyn Paulson: Visual Resources | VIS | Merlyn Paulson |
| 323 | 3/9/2010 | Declaration of Jody Salamacha-Hollier: Visual Resources | VIS | Jody Salamacha-Hollier |
| 324 | 3/9/2010 | Rebuttal Testimony of Merlyn Paulson on Visual Resources | VIS | Merlyn Paulson |
| Waste Management | | | | |
| 20 | 3/13/2008 | AFC Section 5.16: Waste Management | WASTE | Mike Arvidson |
| 32 | 3/13/2008 | AFC Appendix D: Therminol VP1 Heat Transfer Fluid MSDS | WASTE | Jared Foster |
| 40 | 3/13/2008 | AFC Appendix I: Phase I Site Assessments | WASTE | Jim Fickerson |
| 48 | 3/13/2008 | AFC Appendix K.6: Department of Toxic Substances Control Correspondence | WASTE | Mike Arvidson |
| 68 | 7/16/2008 | Responses to CEC Data Requests 54-57, with Attachment DR-56 Phase I ESA for Natural Gas Pipeline Route | WASTE | Jim Fickerson |
| 97 | 12/15/2008 | Beacon Waste Stream Quantities - Revised Table 5.16-6 | WASTE | Janine Forrest |
| 145 | 5/1/2009 | PSA Comments, Waste Management | WASTE | Duane McCloud |
| 175 | 6/19/2009 | PDR Section 4.1.8: Waste Management | WASTE | Jared Foster/Janine Forrest |
| 182 | 6/19/2009 | PDR Section 4.2.6.1: Waste from Additional HTF Expansion Tanks | WASTE | Russ Kingsley |
| 208 | 6/19/2009 | PDR Attachment 8: Phase I Environmental Site Assessment for Additional Transmission Line Parcel | WASTE | Jim Fickerson |
| 253 | | Declaration of Duane McCloud: Waste Management | WASTE | Duane McCloud |
| 263 | | Declaration of Janine Forest: Waste Management | WASTE | Janine Forrest |
| 268 | | Declaration of Jared Foster: Waste Management | WASTE | Jared Foster |
| 276 | | Declaration of Jim Fickerson: Waste Management | WASTE | Jim Fickerson |

| Ex. No. | Date | Title | Subject | Sponsor |
|----------------|-------------|--|----------------|---------------------------------|
| 291 | | Declaration of Mike Arvidson: Waste Management | WASTE | Mike Arvidson |
| 304 | | Declaration of Russ Kingsley: Waste Management | WASTE | Russ Kingsley |
| 332 | 3/9/2010 | Rebuttal Testimony of Duane McCloud on Waste Management | WASTE | Duane McCloud |
| 333 | 3/9/2010 | Rebuttal Testimony of Michael Flack on Waste Management | WASTE | Mike Flack |
| Water | | | | |
| 21 | 3/13/2008 | AFC Section 5.17: Water Resources | WATER | Mike Flack |
| 41 | 3/13/2008 | AFC Appendix J: Water Resources Supporting Documentation | WATER | Mike Flack |
| 42 | 3/13/2008 | AFC Appendix J.3.d: Raw Data and Aquifer Test Analysis (CD only) | WATER | Mike Flack |
| 69 | 7/16/2008 | Responses to CEC Data Requests 58-70 | WATER | Mike Flack |
| 70 | 7/16/2008 | Responses to CEC Data Requests, Attachment DR-63 | WATER | Mike Flack |
| 83 | 10/13/2008 | Responses to CEC Data Requests 96-127, with Figures and Tables | WATER | Mike Flack |
| 84 | 10/13/2008 | Data Requests 113, Attachment DR-113, MODFLOW files | WATER | Mike Flack |
| 86 | 10/23/2008 | Supplemental Responses to CEC Data Requests 101-103, 106-109, 112, 114-115, 117-123, with Tables and Figures | WATER | Mike Flack |
| 94 | 12/9/2008 | Supplemental Workshop Responses to CEC Data Requests 96, 101, 112, 114, 118, & 121, with attachments | WATER | Mike Flack |
| 102 | 1/16/2009 | Email Response to CEC Request Regarding High TDS Water | WATER | Mike Flack |
| 106 | 1/31/2009 | Summary of Conference Call With Lahontan | WATER | Mike Flack |
| 108 | 2/10/2009 | Response to RWQCB Comments on draft ROWD Application | WATER | Mike Flack |
| 109 | 2/23/2009 | Email Response to E. Solorio Regarding Sources of Groundwater Data, With Updated J.4 database | WATER | Mike Flack |
| 120 | 4/8/2009 | PPSA Comments, Section IIIA: Soil and Water Resources | WATER | Mike Flack / Jennifer Guigliano |
| 140 | 5/1/2009 | PSA Comments, Soil and Water | WATER | Mike Flack |
| 141 | 5/1/2009 | PSA Comments, Attachment Soil and Water-1: Draft Water Mitigation and Offset Plan | WATER | Mike Flack/Jennifer Guigliano |
| 142 | 5/1/2009 | PSA Comments, Attachment Soil and Water-2: Revised Table 112W | WATER | Mike Flack |

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|--|-------------|--|----------------|-------------------------|
| 188 | 6/19/2009 | PDR Figure 1: Water Balance With On-Site Groundwater | WATER | Scott Stern/Dan Sampson |
| 202 | 6/19/2009 | PDR Attachment 5: Groundwater Mitigation Plan | WATER | Mike Flack |
| 203 | 6/19/2009 | PDR Attachment 6: Amendment to Report of Waste Discharge | WATER | Mike Flack |
| 216 | 7/20/2009 | Response to Request for Predictive Sensitivity Groundwater Analysis | WATER | Mike Flack |
| 225 | 9/11/2009 | Email Regarding Updated Construction Water Impacts Assessment | WATER | Mike Flack |
| 226 | 12/2/1997 | LADWP's Draft Initial Study/Proposed Negative Declaration SAMDA Water Exploration, Fremont Valley Ranch Water Management Project | WATER | Mike Flack |
| 227 | 4/1/2009 | Stetson Groundwater Report (CA City) | WATER | Mike Flack |
| 231 | 7/2/2009 | DWR Well Data | WATER | Mike Flack |
| 243 | | Declaration of Dan Sampson: Water | WATER | Dan Sampson |
| 274 | | Declaration of Jennifer Guigliano: Water | WATER | Jennifer Guigliano |
| 295 | | Declaration of Mike Flack: Water (1) | WATER | Mike Flack |
| 296 | | Declaration of Mike Flack: Water (2) | WATER | Mike Flack |
| 315 | | Declaration of Scott Stern: Water | WATER | Scott Stern |
| 335 | 3/9/2010 | Rebuttal Testimony of Michael Flack on Water Resources | WATER | Mike Flack |
| 336 | 3/9/2010 | Rebuttal Testimony of Scott Busa on Water Resources | WATER | Scott Busa |
| Worker Safety | | | | |
| 22 | 3/13/2008 | AFC Section 5.18: Worker Safety | WS | Mike Arvidson |
| 146 | 5/1/2009 | PSA Comments, Worker Safety and Fire Protection | WS | Duane McCloud |
| 183 | 6/19/2009 | PDR Section 4.2.7: Other Environmental Topic Areas | WS | Mike Arvidson |
| 228 | 5/1/2009 | PSA Comments, Attachment Worker Safety-1: Letter From Kern County Fire Dept. | WS | Jared Foster |
| 254 | | Declaration of Duane McCloud: Worker Safety | WS | Duane McCloud |
| 269 | | Declaration of Jared Foster: Worker Safety | WS | Jared Foster |
| 292 | | Declaration of Mike Arvidson: Worker Safety | WS | Mike Arvidson |
| Facility Design and Engineering | | | | |
| 26 | 3/13/2008 | AFC Appendix C.1: Civil Engineering Design Criteria | FD | Bob Anders |
| 27 | 3/13/2008 | AFC Appendix C.2: Mechanical Engineering Design Criteria | FD | Jared Foster |
| 28 | 3/13/2008 | AFC Appendix C.3: Control Engineering Design Criteria | FD | Jared Foster |

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|----------------|-------------|---|----------------|-----------------------------|
| 29 | 3/13/2008 | AFC Appendix C.4: Geologic and Foundation Design Criteria | FD | Bob Anders |
| 30 | 3/13/2008 | AFC Appendix C.5: Structural Engineering Design Criteria | FD | Bob Anders |
| 31 | 3/13/2008 | AFC Appendix C.6: Electrical Engineering Design Criteria | FD | Steve Richards |
| 95 | 12/12/2008 | Email from Kenny to Eric on Auxiliary Loads | FD | Kenny Stein |
| 98 | 12/22/2008 | Email from K. Stein Regarding Cut/Fill For Evaporation Ponds | FD | Kenny Stein |
| 101 | 1/13/2009 | Email from K. Stein Regarding Control Temperature for HTF Freeze Pro | FD | Kenny Stein |
| 147 | 5/1/2009 | PSA Comments, Engineering Assessment | FD | Duane McCloud |
| 149 | 5/1/2009 | PSA Comments, General Conditions | FD | Duane McCloud |
| 154 | 6/19/2009 | PDR, Section 1.0: Intro & Section 5.0: Conclusions | FD | Kenny Stein |
| 155 | 6/19/2009 | PDR, Section 2.1: Staff Suggested Changes | FD | Kenny Stein |
| 157 | 6/19/2009 | PDR Section 2.1.2: Water Treatment & Discharge Facilities | FD | Scott Stern/Dan Sampson |
| 158 | 6/19/2009 | PDR Section 2.1.3: Stormwater Retention and Erosion Control | FD | Bob Anders |
| 159 | 6/19/2009 | PDR Section 2.1.5: SCE Distribution Lines | FD | Scott Busa |
| 160 | 6/19/2009 | PDR Section 2.1.6: Land Treatment Unit | FD | Janine Forrest |
| 161 | 6/19/2009 | PDR Section 2.1.7: Site Layout Adjustments | FD | Jared Foster |
| 162 | 6/19/2009 | PDR Section 2.1.8: Telecommunications System | FD | Scott Busa |
| 165 | 6/19/2009 | PDR Section 2.2: Beacon Proposed Project Refinements | FD | Duane McCloud |
| 190 | 6/19/2009 | PDR Figure 3: Revised Site Layout | FD | Jared Foster |
| 191 | 6/19/2009 | PDR Figure 5: Revised Power Block Equipment Layout (with Propane) | FD | Jared Foster |
| 196 | 6/19/2009 | PDR Attachment 2: Evaporation Pond Calculations | FD | Jared Foster/Janine Forrest |
| 197 | 6/19/2009 | PDR Attachment 3: Storm Water Management-Conceptual Retention and Grading Study | FD | Bob Anders |
| 239 | | Declaration of Bob Anders: Facility Design | FD | Bob Anders |
| 244 | | Declaration of Dan Sampson: Facility Design | FD | Dan Sampson |
| 256 | | Declaration of Duane McCloud: Facility Design | FD | Duane McCloud |
| 264 | | Declaration of Janine Forest: Facility Design | FD | Janine Forrest |
| 270 | | Declaration of Jared Foster: Facility Design | FD | Jared Foster |
| 286 | | Declaration of Kenneth Stein: Facility Design | FD | Kenny Stein |
| 311 | | Declaration of Scott Busa: Facility Design | FD | Scott Busa |
| 316 | | Declaration of Scott Stern: Facility Design | FD | Scott Stern |

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| 319 | | Declaration of Steve Richards: Facility Design | FD | Steve Richards |
| Alternatives | | | | |
| 4 | 3/13/2008 | AFC Section 4.0: Alternatives | ALTS | Kenny Stein |
| 43 | 3/13/2008 | AFC Appendix K.1: Water Agencies Correspondence | ALTS | Jared Foster |
| 89 | 11/24/2008 | Email from Kenny to Eric on Alternative Layouts | ALTS | Kenny Stein |
| 100 | 1/13/2009 | Beacon Dry Cooling Evaluation | ALTS | Jared Foster/Gary Pratt |
| 121 | 4/8/2009 | PPSA Comments, Section IIIB: Alternatives | ALTS | Kenny Stein |
| 127 | 5/1/2009 | PSA Comments, Alternatives | ALTS | Kenny Stein |
| 153 | 6/3/2009 | Comments on CEC Groundwater Sampling Program | ALTS | Mike Flack |
| 166 | 6/19/2009 | PDR Section 3.1: Koehn Lake Alternative | ALTS | Mike Flack |
| 167 | 6/19/2009 | PDR Section 3.1.1: Water Treatment Facilities for Configuration 2 | ALTS | Scott Stern/Dan Sampson |
| 168 | 6/19/2009 | PDR Section 3.1.2: Evaporation Pond Size for Configuration 2 | ALTS | Janine Forrest |
| 169 | 6/19/2009 | PDR Section 3.2: Rosamond Waste Water Alternative | ALTS | Scott Busa |
| 184 | 6/19/2009 | PDR Section 4.3.1: Air Quality | ALTS | Sara Head |
| 185 | 6/19/2009 | PDR Section 4.3.5: Soil and Water Resources | ALTS | Mike Flack |
| 186 | 6/19/2009 | PDR Section 4.3.6: Traffic and Transportation | ALTS | Jared Foster |
| 187 | 6/19/2009 | PDR Section 4.3.7: Waste Management | ALTS | Jared Foster/Janine Forrest |
| 189 | 6/19/2009 | PDR Figure 2: Water Balance With High TDS Water | ALTS | Scott Stern/Dan Sampson |
| 193 | 6/19/2009 | PDR Figure 7: Water Supply Wells Located in the Koehn Sub-Basin | ALTS | Mike Flack |
| 221 | 8/11/2009 | Email to CEC Regarding Results of Offsite Well Sampling | ALTS | Mike Flack |
| 222 | 8/18/2009 | Email to CEC With Resubmittal of Revised Metals Results for Offsite Sampling | ALTS | Mike Flack |
| 224 | 8/30/2009 | Arciero Well Data (from J. Musick) | ALTS | Mike Flack |
| 229 | 6/21/2009 | CEC Well Canvas | ALTS | Mike Flack |
| 230 | 7/1/2009 | CEC Well Canvas Photos | ALTS | Mike Flack |
| 245 | | Declaration of Dan Sampson: Alternatives | ALTS | Dan Sampson |
| 258 | | Declaration of Gary Pratt: Alternatives | ALTS | Gary Pratt |
| 265 | | Declaration of Janine Forest: Alternatives | ALTS | Janine Forrest |
| 271 | | Declaration of Jared Foster: Alternatives | ALTS | Jared Foster |
| 287 | | Declaration of Kenneth Stein: Alternatives | ALTS | Kenny Stein |
| 297 | | Declaration of Mike Flack: Alternatives (1) | ALTS | Mike Flack |
| 298 | | Declaration of Mike Flack: Alternatives (2) | ALTS | Mike Flack |

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| 308 | | Declaration of Sara Head: Alternatives | ALTS | Sara Head |
| 314 | | Declaration of Scott Busa: Alternatives | ALTS | Scott Busa |
| 317 | | Declaration of Scott Stern: Alternatives | ALTS | Scott Stern |

ATTACHMENT C

Proposed Modifications to Biological Resources Conditions of Certification

BIOLOGICAL RESOURCES

DESERT TORTOISE RELOCATION PLAN, CLEARANCE SURVEYS AND EXCLUSION FENCING

BIO-9

The project owner shall undertake appropriate measures to manage construction at the plant site and linear facilities in a manner to avoid or minimize impacts to desert tortoise. Methods for clearance surveys, fence specifications and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the current USFWS guidelines, the Desert Tortoise Field Manual (USFWS 2009) (http://www.fws.gov/ventura/speciesinfo/protocols_guidelines) or more current guidance provided by CDFG and USFWS. The project owner shall also implement terms and conditions developed as part of the Habitat Conservation Plan process with USFWS. These measures include, but are not limited to, the following:

1. Fence Installation. Prior to construction-related ground disturbance activities, the entire plant site shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. Surveys shall be conducted by the Designated Biologist using techniques approved by the USFWS and CDFG. Biological Monitors may assist the Designated Biologist under his or her supervision. These surveys shall provide 100 percent coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. This fence line transect shall cover an area approximately ~~6090~~ feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. All desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined to assess occupancy of each burrow by desert tortoises and handled in accordance with USFWS-approved protocol.
 - a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed prior to the onset of site clearing and grubbing. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present.
 - b. Fence Material and Installation. Tortoise exclusionary fencing shall be installed per USFWS specifications (USFWS 2009).
 - c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises, including gates that would exclude public access to the transmission line maintenance road at SR 14. The gates shall remain closed except during vehicle passage and may be electronically activated to open and close immediately after vehicle(s) have entered or exited to prevent extended periods with open gates, which might lead to a tortoise entering. Cattle grating designed to safely exclude desert tortoise shall be installed at the gated entries to discourage tortoises from gaining entry.
 - d. Utility Corridor Fencing. Utility corridors and tower locations shall be temporarily fenced with tortoise exclusion fencing to prevent desert tortoise entry during construction. Alternatively, site mobilization activities, construction-related ground disturbance, grading, boring or trenching activities may occur at unfenced utility corridors and tower locations if the Designated Biologist is present at all times in the immediate vicinity of such activities.
 - e. Fence Inspections. Following installation of the desert tortoise exclusion fencing and any temporary fencing in the utility corridors, the fencing shall be regularly inspected. Permanent fencing shall be inspected monthly and during/following all major rainfall

events. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within two days of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing must be inspected weekly and, where drainages intersect the fencing, during and immediately following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the Designated Biologist shall inspect the utility corridor or tower site for tortoise.

2. Desert Tortoise Clearance Surveys. Following construction of the tortoise exclusionary fencing around the Plant Site, all fenced areas shall be cleared of tortoises by the Designated Biologist, who may be assisted by Biological Monitors under the supervision of the Designated Biologist. Clearance surveys shall adhere to the current USFWS clearance survey protocols described in the Desert Tortoise Field Manual (USFWS 2009).
3. Relocation for Desert Tortoise West of SR 14. If desert tortoises are detected during clearance surveys within the project impact area west of SR 14, the Designated Biologist shall move the tortoise the shortest possible distance, keeping it out of harm's way but still within its home range. Desert tortoise encountered during construction of any of the utility corridors shall be similarly treated in accordance with the Relocation Plan. Any relocation efforts shall be in accordance with techniques described in the *Guidelines for Handling Desert Tortoise during Construction Projects* (Desert Tortoise Council 1999) or more current guidance on the USFWS website.
4. Relocation/Translocation for Desert Tortoise East of SR-14. To address desert tortoise encountered during clearance surveys within the project impact area east of SR 14, the project owner shall develop and implement a desert tortoise Relocation/Translocation Plan. The Relocation/Translocation Plan shall be consistent with current USFWS approved guidelines (USFWS 2009), and shall be approved by Energy Commission staff in consultation with the USFWS and CDFG. The Relocation/Translocation Plan shall designate a relocation/translocation site as close as possible to the project impact area east of SR 14 that provides suitable conditions for long-term survival of the relocated/translocated desert tortoise.
5. Burrow Inspection. All potential desert tortoise burrows, including rodent burrows that may host juvenile tortoises, within the fenced area shall be searched for presence. In some cases, a fiber optic scope may be needed to determine presence or absence within a deep burrow. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined. Tortoises excavated from burrows shall be relocated/translocated to unoccupied natural or artificial burrows in accordance with procedures outlined in the Relocation/Translocation Plan and consistent with the most current USFWS guidelines (USFWS 2009).
6. Burrow Excavation. Burrows inhabited by tortoises shall be excavated by the Designated Biologist using hand tools, and then collapsed or blocked to prevent re-occupation. If excavated during May through July, the Designated Biologist shall search for desert tortoise nests/eggs. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the Designated Biologist in accordance with the USFWS-approved protocol (Desert Tortoise Council 1999) or more current guidance on the USFWS website.
7. Monitoring Following Clearing. Following desert tortoise clearance removal from the plant site, and relocation/translocation to a new site, heavy equipment shall be allowed to enter the project site to perform earth work such as clearing, grubbing, leveling, and trenching. A Designated Biologist, or Biological Monitor supervised by the Designated Biologist shall

be ~~on call onsite~~ during initial clearing and grading activities. Should a tortoise be discovered, it shall be relocated/translocated as described above in accordance with the Relocation Plan.

8. Reporting. The Designated Biologist shall record the following information for any desert tortoises handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled desert tortoise as described in the paragraph below. Desert tortoise moved from within project areas shall be marked for future identification as described in *current USFWS guidelines, the Desert Tortoise Field Manual (USFWS 2009)* (http://www.fws.gov/ventura/speciesinfo/protocols_guidelines) or more current guidance on the USFWS website. Digital photographs of the carapace, plastron, and fourth costal scute shall be taken. Scutes shall not be notched for identification.

Verification: Within 90 days prior to start of any pre-construction site mobilization activities, the project owner shall submit to Energy Commission Staff, USFWS and CDFG a draft Desert Tortoise Relocation/Translocation Plan. At least 60 days prior to start of any construction-related ground disturbance activities, the project owner shall provide the CPM with the final version of a Relocation/Translocation Plan that has been approved by Energy Commission staff in consultation with USFWS and CDFG. The CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Desert Tortoise Relocation/Translocation Plan must be made only after approval by the Energy Commission staff in consultation with USFWS and CDFG. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM-approved modifications to the Relocation/Translocation Plan.

Within 30 days after initiation of relocation/translocation activities, the Designated Biologist shall provide to the CPM for review and approval, a written report identifying which items of the Relocation /Translocation Plan have been completed, and a summary of all modifications to measures made during implementation.

Within 30 days of completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to the CPM, USFWS, and CDFG describing how each of the mitigation measures described above has been satisfied. The report shall include the desert tortoise survey results, capture and release locations of any relocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.

RATIONALE

Point No. 1 – The new USFWS requirement for 15-foot transects makes a survey area of 90 feet, centered on the fence alignment, burdensome without substantial benefit. A 60-foot survey area is adequate to detect the presence of species. In addition, a biologist must be onsite to monitor fence construction and subsequently for clearance surveys.

Point No. 7 – The requirement to have a designated biologist onsite at all times during construction within the DT exclusionary fence is overly burdensome for the construction period and does not acknowledge the purpose for installing the fencing and conducting clearance surveys for DT, MGS, and WBO, including collapsing of any burrows found onsite. Having a Designated Biologist on-call after fencing is a standard practice.

DESERT TORTOISE AND MOHAVE GROUND SQUIRREL COMPENSATORY MITIGATION

BIO-11 To fully mitigate for habitat loss and potential take of desert tortoise and Mohave ground squirrel, the project owner shall acquire, in fee or in easement, no less than 115 acres of land

suitable for these species and shall provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. If habitat disturbance exceeds that described in this analysis, the project owner shall be responsible for acquisition and management of additional compensation lands or additional funds required to compensate for any additional habitat disturbances. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. The acquisition and management of compensation lands shall include the following elements:

1. Selection Criteria for Compensation Lands. The compensation lands selected for acquisition shall:
 - a. be in the western Mojave Desert;
 - b. provide moderate to good quality habitat for Mohave ground squirrel and desert tortoise with capacity to improve in quality and value for these species;
 - c. be a contiguous block of land (preferably) or located so they result in a contiguous block of protected habitat;
 - d. be adjacent to, or in close proximity to, larger blocks of lands that are already protected such that there is connectivity between the acquired lands and the protected lands;
 - e. be connected to, or in close proximity to, lands for which there is reasonable evidence (for example, recent (<15 years) CNDDDB occurrences on or immediately adjacent to the proposed lands) suggesting current occupation by desert tortoise and Mohave ground squirrel, ideally with populations that are stable, recovering, or likely to recover;
 - f. not have a history of intensive recreational use, grazing, or other disturbance that might make habitat recovery and restoration infeasible;
 - g. not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration; and
 - h. not be encumbered by easements, subsurface rights, or uses that would preclude fencing of the site or preclude or unacceptably constrain management of the site for the primary benefit of the species and their habitat for which compensation lands were secured.
2. Review and Approval of Compensation Lands Prior to Acquisition. A minimum of three months prior to acquisition of the property, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, CDFG, and USFWS describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for desert tortoise and Mohave ground squirrel in relation to the criteria listed above. Approval from the CPM, in consultation with USFWS and CDFG,

shall be required for acquisition of all parcels comprising the 115.0 acres in advance of purchase.

3. Mitigation Security for Compensation Lands and Avoidance/Minimization Measures. The project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating construction-related ground disturbance project activities. If Security is provided, the project owner, or an approved third party, shall complete the proposed compensation lands acquisition within 12 months of the start of construction-related ground disturbance activities. The project owner shall also provide financial assurances to the CPM, with copies of the document(s) to CDFG and USFWS, to guarantee that an adequate level of funding is available to implement all impact avoidance, minimization, and compensation measures described in Conditions of Certification BIO-9 through BIO-12. Financial assurance shall be provided to the CPM in the form of an irrevocable letter of credit or another form of security ("Security") approved by the CPM, prior to initiating construction-related ground disturbance activities. If necessary to draw on these funds, such funds shall be used solely for implementation of the measures associated with the project.

Prior to initiation of ground disturbance, the Security shall be provided by the project owner and approved by the CPM, in consultation with CDFG, to ensure funding in the amount of \$529,000.00. These Security amounts were calculated as follows and may be revised upon completion of a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands:

- a. land acquisition costs for compensation lands, calculated at \$3,000/acre for 115 acres: \$345,000.00;
 - b. costs of enhancing compensation lands, calculated at \$250/acre for 115 acres: \$28,750; and
 - c. costs of establishing an endowment for long-term management of compensation lands, calculated at \$1,350/acre for 115 acres: \$155,250.
4. Compensation Lands Acquisition Conditions. The project owner shall comply with the following conditions relating to acquisition of compensation lands after the CPM, in consultation with CDFG and USFWS, has approved the proposed compensation lands and received Security, if any, as described above.
 - a. Preliminary Report: The project owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary documents for the proposed 115 acres. All documents conveying or conserving compensation lands and all conditions of title/easement are subject to a field review and approval by the CPM, in consultation with CDFG and USFWS, California Department of General Services and, if applicable, the Fish and Game Commission and/or the Wildlife Conservation Board.
 - b. Title/Conveyance: The project owner shall transfer fee title or a conservation easement to the 115 acres of compensation lands to CDFG under terms approved by CDFG. Alternatively, a non-profit organization qualified to manage compensation lands (pursuant to California Government Code section 65965) and approved by CDFG and the CPM may hold fee title or a conservation easement over the compensation lands. If the approved non-profit organization holds title, a conservation easement shall be recorded in favor of CDFG in a form approved by CDFG. If the approved non-profit holds a conservation easement, CDFG shall be named a third party beneficiary. If a Security is provided, the project owner or an

approved third party shall complete the proposed compensation lands acquisition within 12 months of the start of construction-related ground disturbance activities.

- c. Enhancement Fund. The project owner shall fund the initial protection and enhancement of the 115 acres by providing the enhancement funds to the CDFG. Alternatively, a non-profit organization may hold the enhancement funds if they are qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if they meet the approval of CDFG and the CPM. If CDFG takes fee title to the compensation lands, the enhancement fund must go to CDFG where it will be held in the special deposit fund established for the purpose of enhancing the compensation lands, pursuant to California Government Code section 16370.
- d. Endowment Fund. Prior to construction-related ground disturbance activities, the project owner shall provide to CDFG a capital endowment in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis that will be conducted for the 115 acres of compensation lands. Alternatively, a non-profit organization may hold the endowment fees if they are qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if they meet the approval of CDFG and the CPM. If CDFG takes fee title to the compensation lands, the endowment must go to CDFG, where it will be held in the special deposit fund established for the purpose of managing the compensation lands, pursuant to California Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation shall manage the endowment for CDFG and with CDFG guidance.
 - a. The project owner and the CPM shall ensure that an agreement is in place with the endowment holder/manager to ensure the following conditions:
 - Interest. Interest generated from the initial capital endowment shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action designed to protect or improve the habitat values of the compensation lands.
 - Withdrawal of Principal. The endowment principal shall not be drawn upon unless such withdrawal is deemed necessary by the CDFG or the approved third-party endowment manager to ensure the continued viability of the species on the 115 acres. If CDFG takes fee title to the compensation lands, monies received by CDFG pursuant to this provision shall be deposited in a special deposit fund established pursuant to Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation will manage the endowment for CDFG with CDFG guidance.
 - Pooling Endowment Funds. CDFG, or a CPM- and CDFG-approved non-profit organization qualified to hold endowments pursuant to California Government Code section 65965, may pool the endowment with other endowments for the operation, management, and protection of the 115 acres for local populations of desert tortoise and Mohave ground squirrel. However, for reporting purposes, the endowment fund must be tracked and reported individually.

- e. Reimbursement Fund: The project owner shall provide reimbursement to the CDFG or approved third party for reasonable expenses incurred during title, easement, and documentation review; expenses incurred from other state agency reviews; and overhead related to providing compensation lands.

The project owner is responsible for all compensation lands acquisition/easement costs, including but not limited to, title and document review costs, as well as expenses incurred from other state agency reviews and overhead related to providing compensation lands to CDFG or an approved third party; escrow fees or costs; environmental contaminants clearance; and other site clean up measures.

Verification: No less than 90 days prior to acquisition of the property, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, CDFG, and USFWS describing the parcel(s) intended for purchase.

Draft agreements to delegate compensation lands acquisition to CDFG or an approved third party and agreements to manage compensation lands shall be submitted to Energy Commission staff for review and approval (in consultation with CDFG) prior to compensation lands acquisition. Such agreements shall be mutually approved and executed at least 60 days prior to start of any construction related ground disturbance activities. The project owner shall provide written verification to the CPM that the compensation lands and/or conservation easements have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities, the project owner shall provide Security in accordance with this condition. Within 90 days after the compensation lands purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFG, for the compensation lands and associated funds.

Within 90 days after completion of project construction, the project owner shall provide to the CPM verification that disturbance to Mojave creosote scrub habitat west of State Route 14 did not exceed 5.0 acres, and that construction activities at the plant site and along the gas pipeline alignment did not result in impacts to Mojave creosote scrub habitat adjacent to work areas.

RATIONALE

Point No. C and D – The language was modified to allow CDFG flexibility to apply funds to a fee program, if established, for the purposes of enhancement and/or endowment. The revised language still requires the funding be applied to enhancement and endowment of the compensation lands.

DESERT TORTOISE AND MOHAVE GROUND SQUIRREL COMPLIANCE VERIFICATION

BIO-12 The project owner shall provide staff, CDFG, and USFWS with reasonable access to the project site and compensation lands under the control of the project owner and shall otherwise fully cooperate with the Energy Commission's efforts to verify the project owner's compliance with, or the effectiveness of, mitigation measures set forth in the conditions of certification. The project owner shall hold harmless the Designated Biologist, the Energy Commission and staff, and any other agencies with regulatory requirements addressed by the Energy Commission's sole permitting authority for any costs the project owner incurs in complying with the management measures, including stop work orders issued by the CPM or the Designated Biologist. The Designated Biologist shall do or supervise all of the following:

1. Notification. Notify the CPM, CDFG, and USFWS at least 14 calendar days before initiating construction-related ground disturbance activities. Immediately notify the CPM, CDFG, and USFWS in writing if the project owner is not in compliance with any conditions of certification, including but not limited to any actual or anticipated failure to implement mitigation measures within the time periods specified in the conditions of certification. CDFG shall be notified at their Central Region Headquarters Office, 1234 E.

Shaw Avenue, Fresno, CA 93710; (559) 243-4005. USFWS shall be notified at their Ventura office at 2493 Portola Road, Suite B, Ventura, CA 93003; (805) 644-1766

2. Monitoring During Grading. Remain on site daily while grubbing and grading are taking place outside of the desert tortoise exclusionary fenced areas to avoid or minimize take of listed species, to check for compliance with all impact avoidance and minimization measures, and to check all exclusion zones to ensure that signs, stakes, and fencing are intact and that human activities are restricted in these protected zones.
3. Fence Monitoring. During construction maintain and check desert tortoise exclusion fences on a daily basis to ensure the integrity of the fence is maintained. The Designated Biologist shall be present on site to monitor construction and determine fence placement during fence installation. During operation of the project fence inspections shall occur at least once per month throughout the life of the project, and more frequently after storms or other events that might affect the integrity and function of desert tortoise exclusion fences. Fence repairs shall occur within two days (48 hours) of detecting problems that affect the functioning of the desert tortoise exclusion fencing.
4. Monthly Compliance Inspections. Conduct compliance inspections at a minimum of once per month after clearing, grubbing, and grading are completed and submit a monthly compliance report to the CPM, USFWS and CDFG during construction, as required under COMPLIANCE-6. All observations of listed species and their sign shall be reported to the Designated Biologist for inclusion in the monthly compliance report as required under COMPLIANCE-6.
6. Final Listed Species Mitigation Report. No later than 45 days after initiation of project operation provide the CPM a Final Listed Species Mitigation Report that shall include, at a minimum: 1) a copy of the table in the BRMIMP with notes showing when each of the mitigation measures was implemented; 2) all available information about project-related incidental take of listed species; 3) information about other project impacts on the listed species; 4) construction dates; 5) an assessment of the effectiveness of conditions of certification in minimizing and compensating for project impacts; 6) recommendations on how mitigation measures might be changed to more effectively minimize and mitigate the impacts of future projects on the listed species; and 7) any other pertinent information, including the level of take of the listed species associated with the project.
7. Notification of Injured, Dead, or Relocated Listed Species. In the event of a sighting in an active construction area (e.g., with equipment, vehicles, or workers), injury, kill, or relocation of any listed species, the CPM, CDFG, and USFWS shall be notified immediately by phone. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species. Written follow-up notification via FAX or electronic communication shall be submitted to these agencies within two calendar days of the incident and include the following information as relevant:
 - a. Injured Desert Tortoise. If a desert tortoise is injured as a result of project-related activities during construction, the Designated Biologist shall immediately take it to a CDFG-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by the project owner. Following phone notification as required above, the CPM, CDFG, and USFWS shall determine the final disposition of the injured animal, if it recovers. Written notification shall include, at a minimum, the date, time, location, circumstances of the incident, and the name of the facility where the animal was taken.
 - b. Desert Tortoise/Mohave Ground Squirrel Fatality. If a desert tortoise or Mohave ground squirrel is killed by project-related activities during construction or operation,

or if a desert tortoise or Mohave ground squirrel is otherwise found dead, submit a written report with the same information as an injury report. These desert tortoises shall be salvaged according to guidelines described in *Salvaging Injured, Recently Dead, Ill, and Dying Wild, Free-Roaming Desert Tortoise* (Berry 2001). The project owner shall pay to have the desert tortoises transported and necropsied. The report shall include the date and time of the finding or incident.

8. **Stop Work Order.** The CPM may issue the project owner a written stop work order to suspend any activity related to the construction or operation of the project to prevent or remedy a violation of one or more conditions of certification (including but not limited to failure to comply with reporting, monitoring, or habitat acquisition obligations) or to prevent the illegal take of an endangered, threatened, or candidate species. The project owner shall comply with the stop work order immediately upon receipt thereof.

Verification: No later than two calendar days following the above-required notification of a sighting, kill, injury, or relocation of a listed species, the project owner shall deliver to the CPM, CDFG, and USFWS via FAX or electronic communication the written report from the Designated Biologist describing all reported incidents of the sighting, injury, kill, or relocation of a listed species, identifying who was notified and explaining when the incidents occurred. In the case of a sighting in an active construction area, the project owner shall, at the same time, submit a map (e.g., using Geographic Information Systems) depicting both the limits of construction and sighting location to the CPM, CDFG, and USFWS.

No later than January 31st of every year the BSEP facility is under construction or remains in operation the Designated Biologist shall provide the CPM, CDFG and USFWS an annual Listed Species Status Report, and a summary of desert tortoise exclusion fence inspections and repairs conducted in the course of the year. The Listed Species Status Report shall include, at a minimum: 1) a general description of the status of the project site and construction/operation activities, including actual or projected completion dates, if known; 2) a copy of the table in the BRMIMP with notes showing the current implementation status of each mitigation measure; 3) an assessment of the effectiveness of each completed or partially completed mitigation measure in minimizing and compensating for project impacts, and 4) recommendations on how effectiveness of mitigation measures might be improved. The annual Listed Species Status Report shall be **[INCOMPLETE SENTENCE]**

RATIONALE

Same issue as for BIO-9, No. 7. The requirement to have a designated biologist onsite at all times during construction within the DT exclusionary fence is overly burdensome for the construction period and does not acknowledge the purpose for installing the fencing and conducting clearance surveys for DT, MGS, and WBO, including collapsing of any burrows found onsite. Having a Designated Biologist on-call after fencing is a standard practice.

EVAPORATION POND NETTING AND MONITORING

BIO-14 The project owner shall cover the evaporation ponds prior to any discharge with 1.5-inch mesh netting designed to exclude birds and other wildlife from drinking or landing on the water of the ponds. Netting with mesh sizes other than 1.5-inches may be installed if approved by the CPM in consultation with CDFG and USFWS. The netted ponds shall be monitored regularly to verify that the netting remains intact, is fulfilling its function in excluding birds and other wildlife from the ponds, and does not pose an entanglement threat to birds and other wildlife. The ponds shall include a visual deterrent in addition to the netting, and the pond shall be designed such that the netting will never contact the water. Monitoring of the evaporation ponds shall include the following:

- The Designated Biologist or Biological Monitor shall regularly survey the ponds at least once per month starting with the first month of operation of the evaporation ponds. The

purpose of the surveys shall be to determine if the netted ponds are effective in excluding birds, if the nets pose an entrapment hazard to birds and wildlife, and to assess the structural integrity of the nets. Surveys shall be of sufficient duration and intensity to provide an accurate assessment of bird and wildlife use of the ponds during all seasons. Surveyors shall be experienced with bird identification and survey techniques. Operations staff at the BSEP site shall also report finding any dead birds or other wildlife at the evaporation ponds to the Designated Biologist within one day of the detection of the carcass. The Designated Biologists shall report any bird or other wildlife deaths or entanglements within two days of the discovery to the CPM, CDFG, and USFWS.

- If dead or entangled birds are detected, the Designated Biologist shall take immediate action to correct the source of mortality or entanglement. The Designated Biologist shall make immediate efforts to contact and consult the CPM, CDFG, and USFWS by phone and electronic communications prior to taking remedial action upon detection of the problem, but the inability to reach these parties shall not delay taking action that would, in the judgment of the Designated Biologist, prevent further mortality of birds or other wildlife at the evaporation ponds.
- If after 12 ~~consecutive~~ monthly site visits no significant bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist, monitoring can be reduced to quarterly visits, and with approval from the CPM, USFWS and CDFG, future surveys can be conducted by the Environmental Compliance Manager.
- If after 12 ~~consecutive~~ quarterly site visits no significant bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist, ~~and with approval from the CPM, USFWS and CDFG, future surveys can be conducted by the Environmental Compliance Manager and~~ the site visits can be reduced to two surveys per years, during spring and fall migration.

Verification: No less than 30 days prior to operation of the evaporation ponds the project owner shall provide to the CPM as-built drawings and photographs of the ponds indicating that the bird exclusion netting has been installed. For the first year of operation the Designated Biologist shall submit quarterly reports to the CPM, CDFG, and USFWS describing the dates, durations and results of site visits conducted at the evaporation ponds. Thereafter the Designated Biologist shall submit annual monitoring reports with this information. The quarterly and annual reports shall fully describe any bird or wildlife death or entanglements detected during the site visits or at any other time, and shall describe actions taken to remedy these problems. The annual report shall be submitted to the CPM, CDFG, and USFWS no later than January 31st of every year for the life of the project.

RATIONALE

Bullets 3 and 4 –With the netting installed, the DB should not be required to do surveys for the life of the project. That is overly burdensome without substantial benefit. The ECM should be able to identify if birds are trapped within the netting. If birds are trapped, information can be collected for identification.

BURROWING OWL IMPACT AVOIDANCE, MINIMIZATION, AND COMPENSATION MEASURES

BIO-17 The project owner shall implement the following measures to avoid and offset impacts to burrowing owls:

1. Pre-Construction Surveys. The Designated Biologist shall conduct pre-construction surveys for burrowing owls within the project site and along all linear facilities in accordance with CDFG guidelines (CDFG 1995). If burrowing owls are detected within the impact area or within 500 feet of any proposed construction activities, the Designated Biologist shall prepare a Burrowing Owl Monitoring and Mitigation Plan in consultation with CDFG, USFWS, and Energy Commission staff. This plan shall include detailed

measures to avoid and minimize impacts to burrowing owls in and near the construction areas and shall be consistent with CDFG guidance (CDFG 1995).

2. Artificial Burrow Installation. Prior to any ground-disturbing activities, the project owner shall install no less than four artificial burrows, or at least two burrows for each owl displaced by the project, in the proposed relocation area immediately north of the project site, a 6-acre area within the 14.39-acre parcel owned by Beacon Solar, LLC, (APN 469-14-011). Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG 1995). The Designated Biologist shall survey the site selected for artificial burrow construction to verify that such construction will not affect desert tortoise or Mohave ground squirrel. The design of the burrows shall be approved by the CPM in consultation with CDFG and USFWS.
3. Surveys of Relocation Area. The Designated Biologist shall survey the relocation area during the nesting season to assess use of the artificial burrows by owls using methods consistent with Phase II and Phase III Burrowing Owl Consortium Guideline protocols (CBOC 1993). Surveys shall start upon completion of artificial burrow construction and shall continue for a period of five years. ~~If survey results indicate burrowing owls are not nesting on the relocation area, remedial actions shall be developed and implemented in consultation with the CPM, CDFG and USFWS to correct conditions at the site that might be preventing owls from nesting there.~~
4. Protect and Manage 6-Acre Relocation Area. The project owner shall provide a mechanism to protect 6 acres of the 14.39-acre relocation area in perpetuity as habitat for burrowing owls, either in fee title, or as a permanent deed restriction. The project owners shall prepare a draft Burrowing Owl Relocation Area Management Plan for review and approval by the CPM in consultation with CDFG. The overall objective of the plan shall be to manage the 6-acre relocation parcel for the benefit of burrowing owls, with the specific goals of:
 - a. Maintaining the functionality of at least four artificial or natural burrows for the 5-year monitoring period; and
 - b. Minimizing the occurrence of weeds (species considered “moderate” or “high” threat to California wildlands as defined by CAL-IPC [2006] and noxious weeds rated “A” or “B” by the California Department of Food and Agriculture and any federal-rated pest plants [CDFA 2009]) at less than 10 percent cover of the shrub and herb layers.

The Burrowing Owl Relocation Area Management Plan shall include monitoring and maintenance requirements, details on methods for measuring compliance goals and remedial actions to be taken if management goals are not met.

5. Acquire 20 Acres of Burrowing Owl Habitat. In addition to protecting the 6 acre relocation area north of the project site, the project owner shall acquire, in fee or in easement, 20 acres of land suitable to support a resident population of burrowing owls and shall provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. Agreements to delegate land acquisition to CDFG or an approved third party and to manage compensation lands shall be implemented within 12 months of the Energy Commission’s License Decision.

- a. Burrowing Owl Compensation Lands Criteria. The terms and conditions of this acquisition or easement shall be as described in BIO-11, with the additional criteria to include: 1) the 20 acres of mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must be either capable of currently supporting burrowing owls or be no farther than 5 miles from an active burrowing owl nesting territory. The 20 acres of burrowing owl compensation lands may be included with the 115 acres of desert tortoise and Mohave ground squirrel compensation lands ONLY if these two burrowing owl criteria are met.
- b. Security. If the 20 acres of burrowing owl compensation land is separate from the 115 acres required for desert tortoise and Mohave ground squirrel compensation lands the project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating construction-related ground disturbance activities. Alternatively, financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating construction-related ground disturbance activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with CDFG, to ensure funding in an amount determined by a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands.

Verification: Within 60 days prior to start of any construction -related ground disturbance activities, the project owner shall submit to the CPM, CDFG and USFWS a draft Burrowing Owl Relocation Area Management Plan. Within 30 days prior to any construction-related ground disturbance activities on the project site the project owner shall submit to the CPM a final Burrowing Owl Relocation Area Management Plan that reflects review and approval by Energy Commission staff in consultation with CDFG and USFWS.

If pre-construction surveys detect burrowing owls within 500 feet of proposed construction activities, the Designated Biologist shall provide to CDFG, USFWS, and the CPM a Burrowing Owl Monitoring and Mitigation Plan at least 30 days prior to the start of any project-related site disturbance activities. The project owner shall report monthly to CDFG, USFWS, and the CPM for the duration of construction on the implementation of burrowing owl avoidance and minimization measures described in the Burrowing Owl Monitoring and Mitigation Plan. Within 30 days after completion of construction the project owner shall provide to the CDFG and CPM a written construction termination report identifying how mitigation measures described in the plan have been completed.

No less than 90 days prior to acquisition of compensation lands, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, and CDFG, and USFWS describing the 20-acre parcel intended for purchase. Prior to start of any construction-related ground disturbance activities the project owner shall provide written verification to the CPM that the 20 acres of compensation lands and/or conservation easements have been acquired and recorded in favor of the approved easement holder(s). Alternatively, before beginning construction-related ground disturbance activities, the project owner shall provide Security to the CPM in accordance with this condition. Within 90 days of the compensation land or easement purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFG, for the compensation lands and associated funds.

If the 20 acres of burrowing owl compensation land is separate from the 115 acres required for desert tortoise and Mohave ground squirrel compensation lands, the project owner shall fulfill the requirements described in BIO-11, including submittal of a formal acquisition proposal no less than 90 days prior to acquisition, and a management plan within 30 days after the compensation land purchase.

No later than January 31st of each year, commencing with the first year of construction and ending at the fifth year following initiation of construction, the Designated Biologist shall submit a report to the CPM, CDFG and USFWS describing survey results and remedial actions taken at the 6-acre burrowing owl relocation area. Thereafter no later than January 31st of each year the project is in operation the Designated Biologist shall provide to the CPM, CDFG and USFWS a report describing the results of monitoring and management of the 6-acre burrowing owl relocation area.

RATIONALE

Point No. 3 – The statement regarding success of the relocation area being based upon successful nesting in the burrows establishes an unreasonable criteria for success because WBO may be using other burrows within their home range, and they may use burrows for wintering but not nesting. The WBO population in the area also is not dense, which provides WBOs in the area with more opportunity to pick and choose amongst available burrows. Therefore the use of burrows in the relocation area – whether artificial or natural – is not a biologically appropriate measure of relocation success. Furthermore, the 6-acre conservation area is being provided for relocation and not for compensatory mitigation. An additional 20 acres of compensation lands are being acquired to fully mitigate impacts to WBO. In accordance with the 1993 CBOC Guidelines and CDFG 1995 Staff Report, WBO impacts are mitigated by the acquisition of offsite acreage at a rate commensurate with the number of pairs/individuals impacted and the quality of habitat acquired. The Project is proposing to acquire occupied habitat offsite to compensate for impacts to 2 pairs of WBO (based on survey data), based on 6.5 acres per pair, which is equivalent to a 13-acre compensatory mitigation requirement. The project is acquiring 20 acres for WBO, more than the amount required under the CBOC Guidelines and CDFG Staff Report.

STREAMBED IMPACT MINIMIZATION AND COMPENSATION MEASURES

BIO-18 The project owner shall compensate for permanent impacts to waters of the state by constructing a new channel that replicates the hydrological and biological functions of the impacted drainages, and shall establish a channel maintenance program. The channel created by the applicant shall: be designed to be geomorphologically equivalent to a typical desert wash system; maintain existing hydrological connections and levels of sediment transport; provide conditions that would support recruitment and maintenance of native vegetation, provide wildlife habitat, and maintain the biological functions and values of a natural desert wash ecosystem; be designed, constructed and maintained such that it would not create a movement barrier or hazard for desert tortoise or other wildlife, or be a source of invasive weeds. The project owner shall also implement Best Management Practices and other measures described below to protect jurisdictional waters of the State occurring along linear alignments. The project owner shall implement the following measures to compensate for impacts to waters of the state:

1. Submit Channel Design for Review: No later than 60 days prior to start of site mobilization, the project owner shall submit channel design and construction drawings for review and approval by the CPM in consultation with CDFG, as described in Soil&Water-5. The channel shall be designed such that it would remain accessible to desert tortoise and other wildlife at all times (i.e., all side slopes 3:1 or more gradual, with textured soil cement that would enhance traction for tortoise), and would promote a slightly aggradational (depositional) pattern of sediment deposition to allow for natural geomorphic processes;
2. Prepare a Desert Wash Revegetation Plan that follows the outline provided for rehabilitation plans described in Newton and Claassen (2003), *Appendix C: Sample*

Outline for a Rehabilitation Plan. The Desert Wash Revegetation Plan shall meet the following criteria at the end of the 10-year revegetation period¹:

- a. Establishment of at least 15 percent native desert wash shrub cover within the channel bottom (6.2 acres total within the 41.5-acre channel bottom, and under no circumstances less than 4.8 acres);
 - b. Establishment of at least 7 percent native desert wash shrub cover on each of the 11 channel reaches between drop structures;
 - c. Maintain percent cover of noxious weeds (defined as non-native species that pose a “moderate” or “high” threat to California wildlands as defined by CAL-IPC (2006) within the channel) below 2 percent within the channel bottom (less than 0.8 total within the 41.5-acre channel bottom);
3. Acquire Off-Site Desert Wash: If at the end of the 10-year revegetation period the success criteria defined in the Desert Wash Revegetation Plan have not been achieved, the project owner shall acquire, in fee or in easement, land that includes at least 16 acres of desert wash state jurisdictional waters and their immediate watershed. Prior to acquisition the applicant shall prepare an acquisition proposal for review and approval by Energy Commission staff and CDFG describing the 16 acres of state waters and the surrounding watershed, and shall ensure that the acquired parcel(s) include sufficient area to manage the lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-profit organization dedicated to Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and RWQCB prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. The terms and conditions of this acquisition or easement shall be as described in **BIO-11**, with the additional criteria that the desert wash mitigation lands: 1) include at least 16 acres of state jurisdictional waters; 2) be characterized by similar soil permeability and hydrological and biological functions as the impacted wash; and 3) be within the same watershed as the impacted wash.
4. Review and Approval of Compensation Lands Prior to Acquisition. A minimum of three months prior to acquisition of the compensation lands, the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase. This acquisition proposal shall include a description and delineation of waters of the state within the parcel(s); shall describe the immediate watershed in the vicinity of the drainage; and shall identify the area of lands surrounding the drainage needed to adequately manage the waters of the state to protect and enhance their biological functions and values. Approval from the CPM, in consultation with CDFG, shall be required for acquisition of all parcels comprising the compensation lands in advance of purchase.
5. Security for Implementation of Mitigation: A security in the form of an irrevocable letter of credit, pledged savings account, or certificate of deposit for the amount of all mitigation measures pursuant to this condition of certification shall be submitted to, and approved by, the CPM, in consultation with CDFG, prior to commencing project activities within waters of the state. The security shall be approved by the CPM, in consultation with CDFG’s legal advisors, prior to its execution, and shall allow the CPM at its discretion to recover funds immediately if the CPM, in consultation with CDFG, determines there has been a default. Security shall include an amount

¹ The 10-year revegetation period begins upon completion of construction of the new channel.

equal to the final cost estimate for implementation of the Desert Wash Revegetation Plan, as described above in item 2. In addition, security shall include the costs of purchasing sufficient land to ensure acquisition of a minimum of 16 acres of desert wash state jurisdictional waters.

Prior to initiation of ground disturbance, the security shall be approved by the CPM, in consultation with CDFG, to ensure funding for the required mitigation (onsite restoration or offsite acquisition). The amount of the security shall be based on the amount of the final estimated cost of implementing the Desert Wash Revegetation Plan over a 10 year period. The security deposit shall be no less than \$230,000, as estimated for the cost of sufficient acreage to ensure acquisition of 16 acres of desert wash state jurisdictional waters, should onsite mitigation not succeed. ~~in the amount of \$230,000 plus the final estimated cost of implementing the Desert Wash Revegetation Plan over a ten-year period. The security amounts shall include the costs of implementing the Desert Wash Revegetation Plan over a ten-year period, and the costs of acquisition of 50 acres that includes at least sufficient acreage to ensure acquisition and management of 16 acres of desert wash plus the immediate watershed and floodplain state jurisdictional waters. The required acreage may be less than 50 acres, and will depend on the area of adjacent watershed and floodplain needed to adequately protect and manage the 16 acres of waters of the state.~~ The minimum security amount is based on 50 acres, an estimated amount of acreage needed for acquisition of 16 acres of state jurisdictional waters. Security costs for land acquisition were calculated as follows and may be revised upon completion of a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands:

- land acquisition costs for compensation lands, calculated at \$3,000/acre for 50 acres: \$150,000;
 - costs of enhancing compensation lands, calculated at \$250/acre for 50 acres: \$12,500; and
 - costs of establishing an endowment for long-term management of compensation lands, calculated at \$1,350/acre for 50 acres: \$67,500.
7. Long-Term Monitoring and Management. Long-term monitoring and management of the channel shall begin at the end of the 10-year revegetation period and shall continue for the life of the project as described in SOIL&WATER-8, and shall occur regardless of the success or failure of the revegetation effort. The goals of the long-term monitoring shall be to:
- a. Maintain percent cover of noxious weeds (defined as non-native species that pose a “moderate” or “high” threat to California wildlands as defined by CAL-IPC (2006) within the channel) below 2 percent within the channel bottom (less than 0.8 total within the 41.5-acre channel bottom).
 - b. Maintain the channel as safe for desert tortoise and other wildlife. At no time shall the channel pose an entrapment hazard to desert tortoise and other wildlife. An entrapment hazard is defined as a depression, pit or trench with a depth of one foot or greater and a slope steeper than 3:1.

Inspections to assess percent weed cover within the channel shall be conducted by the Designated Biologist no less than once per year and only within the peak growing season for weedy annual herbs (February 1 through April 30th). Inspections to assess entrapment hazards for desert tortoise and other wildlife shall occur within 1 day of major storm events. The same remedial actions for managing weeds and entrapment hazards described in the Desert Wash Revegetation Plan shall be employed during the long-term monitoring. Entrapment hazards shall be corrected immediately upon detection.

8. Equipment Laydown Plan: The project owner shall develop a Storm Water Pollution Prevention Plan for construction activities that includes an engineered plan for the proposed equipment laydown area within the existing wash, as described in Soil&Water 3. This engineered plan shall describe protective structures, procedures for moving equipment, fuels and materials, and plan for conveyance of stormflows, during a rainfall event. Prior to initiation of any project activities in jurisdictional areas and no later than 60 days after publication of the Energy Commission Decision, the project owner shall submit this plan for review and approval by the CPM in consultation with CDFG.
9. Right of Access and Review for Compliance Monitoring: The CPM reserves the right to enter the project site and/or allow CDFG to enter the project site at any time to ensure compliance with these conditions. The project owner herein grants to the CPM and to CDFG employees and/or their representatives the right to enter the project site at any time, to ensure compliance with the terms and conditions and/or to determine the impacts of storm events, maintenance activities, or other actions that might affect the restoration and revegetation efforts. The CPM and CDFG may, at the CPM's discretion, review relevant documents maintained by the operator, interview the operator's employees and agents, inspect the work site, and take other actions to assess compliance with or effectiveness of mitigation measures.
12. Code of Regulations: The project owner shall provide a copy of the Energy Commission License Decision to all contractors, subcontractors, and the applicant's project supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel or personnel from another agency upon demand. The CPM reserves the right to issue a stop work order or allow CDFG to issue a stop work order after giving notice to the project owner and the CPM, if the CPM in consultation with CDFG, determines that the project owner has breached any of the terms or conditions or for other reasons, including but not limited to the following:
 - a. The information provided by the applicant regarding streambed alteration is incomplete or inaccurate;
 - b. New information becomes available that was not known to it in preparing the terms and conditions;
 - c. The project or project activities as described in the Final Staff Assessment have changed; or
 - d. The conditions affecting biological resources changed or the CPM, in consultation with CDFG, determines that project activities will result in a substantial adverse effect on the environment.
13. Construction Schedule: Pine Tree Creek and the unnamed desert wash shall not be altered until the new channel is constructed and deemed by the CPM ready to accept stormwater flows.
14. Best Management Practices: The applicant shall also comply with the following conditions:
 - a. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a lake or flowing stream or be placed in locations that may be subjected to high storm flows.
 - b. The project owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the operator to ensure compliance.

- c. Spoil sites shall not be located within a drainage or locations that may be subjected to high storm flows, where spoil shall be washed back into a drainage or lake.
- d. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage or lake, by project owner or any party working under contract or with the permission of the project owner shall be removed immediately.
- e. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the state.
- f. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.
- g. No equipment maintenance shall occur within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.

Verification: Within 90 days prior to any construction-related ground disturbance activities, the project owner shall submit to the CPM and CDFG a draft Desert Wash Revegetation Plan and a draft estimate of costs to fully implement the plan. Within 30 days prior to any construction-related ground disturbance activities within waters of the State, the project owner shall submit to the CPM a final Desert Wash Revegetation Plan and a final cost estimate for implementation of revegetation monitoring and management activities that reflects review and approval by Energy Commission staff in consultation with CDFG.

No later than 90 days prior to any construction-related ground disturbance activities, the project owner shall submit channel design and construction drawings for review and approval by the CPM in consultation with CDFG, as described in **Soil&Water-5**.

No fewer than 30 days prior to the start of any construction-related ground disturbance activities, the project owner shall implement the mitigation measures described above. No fewer than 30 days prior to the start of work potentially affecting jurisdictional waters of the state, the project owner shall provide written verification (i.e., through incorporation into the BRMIMP) to the CPM that the above best management practices will be implemented and provide a discussion of work in jurisdictional waters of the state in Compliance Reports for the duration of the project. Compliance reports shall be monthly for the first five years following completion of construction of the channel, and thereafter shall be submitted annually per COMPLIANCE-7

No less than 90 days prior to acquisition of the desert wash compensation acreage the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase.

The project owner shall notify the CPM and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional areas as noted and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM and CDFG of any change of conditions to the project, the jurisdictional impacts, or the mitigation efforts, if the conditions at the site of a proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed project. The notifying report shall be provided to the CPM and CDFG no later than seven days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical

characteristics of a project area; or the laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports.

- a. Biological Conditions: a change in biological conditions includes, but is not limited to, the following: 1) the presence of biological resources within or adjacent to the project area, whether native or non-native, not previously known to occur in the area; or 2) the presence of biological resources within or adjacent to the project area, whether native or non-native, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.
- b. Physical Conditions: a change in physical conditions includes, but is not limited to, the following: 1) a change in the morphology of a river, stream, or lake, such as the lowering of a bed or scouring of a bank, or changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime such as fluctuations in the timing or volume of water flows in a river or stream.
- c. Legal Conditions: a change in legal conditions includes, but is not limited to, a change in Regulations, Statutory Law, a Judicial or Court decision, or the listing of a species, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

After completion of the 10-year monitoring period for the Desert Wash Revegetation Plan, the project owner shall thereafter submit an annual report to the CPM and CDFG. The report shall describe the methods and results of the long term monitoring inspections for weed and entrapment hazards within the channel. The report also shall include a discussion of remedial actions taken, if any, and shall be submitted no later than January 31st of every year for the life of the project. If any entrapped animals/carcasses are detected CDFG and USFWS shall be notified in writing within 48 hours.

RATIONALE

Point No. 5 – The condition as written requires a security that includes separate funding for the offsite mitigation and the onsite revegetation of the rerouted wash. This requirement is excessive and does not reflect the actual method of security holding and expenditure. The security that is held is not used for the actual implementation of the onsite restoration (revegetation) and therefore should the onsite restoration not meet the established success criteria, the security would still be accessible to cover costs of offsite mitigation lands. The security is held as “collateral” for the project obligations. There are only two conditions under which the security would be used:

1. *The project applicant reroutes the wash but does not complete the project. In this case, the security may be used to complete the onsite revegetation/restoration of the wash.*
2. *The onsite mitigation is completed but is unsuccessful, and offsite mitigation therefore is required.*

ATTACHMENT D

Proposed Modifications to Cultural Resources Conditions of Certification

CULTURAL RESOURCES

The following provides modifications to the COCs for cultural resources to more effectively allow the compliance efforts to be completed within project constraints. With this approach some submittals have been combined to reduce the number of documents that require review and approval, time periods for some submittals have been compressed, and provisions of the monitoring efforts and site treatment have been rescaled. The rationales for the modifications are provided after each condition where a change is presented.

Requested Changes to the Conditions of Certification for Cultural Resources

Beacon's proposed changes to several Conditions are presented below.

CUL-1 *Cultural Resources Personnel.* Prior to the start of ground disturbance (includes "preconstruction site mobilization," "construction ground disturbance," and "construction grading, boring and trenching," as defined in the General Conditions for this project) the project owner shall obtain the services of a Cultural Resources Specialist (CRS) and one or more alternate CRSs, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation, and reporting activities required in accordance with the Conditions of Certification (Conditions). The CRS may elect to obtain the services of Cultural Resources Monitors (CRMs) and other technical specialists, if needed, to assist in monitoring, mitigation, and curation activities. The project owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be affected in an unanticipated manner. No ground disturbance shall occur prior to Compliance Project Manager (CPM) approval of the CRS and alternates, unless such activities are specifically approved by the CPM. Approval of a CRS may be denied or revoked for non-compliance on this or other projects.

CULTURAL RESOURCES SPECIALIST

The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 CFR Part 61). In addition, the CRS shall have the following qualifications:

1. The CRS's qualifications shall be appropriate to the needs of the project and shall include a background in anthropology, archaeology, history, architectural history, or a related field;
2. At least three years of archaeological or historical, as appropriate (per nature of predominant cultural resources on the project site), resource mitigation and field experience in California; and
3. At least one year of experience in a decision-making capacity on cultural resources projects in California and the appropriate training and experience to knowledgeably make recommendations regarding the significance of cultural resources.

The resumes of the CRS and alternate CRS shall include the names and telephone numbers of contacts familiar with the work of the CRS/alternate CRS on referenced projects and demonstrate to the satisfaction of the CPM that the CRS/alternate CRS has the appropriate training and experience to implement effectively the Conditions.

CULTURAL RESOURCES MONITORS

CRMs shall have the following qualifications:

1. a B.S. or B.A. degree in anthropology, archaeology, historical archaeology or a related field and one year experience monitoring in California; or
2. an A.S. or A.A. degree in anthropology, archaeology, historical archaeology or a related field, and four years experience monitoring in California; or
3. enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology or a related field, and two years of monitoring experience in California.

CULTURAL RESOURCES TECHNICAL SPECIALISTS

The resume(s) of any additional technical specialist(s), e.g., historical archaeologist, historian, architectural historian, and/or physical anthropologist, shall be submitted to the CPM for approval.

Verification

1. At least ~~412-180~~ days prior to the start of ground disturbance anywhere on the project site ~~30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, or at least 352 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is subject to construction related ground disturbance first~~, the project owner shall submit the resume for the CRS, and alternate(s) if desired, to the CPM for review and approval.
2. At least 10 days prior to a termination or release of the CRS, or within 10 days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the proposed new CRS the AFC and all cultural resources documents, field notes, photographs, and other cultural resources materials generated by the project. If there is no alternate CRS in place to conduct the duties of the CRS, a previously approved monitor may serve in place of a CRS so that construction-related ground disturbance may continue up to a maximum of 3 days without a CRS. If cultural resources are discovered then ground disturbance will remain halted until there is a CRS or alternate CRS to make a recommendation regarding significance.
3. At least 20 days prior to any construction-related ground disturbance, the CRS shall provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition.
4. At least 5 days prior to additional CRMs beginning on-site duties during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to their qualifications. If additional CRMs are obtained during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to the qualifications of the CRMs, at least 5 days prior to

the CRMs beginning on-site duties.

5. At least 10 days prior to any technical specialists beginning tasks, the resume(s) of the specialists shall be provided to the CPM for review and approval.
6. At least 7 days prior to the start of the preparation of the Historical Resources Management Plan (HRMP) (**CUL-4**), the project owner shall confirm in writing to the CPM that the approved CRS will be available for and is prepared to implement the cultural resources conditions.

RATIONALE

General - Consistency with General Conditions Definitions, page 7-1.

The requirement for submittal of the resume for the CRS prior to the start of ground disturbance is linked to preparation and implementation of a Historical Resources Management Plan (HRMP). The same cultural resources personnel will be conducting work on the two areas within the plant site identified by CEC staff (i.e., Archaeological Zone 1 and the area outside Archaeological Zone 1). To reduce the number of submittals only one resume submittal will be made for the CRS and alternate(s) to the CPM for review and approval. Assuming 60 days for preparation and approval of the HRMP and another 120 days to implement the field portion of data recovery, a reasonable preconstruction time period for identification of the CRS is 180 days. This schedule is dependent on project approval by the end of April 2010.

CUL-2 *Project Documentation for Cultural Resources Personnel.* Prior to the start of ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, if the CRS has not previously worked on the project, the project owner shall provide the CRS with copies of the AFC, data responses, confidential cultural resources reports, all supplements, and the Energy Commission's Final Staff Assessment (FSA) for the project. The project owner shall also provide the CRS and the CPM with maps and drawings showing the footprints of the power plant, all linear facility routes, all access roads, and all laydown areas. Maps shall include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1" = 200') for plotting cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. The CPM shall review map submittals and, in consultation with the CRS, approve those that are appropriate for use in cultural resources planning activities. No ground disturbance anywhere on the project site 30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site shall occur prior to CPM approval of maps and drawings, unless such activities are specifically approved by the CPM. If construction of the project would proceed in phases, maps and drawings not previously provided shall be submitted prior to the start of each construction phase. Written notification identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

Weekly, until ground disturbance is completed, the project construction manager shall

provide to the CRS and CPM a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification

1. At least ~~97-180~~ days prior to the start of ground disturbance anywhere on the project site ~~30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, and at least 367 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is subject to construction-related ground disturbance first~~, the project owner shall provide the AFC, data responses, confidential cultural resources documents, all supplements, and the Energy Commission's Final Staff Assessment (FSA) to the CRS, if needed, and the subject maps and drawings to the CRS and CPM. The CPM will review submittals in consultation with the CRS and approve maps and drawings suitable for cultural resources planning activities.
2. At least 15 days prior to the start of ground disturbance, if there are changes to any project-related footprint, the project owner shall provide revised maps and drawings for the changes to the CRS and CPM.
3. At least 15 days prior to the start of each phase of a phased project, the project owner shall submit the appropriate maps and drawings, if not previously provided, to the CRS and CPM.
4. Weekly, during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.
5. Within 5 days of changing the scheduling of phases of a phased project, the project owner shall provide written notice of the changes to the CRS and CPM.

RATIONALE

The provisional boundary of Archaeological Zone encompasses the northeastern corner of the project area as indicated on Figure 2. The requirement to provide the CRS with copies of the AFC, data responses, confidential cultural resources reports, all supplements, and the Energy Commission's Final Staff Assessment (FSA) for the project, along with maps and drawings showing the footprints of the power plant, all linear facility routes, all access roads, and all laydown areas is linked to preparation of a HRMP. The same cultural resources personnel will be conducting work on the two areas within the plant site identified by CEC staff (i.e., Archaeological Zone 1 and the area outside Archaeological Zone 1). To reduce the number of submittals one set of project data will be provided to the CRS. Assuming 60 days for preparation and approval of the HRMP and another 120 days to implement data recovery, a more reasonable preconstruction time period for the transfer of data is 180 days.

CUL-3 *Alteration of Project Area.* Changes to the proposed project or to the character of its construction, operation, and maintenance that may become necessary subsequent to the

approval of the project, were such approval to occur, may in turn require the re-consideration of the extent of the original project area. Where such changes indicate the need to alter the original project area to include additional lands that were not elements of analysis during the certification process, the effects of any proposed changes on historical resources that may be on such lands would need to be taken into account. Changes in the character of the construction, operation, and maintenance of the proposed project may include such actions as decisions to use non-commercial borrow sites or disposal sites. Upon the recognition that proposed changes to the project would require the use of lands that were not a part of the original project area, the project owner shall ensure that the CRS surveys any such lands for cultural resources and record each newly found resource on DPR 523 forms. Exceptions would be made to this protocol in cases where cultural resources surveys no greater than five years in age are documented for the entirety of the subject lands and approved by the CPM. Where new cultural resources surveys are warranted, the project owner shall convey the results of such surveys, along with the CRS's recommendations for further action, to the CPM, who will determine whether further action is necessary. If the CPM determines that historical resources may be present and that any such resource may be subject to a substantial adverse change in its significance, the project owner shall ensure that the CRS provides the CPM with substantiated recommendations on whether each such resource is eligible for listing in the CRHR and recommendations for the resolution of any such significant effects. The CRS, the project owner, and the CPM shall then confer on said recommendations, and, upon the concurrence of the CPM with those recommendations, the project owner shall ensure that the CRS proceeds to implement them, and reports on the methods and the results of any such work in the final Cultural Resources Report (CRR) (CUL-10).

Verification

1. Upon the recognition that proposed changes to the project or to the character of the construction, operation, and maintenance of the project would require the use of lands that were not a part of the original project area, the project owner shall notify the CRS and CPM. The project owner shall then provide, for CPM review and approval, documentation of any cultural resources surveys five years or less in age that exist for the additional lands.
2. At least ~~75~~ 60 days prior to the use of the new additional project area lands, in the absence of any such cultural resources surveys or when the extant cultural resources surveys do not cover the entirety of the lands to be added to the project area, the project owner shall ensure that the CRS surveys the additional lands for cultural resources, notifies the project owner and the CPM of the results of the new cultural resources survey, and recommends further action.
3. No more than 15 days subsequent to the receipt of the information in verification 2, CUL-3, above, the CPM shall determine whether historical resources may be present and whether any such resources may be subject to substantial adverse changes in significance.
4. At least ~~60~~ 30 days prior to the use of the new additional project area lands, if the CPM determines that historical resources may be subject to substantial adverse changes in significance, the project owner shall ensure that the CRS provides the CPM with substantiated evaluations, based on archival and field research, on whether each such resource is eligible for listing in the CRHR and

recommendations for the resolution of any potential significant effects.

5. For no longer than 15 days, the project owner, the CRS, and the CPM shall confer about the above evaluations and recommendations, and, upon the concurrence of the CPM with those evaluations and recommendations, the project owner shall ensure that the CRS proceeds to resolve any significant effects pursuant to the above recommendations prior to the use of the new additional project area lands.
6. The project owner shall ensure that the CRS reports on the methods and the results of all such work in the CRR (**CUL-10**).

RATIONALE

Additional project areas are anticipated to be small and avoidance of resources will be given a high priority. Based on this, the notification period can reasonably be moved closer to the start of ground disturbance.

CUL-4 *Historical Resources Management Plan.* The Historical Resources Management Plan (HRMP) shall govern the implementation of the overarching program to reduce the effects of the proposed project on historical resources to less than significant. The preparation and implementation of the different elements of the historical resources management program, by the project owner, shall be the result of a number of protocols and consultations set out in this condition of certification and others (**CUL-5** through **CUL-10**) below. Prior to the start of any construction-related ground disturbance (includes “preconstruction site mobilization,” “construction ground disturbance,” and “construction grading, boring and trenching,” as defined in the General Conditions for this project), the project owner shall submit the HRMP, as prepared by or under the direction of the CRS, to the CPM for review and approval. The HRMP shall follow the content and organization of a similar document, the Cultural Resources Monitoring and Mitigation Plan, a draft model version of which will be provided by the CPM, as general guidance. The authors’ name(s) shall appear on the title page of the HRMP. The HRMP shall also incorporate the final results of the January 2009 geoarchaeology study for the proposed project into the appropriate elements of the HRMP. Implementation of the HRMP shall be the responsibility of the CRS and the project owner. Copies of the HRMP shall reside with the CRS, alternate CRS, each CRM, and the project owner’s on-site construction manager. No ground disturbance shall occur prior to CPM approval of the HRMP, unless such activities are specifically approved by the CPM.

The HRMP shall include, but not be limited to, the following elements:

Primacy of the Conditions of Certification

1. The statement in the introduction to the HRMP that “any discussion, summary, or paraphrasing of the Conditions of Certification in this HRMP is intended as general guidance and as an aid to the user in understanding the conditions and their implementation. The conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the conditions in the HRMP. The Cultural Resources Conditions of Certification from the Commission Decision are

contained in Appendix A.”

Implementation of the Historical Resources Management Program

2. Specification of the implementation sequence and the estimated time frames needed to accomplish all historical resources management program tasks prior to and during construction_-related ground disturbance, and during those analysis phases of the management program that may occur subsequent to construction_-related ground disturbance.
3. Identification of the person(s) expected to perform each of the historical resources management program tasks, their responsibilities, and the reporting relationships between project construction management and the treatment and monitoring teams.
4. A statement from the project owner that the CRS shall have, for the duration of construction_-related ground disturbance, access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resource materials that are found during such ground disturbance, where such materials cannot be treated prescriptively.

Historical Resources Management Program Research Design

5. A project area-specific research design that includes a discussion of archaeological research questions and testable hypotheses appropriate to the archaeological data sets known for the project area. The research design shall provide the broader context for and facilitate tiering down to the research design that the project owner shall prepare, pursuant to **CUL6**, for Archaeological Zone 1. The project area research design shall clearly articulate why it is in the public interest to address the research questions that it poses. That research design shall also develop a discussion of artifact and ecofact collection, retention, and disposal policies as related to the research questions in the research design.

Documentation and Curation Standards

6. A statement that all found cultural resources over 50 years old shall be recorded on Department of Parks and Recreation (DPR) 523 Series forms, and mapped and photographed. In addition, all artifacts and ecofacts retained as a result of the archaeological investigations (survey, testing, and data recovery) shall be curated in accordance with the California State Historical Resources Commission’s *Guidelines for the Curation of Archaeological Collections*, into a retrievable storage collection in a public repository or museum.
7. A statement that the project owner shall pay all curation fees for artifacts and ecofacts recovered and for related documentation produced during cultural resources investigations conducted for the project. The project owner shall identify three possible curation facilities that could accept cultural resources materials resulting from project activities.
8. A description of the contents, the format, and the review and approval process for the CRR (**CUL-10**), which shall be prepared according to ARMR guidelines (COHP 1990).

Native American Participation

9. A description of the roles which Native American observers or monitors shall play in the implementation of the HRMP, including the procedures that shall govern the selection of such observers and monitors, and the authority and responsibility of each role.

Treatment and Management of Historical Resources

10. A protocol that articulates, pursuant to **CUL-5**, the avoidance measures that the project owner shall implement to preserve archaeological site Site 17. **CUL-5** sets out the structure and the details of the avoidance measures. If the applicant determines that it is not feasible to avoid Site 17, the applicant shall notify the CPM of that determination and prepare a treatment plan for the site that will be subject to review and approval by the CPM. The purpose of the treatment plan will be to reduce the effects of the proposed project on the historical resource to less than significant through a program of data recovery, in addition to, as appropriate, resource registration or public outreach.
11. A treatment plan for Archaeological Zone 1, pursuant to **CUL-6**, the purpose of which is to reduce the effects of the proposed project on the historical resource to less than significant through a program of data recovery, resource registration, and public outreach. The structure and the details of the program are set out in **CUL-6**.

Construction Monitoring and Discovery

12. A Worker Environmental Awareness Program (WEAP) to guide the orientation of every new worker in the project area to cultural resources statutes and regulations, to the effects of the proposed project on cultural resources, to the management program that has been negotiated to address those effects, to the role of the workers in the management program, to the types of cultural resources in the project area and how to recognize them, and to the protocols that workers are to follow upon the discovery of different types of cultural resources. The structure and the details of the WEAP program are set out in **CUL-7**.
13. A description of the structure, and the review and approval process for the Monitoring and Discovery Plan (**CUL-8** and **CUL-9**).
14. Prescriptive treatment plans, where appropriate, for cultural resources that represent marginal data sets (**CUL-9**).

Verification

1. Prior to the preparation of the HRMP, the project owner shall submit the final technical report for the January 2009 geoarchaeology study for the proposed project to the CPM for review and approval.
2. Upon approval of the CRS proposed by the project owner, the CPM shall provide to the project owner, as general guidance, an electronic copy of the draft model Cultural Resources Monitoring and Mitigation Plan for the use of the CRS.
3. At least ~~30~~ **150** days prior to the start of ground disturbance anywhere on the project site ~~30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions~~

~~of the project area beyond the project site, and at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is subject to construction related ground disturbance first,~~ the project owner shall submit the HRMP to the CPM for review and approval.

4. At least 30 days prior to the start of ground disturbance anywhere on the project site ~~30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, and at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, whichever portion of the project area is subject to construction related ground disturbance first,~~ a letter shall be provided to the CPM indicating that the project owner agrees to pay curation fees for any materials collected as a result of the archaeological investigations (survey, monitoring, testing, data recovery).

RATIONALE

General - Consistency with General Conditions Definitions, page 7-1.

To allow time for a review period and 120 days for implementation, the HRMP and Treatment Plan should be submitted well in advance of the fieldwork. A distinction between Archaeological Zone I and other portions of the project area is not needed for compliance documents. The need for a commitment to curate cultural materials collected during archaeological investigations is linked to implementation of the HRMP. Such a commitment could reasonably be provided 30 days prior to start of ground disturbance.

CUL-5 *Historical Resource Avoidance Measures, Site 17.* The project owner shall direct the CRS to actively implement a sequence of avoidance measures to ensure that there would be no physical damage to Site 17 as a result of the construction, operation, or maintenance of the project. Prior to the onset of any construction-related ground disturbance in the southwestern portion of the project site, the CRS shall re-establish the known boundary of Site 17, add a 10-meter wide buffer around the periphery of that boundary, and flag the boundary around the site and the buffer in a conspicuous manner. The CRS, alternate CRS, or a CRM would subsequently enforce the avoidance of the flagged area during project construction.

The CRS would, subsequent to the construction of the project, permanently mark the boundary around Site 17 and the above buffer, and then set the bounded area aside as an environmentally sensitive area that would not be subject to disturbance during the life of the project. The character of the permanent marking shall be decided on the basis of consultation and consensus among the property owner, the CRS, and the CPM. If avoidance of Site 17 is not feasible, a treatment plan for Site 17 will be prepared in accordance with Subpart 10 of CUL-4.

Verification

1. At least 30 days prior to the onset of construction-related ground disturbance in the SE 1/4 of

section 8, T. 31 S., R. 37 E., the CRS shall re-establish the known boundary of Site 17, add a 10-meter wide buffer around the periphery of that boundary, and flag the boundary around the site and the buffer in a conspicuous manner.

2. The CRS, alternate CRS, or a CRM shall enforce the avoidance of the above flagged area for the duration of construction-related ground disturbance.
3. No longer than 30 days subsequent to the conclusion of construction-related ground disturbance in the SE 1/4 of section 8, T. 31 S., R. 37 E., the CRS shall permanently mark the boundary around Site 17 and the above buffer. The area so marked shall then be an environmentally sensitive area that shall not be subject to any disturbance during the life of the project. The CRS shall continue to enforce the avoidance of the originally flagged area until the area has been permanently marked.
4. The CRS shall ensure that the measures and verifications of this condition of certification are, pursuant to subpart 10, **CUL-4**, completely incorporated as a protocol in the HRMP.

RATIONALE

General - Consistency with General Conditions Definitions, page 7-1.

To address other environmental issues the loop area for the rerouted wash has been reconfigured. The loops now are located very close to Site 17. If it is not feasible to avoid Site 17, treatment in the form of data recovery will be needed.

CUL-6 *Archaeological Zone 1 Historical Resource Treatment Plan.* The project owner shall prepare and implement a treatment plan the purpose of which is to reduce the effects of the proposed project on Archaeological Zone 1 to less than significant. The treatment plan shall accomplish the reduction of effects through a program of data recovery, resource registration, and public outreach. Prior to the onset of any construction-related ground disturbance within 30 meters of the provisional boundary for Archaeological Zone 1, the project owner shall prepare, secure the approval of the CPM for, and conclude the field investigation portions of the Archaeological Zone 1 Historical Resource Treatment Plan (HRTP). The HRTP shall, at a minimum, include and set out the details of each of the following elements:

1. *Research Design.* A research design specific to Archaeological Zone 1 that tiers off of the research design for the project area in the HRMP (Subpart 5, **CUL-4**) and that clearly articulates why it is in the public interest to address the research questions that it poses. The research design shall evidence consideration of archaeological themes that relate to the identity and the lifeways of Native American groups in the prehistoric and historic periods.
2. *Data Recovery Program.* Thorough descriptions of the overall goals of the data recovery program, how the data sets that are anticipated for Archaeological Zone 1 will contribute to our knowledge of the prehistoric and historic period Native American themes of the research design and answer particular research questions, of the purposes and the methods of the different field phases of the data recovery program, and of the purposes and methods of the material

analyses that will also occur. The descriptions of the field and laboratory efforts for the data recovery program shall include, at a minimum, and more thoroughly articulate the following phases:

- a. *Inventory, Phase 1 (Geophysical Test)*. The initial component of the data recovery program shall be a discontinuous 1-acre test of the efficacy of the use of magnetometry to derive a representative sample of the predominant type of archaeological deposits that are now thought to make up Archaeological Zone 1, fire features or hearths that occur both as feature clusters and as isolate features and that may or may not occur in association with fire-affected rock. The test shall include a small magnetometer survey through and in the near vicinity of (approximately 30 meters beyond) known archaeological sites in Archaeological Zone 1, and the subsequent ground truthing of a representative sample of the magnetic anomalies found in the survey areas for the test. The ground truthing sample shall, at a minimum, be the lesser of 25 percent of the anomalies or 12 individual anomalies. The excavation of the anomalies may, at the discretion of the CRS, be by hand or mechanical means. The CRS shall ensure that the field notes and the forms for the survey areas and for the ground truthing are sufficient to completely document the geophysical test.

- b. *Inventory, Phase 2a (Geophysical Survey)*. If the CRS and CPM agree, after consultation, that the geophysical test demonstrates that the use of magnetometry appears to be reasonably reliable, the project owner shall ensure that the CRS proceeds to a broader magnetometry sample survey of Archaeological Zone 1 and of the area 30 meters to the southwest of the provisional district boundary (Cultural Resources Figure 2). The CRS and CPM shall first derive and agree upon, in consultation with one another, the precise location of the provisional district boundary on the surface of the project site. The project owner shall then ensure that the CRS develops a single stratified random sample for Archaeological Zone 1 and the adjacent area 30 meters to the southwest of the provisional district boundary that would result in a magnetometry survey of ~~a minimum of 10~~ no more than 5 percent of that total area not to exceed 27 acres. The CRS and the CPM shall, in consultation, derive and agree upon criteria that shall form the basis for the stratification of the survey sample. The criteria shall reflect the spatial variability in the physical and material character and in the chronology of Archaeological Zone 1, as such variability is presently known from the field investigations in the project area. The results of the broader magnetometry survey would also be subject to the ground truthing of a representative sample of the magnetic anomalies found in the survey areas to more precisely establish the range of error of the survey results. The ground truthing sample shall, at a minimum, be the lesser of 10 percent of the anomalies or 48 individual anomalies. The excavation of the anomalies may, at the discretion of the CRS, be by hand or mechanical means. The project owner shall ensure that the CRS's field notes and the forms for the survey

areas and for the ground truthing are sufficient to completely document the geophysical survey to the satisfaction of the CPM.

- c. *Inventory, Phase 2b (Mechanical Subsurface Survey)*. Should the results of the initial geophysical test demonstrate that the use of magnetometry is not reasonably well able to locate the types of archaeological deposits that make up Archaeological Zone 1, the applicant would conduct a broader subsurface sample survey of the Zone using construction equipment such as a road grader or a backhoe rather than proceeding with the broader geophysical survey. This mechanical subsurface survey would employ transects, the proposed width and length of which the CPM would approve, and would involve the excavation of the transects in thin (no thicker than approximately 5 centimeters) layers to carefully expose and facilitate the accurate preliminary documentation of target archaeological deposits. The project owner shall ensure that the CRS, with CPM concurrence, derives criteria to form the basis for the stratification of the survey sample and develops a single stratified random sample for the Zone and the adjacent area to the southwest that would result in the mechanical subsurface survey of no more than 2.5 percent of that total area not to exceed 14 acres. The criteria shall reflect the spatial variability in the physical and material character and in the chronology of Archaeological Zone 1, as such variability is presently known from the field investigations in the project area. The project owner shall submit, for CPM review and approval, the CRS's methodology for the mechanical subsurface survey. The methodology would prescribe how archaeological deposits found during the survey would be preserved intact until the conclusion of the survey so that the CRS could structure a representative data recovery sample of the found deposits. The methodology would also take into account how the CRS would recover a sample of the buried land surfaces that may surround individual hearths or groups of hearths and document the material culture assemblages that may be found on such surfaces when the act of the mechanical exposure of the hearths may often truncate the surface from which they were constructed and used. The project owner shall ensure that the CRS's field notes and the forms for the survey areas are sufficient to completely document the mechanical subsurface survey to the satisfaction of the CPM.
- d. *Inventory, Phase 3 (Refinement of Provisional District Boundary)*. The project owner shall ensure that the CRS, on the basis of the results of either phase 2a or phase 2b of the data recovery program, drafts a refined provisional boundary for Archaeological Zone 1 that shall become an integral part of the implementation of, among other conditions of certification, **CUL-8** and subparts 2e and 2f of this condition, **CUL-6**.
- e. *Data Recovery, Phase 1 (Hearth Excavations)*. One component of the actual data recovery phase of the data recovery program would be to excavate small (approximately 1–~~3~~2 meters square) exposures to uncover

and document a sample of the individual hearths that are one constituent of the Zone. The purpose of this documentation would be to gather data to describe the physical variability of the features, to identify and inventory the artifacts and ecofacts that are found in them, and to interpret the methods of construction and the potential uses of the features. The excavation of the hearths shall proceed by hand to, where feasible, remove the archaeological deposits in anthropogenic layers. Where appropriate, the project owner shall ensure that the CRS retain samples of each layer sufficient to submit for radiocarbon assays, and macrobotanical, palynological, geochemical, or other analyses. The balance of each layer shall be screened through hardware cloth of no greater than 1/8-inch mesh. The project owner shall ensure that the CRS excavates a maximum of 12 such small exposures. In consultation, the CRS and the CPM shall develop and agree upon a sample of the hearths found as a result of the entire cumulative effort to inventory the archaeological deposits of Archaeological Zone 1 to subject to data recovery excavation. The sample shall reflect the apparent physical, material, and chronological variability of the found features. The project owner shall ensure that the CRS's field notes and the forms for the excavation of the hearths are sufficient to acquire the thorough complement of data necessary to the description of each feature, and the interpretation of the construction and use of each feature to the satisfaction of the CPM.

- f. *Data Recovery, Phase 2 (Excavation of Former Land Surfaces)*. The other component of the actual data recovery phase of the data recovery program would be to excavate larger (~~5-3~~ meters square) block exposures to attempt to uncover a sample of the buried land surfaces that may surround individual hearths or groups of them, and to document the material culture assemblages that may be found on such surfaces. If such surfaces are identified, the area of excavation can be expanded to a maximum of 5 meters square. The excavation of the surfaces shall proceed by hand to, where feasible, remove the archaeological deposits in anthropogenic layers. Where appropriate, the project owner shall ensure that the CRS retain samples of each layer sufficient to submit for radiocarbon assays, and macrobotanical, palynological, geochemical, or other analyses. The balance of each layer shall be screened through hardware cloth of no greater than 1/8-inch mesh. The CRS shall try to excavate each block exposure as a single excavation unit rather than as separate one meter square excavation units. The project owner shall ensure that the CRS excavate a maximum of 4 block exposures or excavation blocks, ~~where intact buried land surfaces are found in each excavation block. The CRS shall excavate a maximum of 8 block exposures, where intact buried land surfaces are not found in at least four of the blocks excavated.~~ In consultation, the CRS and the CPM shall develop and agree upon a sample of the buried surfaces that would be subject to excavation. The sample shall reflect the apparent physical, material, and chronological variability of the hearth features around which

the buried surfaces may be found. The project owner shall ensure that the CRS's field notes and the forms for the excavation of the surfaces are sufficient to acquire the thorough complement of data necessary to the description of the distributions of artifacts and ecofacts across each surface, and the interpretation of the use of each surface, to the satisfaction of the CPM.

g. *Material Analyses.* The project owner shall ensure that the H RTP articulates the anticipated scope of the analyses of the cumulative artifact and ecofact collections that have been and will be the result of the investigations of Archaeological Zone 1, articulates the analytic methods to be used, and articulates how the data sets that such analyses will produce are relevant to the themes and questions in the research design for the Zone.

h. *Report Preparation.* The project owner shall ensure that the H RTP states that a conclusory report is one of the requirements of the data recovery program, and also articulates the outline of, and the production schedule and approval process for the subject report.

3. *California Register of Historical Resources Registration.* The project owner shall prepare a California Register of Historical Resources nomination for Archaeological Zone 1 and submit the nomination to the State Historic Resources Commission for formal consideration. The project owner shall ensure that the CRS, as a part of the registration effort, derives a permanent district name for the Zone to replace the temporary designation of "Archaeological Zone 1." The CRS shall also ensure that the nomination reflects a final formal boundary for the district, a boundary that the CRS shall derive on the basis of the results of the data recovery program and present in the conclusory report for that program.

4. *Outreach Initiatives*

a. *Professional Outreach.* The project owner shall prepare a research paper and present it at a professional conference, or prepare and publish a peer-reviewed journal article to inform the professional archaeological community about Archaeological Zone 1 and to interpret its implications for our understanding of the prehistory and early history of Native American life in the region.

b. *Public Outreach.* The project owner shall prepare and present materials that interpret Archaeological Zone 1 for the public. Potential public interpretation efforts may include the preparation of an instructional module for use in local school districts, or the preparation of a display for existing public interpretation venues such as Red Rock Canyon State Park.

Verification

1. **At least 210 days p** Prior to the onset of construction-related ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, the project owner shall ensure that the CRS completes the geophysical test referred to in subpart 2a, **CUL-6**, above, and as set out in the H RTP component of the HRMP (**CUL-4**), and submit, for the review and approval of the CPM, a formal assessment of the reliability of the use of magnetometry to locate buried hearths in the Zone. If the geophysical test demonstrates that the

use of magnetometry appears to be reasonably reliable in this regard, then the project owner shall also submit, for the review and approval of the CPM, the precise geographic coordinates of the provisional boundary of Archaeological Zone 1 and a stratified random sample for a broader magnetometry survey of ~~40~~ 5 percent of Archaeological Zone 1 and of the area 30 meters to the southwest of the provisional district boundary. If the geophysical test demonstrates that the use of magnetometry does not appear to be reasonably reliable, then the project owner shall submit, for the review and approval of the CPM, a stratified random sample for a mechanical subsurface survey of 2.5 percent of Archaeological Zone 1 and of the area 30 meters to the southwest of the provisional district boundary.

2. ~~At least 105 days p~~ Prior to the onset of construction_-related ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone, the project owner shall ensure that the CRS completes the formal inventory of that area under, as appropriate, subparts 2b or 2c, **CUL-6** and submits, for the review and approval of the CPM, a preliminary report, prepared by or under the direction of the CRS, of the results of the formal inventory, the precise geographic coordinates of the refined provisional district boundary (subpart 2d, **CUL6**), and separate samples for the data recovery excavation of a finite number of the hearths found in Archaeological Zone 1 (subpart 2e, **CUL-6**) and of a finite number of block exposures to reveal intact buried land surfaces there (subpart 2f, **CUL-6**). The project owner shall ensure that the preliminary report is a concise document that provides descriptions of the schedule and methods of the inventory field effort, a preliminary tally of the numbers and, where feasible, the types of archaeological deposits that were found, a discussion of the potential range of error in that tally, and a map of the locations of the found archaeological deposits that has topographic contours and the project site landform designations as overlays. The results of the formal inventory, as set out in the preliminary report, shall be the basis for the refinement of the provisional district boundary. The project owner shall ensure that the CRS then derives the samples for the hearths and the buried land surface block exposures relative to the refined provisional district boundary.
3. ~~At least 30 days p~~ Prior to the onset of construction_-related ground disturbance anywhere to the northeast of the refined provisional boundary for Archaeological Zone 1, subsequent to the CPM's approval of said boundary, the project owner shall ensure that the CRS completes the data recovery phases of the data recovery program (subparts 2e and 2f, **CUL-6**) and submits, for the review and approval of the CPM, a preliminary report of the results of those phases. The preliminary report shall be a concise document that provides descriptions of the schedule and methods of the data recovery effort, technical descriptions of excavated archaeological features and buried land surfaces that, while draft in format, present the highest resolution of technical data that can be derived from the data recovery field notes, plan and, as appropriate, profile drawings and photographs of excavated archaeological features and buried land surfaces, and technical descriptions and appropriate graphics of the stratigraphic contexts of excavated archaeological features and buried land surfaces. No construction_-related ground disturbance shall occur to the northeast of the refined provisional boundary for Archaeological Zone 1 prior to the project owner's receipt, in writing, of the CPM's approval of the preliminary data recovery report.
4. No longer than 180 days subsequent to the CPM's approval of the preliminary data recovery report, the project owner shall ensure that the CRS completes the requisite material analyses for, prepare, and submits, for the approval of the CPM, the conclusory report for the data recovery

program (subpart 2h, **CUL-6**).

5. No longer than 240 days subsequent to the CPM's approval of the preliminary data recovery report, the project owner shall ensure that the CRS completes the preparation of the California Register of Historical Resources nomination for Archaeological Zone 1 and submits the nomination to the State Historic Resources Commission for formal consideration (subpart 3, **CUL-6**). The nomination shall reflect the formal district boundary that shall be one result of the implementation of the data recovery program, as presented in the conclusory report for that program.
6. No longer than 240 days subsequent to the CPM's approval of the preliminary data recovery report, the project owner shall ensure that the CRS completes requirements of subpart 4a, **CUL-6** and provides the CPM with three copies of the final product of that effort, and prepares, and submits for the approval of the CPM, a product that fulfills the requirements of subpart 4b, **CUL-6**. Upon the CPM's approval of the latter product, the project owner shall ensure, as appropriate, the product's installation, implementation, or display.

RATIONALE

General - Consistency with General Conditions Definitions, page 7-1.

Magnetometry is labor intensive and expensive. As currently proposed the area of study (Archaeological Zone 1) could be up to 50 acres. One to two days per acre for field time and the same for post-processing and analysis equate to 100 to 200 days of investigation, prior to initiating excavations for data recovery. A more feasible approach would be up to a 5% magnetometry sample as long as the investigations are identifying buried anomalies.

Excavations ranging in size from 1 to 2 meters are typically sufficient to expose hearth features such as those identified at BSEP. For areas where the potential for buried land surfaces that may surround the hearths is to be investigated, larger excavations of 3 meters square provide an adequate exposure. If a cultural land surface is identified, the area of excavation could then be expanded up to a maximum of 5 meters square to provide a larger exposure.

- CUL-7** *Worker Environmental Awareness Program (WEAP).* Prior to and for the duration of construction-related ground disturbance, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment at the project site, laydown area, and along the linear facilities routes. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended, but must be resumed when ground disturbance, such as landscaping, resumes. The training shall include:
1. A discussion of applicable cultural resources statutes, regulations, and related enforcement provisions;
 2. A summary of the effects of the proposed project on cultural resources;

3. A summary of the historical resources management program that has been negotiated to address the effects of the proposed project on cultural resources;
4. A discussion of the role of the workers in the historical resources management program;
5. Samples or visuals of artifacts that might be found in the project area;
6. A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;
7. A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, the range of variation in the appearance of such deposits across the project area, and, more especially, the known range of variation in the archaeological deposits of Archaeological Zone 1;
8. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt construction-related ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS;
9. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery, particularly in Archaeological Zone 1 for prehistoric archaeological deposits that are inconsistent with the known range of variation in the archaeological deposits there, and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;
10. An informational brochure that identifies the reporting procedures for Archaeological Zone 1 and non-Archaeological Zone 1 areas in the event of a discovery;
11. An acknowledgement form signed by each worker indicating that they have received the training; and
12. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

No ground disturbance shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the CPM.

Verification

1. At least 30 days prior to the start of construction-related ground disturbance anywhere on the project site, the CRS shall provide, as a stand-alone document or as an element of the HRMP, the training program draft text and graphics and the informational brochure to the CPM for review and approval.
2. At least 30 days prior to the start of construction-related ground disturbance anywhere on the project site, the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP-trained worker to sign.

3. Monthly, until all construction-related ground disturbance is complete, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of workers at the project site and on the linear facilities who have completed the training in the prior month and a running total of all persons who have completed training to date.

RATIONALE

General - Consistency with General Conditions Definitions, page 7-1.

Submittal of the training program draft text and graphics and the informational brochure to the CPM 30 days prior to ground disturbance allows sufficient review time. Only one WEAP program is needed for the project.

CUL-8 *Construction Monitoring Program.* The Monitoring and Discovery Plan (subpart 13, **CUL-4**) shall include separate protocols for construction monitoring, and for the discovery and treatment of new cultural resources that are found or when unanticipated effects to known cultural resources become evident during construction_-related ground disturbance. The construction monitoring protocol shall specify the different procedures below that the project owner shall follow during construction_-related ground disturbance in different parts of the project area and on different landforms in the project area, where the lateral extent and the character of project area landforms are known. As the source of the water that would be necessary to operate the proposed project remains an active focus of discussion, staff includes specifications here for the monitoring procedures that the project owner would need to follow in the event that the project owner ultimately chooses to construct either the Rosamond Community Service District or the City of California City treated wastewater pipeline alternative. Other alterations of the project area under **CUL-3** shall require the project owner to append the Monitoring and Discovery Plan to include monitoring procedures for the actions that would occur in any lands added to the original project area. The appended procedures shall be consistent with the landform-specific monitoring protocols below.

The project owner shall ensure that the CRS, alternate CRS, or CRMs actively monitor, full time, all construction_-related ground disturbance in the project area, in accordance with the landform-specific protocols below, to ensure that there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner. Additionally, the project owner shall ensure that construction personnel, trained to recognize what archaeological site types are and are not known for Archaeological Zone 1, passively monitor construction_-related ground disturbance in the project area, also in accordance with the landform-specific protocols below.

Landform-specific Monitoring Protocols. The construction monitoring protocols specific to the different landform contexts in the project area variously have active and passive components. The active components relate to the construction monitoring protocols that are required for landform contexts that are outside of Archaeological Zone 1, and the passive components relate to the protocols for such contexts that are in Archaeological Zone 1. The efficacy of the whole series of construction monitoring protocols below depends on the project owner, prior to

the initiation of construction_-related ground disturbance, physically staking out the boundary of each landform and the refined provisional district boundary for Archaeological Zone 1, and ~~ensuring that the primary author of the January 2009 geoarchaeology study for the proposed project conduct- will conduct~~ field orientations for the CRS, the alternate CRS, and each CRM so that they are able to recognize the project area landforms and key subsurface sedimentary features such as paleosols and sedimentary contacts. The boundary lines on the surface of the project site are the referents that direct the differential implementation of the active and passive components of the protocols, and the subsurface paleosols and sedimentary contacts are the referents that vertically bound the requisite construction monitoring areas.

Monitoring Protocol for Landform Hf1

Active component. The active component of the monitoring protocol for the Hf1 landform requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction_-related ground disturbance down to the upper boundary of the paleosol that is buried in the landform. That boundary, which is the upper boundary of a preserved A horizon, is approximately 2 meters below the present surface of the landform.

Passive component. The owner shall have construction personnel on the project passively monitor for and halt construction upon the discovery of buried archaeological deposits in the portion of Archaeological Zone 1 on the Hf1 landform that appear to represent archaeological site types not previously known for the Zone. Any such discovery shall be subject to the discovery protocol of **CUL-9**. Construction personnel shall be given training, as part of the training program of **CUL-7**, which would facilitate the field recognition of archaeological site types that are and are not known for the district.

Applicability

Project Site. Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

Transmission Line Infrastructure. Not applicable.

Emergency Access Road. Not applicable.

Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives. Passive monitoring to the northeast of the refined provisional district boundary.

Monitoring Protocol for Landform Hf1d

Active component. The active component of the monitoring protocol for the Hf1d landform requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction_-related ground disturbance down approximately 2 meters from the present surface of the landform to the upper contact of what are presently thought to be Pleistocene-age deposits of pebbles and cobbles.

Passive component. No passive monitoring on the Hf1d landform.

Applicability

Project Site. Active monitoring across the whole extent of the landform on the project site.

Transmission Line Infrastructure. Active monitoring across the whole extent of the landform in the portion of the project area that encompasses the construction area for the transmission line infrastructure. To implement the protocol for the Hf1d landform in the construction area for the transmission line infrastructure, the project owner shall project out the boundary between the Hf1d and Hf3 landforms, which appears to be coincident with the Cantil Valley fault, to the southwest of the project site, and implement the protocol for the Hf1d landform to the southeast of that projected boundary.

Emergency Access Road. Not applicable.

Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives. Not applicable.

Monitoring Protocol for Landform Hf2

Active component. The active component of the monitoring protocol for the Hf2 landform requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction-related ground disturbance to the maximum depth of such disturbance.

Passive component. The project owner shall have construction personnel on the project passively monitor for and halt construction upon the discovery of buried archaeological deposits in the portion of Archaeological Zone 1 on the Hf2 landform that appear to represent archaeological site types not previously known for the Zone. Any such discovery shall be subject to the discovery protocol of **CUL-9**. Construction personnel shall be given training, as part of the training program of **CUL-7**, which would facilitate the field recognition of archaeological site types that are and are not known for the district.

Applicability

Project Site. Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

Transmission Line Infrastructure. Not applicable.

Emergency Access Road. Not applicable.

Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives. Passive monitoring to the northeast of the refined provisional district boundary.

Monitoring Protocol for Landform Hf3

Active component. No active monitoring on the Hf3 landform.

Passive component. No passive monitoring on the Hf3 landform.

Applicability

Project Site. Not applicable.

Transmission Line Infrastructure. Not applicable.

Emergency Access Road. Not applicable.

Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives. Not applicable.

Monitoring Protocol for Landform Hf4

Active component. The active component of the monitoring protocol for the Hf4 landform requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction-related ground disturbance to the maximum depth of 4 meters.

Passive component. The owner shall have construction personnel on the project passively monitor for and halt construction upon the discovery of buried archaeological deposits in the portion of Archaeological Zone 1 on the Hf4 landform that appear to represent archaeological site types not previously known for the Zone. Any such discovery shall be subject to the discovery protocol of **CUL-9**. Construction personnel shall be given training, as part of the training program of **CUL-7**, which would facilitate the field recognition of archaeological site types that are and are not known for the district.

Applicability

Project Site. Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

Transmission Line Infrastructure. Not applicable.

Emergency Access Road. Not applicable.

Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives. Active monitoring to the southwest of the refined provisional district boundary, and passive monitoring to the northeast of the refined provisional district boundary.

Monitoring Protocol for Unknown Landforms

Active component. The active component of the monitoring protocol for unknown landforms requires the project owner to have the CRS, alternate CRS, or CRMs actively monitor all construction-related ground disturbance to the maximum depth of any such disturbance.

Passive component. No passive monitoring on unknown landforms.

Applicability

Project Site. Not applicable.

Transmission Line Infrastructure. Not applicable.

Emergency Access Road. Active monitoring for the whole length of the proposed emergency access road, which is outside and projects east of the project site to Neuralia Road.

Rosamond Community Service District or City of California City Treated Wastewater Pipeline Alternatives. Active monitoring for the whole length of either pipeline route alternative, both of which are outside and to the east and south of the project site.

Full-time archaeological monitoring for this project shall be the archaeological monitoring of all construction-related ground disturbance in the project area, in accordance with the Landform-specific Monitoring Protocols, above. ~~Where excavation equipment is actively removing dirt and hauling the excavated material farther than fifty feet from the location of active excavation, full-time archaeological monitoring shall require at least two monitors per excavation area. In this circumstance, one monitor shall observe the location of active excavation and a second monitor shall inspect the dumped material. For excavation areas where the excavated material is dumped no further than fifty feet from the location of active excavation, one monitor shall both observe the location of active excavation and inspect the dumped material.~~

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The research design in the HRMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered.

A Native American monitor shall be obtained to monitor ground disturbance in areas where Native American artifacts may be discovered. Contact lists of interested Native Americans and guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance to proceed without a Native American monitor.

On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of noncompliance with the Conditions and/or applicable LORS. Copies of the daily monitoring logs shall be provided by the CRS to the CPM, if requested by the CPM. From these logs, the CRS shall compile a monthly monitoring

summary report to be included in the MCR. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended.

The CRS or alternate CRS shall report daily to the CPM on the status of the project's cultural resources-related activities, unless reducing or ending daily reporting is requested by the CRS and approved by the CPM.

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff. Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS, or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these Conditions.

Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided in the next MCR for the review of the CPM.

Verification

1. At least 30 days prior to the start of ground disturbance anywhere on the project site ~~30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, and at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone,~~ the project owner shall submit the Monitoring and Discovery Plan to the CPM for review and approval.
2. At least 30 days prior to the start of construction_-related ground disturbance, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log.
3. Monthly, while monitoring is on-going, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS and shall attach any new DPR 523A forms completed for finds treated prescriptively, as specified in the HRMP.
4. At least 10 days prior to the start of construction_-related ground disturbance, the project owner shall physically stake out, ~~every 200 feet~~ along the surface of the ground and in a conspicuous manner, either the provisional boundary of Archaeological Zone 1, or, if it has been given the approval of the CPM, the refined provisional district boundary for the Zone, and the known

boundary of each landform on the project site as each such boundary is reported in the February 6, 2009 preliminary field report for the geoarchaeology study (Young 2009b). The project owner shall engage the author of that preliminary report to assist in the location of each landform boundary on the ground.

5. At least 30 days prior to the start of construction_-related ground disturbance, the project owner shall ~~engage the author of the February 6, 2009 preliminary field report for the geoarchaeology study (Young 2009b) to~~ conduct field orientations for the CRS, the alternate CRS, and each CRM so that they are each able to recognize the project area landforms and key subsurface sedimentary features in the landform-specific monitoring protocols such as paleosols and sedimentary contacts. The replacement of the CRS, the alternate CRS, or CRMs shall necessitate new field orientations to train new personnel.
6. At least 30 days prior to the start of construction_-related ground disturbance in any portion of the project area added under **CUL-3**, the project owner shall submit a numbered appendix to the Monitoring and Discovery Plan to the CPM for review and approval. Each such appendix shall include monitoring procedures for the actions that would occur in lands added to the original project area. The appended procedures shall be consistent with the landform-specific monitoring protocols of **CUL-8**.
7. Daily, as long as no cultural resources are found, the CRS shall provide a statement that “no cultural resources over 50 years of age were discovered” to the CPM as an email, or in some other form acceptable to the CPM.
8. At least 24 hours prior to reducing or ending daily reporting, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication acceptable to the CPM) detailing the CRS’s justification for reducing or ending daily reporting.
9. At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval.
10. No later than 30 days following the discovery of any Native American cultural materials, the project owner shall submit to the CPM copies of the information transmittal letters sent to the Chairpersons of the Native American tribes or groups who requested the information.
11. Within 15 days of receiving them, the project owner shall submit to the CPM copies of any comments or information provided by Native Americans in response to the project owner’s transmittals of information.

RATIONALE

General - Consistency with General Conditions Definitions, page 7-1.

The closer to the start of construction the more likely the staking will be in place at the start of

construction. Although field orientation will be conducted, It is not feasible to commit to engage a specific individual to conduct the field orientation regarding landforms. Standard archaeological monitoring of mechanical excavations consists of viewing soils as they are removed from their in situ location and does not involve a second monitor.

Maximum excavation in landform Hf4 is limited to 4 meters based on the geoarchaeological investigation that identified area below that depth as high energy and not conducive to intact preservation of archaeological sites (Young 2009:14).

CUL-9 *Discovery and Discovery Treatment Protocols.* The Monitoring and Discovery Plan (subpart 13, **CUL-4**) shall include separate protocols for construction monitoring, and for the discovery and treatment of new cultural resources that are found outside of the refined provisional boundary for Archaeological Zone 1, when archaeological site types not previously known for the Zone are found inside said boundary, or when unanticipated effects to known cultural resources become evident during construction-related ground disturbance. The Discovery Protocol shall specify the procedures that the project owner shall follow upon the discovery of a new resource outside of Archaeological Zone 1, of a new archaeological site type in Archaeological Zone 1, or upon the recognition of an unanticipated effect. The project owner shall, in any such instance, grant authority to halt construction-related ground disturbance to the CRS, alternate CRS, and the CRMs. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event that cultural resources that may be over 50 years of age are found, or, if younger, determined exceptionally significant by the CPM, or archaeological site types not previously known for Archaeological Zone 1 are found in it, or impacts to such resources can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting as provided in **CUL-8** shall continue during all ground-disturbing activities elsewhere on the project site. The halting or redirection of ground disturbance shall remain in effect until the CRS has visited the discovery, and all of the following have occurred:

1. The CRS has notified the project owner, and the CPM has been notified within 24 hours of the discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning, including a description of the discovery (or changes in character or attributes), the action taken (i.e., work stoppage or redirection), a recommendation of CRHR eligibility, and recommendations for mitigation of any cultural resources discoveries, whether or not a determination of CRHR eligibility has been made.
2. If the discovery would be of interest to Native Americans, the CRS has notified all Native American groups that expressed a desire to be notified in the event of such a discovery.
3. The CRS has completed field notes, measurements, and photography for a DPR 523A "Primary Record" form. Unless the find can be treated prescriptively, as specified in the

HRMP, the "Description" entry of the DPR 523A "Primary Record" form shall include a recommendation on the CRHR eligibility of the discovery. The project owner shall submit completed forms to the CPM.

4. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the discovery and approved the CRS's proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.

The discovery and discovery treatment protocols in the Monitoring and Discovery Plan shall specify that the preferred treatment strategy for any buried archaeological deposits found during the course of the construction, operation, and maintenance of the proposed project is avoidance. A mitigation plan shall be prepared for any CRHR-eligible (as determined by the CPM) resource, impacts to which cannot be avoided, except for archaeological site types in Archaeological Zone 1 that are already known to be characteristic of that district.

Prescriptive treatment plans may be included, where appropriate, in the HRMP for cultural resources that represent marginal data sets.

Verification

1. At least 30 days prior to the start of ground disturbance anywhere on the project site ~~30 meters or greater to the southwest of the provisional boundary of Archaeological Zone 1 or on the portions of the project area beyond the project site, and at least 270 days prior to the start of ground disturbance anywhere in Archaeological Zone 1 or 30 meters or less to the southwest of the provisional boundary for the Zone,~~ the project owner shall submit the Monitoring and Discovery Plan to the CPM for review and approval.
2. At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, and CRMs have the authority to halt construction-related ground disturbance in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.
3. Within 48 hours of the discovery of a resource of interest to Native Americans, the project owner shall ensure that the CRS notifies all Native American groups that expressed a desire to be notified in the event of such a discovery.
4. Unless the discovery can be treated prescriptively, as specified in the HRMP, completed DPR 523 Series forms for resources newly discovered during ground disturbance shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever the CRS decides is more appropriate for the subject cultural resource.

RATIONALE

General - Consistency with General Conditions Definitions, page 7-1.

In an effort to reduce the number of documents submitted for review and approval, one Monitoring and Discovery Plan will be prepared. There is not a need for more than one Monitoring and Discovery Plan.

CUL-10 *Cultural Resources Report (CRR)*. The project owner shall submit the final CRR to the CPM for approval. The final CRR shall be written by or under the direction of the CRS and shall be provided in the ARMR format (COHP 1990). The final CRR shall report on all field activities including dates, times and locations, findings, samplings, and analyses. All survey reports, DPR 523 Series forms, data recovery reports, and any additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as appendices to the final CRR.

If the project owner requests a suspension of construction_-related ground disturbance and/or construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM for review and approval on the same day as the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until ground disturbance and/or construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.

Verification

1. Within 90 days after completion of all construction_-related ground disturbance (including landscaping), the project owner shall submit the final CRR to the CPM for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification of receipt shall be included in an appendix.
2. Within 90 days after completion of all construction_-related ground disturbance (including landscaping), if cultural materials requiring curation were collected, the project owner shall provide to the CPM a copy of an agreement with, or other written commitment from, a curation facility that meets the standards stated in the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, to accept cultural materials, if any, from this project. Any agreements concerning curation will be retained and available for audit for the life of the project.
3. Within 10 days after CPM approval, the project owner shall provide documentation to the CPM confirming that copies of the final CRR have been provided to the SHPO, the CHRIS, the curating institution, if archaeological materials were collected, and to the Tribal Chairpersons of any Native American groups requesting copies of project-related reports.
4. Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.

ATTACHMENT E

Proposed Modifications to Water Resources Conditions of Certification

PROPOSED CONDITIONS OF CERTIFICATION

SOIL&WATER-1: Groundwater Water Use For Project Construction: The project owner may use up to 8,086 acre feet of onsite groundwater for project construction. Groundwater use and potential impacts will be monitored and mitigated as outlined in items A. ~~and B.~~ and C. below.

Groundwater Use For Project Operation: The project owner may use up to 153 acre feet per year (AFY) of onsite groundwater to meet non-cooling operational needs. The project owner may also use 47 AFY of groundwater for emergency purposes. For the purpose of this condition, the term “emergency” shall mean the inability for BSEP to receive, or for the recycled water supplier to deliver, recycled water to BSEP due to Acts of God, natural disaster or other circumstances beyond the control of the project owner in a quantity sufficient for BSEP to operate at its normal operational level ~~for the season in which the emergency occurred.~~

The project owner shall use recycled water for ~~all~~ power plant cooling needs. On a temporary basis, groundwater may ~~only~~ be used for cooling purposes while the California City recycled water option, discussed below, is being developed and until it becomes fully implemented. Groundwater use and potential impacts during operation will be monitored and mitigated as outlined in items A. and C. below.

California City Recycled Water Supply – If the California City Recycled Water supply is developed for project operation, then groundwater may be used in accordance with the table presented below:

Operations Water Use – California City Alternative

| California City Collection System Construction Year | Maximum Volume of Site Groundwater Extracted for BSEP Operation ^{1,2} |
|---|--|
| 1 (end of month 12) | 1,353AFY |
| 2 (end of month 24) | 1053 AFY |
| 3 (end of month 36) | 753 AFY |
| 4 (end of month 48) | 453 AFY |
| 5 (end of collection system construction) | 153 AFY |

¹Includes potable demand

²Excludes yearly emergency supply

Rosamond Community Services District Recycled Water Supply – If the Rosamond Community Services District Recycled Water Supply is developed for project use groundwater shall be limited to ~~a volume of no more than~~ up to 153 AFY.

Monitoring and Mitigation for Groundwater Use

The project owner shall also develop and implement a groundwater ~~impact~~ monitoring and mitigation program. The monitoring and mitigation program shall be consistent with the intent of **Soil ~~and~~ & Water APPENDIX I**, attached to this FSA. The primary objective for the monitoring is to

establish pre-construction and project related water level trends that can be quantitatively compared against observed and simulated trends near the project pumping wells, at the property boundary, and near potentially impacted existing wells. Specifically, the project owner shall do all of the following:

A. Prior to construction:

- 1 In accordance with the provisions set forth in **Soil and Water Appendix I**, create the Fremont Valley Groundwater Monitoring Committee to monitor project pumping impacts during construction and (if recycled water is incrementally delivered to the site) the “phase-in” period during initial project operation. The purpose of the Fremont Valley Groundwater Monitoring Committee is to provide for land owner protection and include stakeholder participation in evaluation of project impacts. The monitoring committee’s function will be to implement and oversee the project owner’s groundwater monitoring program and to confer with the CPM to verify that there are no unacceptable impacts to groundwater levels, water quality or well performance in water supply wells affected by the proposed pumping during construction of the BSEP and during project operation. The committee will review the applicability of the groundwater monitoring and mitigation program on a recurring 5 year basis following project construction. During their review of the monitoring data, the committee will recommend to the CPM whether the program should be expanded or if some or all of the monitoring should be terminated. In the event that a committee cannot be formed or maintained the CPM will continue to implement and oversee the groundwater monitoring program.
- 2 Initially identify and secure access to representative water supply wells predicted by the groundwater model “Zero Recharge” simulation run (see Groundwater Impacts section of this FSA), to allow monitoring of groundwater levels and water quality of those wells. Wells shall be identified by comparison to the “No” Project and Project pumping simulation. Wells that show a water level change of 5 feet or more at the end of construction and after the first five years of operation will be included in the monitoring program. Any new wells within the potentially impacted area not previously identified shall also be included in the monitoring network. Abandoned wells, or wells no longer in use, that are accessible and provide reliable water level data within the monitoring area may also be included as part of the monitoring network. Based on the annual monitoring data, additional wells outside the monitoring network developed from the groundwater model may be added should the perimeter wells within the network show a statistically verifiable trend of 5 feet or more caused by Project pumping.

Rationale

Regardless of what scenario modeled (i.e., base condition, zero recharge or no Cantil Fault), Project impacts should be defined by a comparison between a “No” Project and Project pumping simulations. The difference in the predicted water levels between the two model runs provides the most appropriate measure of Project-induced pumping “impacts”. The potential for impacts within the identified monitoring network should be established on a criterion of a difference of 5 feet or more at the end of construction and at the end of the first five years of operation. Given that compensation for increased pumping lift is predicated on a difference of 10 feet (Soil & Water - 1.C.3.a), a value of 5 feet provides an adequate buffer of additional area to account for uncertainty in the model prediction. Additional text has been added to provide a contingency to add additional wells beyond the model-predicted network should perimeter monitoring wells predicted by the model

show a change of 5 feet or more. The last sentence has been added to provide flexibility and introducing a further mechanism to account for uncertainty in the pumping response.

~~3—In addition to the Zero Recharge wells discussed above, identify all available wells between the BSEP site and California City, in both the Koehn and California City sub-basins, and include representative wells into the monitoring network. Inclusion of these well into the monitoring network is necessary to assess the potential changes in hydraulic gradients and subsurface flow between sub-basins.~~

Rationale

The proposal to monitor all available wells between and in the California City sub-basin is not warranted under the revised operational volume of 153 AFY (~95 gpm). The base condition evaluated in the AFC using the calibrated numerical groundwater model running at the full operational pumping rate of 1,600 AFY for 30 years did not predict impacts in the California City area. The Project operational supply has been reduced to about 10% of the AFC volume. Given this significant reduction of groundwater supply, including this specific condition in addition to what is required under Condition Soil & Water-1.A.2 this request is not warranted and excessive. Soil & Water-1.Condition A.2 should be sufficient to establish the monitoring well program to assess project pumping impacts. Lastly, if the intent is to monitor changes in recharge from the removal of residential septic and leach fields in California City, the City currently has an ongoing monitoring program that would be sufficient to assess this change, and are available to the public.

- 4 At least 30-days prior to project construction, accessible abandoned or unused wells within the monitoring network shall be instrumented with recorders to track groundwater levels during project construction. The water level recorders shall continuously collect and store the data every four hours and shall be serviced at least quarterly.
- 5 Obtain all historic water level and water quality data for each water supply well within the monitoring network as defined by the groundwater model where access to monitor groundwater conditions can be obtained. Additionally, conduct a well reconnaissance and identify all wells within the monitoring area as defined by the groundwater model. Obtain well construction information (completion depth, well screen depth interval, and pump intake depth), historic well performance data, including pumping and non-pumping water levels, and pump specifications for each of those wells.
- 6 Update the groundwater database presented in the AFC, and updated in January 2009, with all new information obtained from the wells where access to monitor groundwater conditions has been obtained.
- 7 Prepare time series graphs for water level and total dissolved solids (TDS) concentrations data for each well within the monitoring network where information is available.
- 8 Perform statistical trend analysis using Mann-Kendall Trend Test and Sen's Slope Estimator for water levels and the TDS data to statistically analyze the data. Determine the significance of an apparent trend and estimate the magnitude of that trend.
- 9 At least once prior to construction, collect groundwater levels from the off-site and on-site monitoring network wells and collect and analyze groundwater samples for TDS

concentrations to provide baseline groundwater levels and TDS concentrations for both on-site and off-site monitoring network wells. Groundwater samples shall be analyzed for TDS by a California Certified Analytical Laboratory in accordance with Standard Methods 2540C.

- 10 Map TDS data and groundwater levels within the Koehn and California City Sub-basins from the groundwater data collected prior to construction. Update trend plots and statistical analyses, as data is available.

B. During Construction:

- 1 Collect static water levels and TDS data from the monitoring network wells on a quarterly basis throughout the construction period, and at the end of the construction period. The continuous monitoring discussed in Condition Soil & Water-1.item A.4, above shall continue a minimum of 30-days after completion of project construction. Perform statistical trend analysis using Mann-Kendall Trend Test and Sen's Slope Estimator for water levels and the TDS data to statistically analyze the data. Determine the significance of an apparent trend and estimate the magnitude of that trend.

C. During Operation:

- 1 On a quarterly basis, collect static water level measurements and TDS data from the wells in the groundwater monitoring network to evaluate operational influence from the project. Quarterly operational parameters (i.e., pumping rate) of the water supply wells shall be monitored. Additionally, quarterly groundwater-use in the Koehn sub-basin shall be estimated and the values submitted to the Fremont Valley Basin Groundwater Monitoring Committee for evaluation and consultation with the CPM.
- 2 On an annual basis, perform statistical trend analyses using Mann-Kendall Trend Test and Sen's Slope Estimator for water levels and the TDS data to statistically analyze the data. The significance of an apparent trend shall be determined and the magnitude of that trend estimated. Based on the results of the statistical trend analyses, the project owner shall determine if the project pumping has induced a drawdown (i.e. reduction in the static water level) in the water supply at a level of ten feet or more below the baseline trend.
- 3 If water levels have been lowered below pre-site operational trends, and monitoring data provided by the project owner show the water level changes are different from background trends and are solely caused by project pumping, then the project owner shall provide mitigation to the well owner(s) consistent with the following Soil & Water-1.C.3.a through C.3.i. Mitigation shall be provided if the CPM's inspection of the well monitoring data confirms changes to water levels and water level trends relative to measured pre-project water levels, and the well yield has been lowered by project pumping. The type and extent of mitigation shall be determined by the amount of water level decline and site specific well construction and water use characteristics. The mitigation of impacts will be determined as follows:
 - a. If project pumping has lowered water levels and increased pumping lifts by 10 feet or more, increased energy costs shall be calculated in accordance with item **SOIL & WATER-1.C.3.e** below. The compensation and payment schedule for the increased costs shall be provided at the option of the affected well owner as provided in **SOIL & WATER-1.C.3.g**.

- b. If groundwater monitoring data indicate project pumping has lowered water levels below the top of the well screen, and the well yield is shown to have decreased by 10-percent or more of the average seasonal yield, compensation shall be provided for the diagnosis and maintenance to treat and remove encrustation from the well screen. Reimbursement shall be provided at an amount equal to the customary local cost of performing the necessary diagnosis and maintenance for well screen encrustation. ~~Should well yield reductions be occurring, the project owner shall provide periodic diagnosis of the well screen to assess the rate of encrustation caused by project pumping and the frequency of required maintenance to maintain well yield to levels above the significance criteria is discussed in SOIL & WATER-1.C.3c. The project owner shall use these findings to provide reimbursement equal to the customary local cost of performing the necessary maintenance at the determined frequency for the life of the project or replace the well.~~ Should the well yield reductions be reoccurring, the project owner shall provide payment or reimbursement for periodic maintenance throughout the life of the Pproject. If with treatment the well yield is incapable of meeting 110% of the well owner's maximum daily demand, dry season demand, or annual demand the well owner should be compensated by reimbursement or well replacement as described under Ccondition Soil & Water-1.C.3.c.

Rationale

The condition contains redundant text from a prior version. It appears that this text was not removed and entirely replaced with the suggested text that was provided on January 15, 2010, which has been inserted as the last two sentences of the condition. It is suggested that this text be removed as it is redundant with the last two sentences. The suggested text in the last two sentences provides the same level of accountability for diagnosis and maintenance of the well and ties the replacement of the well to the specific conditions of Soil & Water-1.C.3. This text is preferred over that which is stricken as the conditions for well replacement are not explicitly stated.

- c. If project pumping has lowered water levels to significantly impact well yield below property water supply requirements or cause casing collapse, payment or reimbursement of an amount equal to the cost of deepening or replacing the well shall be provided to accommodate these effects. Compensation shall be at an amount equal to the customary local cost of deepening the existing well or constructing a new well. The demand for water, which determines the required well yield, shall be determined on a per well basis using historic seasonal yield data, well owner interviews and field verification of property conditions and historical seasonal water requirements compiled as part of the pre-project well reconnaissance. Well yield shall be considered significantly impacted if it is incapable of meeting 110-percent of the well owner's maximum daily demand, dry-season demand, or annual demand – assuming the pre-project well yield documented by the well reconnaissance met or exceeded these yield levels.
- d. Electrical cost reimbursement – Through a statistical analysis of the water level data, if the pumping water level falls below a depth of 10 feet from the baseline trend, and is shown to be caused by project pumping, the well owner shall be compensated by the project owner for the additional electrical costs commensurate with the additional lift required to pump. The water level in the well will be assessed relative to the pumping rate established during the pre-site development period.

- e. Where it is determined by the CPM that the project owner shall reimburse a private well owner for increased energy costs, the project owner shall calculate the compensation owed to the owner of any impacted well as described below.

$$\frac{\text{Increased cost for energy}}{\text{costs/unit of energy}} = \text{change in lift/total system head} \times \text{total energy consumption}$$

Where:

change in lift (ft) = calculated change in water level in the well resulting from project pumping

total system head (ft) = elevation head + discharge pressure head

elevation head (ft) = difference in elevation between wellhead discharge pressure gauge and water level in well during pumping.

discharge pressure head (ft) = pressure at wellhead discharge gauge (psi) X 2.31

- f. The project owner shall notify all owners of the impacted wells within one month of CPM approval of the compensation analysis for increased energy costs.
- g. Compensation shall be provided on an annual basis, as described below:

Annual Compensation- Compensation provided on an annual basis shall be calculated prospectively for each year by estimating energy costs that will be incurred to provide the additional lift required as a result of the project. With the permission of the impacted well owner, the project owner shall provide energy meters for each well or well field affected by the project, as described under 3e above. The impacted well owner to receive compensation must provide documentation of energy consumption in the form of meter readings or other verification of fuel consumption. For each year after the first year of operation, the project owner shall include an adjustment for any deviations between projected and actual energy costs for the previous calendar year.

- h. Pump lowering – If pumps are exposed but well screens remain submerged, the pumps shall be lowered to maintain production in the well. All costs associated with lowering pumps shall be borne by the project owner. Reimbursement shall be provided at an amount equal to the customary local cost of performing the lowering of the pump.
- i. Deepening of wells – If the groundwater is lowered enough that the well screen is exposed, and lowering of the pump cannot be done to maintain well yield above a level of significance described in **Soil & Water OIL & WATER-1.C.3c**, the well shall be deepened or a new well constructed. The well shall be completed in a manner that provides water to the property in consideration of historic seasonal use requirements. All costs associated with deepening existing wells or constructing new wells shall be borne by the project owner. Reimbursement shall be provided at an amount equal to the customary local cost of installing a new well.

- 4 During or after the first five-year operational and monitoring period, the CPM, after consultation with the Fremont Valley Basin Groundwater Monitoring Committee, shall evaluate the data and determine if the monitoring program water level measurements and

TDS sampling frequencies should be revised or eliminated. Revision or elimination of any monitoring program elements shall be based on the consistency of the data collected. The determination of whether the monitoring program should be revised or eliminated shall be made by the CPM after consultation with the Fremont Valley Basin Groundwater Monitoring Committee.

- 5 At the end of each subsequent five-year monitoring period, the collected data shall be evaluated by the CPM after consultation with the Fremont Valley Basin Groundwater Monitoring Committee and the CPM shall determine if the sampling frequency and TDS sampling should be revised or eliminated.
- 6 If the applicant Project elects to utilize the California City option, ~~monitoring of groundwater in the California City area shall be required due to the anticipated reduction in groundwater recharge resulting from collection and elimination of return flows from leachfields. The~~ Project owner shall also implement the compensate California City for implementation of a Tamarisk Removal Program identified as described in Appendix I.

Rationale

The condition for monitoring California City wells was addressed under Soil & Water-1.A.3 above, and is not warranted given there is already a groundwater monitoring program for California City that is available to the public. Further, concerns over pumping influence from the Project in the area of California City are not warranted, as the prior modeling for the AFC using site groundwater for the entirety of the Project demand did not show a significant impact in the area of California City. Subsequently, there could be no concern over Project pumping influence, given that the groundwater volume has been reduced to 10% of the AFC volume. The wording has also been revised to match Appendix I revisions.

- 7 If the Rosamond option is implemented, all off site groundwater monitoring will likely be eliminated within the five year post construction period. Consideration of the need to continue the groundwater monitoring program will be given, in accordance with ~~item~~ Condition Soil & Water - 1.C.4 above.
- 8 If the California City option is implemented, all off site groundwater monitoring may be eliminated within the five year post construction period. Consideration of the need to continue the groundwater monitoring program will be given in accordance with Condition Soil & Water-1.C.4 above.

Rationale

The condition for termination should be tied to the 5-year reoccurrence interval equally between recycled water options.

- 9 Comply with Condition of Certification **SOIL & WATER -19**, which requires metering of water used for power plant construction and operation.

Verification: The project owner shall do all of the following:

- 1 At least 60 days prior to start of construction, the project owner shall submit to the CPM a list identifying the members of the Fremont Valley Basin Groundwater Monitoring Committee and each member's written agreement to participate in accordance with the Committee's stated purpose and function and assist the project owner in implementing the groundwater monitoring program.
- 2 At least 30 days prior to project construction, the project owner shall submit to the CPM, a comprehensive report presenting all the data and information required in items **SOIL & WATER -1.A.2** through **-1.A.910**.

The project owner shall submit to the CPM all calculations and assumptions made in development of the report data and interpretations, along with comments to the draft report made by Committee members or well owners within the monitoring network on the data, calculations and assumptions used in development of the report. The project owner shall also provide documentation of communications and negotiation for securing access and inclusion of a well in the monitoring program. Further, documentation shall be provided that shows adequate inquiry of each well owner in the monitoring network, and any subsequent refusal by the well owner to be included in the monitoring network.

- 3 During project construction, the project owner shall submit to the CPM quarterly reports presenting all the data and information required in items **SOIL & WATER -1.B.1** through **-1.B.2**.

The project owner shall submit to the CPM all calculations and assumptions made in development of the report data and interpretations, along with comments to the draft report made by Committee members or local well owners within the monitoring network on the data, calculations, and assumptions used in development of the report.

- 4 No later than March 31 of each year of construction and 60 days following completion of construction, the project owner shall provide to the CPM for review and approval, documentation showing that any mitigation to private well owners during project construction was satisfied, based on the requirements of the property owner as determined by the CPM.
- 5 During project operation, the project owner shall submit to the CPM, applicable quarterly and annual reports presenting all the data and information required in items **SOIL & WATER -1.C.1** through **-1.C.78**.

The project owner shall submit to the CPM all calculations and assumptions made in development of report data and interpretations, along with any agreement or dissenting opinions voiced by Committee members or local well owners on the data, calculations, and assumptions used in development of any reports.

- 6 After the first five year operational and monitoring period, the project owner shall submit a 5 year monitoring report to the Fremont Valley Basin Groundwater Monitoring Committee and to the CPM that submits all monitoring data collected and provides a summary of the findings. After consultation with the Fremont Valley Basin Groundwater Monitoring Committee, the CPM will determine if the water level measurements and TDS sampling frequencies should be revised or eliminated.
- 7 The project owner shall provide mitigation as described in **SOIL & WATER-1.C.13**, if the

CPM's inspection of the monitoring information confirms changes to water levels and water level trends relative to measured pre-project water levels, and well yield has been lowered by project pumping. The type and extent of mitigation shall be determined by the amount of water level decline and site specific well construction and water use characteristics. The mitigation of impacts will be determined as set forth in **SOIL & WATER-1.C.3**.

- 8 Eliminated, redundant with #4
- 9 During the life of the project, the project owner shall provide to the CPM and Fremont Valley Basin Groundwater Monitoring Committee, all monitoring reports, complaints, studies and other relevant data within 30 days of being received by the project owner.

SOIL AND WATER - APPENDIX I

GROUNDWATER MITIGATION PLAN

Groundwater Monitoring

This groundwater monitoring program was provided in Attachment 5 of the Project Design Refinements (DB2009r) submitted to the CEC by the applicant in June 2009. As proposed by the applicant, the following describes the groundwater mitigation plan to be incorporated if the use of site groundwater is approved by CEC for power plant operation.

Proposed Groundwater Monitoring Program

To provide for land owner protection and participation in evaluation of project impacts, a Fremont Valley Groundwater Monitoring Committee will be formed. The committee will include a representative from the following:

- California City
- Community of Cantil
- Rancho Seco
- Honda
- Beacon Solar LLC

The monitoring committee's function will be to implement and oversee the groundwater monitoring program and to verify that there are no unacceptable impacts to groundwater levels or quality in water supply wells adjacent to the BSEP.

Gather Historic Water Level and Water Quality Data

- Secure access, if authorized by the land owner, for the purpose of monitoring of water levels and water quality for those water supply wells predicted by the numerical groundwater model to experience a change of ~~5~~ 10 feet or more in its water level by comparison to the ~~“Nonon-Project”~~ condition at the end of construction and at the end of 5 years of operation over the term of the project (30 years).
- Through the access agreement, obtain all historic water level and water quality data for each water supply well identified by the model. Additionally, obtain well completion information, historic well performance data, including pumping and non-pumping water levels and pump specifications for each well to be monitored.
- Update the application for certification (AFC) water level and geochemical and water level database with all new information.
- Prepare time series graphs (i.e., trend plots) for water level and total dissolved solids (TDS) data, as information is available for each well.
- Perform statistical trend analysis using Mann-Kendall Trend Test and Sen's Slope Estimator for

water levels and the TDS data. The Mann-Kendall Trend Test and the Sen's Slope Estimator are proposed to statistically analyze the data because they are the accepted non-parametric trend analysis methods for data that are not normally distributed. Use trend analysis to determine the significance of an apparent trend and to estimate the magnitude of that trend. Further, use adjacent well data to evaluate local affects from pumping in water level trends.

Establish Pre-Project Baseline Water Quality and Water Level Database

- To the extent possible, prior to project construction collect groundwater levels from the off-site and on-site wells to evaluate groundwater levels in the area of wells that could be impacted by project pumping as indicated by the model. Additionally, collect groundwater samples to provide baseline TDS data for both on-site and off-site wells. Analyze TDS samples using Standard Methods 2540C by a California Certified Analytical Laboratory.
- Map TDS data and groundwater levels within the Koehn Sub-basin from the groundwater data collected prior to construction. Update trend plots and statistical analyses, as data is available.

Groundwater Monitoring During Construction

- During construction, collect water levels on a quarterly basis for a period of one year or on a quarterly basis through the construction period, and collect TDS data at the end of the construction period and prior to site operations.

Groundwater Monitoring During Operation

- On a quarterly basis for the first five years, collect water level measurements from the wells and collect TDS data to evaluate operational influence from the project. Additionally, monitor quarterly operational parameters (i.e., pumping rate) of the water supply wells.
- After a period of five years, on a well-by-well basis, evaluate the data and determine if the sampling frequency and TDS sampling should be revised or eliminated.
- Subsequently, evaluate the data set every five years and determine if the sampling frequency and TDS sampling should be revised or eliminated.

Proposed Mitigation Options

Water Level Offset Mitigation Options

Based on the results of the statistical trend analyses, determine if the project pumping has induced a drawdown in the water supply at a level of ten feet or more below the baseline trend. If water levels have been lowered below pre-site operational trends, then implement any of the following options, as appropriate and considering the cost effectiveness of each option.

- Electrical cost reimbursement – If the pumping water level falls below a depth of 5 feet from an average of the baseline measurements, the well owner will be compensated for the additional electrical costs commensurate with the additional lift required to pump. The water level in the well will be assessed relative to the pumping rate during pre-site operational period.
- Pump lowering – In the event that groundwater is lowered and existing pumps are day lighted,

pumps can be lowered to maintain production in the well.

- Deepening of wells – If the groundwater is lowered enough that there is insufficient water in the well and pump lowering is not an option, then wells can be deepened.

Groundwater Storage Mitigation Options

Maximum expected groundwater usage during BSEP operation is estimated to be no more than 153 acre feet per year (AFY) (excluding annual emergency allotment of 47 acre-feet). Initially, the applicant proposed to use 1388 AFY of groundwater for power plant operation and provided options to offset that water consumption which included implementation of a partial ZLD and tamarisk removal program, which are described in the Project Design Refinements (DB 2009r).

If the California City option is selected, the project owners shall provide funding to California City for the implementation of a tamarisk removal program to address infestation within the City in the initial amount of \$100,000 at the start of construction and \$10,000 on the commercial operation date (COD) and for a period of 4 years thereafter on the anniversary of the COD.

~~The project owners shall develop in coordination with Bureau of Land Management and other stakeholders, a voluntary tamarisk removal program designed to offset the collection of return flows from conversion of individual septic disposal systems in California City for the project recycled water supply. This program will initially identify areas of tamarisk infestation, provide annual funding for tamarisk eradication and will be implemented in the Fremont Valley Groundwater Basin.~~

**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA**

**APPLICATION FOR CERTIFICATION FOR
THE BEACON SOLAR ENERGY PROJECT**

DOCKET NO. 08-AFC-2

PROOF OF SERVICE
(Revised 2/8/10)

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Declaration of Service

I, Lois Navarrot, declare that on March 11, 2010, I served and filed copies of the attached **Beacon Solar LLC's Prehearing Conference Statement**. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: www.energy.ca.gov/sitingcases/beacon. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service List) and to the Commission's Docket Unit, in the following manner:

(check all that apply)

For Service to All Other Parties

 X sent electronically to all email addresses on the Proof of Service list;

 X by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service List above to those addresses **NOT** marked "email preferred."

AND

For Filing with the Energy Commission

 X sending an original paper copy and one electronic copy, mailed and e-mailed respectively, to the address below (**preferred method**);

OR

 depositing in the mail an original and 12 paper copies as follow:

California Energy Commission
Attn: Docket No. 08-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.

/s/

Lois Navarrot